TECHNICAL REPORT

70
2001

THE DISTRIBUTION AND STATUS OF COLONIAL BREEDING SEABIRDS IN THE NORTHERN TERRITORY

Ray Chatto

Parks and Wildlife Commission
of the Northern Territory

TECHNICAL REPORT

70
2001

THE DISTRIBUTION AND STATUS OF COLONIAL BREEDING SEABIRDS IN THE NORTHERN TERRITORY

Ray Chatto

Parks and Wildlife Commission
of the Northern Territory

PO Box 496, Palmerston, NT, 0831, Australia

ISBN 07245 27885.

Cover photo graph: Crested Terns breeding on an island off Melville Island, May 2000. K. Saalfeld.

EXECUTIVE SUMMARY

This is the second report in a series documenting the location and status of selected faunal assemblages on the Northern Territory coastline, offshore islands and Top End floodplains. It addresses colonial seabird breeding and primarily discusses the status and distribution of breeding sites but also includes information about non-breeding populations. The main species discussed include Silver Gull, Caspian Tern, Lesser Crested Tern, Crested Tern, Roseate Tern, Black-naped Tern, Little Tern, Bridled Tern and Common Noddy, however some other species are also briefly discussed.

Little information existed on the location and status of seabird breeding colonies around the Northern Territory coast prior to 1990. Information gathered during aerial and ground surveys between 1990 and 2001 has now clearly shown that the coast and offshore islands of the Northern Territory have nationally and globally significant numbers of some species of colonial nesting terns.

One hundred and forty-seven colonies, confirmed as active during the survey period, are here documented. The majority of these colonies were located during the surveys by the author, while a few were listed from evidence provided by reliable informants during the survey period.

Apart from one small colony on the western coast, all colonies were distributed along the northern and eastern coasts of the Northern Territory from the Tiwi Islands to the Queensland border. One species, the Little Tern, sometimes chose to nest on mainland beaches, but all other colonies were on islands, with most being on the smaller islands. The most important areas for colonial seabird breeding were in the east, with the area from NE Arnhem Land to Groote Eylandt and the Sir Edward Pellews Islands being the most important.

The majority of the colonies were located on Aboriginal land. Less than 5% of colonies occurred on conservation reserves.

All nesting occurred either on or under the ground. Nesting that occurred in constructed burrows was only very occasional but most Bridled Terns either nested under rocks or in 'burrows' into thick grass cover. A variety of substrates were used, with sand, bare rock, coral rubble or combinations of these being most common.

Individual colonies contained between one and five species, and colony sizes varied from single pairs to 60000+ adults. As well as having nationally significant numbers of colonies, and numbers of birds within them, many Northern Territory colonies are important because they are active every year.

The timing of breeding within the year and the regularity of colony use between the seasons varied among species. Colonial seabird breeding is considerably more variable than for waterbirds. Some species of seabird (eg Crested Tern) bred regularly in a relatively short season each year and at the same time of the year. Others (eg Bridled and Little Tern) had an extended season, while still others (eg Roseate Tern) bred in two different periods during the year. With this in mind, colonial seabird breeding in the Northern Territory occurs throughout most of the year, though mostly between May and November.

A further 68 colonies, which are not discussed in the main body of the report, have been listed as confirmed breeding colonies in the past, or possible breeding colonies at present. These mostly include colonies that were located from the air but require further investigation for confirmation, and sites appearing in historical records (ie prior to 1990) that may no longer be used, or were unable to be located from the information available.

All confirmed colonies are individually detailed in Appendix B and possible colonies in Appendix C.

The fauna of the Top End of the Northern Territory is in a very unique position. Not only is there an immense amount of habitat which holds large populations of many species, but most of the area is very remote and has not been subject to many of the pressures associated with large human populations. Although this is likely to remain the case for at least the short term, it is equally likely that the pressures of human expansion within Australia will see some of this area targeted for development at some stage in the more distant future. It is for this eventuality that we must be prepared. We must ensure the security of the more significant of these colonies before problems arise.

CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF PLATES

ACKNOWLEDGMENTS

The skill and preparedness of the many fixed wing and helicopter pilots to fly low and slowly, or through bad weather, or to land in some of the difficult places I requested of them, meant a lot more information could be obtained from some very remote areas. They are too many to include here, but their efforts were greatly appreciated.

Without the ongoing funding from the Parks and Wildlife Commission of the Northern Territory and the support from senior staff, particularly Dr. Peter Whitehead earlier and Dr. David Lawson towards the end, such a large project would not have been possible to do.

The formatting and final presentation of this report is largely due to the considerable efforts of Neil Smit. For this I am particularly appreciative.

Irene Rainey and John Scott spent many hours transcribing my taped surveys on to paper, and Andrea Hope spent similar long hours entering data to databases designed by Maria Houlihan. Kerry Steele also assisted with some of the data entry. Anne Fuchs and Ryan Hudson helped with advice, and the maintenance of the databases. Charmaine Tynan assisted with many of those less interesting tasks like photocopying and also helped with some data entry.

Keith Saalfeld provided advice on, and spent considerable time preparing, all of the maps for this report.

A number of Aboriginal Land Councils, particularly Dhimurru and Anidilyakwa, and Traditional Owners provide assistance and land access permission over the duration of the project. Help from Djalalingba Yunupingu (Joe), Nanikiya Mununguritj, Djawa Yunupingu and Kelvin Leach of the Dhimurru was particularly appreciated.

Dr. Peter Whitehead, Dr. Robert Taylor and Dr. John Woinarski provided comments on the first draft of this report.

Last but not least I would like to thank my family for putting up with the large amount of time I was away from home over the years.

BACKGROUND AND OBJECTIVES

Much of the Northern Territory's Top End (defined here as north of latitude 16^{o} 35' S) is very sparsely settled and relatively undisturbed. While much work has been done in recent years to survey biological values of terrestrial environments, much less has been done to locate and document the faunal values of the coast and floodplains.

In 1990, whilst conducting transect-based aerial surveys for Magpie Geese, I began to include additional surveys incorporating the coast and associated habitats during returns to overnight bases. These *ad hoc* surveys revealed significant aggregations of seabirds and other fauna that did not appear to have been previously reported.

From these initial results a series of broad ranging aerial and ground surveys was initiated to further inspect the coast, islands, floodplains and larger inland wetlands of the Top End of the Northern Territory. The main objectives of these surveys were to locate and document sites that supported significant assemblages of a range of selected species of fauna.

This report is the second of a series intended to help correct the deficiency of information about Top End coastal and near coastal sites, whose importance is disproportionate to their size because they often support very large aggregations of feeding, roosting or breeding fauna.

This report focuses on the species of seabird that breed colonially in the Northern Territory. Although the report concentrates on the distribution and status of their breeding colonies, there is also some discussion on their non-breeding status. Breeding colonies are obviously very important sites and larger colonies may be of national or global significance. The location and documentation of these colonies is an important first step in ensuring their future security.

Aerial survey was essential because other forms of access to large parts of the Top End and the offshore islands are very difficult, particularly during the wet season. While this puts some constraints on the level of detail available for individual sites, the overall project (and resultant reports) was primarily designed to provide a robust base from which to develop conservation strategies. Accurate assessment of bird numbers would require a much greater survey effort. Such precision would have seriously curtailed the aim of the overall project, and yet added little to the determination of conservation and management priorities. Hence, precise surveys were left for a later date. This report is intended to provide regional and national context rather than specific precision.

Plate1. Pilot waiting on a small island in NE Arnhem Land while the author was off checking a site. Photo R. Chatto.

STUDY AREA AND ENVIRONMENT

Whereas the overall project encompassed all of the coast and Top End wetlands, this report deals only with the part of the study area in which colonial breeding seabirds were found to breed, feed or roost. Although some species were found on wetlands that were short distances in from the coast, the primary survey area was the Northern Territory coastline and adjacent islands. Although a small number of islands were as far as 30 km offshore, the majority were within a few kilometres of the coast so most of the study area involved only the inshore waters of the Northern Territory.

The Northern Territory has a very extensive coastline. Along with the northern coast of Western Australia it is also one of the least explored natural ecosystems in Australia, due to its inaccessibility, isolation and small population base. Including its many islands and estuaries, the Northern Territory coast extends for over 10000 kilometres and spans some 9 degrees of longitude (129^o 00' E to 138^o 00' E) and 5.5 degrees of latitude (11^o 00' S to 16^o 35' S). The Northern Territory basically has three coastlines adjacent to different oceanographic water masses. The western side abuts the Timor Sea, the northern side the Arafura Sea and the eastern side the Gulf of Carpentaria.

Although the Northern Territory coastline has a number of different environments, including small cliffs and rocky shores, and a number of different types of beaches (some with extensive dune systems), the majority of the Northern Territory coast is made up of mangrove-backed mudflats, estuaries and inlets. The islands on the other hand are much less dominated by mangrove systems. There are some large islands such as Melville Island and Groote Eylandt that have many different habitats, but most of the 800 or so islands are much smaller. Most of these smaller islands are morphologically and ecologically simple, and tend to be dominated by sand, rock or coral rubble. The study area for this report includes the entire Northern Territory coast and all islands and is broadly shown in Figure 1.

With the exception of the areas around Darwin, Nhulunbuy, the NW of Groote Eylandt and the coast near Borroloola in the far south east, the majority of the Northern Territory coastline is very remote and sparsely populated. The resultant low level of human development and disturbance would undoubtedly be a significant factor in the populations of seabirds around the Northern Territory coast.

The key hydrological features of the Northern Territory coast are the large annual rainfall, the intense seasonality of this rainfall and the influence of the large tidal range. Most of the coast receives an average of at least 1200mm of rainfall annually with regions in the north-west being in higher rainfall zones than those to the east and south (Figure 2). This rainfall is also highly seasonal, falling mostly between December and March. Mean spring tidal ranges increase from the eastern Northern Territory coast (where they average 2.2m) to the west (Darwin for example has an average range of 5.6m) and then further increases along the coast to the Western Australian border (Wyndham for example has an average 6.5m range). Consequently, in the western parts of the Top End in particular, macro-tidal regimes have significant influences on the flooding characteristics of the coast and coastal wetland systems. The influence of waves around most of the coast is minimal except for periods of exceptional storm activity. Severe storms, including cyclones, combined with droughts and high temperatures create a fairly harsh environment.

Turbidity resulting from a large tidal range and wetland run-off from the wet season rains may tend to create conditions unfavourable to breeding seabirds in terms of hunting small fish on parts of the coast. This is particularly the case on the western side of the Northern Territory where virtually no seabird breeding occurs, although a lack of small islands along this coastline probably also contributes to this lack of breeding.

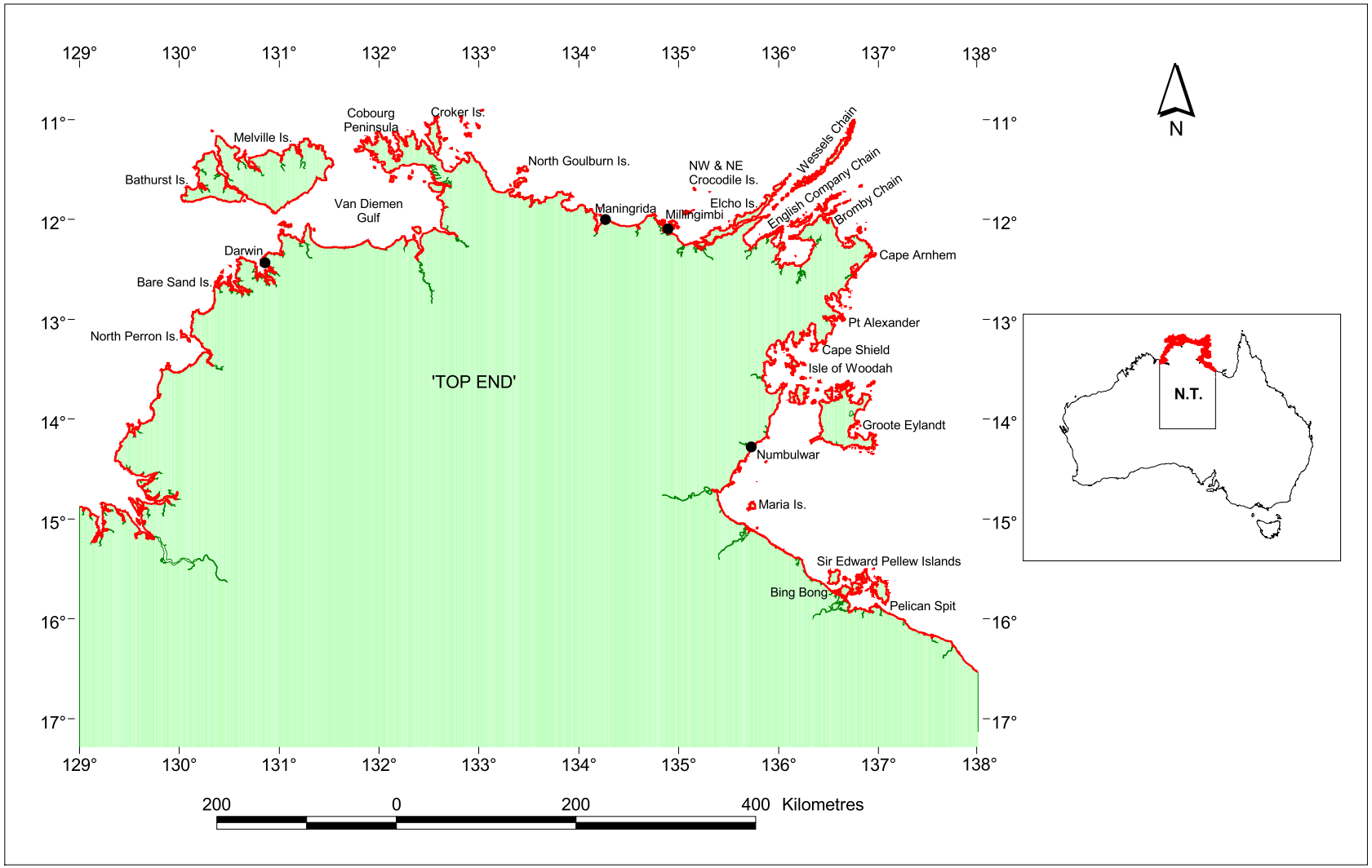

Figure 1. Survey area and place names referred to in the report.

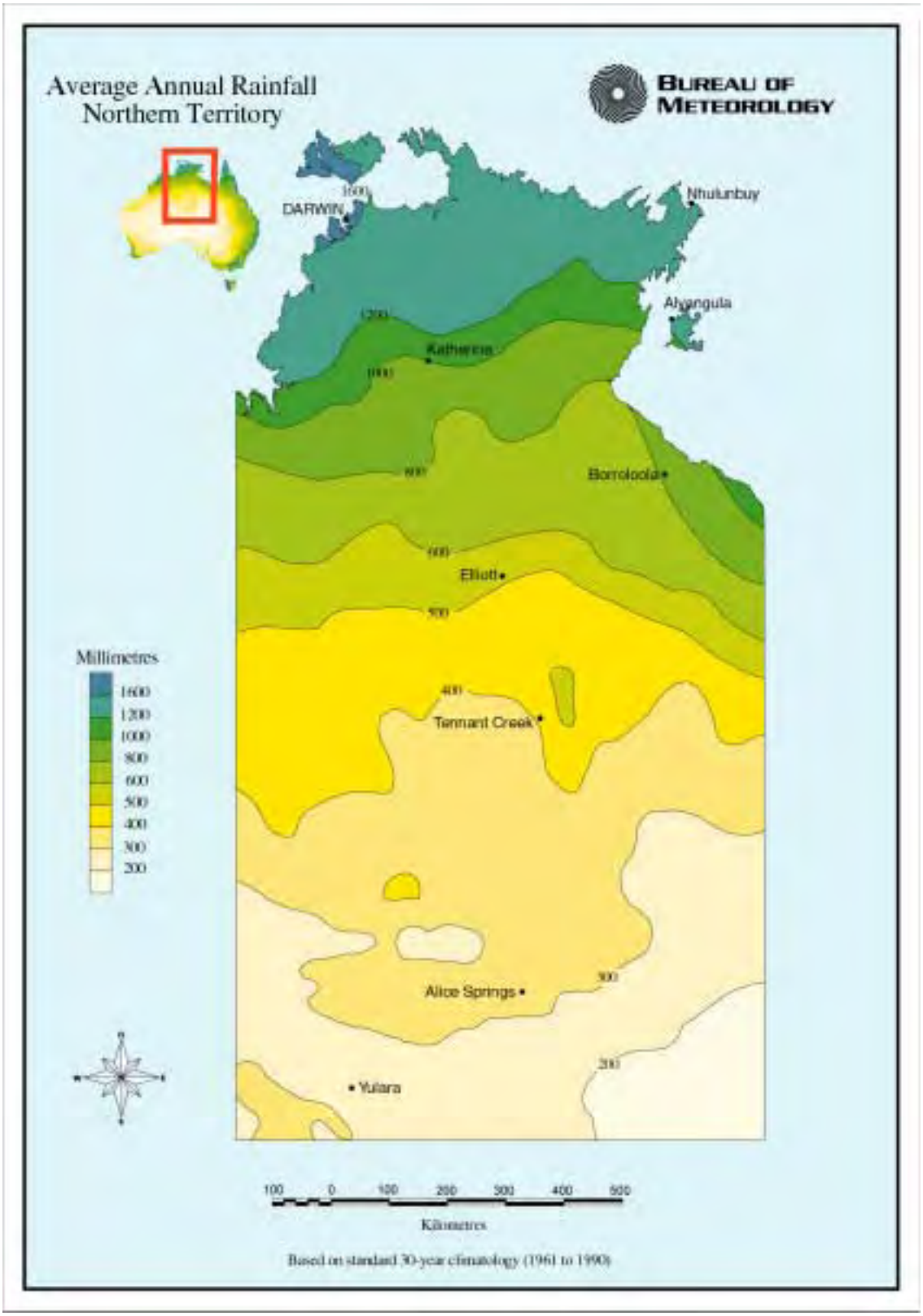

Figure 2. Average annual rainfall isohyets (mm) in the Northern Territory.

SPECIES SELECTED

The birds on which this report particularly focuses are listed in Table 1. All are seabirds in the common understanding of that term (as listed in Ross *et al*. 1996) that breed in colonies around the Top End coast and offshore islands. (The colonial breeding cormorants, *Sterna nilotica* Gull-billed Tern and *Chlidonias hybridus* Whiskered Tern were detailed in Chatto, 2000).

Some common species such as *Egretta sacra* Eastern Reef Egret and *Butorides striatus* Striated Heron also fall into this category of Top End colony breeders but were not surveyed in detail, and are hence only briefly discussed. Other species which have been recorded during the surveys but which do not breed in the Northern Territory are also only briefly discussed. These include *Sula leucogaster* Brown Booby and *Fregata ariel* Lesser Frigatebird, which are reasonably common, and *Fregeta minor* Great Frigatebird, *Sterna fuscata* Sooty Tern and *Anous minutus* Black Noddy, which are reasonably uncommon (at least in inshore waters).

Seabirds from the order Procellariiformes which have been previously recorded from waters off the Northern Territory (usually further offshore than these surveys) are not discussed here. None of these species breed around the Top End coast.

Other seabirds (as listed in Ross *et al.* 1996) often associated with the Top End coast but do not nest in colonies, such as *Pandion haliaetus* Osprey, *Haliastur indus* Brahminy Kite, *Haliaeetus leucogaster* White-bellied Sea Eagle, *Esacus neglectus* Beach Stone-curlew, *Haematopus longirostris* Pied Oystercatcher and *H. fuliginosus* Sooty Oystercatcher will be discussed in subsequent reports.

Common and scientific names used here are as given in Christidis and Boles (1994).

Table 1. Species list.

Order	Family	Species	Common name
Charadriiformes	Laridae	*Larus novaehollandiae*	Silver Gull
		Sterna caspia	Caspian Tern
		S. bengalensis	Lesser Crested Tern
		S. bergii	Crested Tern
		S. dougallii	Roseate Tern
		S. sumatrana	Black-naped Tern
		S. albifrons	Little Tern
		S. anaethetus	Bridled Tern
		Anous stolidus	Common Noddy

METHODS

General Summary

Information presented in this report is taken from a long term and complex series of surveys incorporating a number of methodologies designed to encompass collection of data on a great deal more than just colonial breeding seabirds. Consequently it is very difficult to accurately quantify survey effort, either in relation to species, areas or dates. However, as further interpretation of the results in this report would be assisted by some indication of effort, an attempt is made here to give an approximate quantification to effort.

Between 1990 and 2001, the author spent more than 500 'field days' conducting aerial and ground fieldwork to collect information on a variety of fauna. A 'field day' was any day on which surveys were done. There were undoubtedly differences in the amount of effort put in on different field days, depending on the area covered, the time spent surveying and the species targeted. However, with so many field days over such a long period, it has been assumed that specific biases to area, time or species will have 'evened out' to a certain extent in the context of the broad aims of this report.

The main body of this report discusses each of the nine main colonial breeding seabirds mentioned above in terms of their distribution, numbers and seasonality. Some species (those that occur in reasonable numbers around the Northern Territory coast when not breeding) are first discussed in terms of their the non-breeding populations, but all are then discussed in relation to their breeding colonies. Other seabirds are then also discussed, but in a much briefer manner because of the limited amount of breeding found and/or the limited amount of information collected on these species.

Even though the discussion on the non-breeding distribution and status is less detailed and more general, the data used for this was collected over a much greater number of field days than that collected to discuss their breeding. This was obviously due to the more widespread distribution of these birds when not involved in breeding colonies. Information on non-breeding populations was collected on 421 field days.

To assist with further interpretation of the non-breeding distribution maps for the relevant species, the survey area has been divided into three roughly equal sections. These sections include the 'west' coast (from the WA border to southern boundary of Cobourg Peninsula, including the Tiwi Islands), the 'north' coast (from Cobourg Peninsula to Cape Arnhem, near Gove) and the 'east' coast (from Cape Arnhem to the Qld border). The approximate lengths of coastline for these sections are 3,330, 3633 and 2967 kilometres respectively. Of the 421 field days 41% were on the west coast, 27% were on north coast and 28% were on the east coast. The west coast had the highest survey effort but the extent of this bias is exaggerated by these figures because this section had most of the shorter field days (eg short surveys to sites close to Darwin).

The total number of field days per month was used as an index of search effort when interpreting the seasonal occurrence of non-breeding birds. These were: 11, 32, 49, 20, 51, 23, 28, 38, 56, 41, 45, and 27 from January to December respectively.

There will undoubtedly be breeding birds included in counts that were made away from colonies, that were recorded as non-breeding birds. This will have virtually no effect on some species because of the few colonies and/or low number of breeding birds; however, it will have some effect on the other species. In most of the counts that were made of birds when away from colonies there was little attempt made to separate breeding and non-breeding birds, and there was also no attempt to establish distances flown away form the colonies by breeding birds. Consequently it should be kept in mind that the relative abundance of non-breeding birds during the stated breeding seasons of the relevant species are likely to be overestimates. The individual species discussions thus only provide a general indication of seasonal variation in non-breeding populations.

As indicated above, data on the breeding colonies of these species was not collected on as many field days as data on the non-breeding status and distribution. Seabird colony breeding data were not collected in 1990, and only a limited amount was collected in 1991, 1992, 1997, 1998 and 2000. The main surveys dealing with seabird breeding colonies were conducted between September 1993 and September 1994, throughout 1996 and between May and November 1999.

As with non-breeding birds, to accurately define the amount of time spent searching for and/or surveying seabird breeding colonies is difficult as the surveys also involved work on other groups of species. It is even more difficult to single out field days dominated by seabird breeding colony work because they were nearly always combined with turtle breeding surveys. To give an indication of effort spent on surveying breeding colonies field days have been broken up into days dominated by seabird and turtle breeding work, and field days in which seabird breeding colony work was done, but was not the major emphasis of the day's surveying. Table 2 shows the breakdown of survey days per year for the duration of the project. With this in mind there were approximately 64 field days (mostly in 1993, 1994 & 1996) with seabird (and turtle) breeding work as the sole or primary purpose of the field time, and approximately 114 field days with at least some level of specific surveying or searching done for these sites.

Table 2. Number of field days for each year involving seabird breeding colony surveys.

Year	Seabird/turtle breeding dominated field days	Field days that included some seabird breeding colony searching
1990	0	0
1991	0	6
1992	0	16
1993	14	24
1994	16	21
1995	3	9
1996	22	17
1997	1	2
1998	1	4
1999	6	9
2000	1	5
2001 (to June)	0	1
TOTAL	**64**	**114**

Table 3. Total number of records relating to individual species of seabirds per month during the survey period.

Month	Total number of records	Percentage of total
January	79	6
February	85	6
March	156	12
April	87	6
May	212	16
June	62	5
July	99	7
August	2	<1
September	209	16
October	180	13
November	99	7
December	78	6
Total	**1348**	**100**

Individual, confirmed colonies were surveyed, from the ground or air, 824 times over the period from 1991 to 2001. The minimum record during these visits was 'colony active' or 'colony inactive', and many of these visits simply included flights over colony sites when they were not active. Individual colonies were surveyed between 1 and 20 times over the survey period. The total number of individual records (ie any single count that differs by species, date and/or location) relating to seabird colonies on a monthly basis is shown in Table 3. Except for August, records from seabird colony surveys were well spread over the year, with no month having less than 5% of the records. March, May, September and October had most of the effort. (Records where no birds were present are also included).

Survey Types

The most economical and practical way to cover the long coastline and many islands of the Northern Territory was from the air. As fixed wing aircraft fly faster, have a longer endurance and are cheaper than helicopters, most surveys to initially locate faunal sites were done from a single engine fixed wing aircraft. In the case of seabird breeding colonies most of this work was done by simply flying along the coast, with diversion to circle islands, and then returning to the same point to continue along the coast. Most of this flying was done at around 2-300 feet (61-91m) at speeds varying between 80 and 120 knots. The position of colonies or other sites of interest were recorded, and they were circled as low and as slowly as possible to better assess species and numbers. All definite, and most of the possible breeding sites, were then returned to in a helicopter (or occasionally boat) at a later stage, for ground assessment. Depending on the accessibility to the sites, varying amounts of time, from a few minutes of flying around the site to two hours on the ground, were spent estimating numbers, species and the state of breeding.

Geographic Coverage

The area under consideration for this report was considerably less than what was covered in terms of the whole project. Nevertheless a very extensive area which included the entire Northern Territory coast and all of the Territory's islands was covered. In searching for seabird colonies, the coastline was followed into estuaries and bays but not significantly upstream of the mouths of rivers.

Temporal Coverage

Due to the large size and remoteness of the survey area, logistic and cost constraints prevented regular visits to known colonies, or frequent searches of potential breeding sites. Consequently it was necessary to program regional surveys in conjunction with other targeted species (e.g. waterbirds, waders and marine turtles), and try to achieve visits at 2-3 key times during the year. When specific seabird breeding colony surveys were done, they were concentrated in the period April to June and September to December when the majority of breeding occurs, however searches of potential areas were also done as often as possible at other times of the year.

The net result was that some sites known to support breeding were unable to be visited at the peak of their breeding, or repetitively during extended breeding seasons of more asynchronous colonies. Consequently colony size and possibly species diversity are likely to have been under-estimated at some sites. Nevertheless the general patterns are likely to be robust, and provide a sound basis for more comprehensive surveys should this eventually be deemed necessary.

Quality of Numerical Estimates

With so many sites occurring over such a large and difficult to access area, it was decided very early in the project that the emphasis of fauna counting would be to make estimates from a large number of sites rather than to do more detailed counts from a lesser number of sites. This applied to estimating non-breeding flocks around the coast and also to estimating numbers breeding in the larger, mixed species seabird breeding colonies. Spending a short amount of time in each colony was also important to avoid excessive disturbance to breeding birds. With the very hot tropical conditions in the Northern

Territory, eggs and small young left unprotected by disturbed adult birds for even short periods are likely to suffer elevated mortalities. As many colonies were on small islands, simply being there was enough to keep the adults off their nests.

Apart from the limited visits to many colonies, further complications in estimating the number of breeding birds in a given colony for the complete season include:

- the varying degrees of parental absence from the colony between different species, different stages of the colony's breeding cycle and different times of the day (given colony sizes were based on the number of adult birds present when visited),
- the asynchrony between, and to a lesser extent, within, species in terms of timing of breeding,
- the difficulty of observing all birds in a colony, either from the air or the ground, particularly species such as Bridled Tern, or to a lesser extent Silver Gull, which nest in the shelter of rocks or grass.

Except in the small, easily accessible colonies, no attempts were made to accurately count the number of nests or breeding pairs in the colonies during this project. Instead, numerical estimates (either from ground or air) were based on the approximate number of adult birds that could be seen flying around, and standing/sitting within the colony at the time of sampling. This estimate did not include birds that were in breeding plumage but were not within, or actively defending, the colony at the time. This was more likely to happen with some species than others, and is discussed under the individual species sections. It is appreciated that in some cases a number of birds within the colony may not have been associated with an active nest at the time, even though they may have bred later in the season. This is further discussed in the introduction to Appendix A.

These estimates are not claimed to be more than estimates by eye and often based on short periods of observation. They were not subject to any calibration or scientifically tested sampling procedures. They are however based on over 20 years of experience by the author estimating numbers of waterbirds during aerial and ground surveys. Methods used in the past by the author to estimate numbers, and hence develop skills in such estimations have included counting groups of birds in the field after first making an estimate, and comparing snap estimates with numbers counted from photographs.

There was only one instance when a more accurate count of a large colony was performed. This was in 1998 when a student researcher counted a large colony in more detail, using a transect system. This revealed 24,641 (standard deviation +/- 3238) nests (Watanabe, 1999), indicating my estimates of 50000+ birds at this colony were not excessive.

Research has shown that both experienced and, more so, inexperienced observers, usually underestimate the number of birds visible in large groups (Garnett and Carruthers 1982; Morgan 1986; Bajzak and Piatt 1990; author, pers. obs.). With this in mind, and the points made above, it is more likely that many of the numbers given in this report are underestimates rather than overestimates.

Estimates in these surveys were made as either a single minimum number or a range estimate. This minimum estimate, or the middle of the range estimate, was then taken to represent the colony size (in terms of the number of adults present) for that survey. When a colony had more than one estimate in a season, the estimates most likely to be representative of the peak numbers of each species were used to allocate a seasonal size to that colony. To allocate an overall colony size to each colony over the period of the project (considering only the years that they were active), an average of each of the individual seasonal estimates ascertained over the years was used. Estimates that were clearly made very early or very late in the season were not included if they were the only estimate for that colony in that year.

Each final allocated colony size was then converted to a range to avoid unreliable impressions of precision. Ranges used in this report for total colony size were: 2–10, 11–100, 101–500, 501–1000, 1001–5000, 5001–10000 10001–30000 and >30000. The last of these size classes was the largest chosen (even though a small number of colonies are likely to have had more than 50000 birds) because of the difficulty of estimating numbers in such large colonies and the desire to keep the estimates conservative. The colony sizes recorded during individual seasons are included in Table A1 of Appendix A. The ‘allocated colony size’ is also included in this table, as well as being included in the individual colony summaries of Appendix B and Appendix C and the distribution map shown in Figure 3.

As well as estimates of the total colony size (all species combined), estimates were also made for sub-groups (such as Roseate/Black-naped Tern species) and/or of individual species. For most colonies the best method of estimating total colony numbers was from the air. However, individual species estimates in mixed species colonies usually had to include ground-based surveys as well. When similar species such as Roseate Tern or Black-naped Tern could not be separated from the air, and the birds could have been all of one species or a mixture of both, a '?' was used to indicate that the number of each species was unknown, but the colony was active.

Estimates of the numbers of individual species are included in the Tables A2, A4, A6, A8, A10, A12, A14, A16 and A18 of Appendix A and the individual distribution maps (Figures 9, 12, 14, 17, 18, 19, 22, 23 and 24).

Estimates of colony size in this report are based on adult birds. Clearly this is not as good as discussing colony sizes in terms of the number of pairs breeding or clutches present. Attempting to derive the number of breeding pairs for either the total colony or the individual species, from these estimates, would be scientifically unsound. Firstly, the estimation of numbers that are present is very difficult, and secondly, the assumption that the number of birds present is twice the number of pairs, would need to be proven. Nevertheless it is the author's opinion that in most colonies, halving the estimate of adults will give an estimate of the number of breeding pairs that would still be under the number actually breeding in the colony.

Each colony was also allocated a level of significance based on the assessment of the number of birds of each species present at the site. These are included in Appendix B. Such an allocation is mainly to be used for future research and management by the Parks and Wildlife Commission. Each colony was allocated the level of significance that corresponded to the highest level of any of the species breeding within the colony. The three levels chosen were national, regionally high and low. In order to allocate the level of nationally significant to a particular colony the Ramsar Convention criteria of "regularly supporting 1% or more of the individuals in a population of fauna" and/or "regularly supporting more than 20000 birds" was used. The 1% criteria was assessed by comparing the estimated number of each species at the colony with the Australian population estimates for each species (WBM Oceanics and Claridge 1997).

Only colonies that were recorded as active in more than one year, or recorded as inactive in no more than one year, were considered for the allocation of nationally significant. Colonies that were only recorded on the one occasion but had numbers high enough for the 1% criteria were recorded as "national (?)' because it is unknown whether they are regularly used.

The other two levels of significance were less rigidly allocated. They were basically used to separate small colonies of minor significance and larger, more significant colonies which did not have numbers high enough to rate a nationally significant allocation based on the above mentioned Ramsar criteria.

Separation of Species in Colony Surveys

Unlike the situation with waterbird breeding colonies (Chatto, 2000), most species of seabird tended to be segregated within a site, so separate estimates for different species were usually possible. However, there were two species (Roseate Tern and Black-naped Tern) that did often mix with each other. Where the separation of these species was not possible, they were recorded as RBB (Roseate Tern and/or Black-naped Tern Breeding).

THE COLONY SITES

The nine main species included in this report were confirmed at 147 sites around the coast and islands of the Northern Territory between 1991 and 2001. These sites are individually numbered (S001 to S147) and detailed in Appendix B. A further 68 unconfirmed and/or historical colony sites that are not discussed in the body of this report, are individually numbered (S901 to S968) and detailed in Appendix C. For the purposes of indicating the location of these sites on the maps in this report, the 'S0' and 'S9' have been left off so as to reduce congestion on the maps.

With the exception of some Little Tern colonies that were located on remote beaches of the Northern Territory mainland or large islands, all of these sites were on small offshore islands. Most islands were the size of a 'football' field or smaller. The sites varied from low, predominantly sand, islands to high granite rocky outcrops. Many had little vegetation.

No detailed assessment was made of the substrate or floristic composition of vegetation on the nesting sites. However, the majority of colonies were on sand, coral rubble/reef debris, shell, guano, rock or a combination of these substrates (Table 4). The substrates given in this table are the dominant one for each colony, even though individual species may have nested on different substrates within the colony. Species such as Bridled Tern, and to a lesser extent, Silver Gull, nested under grass or deep down amongst boulders, but for most species the eggs were laid in the open, onto the bare substrate. Except on rock, there was usually some attempt to make a small depression, but vegetation (present at some sites) was rarely nested on or used for a nest. Silver Gulls were the only species to usually construct a nest. At most sites eggs were laid on more than one substrate type.

Only seven colonies were located within declared Parks or Reserves (all in the Cobourg Marine Park), the remainder being on Aboriginal land or beaches adjacent to pastoral properties (Table 5).

Table 4. Nesting substrates.

Nesting substrates	Number of colonies
Sand	28
Coral rubble	6
Rock	35
Sand & shell	12
Sand & coral rubble/reef debris	13
Sand & grass/other low vegetation	11
Sand & guano	2
Rocks & grass/other low vegetation	22
Mixture of all of above	14
Undescribed	4

Table 5. Land tenure of colony sites.

TENURE	NUMBER
Aboriginal land	132 (90%)
Beach adjacent to pastoral leasehold	8 (5%)
Declared park/reserve	7 (5%)

THE COLONIES

Geographic Distribution

All seabird breeding colonies were located on off-shore islands, with the exception of some Little Tern colonies which were on mainland beaches. All of the islands with seabird breeding on them were within about 25 kilometres of the mainland or another large island or island chain. Most, however, were within a few kilometres of the mainland. The most isolated colonies were NW and NE Crocodile Islands (S013 and S014), Sandy Island (S062) and Low Rock (S063). The latter two are north of Maria Island and Low Rock is further detailed in Chatto (1999). These can be seen on the map shown in Figures B1, B1a, B1b, B1c and B1d in Appendix B. In contrast to waterbird breeding colonies that are located in a band that continues around most of the Northern Territory coast, there is a clear lack of seabird breeding along the western coast of the Northern Territory. A number of the species breeding in the Northern Territory occur along this coast but the generally turbid waters probably do not provide good conditions for the high rates of feeding needed for breeding. There is also a scarcity of suitable small islands along this coast.

Seabird colonies were regularly positioned on small islands from the Tiwi Islands in the north-west of the Northern Territory round to the NT/Qld border. Although there was some clustering of colonies around the Cobourg Peninsula area, from NE Arnhem Land to Groote Eylandt and around the Sir Edward Pellew Islands, there were not the specific areas that were of the clear significance to seabird breeding as is the case for waterbird breeding colonies (Chatto 2000).

Numbers

It was mentioned above that confirmed colonies were surveyed 824 times over the period of the project. On 572 of these occasions an estimate of numbers was made at an active colony. These counts totaled around 560000 birds. (A small amount of this figure was calculated by applying a ratio of the total number of individual Roseate to Black-naped Terns counts over the period of the surveys so as to break down the counts recorded as Roseate and/or Black-naped Terns). The number of individual species counts and total numbers of birds, as a percentage of these figures, is discussed under the sections dealing with individual species.

Colonies ranged in size from a single pair of birds, to the largest colonies (S009 in the north-west and S071 in the south-east), which were allocated the maximum size class of >30000 (Figure 3). It is likely that these two colonies actually had in excess of 50000 birds, but as already discussed the largest allocated size class was >30000. Of the 147 colonies, the most common size class was 11-100 birds (Figure 4). Seven colonies had in excess of 10000 birds.

Under the Ramsar criteria discussed above in the methods, there were 31 colonies that could be rated as nationally important and a further 51 that had sufficient numbers to be considered nationally important but were only visited on the one occasion so it was unknown if they were regularly used. This gives a total of up to 82 out of the 147 Northern Territory seabird colonies located during these surveys that could be of national significance. The Australian totals for which the Northern Territory numbers were compared against are likely to be considerably lower than their true values, with one reason for this being because the Northern Territory (and probably northern Western Australian) populations of seabirds were underestimated when being added to the other states. Nevertheless the Northern Territory numbers of colonial breeding seabirds, particularly for some of the terns, are clearly of major significance.

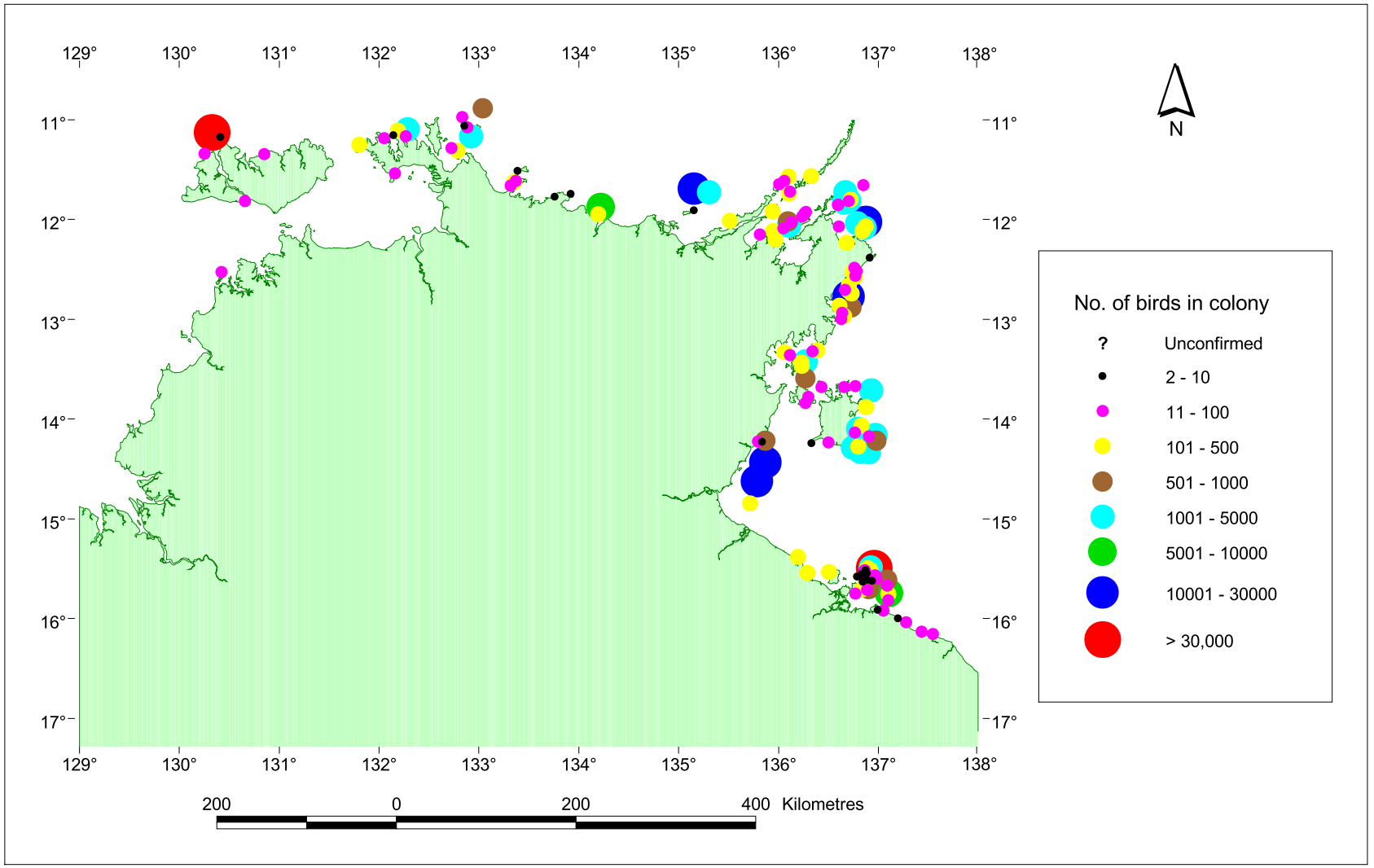

Figure 3. Location of colonies with differing numbers of birds (all species combined).

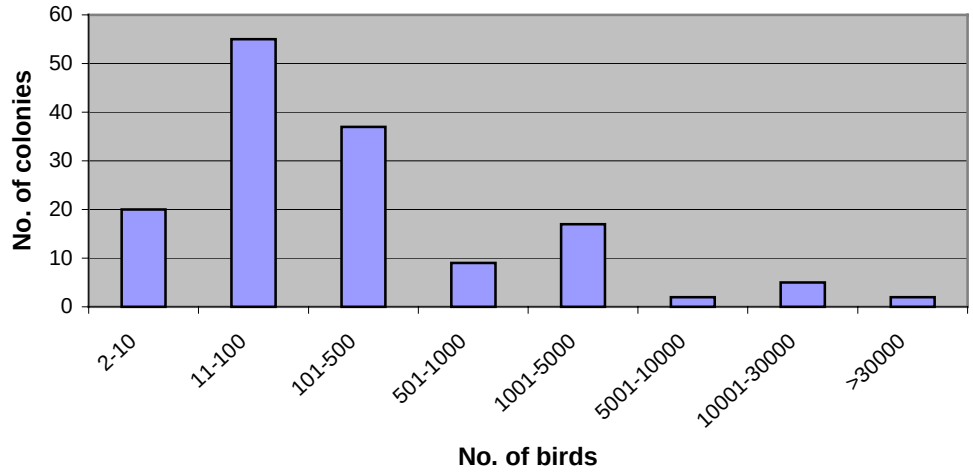

Figure 4. Frequency of occurrence of colonies with differing numbers of birds (all species combined).

Individual numbers of adult birds present in each colony during each year it was visited, along with an overall average size class given to each colony is shown in Table A1 of Appendix A.

It is much more difficult to derive an estimate of the total number of seabirds breeding in colonies around the Northern Territory coast in a given year, than to do so for colonial breeding waterbirds. The much greater number of seabird colonies meant that there were no years when a sufficiently high percentage of the colonies were visited in the one season in order to provide a robust estimate of the Northern Territory total. This is further complicated by the extended use of a number of the seabird sites during the season by different birds and/or species, sometimes separated by a period of no apparent use. Consequently any attempt to estimate Northern Territory totals must, at this stage, be based on the average size of the colonies over the survey period.

Using the average size of each of the 147 colonies (Table A1) and assuming all colonies are active in a given year, then a very rough minimum estimate of the number of seabirds (of the 9 species discussed in detail in this report) breeding in the Northern Territory in an average year could be around a quarter of a million. Such estimates do not include Eastern Reef Egrets or Striated Herons, which are also seabirds that can nest in small colonies in the Northern Territory. It is unlikely that all 147 colonies would be used in the one year, but it is reasonable to say that most of the bigger ones, and those contributing most to the total estimate, were used fairly regularly.

Further details of the number of birds of each species in all colonies can be found in Table 6 and the number of size classes for each species in Table 7.

Seasonality

The timing of breeding within the year and the regularity of colony use between the seasons varied with the species. Colonial seabird breeding in the Northern Territory is considerably more variable in timing than colonial waterbird breeding. Some species of seabird (eg Crested Tern) bred regularly in a relatively short season each year and at the same time of the year. Others (eg Bridled and Little Tern) had an extended season, while still others (eg Roseate Tern) bred in two different periods during the year. Consequently, colonial seabird breeding in the Northern Territory occurs throughout most of the year, though peaking between May and November. The longest period for which any single colony was active was from around March to December. This was Higginson Islet (S030) which is further detailed in Chatto (1998). Table 8 gives an overall summary of the main part of the year during which each species was recorded breeding.

Table 6. Allocated size classes for each species in each colony.

Colony Number	Silver Gull	Caspian Tern	Lesser Crested Tern	Crested Tern	Roseate Tern	Black-naped Tern	Little Tern	Bridled Tern	Common Noddy	Total No. of species in colony
S001							●			1
S002						●	●			2
S003				●						1
S004					●	●				2
S005							●			1
S006					●	●				2
S007	●			●				●		3
S008							●			1
S009	●			●						2
S010							●			1
S011						●		●		2
S012	●			●	●	●		●		5
S013	●			●						2
S014								●		1
S015						●		●		2
S016								●		1
S017						●				1
S018							●			1
S019						●				1
S020	●				●	●		●		4
S021				●	●	●				3
S022						●				1
S023					●	●		●		3

● >30000 birds present in colony on average.

● 10001-30000 birds present in colony on average.

● 5001-10000 birds present in colony on average.

● 1001-5000 birds present in colony on average.

● 501-1000 birds present in colony on average

● 101-500 birds present in colony on average.

● 11-100 birds present in colony on average.

● 2-10 birds present in colony on average.

? Likely to be present but not confirmed and number not known.

Table 6 (cont.). Allocated size classes for each species in each colony.

Colony Number	Silver Gull	Caspian Tern	Lesser Crested Tern	Crested Tern	Roseate Tern	Black-naped Tern	Little Tern	Bridled Tern	Common Noddy	Total No. of species in colony
S024										3
S025										2
S026					?	?				2-3
S027										1
S028					?	?				1-2
S029										1
S030										5
S031										2
S032										4
S033										3
S034										1
S035										1
S036										1
S037										1
S038										3
S039										1
S040										2
S041										3
S042										1
S043										4
S044										2
S045										2
S046										1
S047										3
S048										3

>30000 birds present in colony on average.

10001-30000 birds present in colony on average.

5001-10000 birds present in colony on average.

1001-5000 birds present in colony on average.

501-1000 birds present in colony on average

101-500 birds present in colony on average.

11-100 birds present in colony on average.

2-10 birds present in colony on average.

? Likely to be present but not confirmed and number not known.

Table 6 (cont.). Allocated size classes for each species in each colony.

Colony Number	Silver Gull	Caspian Tern	Lesser Crested Tern	Crested Tern	Roseate Tern	Black-naped Tern	Little Tern	Bridled Tern	Common Noddy	Total No. of species in colony
S049					●	●				2
S050								●		1
S051					●	●		●		3
S052							●			1
S053						●				1
S054								●		1
S055					?	?		●		2-3
S056						●		●		2
S057						●	●	●		3
S058					●	●				2
S059						●				1
S060					●	●				2
S061	●							●		2
S062	●			●						2
S063			●	●	●	●		●		5
S064	●									1
S065					●					1
S066	●						●			2
S067						●				1
S068							●			1
S069								●		1
S070					●	●		●		3
S071	●			●	●	●		●		5
S072								●		1
S073								●		1

● >30000 birds present in colony on average.
● 10001-30000 birds present in colony on average.
● 5001-10000 birds present in colony on average.
● 1001-5000 birds present in colony on average.
● 501-1000 birds present in colony on average
● 101-500 birds present in colony on average.
● 11-100 birds present in colony on average.
● 2-10 birds present in colony on average.
? Likely to be present but not confirmed and number not known.

Table 6 (cont.). Allocated size classes for each species in each colony.

Colony Number	Silver Gull	Caspian Tern	Lesser Crested Tern	Crested Tern	Roseate Tern	Black-naped Tern	Little Tern	Bridled Tern	Common Noddy	Total No. of species in colony
S074							●			1
S075					●	●		●		3
S076						●				1
S077						●				1
S078							●			1
S079							●			1
S080				●		●		●		3
S081								●		1
S082	●						●			2
S083	●									1
S084	●			●						2
S085					●			●		2
S086						●				1
S087	●			●	?	?				3-4
S088								●		1
S089	●				●	●	●			4
S090	●				●	●				3
S091							●			1
S092							●			1
S093							●			1
S094						●				1
S095					●	●				2
S096		●					●			2
S097							●			1
S098					?	?				1-2
S099							●			1
S100					●	●		●		3

● >30000 birds present in colony on average.

● 10001-30000 birds present in colony on average.

● 5001-10000 birds present in colony on average.

● 1001-5000 birds present in colony on average.

● 501-1000 birds present in colony on average

● 101-500 birds present in colony on average.

● 11-100 birds present in colony on average.

● 2-10 birds present in colony on average.

? Likely to be present but not confirmed and number not known.

Table 6 (cont.). Allocated size classes for each species in each colony.

Colony Number	Silver Gull	Caspian Tern	Lesser Crested Tern	Crested Tern	Roseate Tern	Black-naped Tern	Little Tern	Bridled Tern	Common Noddy	Total No. of species in colony
S101						●				1
S102					●	●	●	●		4
S103					●	●				2
S104					●	●				2
S105					●	●				2
S106							●			1
S107						●				1
S108						●				1
S109						●				1
S110					●	●				2
S111					●	●	●			3
S112						●				1
S113						●				1
S114					●	●				2
S115						●				1
S116	●					●		●		3
S117					●	●				2
S118							●			1
S119					?	?				1-2
S120							●			1
S121	●									1
S122				●						1
S123				●						1
S124				●	?	?				2-3
S125					●	●				2
S126							●			1
S127							●			1

● >30000 birds present in colony on average.

● 10001-30000 birds present in colony on average.

● 5001-10000 birds present in colony on average.

● 1001-5000 birds present in colony on average.

● 501-1000 birds present in colony on average

● 101-500 birds present in colony on average.

● 11-100 birds present in colony on average.

● 2-10 birds present in colony on average.

? Likely to be present but not confirmed and number not known.

Table 6 (cont.). Allocated size classes for each species in each colony.

Colony Number	Silver Gull	Caspian Tern	Lesser Crested Tern	Crested Tern	Roseate Tern	Black-naped Tern	Little Tern	Bridled Tern	Common Noddy	Total No. of species in colony
S128					?	?				1-2
S129								●		1
S130					?	?		●		2-3
S131							●			1
S132							●			1
S133		●								1
S134							●			1
S135							●			1
S136							●			1
S137							●			1
S138	●						●			2
S139							●			1
S140							●			1
S141		●			●	●				3
S142							●			1
S143							●			1
S144							●			1
S145							●			1
S146							●			1
S147							●			1
T0TAL	**22**	**4**	**1**	**20**	**38-47**	**72-81**	**44**	**43**	**1**	**Av. Sp/Col 1.71-1.79**

● >30000 birds present in colony on average.

● 10001-30000 birds present in colony on average.

● 5001-10000 birds present in colony on average.

● 1001-5000 birds present in colony on average.

● 501-1000 birds present in colony on average

● 101-500 birds present in colony on average.

● 11-100 birds present in colony on average.

● 2-10 birds present in colony on average.

? Likely to be present but not confirmed and number not known.

Table 7. The number of colonies of different size classes for each species.

Species	Number of colonies of each size								
	?	●	●	●	●	●	●	●	●
Silver Gull			16	6					
Caspian Tern		4							
Lesser Crested Tern				1					
Crested Tern		1	6	1	1	6	1	2	2
Roseate Tern	9	6	12	10	2	7	1		
Black-naped Tern	9	5	40	23	3	1			
Little Tern		23	20	1					
Bridled Tern			11	16	4	10	1	1	
Common Noddy				1					
Total	**18**	**39**	**105**	**59**	**10**	**24**	**3**	**3**	**2**

●	>30000 birds present in colony on average.	●	10001-30000 birds present in colony on average.
●	5001-10000 birds present in colony on average.	●	1001-5000 birds present in colony on average.
●	501-1000 birds present in colony on average	●	101-500 birds present in colony on average.
●	11-100 birds present in colony on average.	●	2-10 birds present in colony on average.
?	Likely to be present but not confirmed and number not known.		

Table 8. Seasonality of breeding for each species (Primary in black, secondary in grey).

Species	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Silver Gull												
Caspian Tern												
Lesser Crested Tern												
Crested Tern												
Roseate Tern												
Black-naped Tern												
Little Tern												
Bridled Tern												
Common Noddy												

THE SPECIES

The Northern Territory does not have a large number of species of seabirds involved in colonial breeding, but it appears to have internationally significant colonies for some species. A total of 11 species were found to breed in colonies around the Northern Territory coast during the period of the surveys. Nine of these species are discussed in detail in this report.

There were between one and five species breeding in each of the colonies, with colonies of one or two species being the most commonly seen (Figures 5 and 6). These made up around 82% of all colonies. The average number of species per colony was approximately 1.7.

Except for two species (Lesser Crested Tern and Common Noddy) found only in one colony each and one species (Caspian Tern) found in only four colonies, the remainder were found in 19 to 82 colonies. The Black-naped Tern was found breeding in the most colonies (72 confirmed and probably some of another nine colonies in which Roseate and/or Black-naped Tern were breeding).

In Table 4 it was shown that on a whole colony basis the dominant substrate within a colony for the majority of the colonies was either sand or rock. The preference of nesting substrate chosen by each of the individual species is shown in Table 9.

The most frequent size class for an individual species was 11-100 birds. However, the size classes 2-10 and 101-500 were also well represented. Thirty-two colonies had more than 1000 individuals of a single species present. Eight of these involved numbers greater than 5000 birds, with five being of Crested Tern, two of Bridled Tern and one of Roseate Tern (Table A1, Appendix A).

Each species is discussed individually in the following sections. There is some repetition in these sections, but this is so the discussion of each species can stand alone.

Further details can be found in the individual species tables in Appendix A.

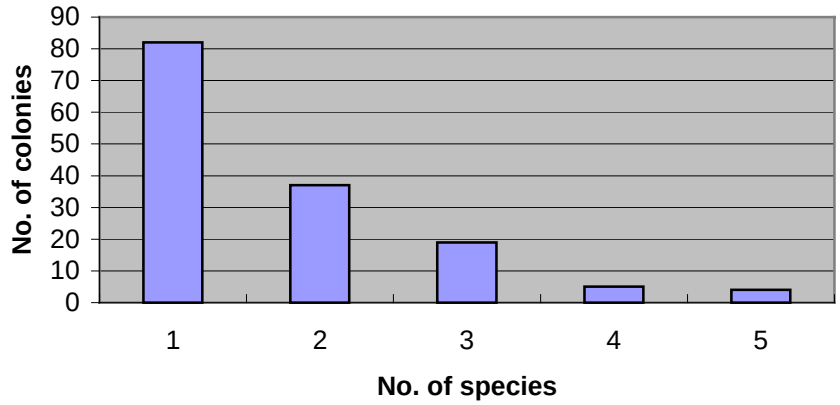

Figure 5. Frequency distribution for numbers of species per colony.

Table 9. Nesting substrate choice of individual species.

Species	Number of usages of each habitat.									
	Sand	Coral rubble	Rock	Sand & shell	Sand & coral/debris	Sand & gress/veg.	Sand & guanno	Rocks & grass/veg.	Mix of all	Not described
Silver Gull					1	7		11		3
Caspian Tern	2				1			1		
Lesser Crested Tern	1									
Crested Tern	2	1		1	3	2	3	3	3	1
Roseate Tern	3	2	9		11			8	4	1
Black-naped Tern	6	8	30		12	1		6	4	4
Roseate and/or Black-naped sp.			6			1		1		2
Little Tern	30			10	1					3
Bridled Tern			13			9		20		
Common Noddy			1							

Plate 2. Haul Round Island (S012) off Maningrida, June 1996. Photo R. Chatto.

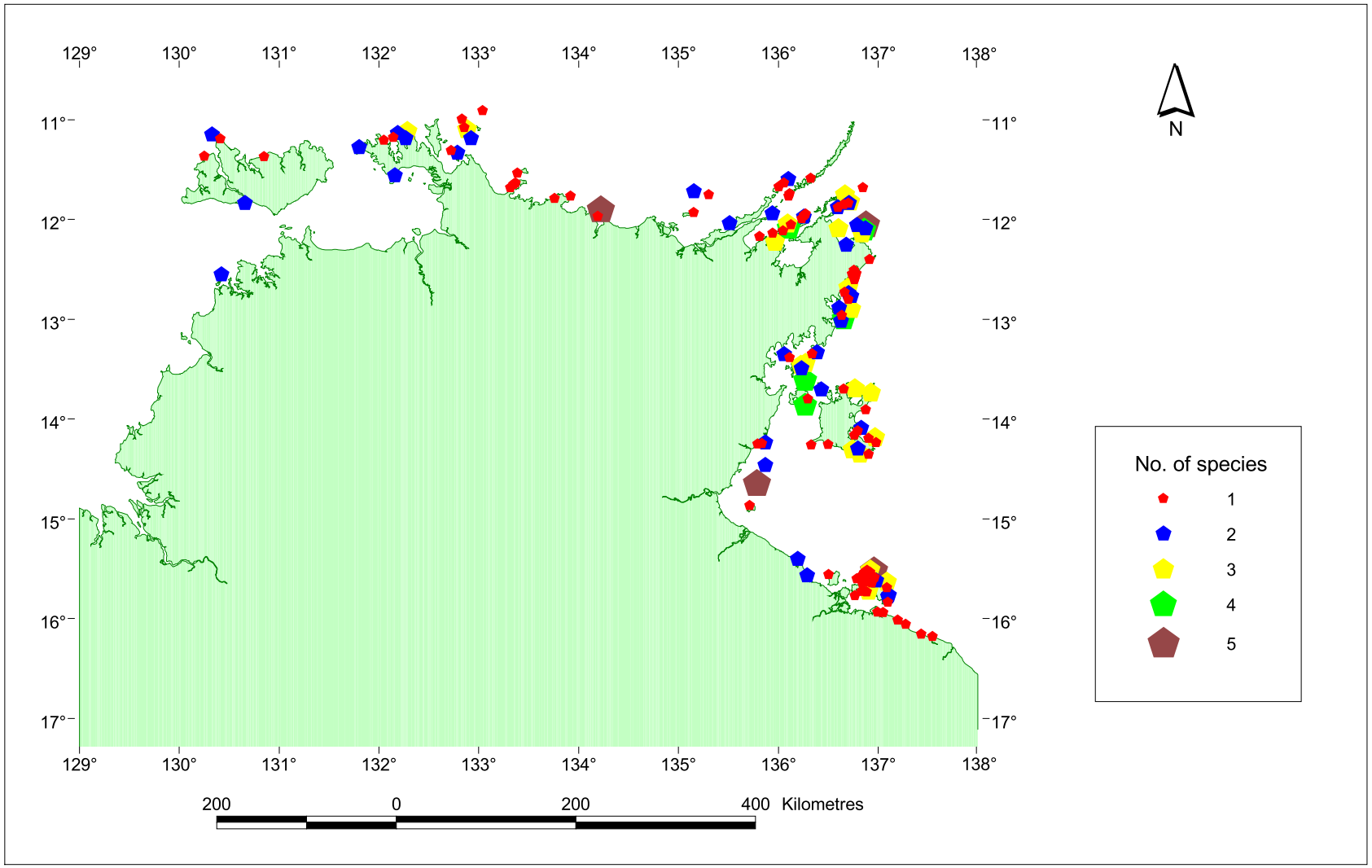

Figure 6. Location of colonies with differing numbers of species per colony.

Plate 3. Coral rubble and sandstone commonly used by Back-naped and Roseate Terns for nesting. This site (S100) is off the SE of Groote Eylant, October 1994. Photo R. Chatto.

Plate 4. Vegetated sandstone rock slopes used by Bridled Terns for nesting, on the same island (S100), October 1994. Photo R. Chatto.

The Main Species in Detail

SILVER GULL

Geographic Distribution

Non-breeding: Silver Gulls were distributed all around the Northern Territory coast, with the exception of most of Van Diemen Gulf where they were rarely seen (Figure 7). Records of Silver Gulls that may have been included in mixed tern and gull records are not included. Although these may increase the number of records, it is doubtful they would greatly increase the general distribution, as shown.

Silver Gulls tended to be mostly found on or close to the coast, being rarely seen on inland Top End wetlands. In general they were much less numerous on the west coast (except around Darwin), particularly during the breeding season when most probably departed for the breeding colonies. However, they were present on the north and east coasts all year round.

Larger concentrations (ie counts of larger groups) tended to be found close to the larger coastal towns around the Northern Territory coastline, which apart from Nguiu on Bathurst Island and Darwin, are all in the eastern half of the Top End.

Breeding: Twenty-two Silver Gull breeding colonies were confirmed during these surveys (Figure 9). These were distributed fairly evenly around the Northern Territory coast from Melville Island in the north-west to the Sir Edward Pellew Islands in the south-east, although there was a higher concentration of colonies along the east coast. Most colonies were on small islands close to the mainland or other large islands. Silver Gulls nearly always chose to nest on the same island as, or close to, nesting terns. They were seen to take eggs and young of these terns on a number of occasions, with eggs up to the size of Bridled Tern seen being swallowed whole and larger eggs being pecked open and eaten.

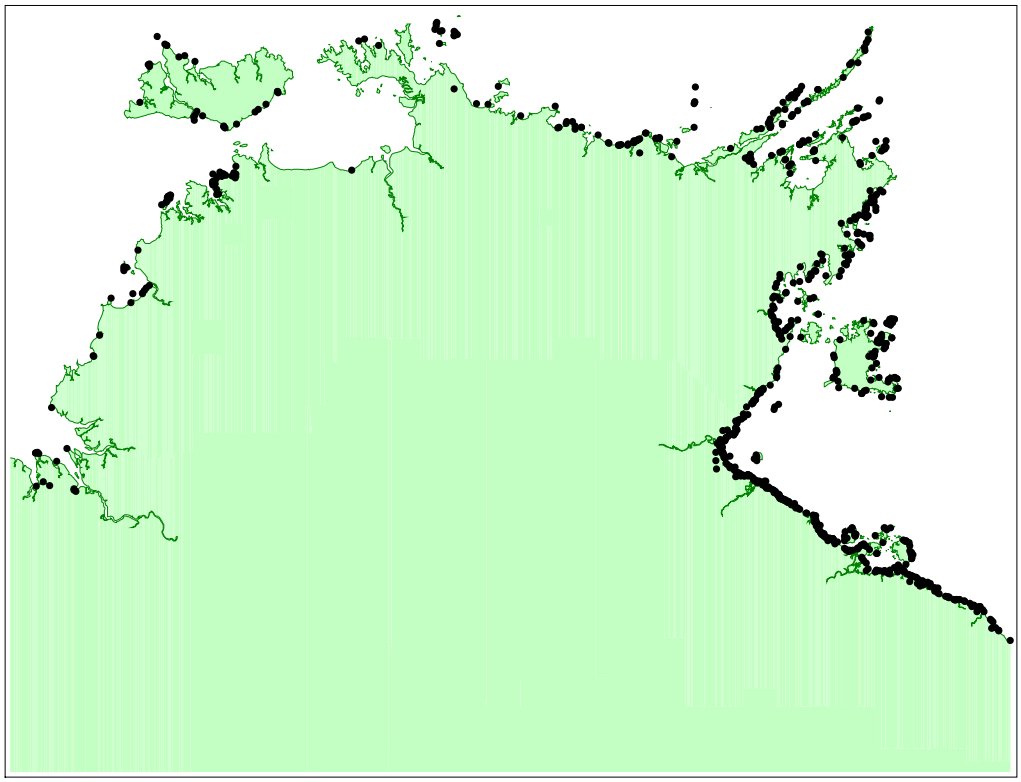

Figure 7. Distribution of all non-breeding Silver Gull records from all surveys.

Whereas all other species discussed in detail in this report rarely constructed any form of nest, Silver Gulls nearly always built a reasonable nest on the ground. In addition they nested at a much lower density over the ground than the other species. Gull nests were usually spread out and often hidden under rocks or grass tussocks. Consequently most gulls chose to nest on vegetated sand or rock islands.

Numbers

Non-breeding: Over the entire period of the surveys, non-breeding Silver Gull records totalled approximately 13% of all the records of the nine species discussed here, but only 3% of the total numbers. Thus, Silver Gulls made up a reasonable percentage of the number of the overall total records of these nine seabird species, but their total numbers were not high. They tended to be seen in small groups with the largest single group being 400 (near Darwin, October 1995). Single groups of more than 50 birds rarely seen. Over the survey period, only nineteen separate counts were made of non-breeding flocks that were in excess of 50 birds.

Breeding: The number of Silver Gulls that were nesting during a season at any given site was difficult to accurately assess because of their preference to spread out and hide most of their nests. This was further complicated by the fact that in most colonies they nested in a very asynchronous manner. Visits to gull colonies at different times during their breeding period usually showed all stages from eggs through to recently fledged young. Even with these points in mind, it appeared that not all gulls present on a given visit to a colony site were involved with a nest at the time. It is unknown whether such birds bred later in that season as follow-up visits were not often done, and there was no marking of birds carried out.

None of the Northern Territory Silver Gull colonies were very large, with most having considerably fewer than 100 birds at any visit. Only six colonies are likely to have had more than 100 birds breeding in them during the season. It is not possible with these data to accurately estimate the number of Silver Gulls breeding in coastal Northern Territory. However, it seems unlikely that there are many more than about 1000 at the present time, and it appears not all birds present around the coast are breeding each year.

In considering the combined totals for numbers recorded as breeding in the colonies, Silver Gulls made up approximately 8% of all the records but less than 1% of the combined total numbers for the nine main species discussed in this report.

The larger colonies tended to be in the south-east, although the largest colony was off Melville Island in the north-west. Although up to 800 gulls were seen at this site during one visit, it was clear that no where near this number were breeding at that time. The site was not visited again that season. The size of this particular colony is probably related to its close proximity to Darwin and the consequent access to food which gulls have learnt to get from around settlements. There is certainly an exodus of gulls from Darwin during their breeding season and when they return there are birds with juvenile plumage present among the flocks (author pers. obs.).

The number of Silver Gulls regularly breeding around the coast of the Northern Territory appears much lower than many of the colonies recorded in Higgins and Davies (1996) in southern Australia.

Further details are in Table A2 of Appendix A.

Seasonality.

Non-breeding: Even with the constraints discussed in the methods it appears the number of Silver Gulls around the Northern Territory coast is reasonably consistent throughout most of the year (Figure 8). There is a fair amount of asynchrony in breeding for this species and this would lessen the effects of including breeding birds that were recorded away from colonies. Figure 8 does show an apparent increase in July and a decrease in August. The increase is likely to be real and be a result of an influx of young birds into the population after the main breeding period. However, the low figure in August is probably because most of the August surveys coincided with areas where Silver Gull numbers are always low. The possibility of variations along different sections of the coast, either between or within seasons, has not been analysed in detail (but see comment above about Darwin).

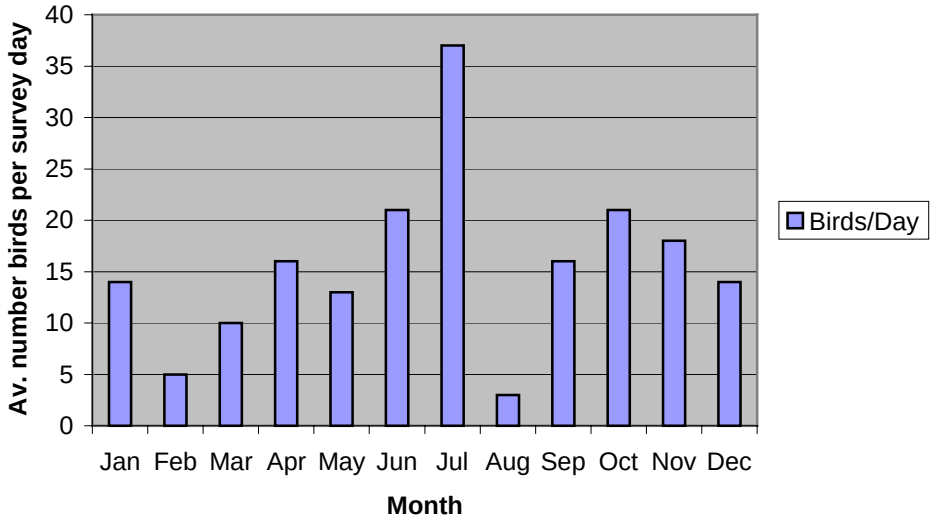

Figure 8. Average number of non-breeding Silver Gulls recorded per day for each month.

Breeding: Silver Gull breeding sites around the Northern Territory coast seem to be used fairly consistently, with most colonies being active in each year they were checked. Not including the visit that initially located a previously unknown colony, the 22 gull colonies were revisited 25 times in subsequent years. There was only one instance of a colony that could be confirmed as inactive for the complete season.

The majority of Silver Gull breeding occurred between March and August, however there were at least two instances of eggs laid in September. These were not colonies that were confirmed to also be active in the earlier part of the year, as is the case for some of the other species discussed below. Of 47 records of Silver Gull breeding that spanned between January and October, there were 22 recorded in the month of May. At colonies where eggs and/or chicks were noted, it is possible to suggest minimum length breeding seasons for each of those records, based on incubation and fledgling times (Higgins and Davies 1996). These include: March to April (1), March to June (5), April to June (2), April to July (9), May to July (1), May to August (2), July to September (1) and September to December (2).

With the asynchronous nature of breeding within the Silver Gull colonies around the Northern Territory coast and a certain amount of variation between colonies it is difficult to identify a precise breeding season from these results, but in general it appears most breeding begins in about March/April. Most breeding has been completed by about August, with some colonies continuing right through and others starting a little later than March/April. The two colonies breeding between September and November appeared to simply be much later in starting.

Comments relating to eggs/young of Silver Gulls, summarised from field notes, are given in Table A3 of Appendix A.

Other Reports of Breeding in the NT (south of the Top End)

Blakers *et al.* (1984), Higgins and Davies (1996) and Storr (1977) do not record Silver Gull breeding south of the Top End in the Northern Territory.

Extensive surveys conducted in the wetlands of the sub-humid tropics of the Northern Territory (defined as the section of the Northern Territory between the 15 and 20 degree latitudes), found small numbers of Silver Gull but could not confirm breeding (Jaensch 1994). These surveys were carried out between April and September of 1993 after significant regional rains had caused substantial flooding and attracted a large number of waterbirds.

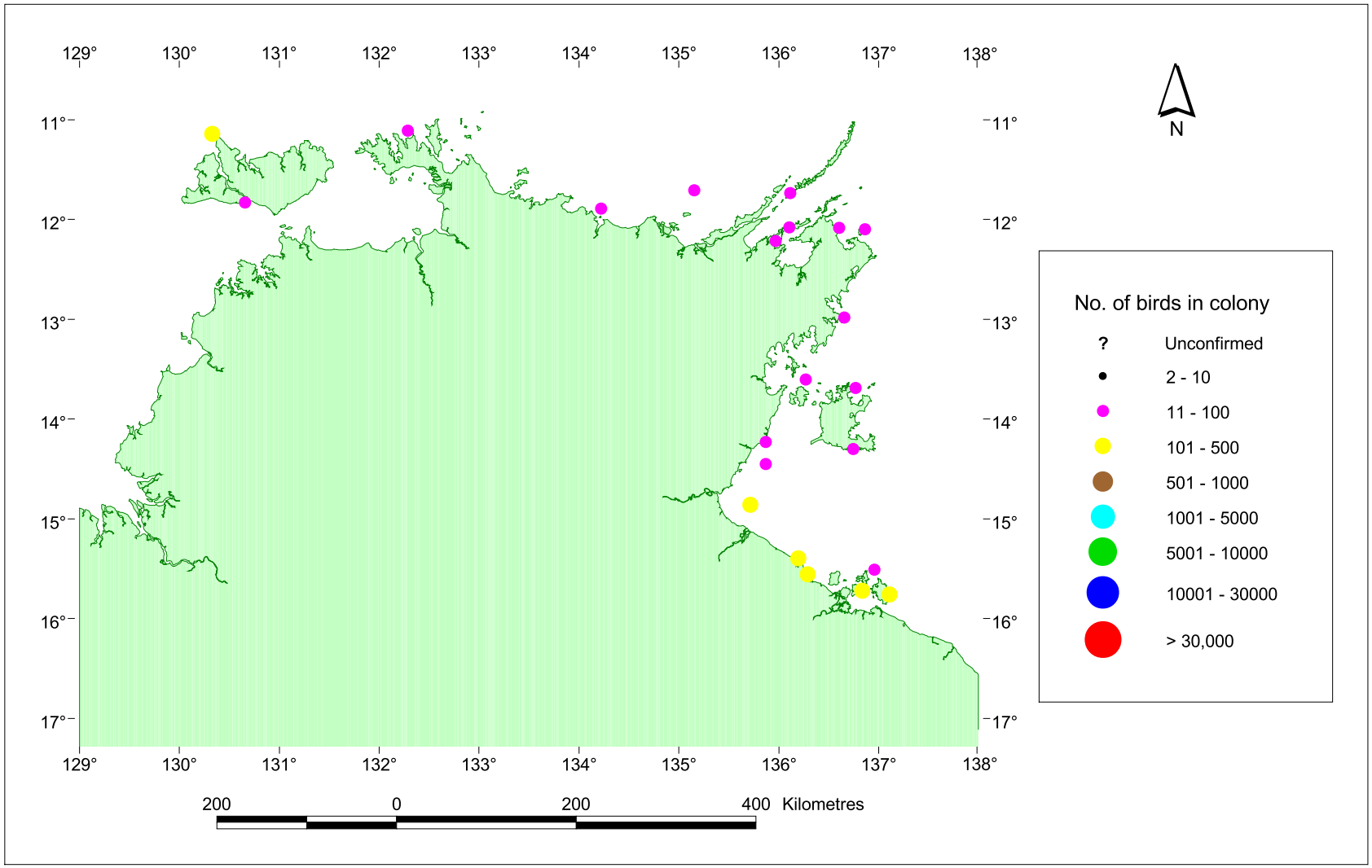

Figure 9. Location and size of colonies containing Silver Gulls.

CASPIAN TERN

Geographic Distribution

Non-breeding: Caspian Terns were more commonly seen on the eastern and western coasts of the Northern Territory, and except for the area between Maningrida and Elcho Island, they were much less often seen across much of the northern coast (Figure 10). They were also not commonly seen in the far south-west. Records of Caspian Terns that may have been included in mixed Gull-billed/Caspian Tern records are not included. Although these may increase the number of records, it is doubtful they would greatly increase the general distribution, as shown.

Like Silver Gulls, Caspian Terns tended to be more commonly seen on the coast or on saline wetlands near the coast in the Top End, but unlike Silver Gulls, Caspian Terns tended to be absent or rare on the outer islands and the more exposed oceanic beaches.

Records of larger groups of Caspian Terns were from three distinct areas around the Northern Territory coast. These included the area between North Perron Island and the western side of Van Diemen Gulf, the area between Maningrida and Elcho Island and the area from about Maria Island to the Queensland border.

Breeding: Caspian Tern were found breeding in four colonies during these surveys (Figure 12). All were on small islands along the eastern coast. All records comprised of a single nest, making the term 'colony' a bit of a misnomer, however they were all associated with other terns breeding in true colonies. Two nests were in a depression on the sand and two were on rock, with a minimal amount of accompanying nesting material.

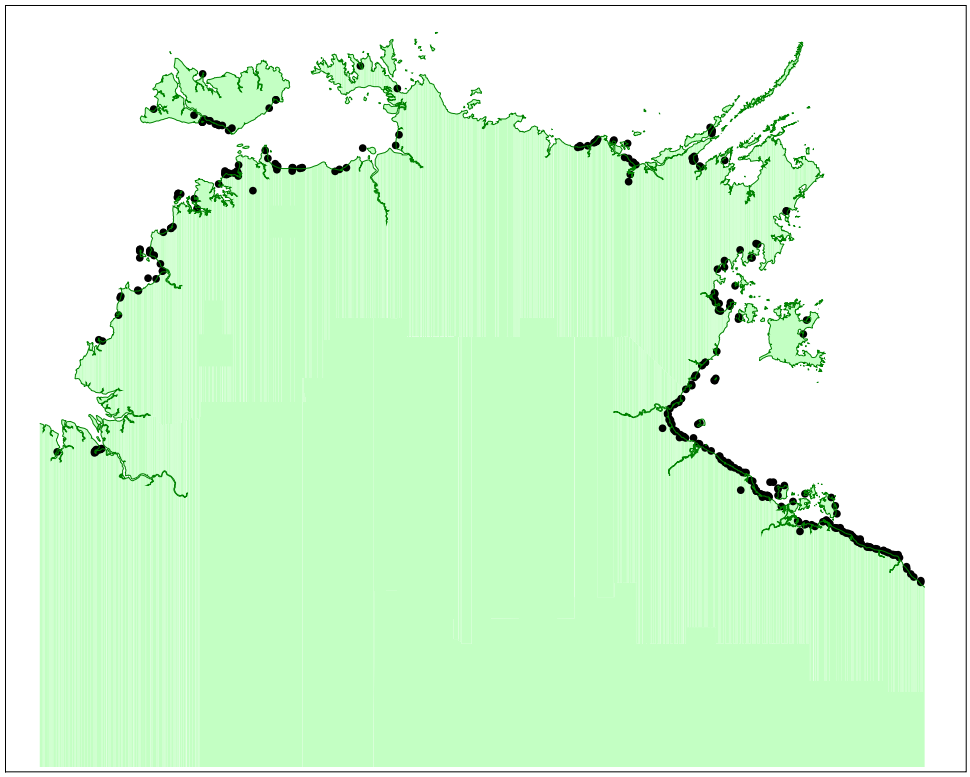

Figure 10. Distribution of all non-breeding Caspian Tern records from all surveys.

Numbers

Non-breeding: Over the entire period of the surveys, non-breeding Caspian Tern records totalled approximately 13% of all the records of the nine species discussed here, but only 4% of the total numbers. Thus, like Silver Gulls, Caspian Terns were reasonably often seen but rarely in large numbers. Twenty-seven separate counts were made of non-breeding flocks in excess of 30 Caspian Terns during the project, but they tended to be mostly seen in ones and twos, through to small groups. The largest single group of Caspian Terns was 115 which was seen in an open saline splash just behind the coast near Bing Bong in the south-east in April of 1998.

Breeding: As mentioned above, all 'colonies' were of a single pair. Thus it is possible that other Caspian Tern breeding, that was not associated with another colony of different species could have been missed. Certainly some birds in breeding plumage, and occasionally even some with begging young, were seen in other locations around the Northern Territory coast. These may have bred locally or they could have been birds returning from breeding elsewhere. It unlikely that the number of Caspian Tern nesting sites that were missed would have been anywhere near high enough to account for the numbers present in coastal Northern Territory. Consequently it appears that most Caspian Tern leave the Northern Territory coast to breed elsewhere. It is also likely that they leave the Top End and possibly even the Northern Territory to breed.

In considering the combined totals for numbers recorded as breeding in the colonies, Caspian Terns made up approximately 1% of the records and less than 0.01% of the combined totals for the nine main species discussed in this report.

Higgins and Davies (1996) and Blakers *et al* (1984) record Caspian Tern breeding as widespread but scattered along coastal sites and rare inland. Most recorded breeding sites are in southern Australia. These surveys have shown that the Northern Territory coast is not significant for Caspian Tern breeding.

Further details are in Table A4 of Appendix A.

Seasonality.

Non-breeding: Non-breeding Caspian Tern numbers appeared fairly consistent throughout most of the year except for slightly lower numbers in January and February, and higher numbers in July (Figure 11). There were quite a few surveys done in the main Caspian Tern areas during January and February so this may represent a departure of some birds from the Northern Territory, possibly for breeding elsewhere, rather than a lack of coverage of suitable areas. The high July figure, however, is a little more difficult to explain, particularly in light of the other figures for the months between March and December. Although this high July figure may represent in influx of juvenile birds into the population from breeding further south, perhaps from colonies such as Lake Gregory (see below), there is no obvious reduction in numbers prior to this to account for birds leaving to breed. The possibility of variations either between or within season, or along different sections of the coast, has not been analysed in this report. As such, irregular departures or departures from one section of coast will not have shown up when looking at all individual months totaled together.

Breeding: Two of the four sites had eggs in May while the other two had eggs in October. It is possible that the small amount of Caspian Tern nesting around the Northern Territory coast is influenced by when other species of seabird chose to nest at that particular site. None of the four sites were checked more than once so it is unknown whether they are used each season.

Comments relating to eggs/young of Caspian Terns, summarised from field notes, are given in Table A5 of Appendix A.

Other Reports of Breeding in the NT (south of the Top End)

Blakers *et al* (1984), Higgins and Davies (1996) and Storr (1977) do not record Caspian Tern breeding south of the Top End in the Northern Territory.

Extensive surveys conducted in the wetlands of the sub-humid tropics of the Northern Territory (defined as the section of the Northern Territory between the 15 and 20 degree latitudes), found small numbers of Caspian Tern but could not confirm breeding (Jaensch 1994). These surveys were carried out between April and September of 1993 after significant regional rains had caused substantial flooding and attracted a large number of waterbirds. Follow up surveys of part of this area (Lake

Sylvester) found 20 nests in May 1995 (Bellchambers, pers. comm.). This does not suggest a suggest a major departure of Caspian Terns from the Top End, however, the five hundred breeding pairs located on Lake Gregory in May 1986 (Jaensch and Vervest, 1990) may begin to account for some of the Top End birds. This colony is only just over the WA border from the Northern Territory and not far south from the Top End, so this and a few more such northern inland colonies could account for a significant proportion of Northern Territory coastal birds. Further the irregularity of such inland colonies may explain the lack of a regular seasonal departure of Caspian Terns from the Top End coastal areas.

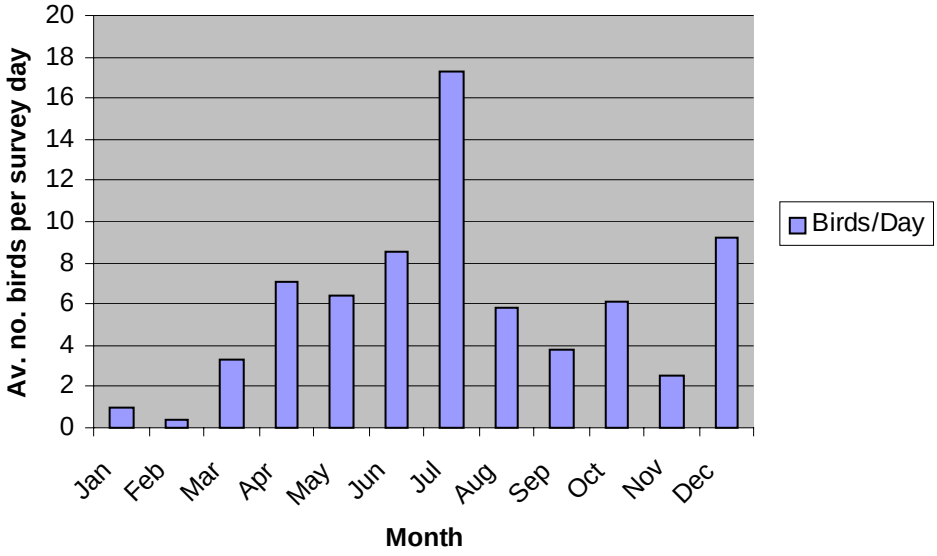

Figure 11. Average number of non-breeding Caspian Terns recorded per day for each month.

Plate 5. Caspian Tern nesting. Photo D. Hollands.

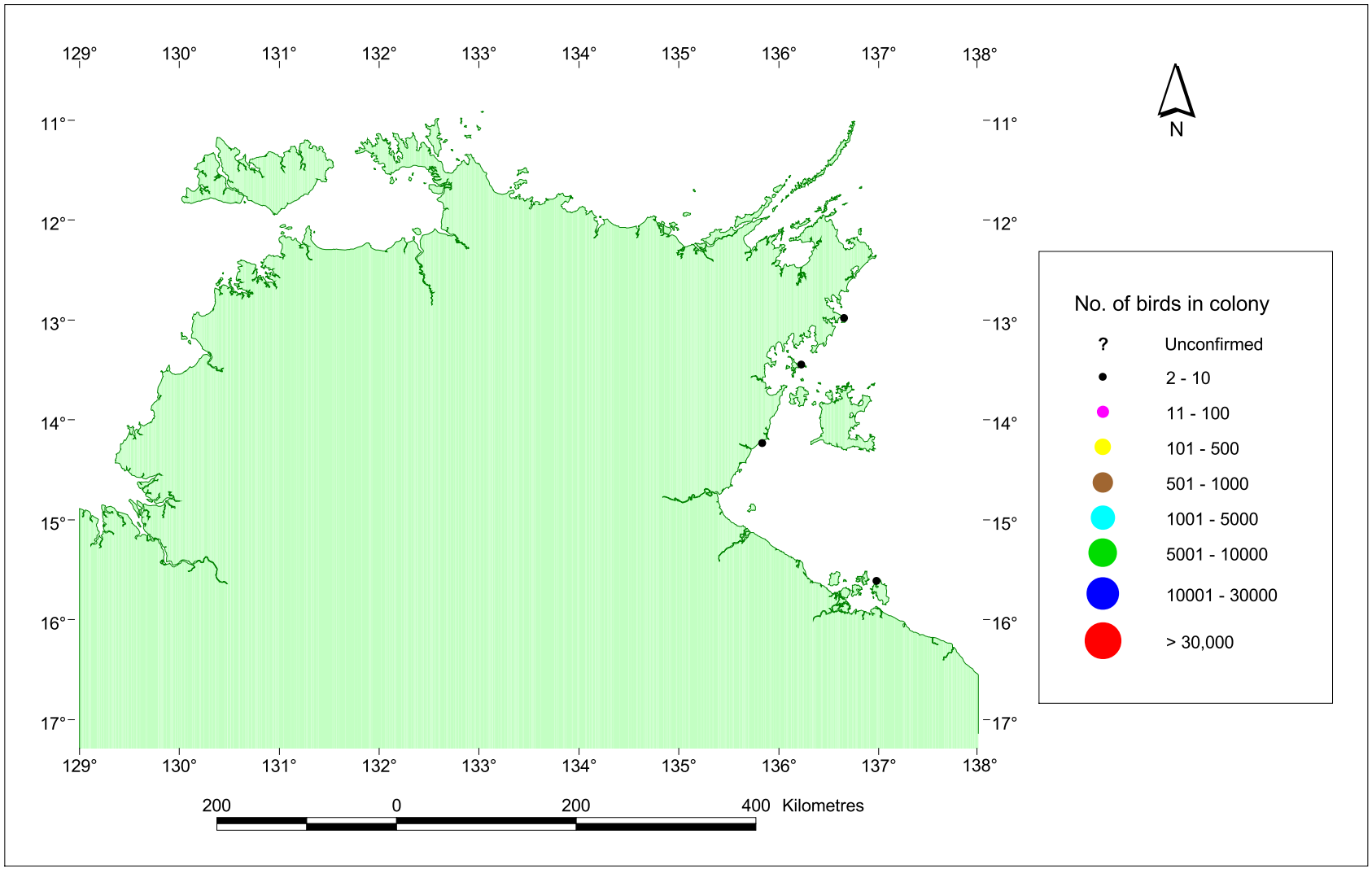

Figure 12. Location and size of colonies containing Caspian Tern.

LESSER CRESTED TERN

Discussing Lesser Crested Terns, in terms of distribution, numbers and seasonality of non-breeding birds, is complicated by the fact that many aerial records were recorded as Crested and/or Lesser Crested Terns. Whereas confirmed Lesser Crested Tern records only were used to discuss distribution and seasonality, the large number of records which were confirmed to the individual species level allowed a ratio of each confirmed species to be calculated and then used to breakdown the grouped records to numbers of each individual species. This was used in the section relating to numbers. Although this further approximates statements made here, the large number of these records, and the fact that they were made over the entire survey area and period of the project would lessen the chance of major error.

Geographic Distribution

Non-breeding: Confirmed Lesser Crested Tern records showed they occurred around most of the Northern Territory coast. However, they were absent or rare in the far south-west, from Van Diemen Gulf and the Tiwi Islands, and from parts of NE Arnhem Land (Figure 13). Even if some of the records listed as Crested and/or Lesser Crested Tern, included Lesser Crested Tern, the former two areas mentioned would still have had few or no Lesser Crested Terns. The highest density of confirmed Lesser Crested Tern records and the larger groups were along the coast to the south-west of Darwin. Lesser Crested Terns were exclusively coastal in the Top End.

Larger flocks of Lesser Crested Terns were quite clearly distributed in four locations. The majority of these were in the area between Darwin and North Perron Island, while the others were essentially in the north-west, the north-east and the south-east corners of the Top End.

Breeding: Only one Lesser Crested Tern breeding colony was found during these surveys (Figure 14). It was on an offshore island in the south-east which had four other species of tern also breeding at the site. Although the Lesser Crested Tern bred at the same time as three of these other species, the Lesser Crested Terns were clearly spatially and temporally separated from Crested Terns which also bred on the island. Extensive sampling of other colonies also failed to show any Lesser Crested Tern present among the breeding Crested Terns. Despite this it cannot be ruled out that small numbers of Lesser Crested Tern may breed among some other Crested Tern colonies around the coast.

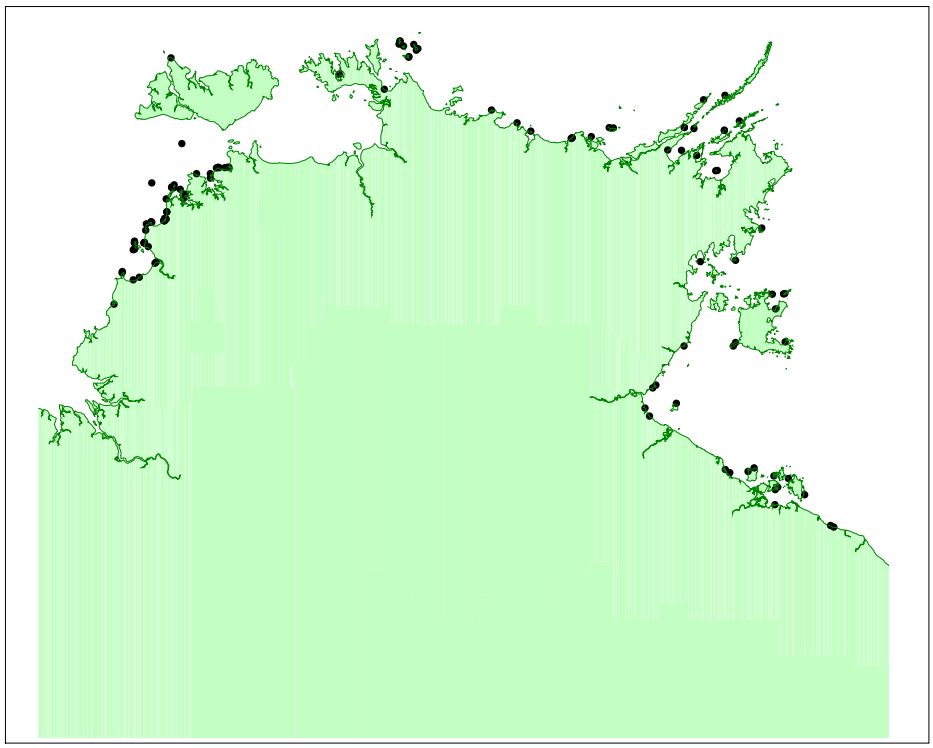

Figure 13. Distribution of all non-breeding Lesser Crested Tern records from all surveys.

Numbers

Non-breeding: Over the entire period of the surveys, non-breeding Lesser Crested Terns records totalled approximately 14% of all the records of the nine species discussed here, and 19% of the total numbers. Consequently non-breeding Lesser Crested Terns still made up a reasonable percentage of the records and the numbers of these species of seabirds. Lesser Crested Terns tended to be seen in small to medium sized groups through to the largest single group of 750 birds. They were often associated with Crested Terns, but not always. They were sometimes seen on their own, and at other times associated with Gull-billed Terns. Without including grouped records of Lesser Crested Tern, twenty-six separate counts were made of non-breeding flocks in excess of 100 Lesser Crested Terns during the project.

Breeding: The single colony of Lesser Crested Terns comprised approximately 440 birds, with at least 150 nests. This breeding site certainly does not account for the numbers of Lesser Crested Tern present in coastal Northern Territory. Consequently it appears that at least some leave the Northern Territory coast to breed elsewhere, possibly to Queensland and Western Australia where at least some of the colonies reported in Higgins and Davies (1996) are considerably larger. It is also possible that some Lesser Crested Tern breeding may have occurred in isolated patches within large Crested Tern colonies that were not thoroughly checked. Even if this was occurring it is unlikely to account for all the non-breeding Lesser Crested Terns in the Top End because the large number of birds checked in Crested Tern colonies throughout the surveys did not reveal any Lesser Crested Terns. Further, Lesser Crested Terns were not often seen in breeding plumage away from this colony or at other times of the year.

In considering the combined totals for numbers recorded as breeding in the colonies, Lesser Crested Terns made up less than 0.2% of the records and less than 0.1% of the combined totals for the nine main species discussed in this report.

Although other authors (eg J. McKean, *pers. comm.*) suggest Lesser Crested Tern probably breed at a number of locations around the Northern Territory coast, this was found not to be the case in these surveys. The colony located in these surveys becomes the first confirmed Lesser Crested Tern breeding colony in the Northern Territory.

The details of this colony are shown in Table A6 of Appendix A.

Seasonality.

Non-breeding: Lesser Crested Tern were found in all months except for January. However, aerial records of the Crested/Lesser Crested group from known Lesser Crested Tern areas in this month may have included Lesser Crested Terns. There were insufficient records of Lesser Crested Terns to comment on any monthly trends or seasonality in the use of different areas at this stage. There must be some seasonal movement because of the low amount of breeding in the Top End compared to the number of birds present. Observations from a number of surveys to the south-west of Darwin suggested that numbers may have been higher in the dry season. Crawford (1980) in a more intensive study suggested that numbers of Lesser Crested Terns increased around Darwin between July and August, which supports the above suggestion. He also noted a decrease over the wet season.

Breeding: Although the Lesser Crested Tern breeding site was checked on six occasions over three different years, it was only checked once around the time that they were recorded breeding. At this site the Lesser Crested Tern commenced breeding in late August to early September. This is clearly a different season to that of Crested Terns in the Northern Territory.

Comments relating to eggs/young of Lesser Crested Tern, summarised from field notes, are given in Table A7 of Appendix A.

Other Reports of Breeding in the NT (south of the Top End)

Lesser Crested Terns are exclusively coastal birds so there would not be expected to be any breeding south of the Top End in the Northern Territory and none has been reported.

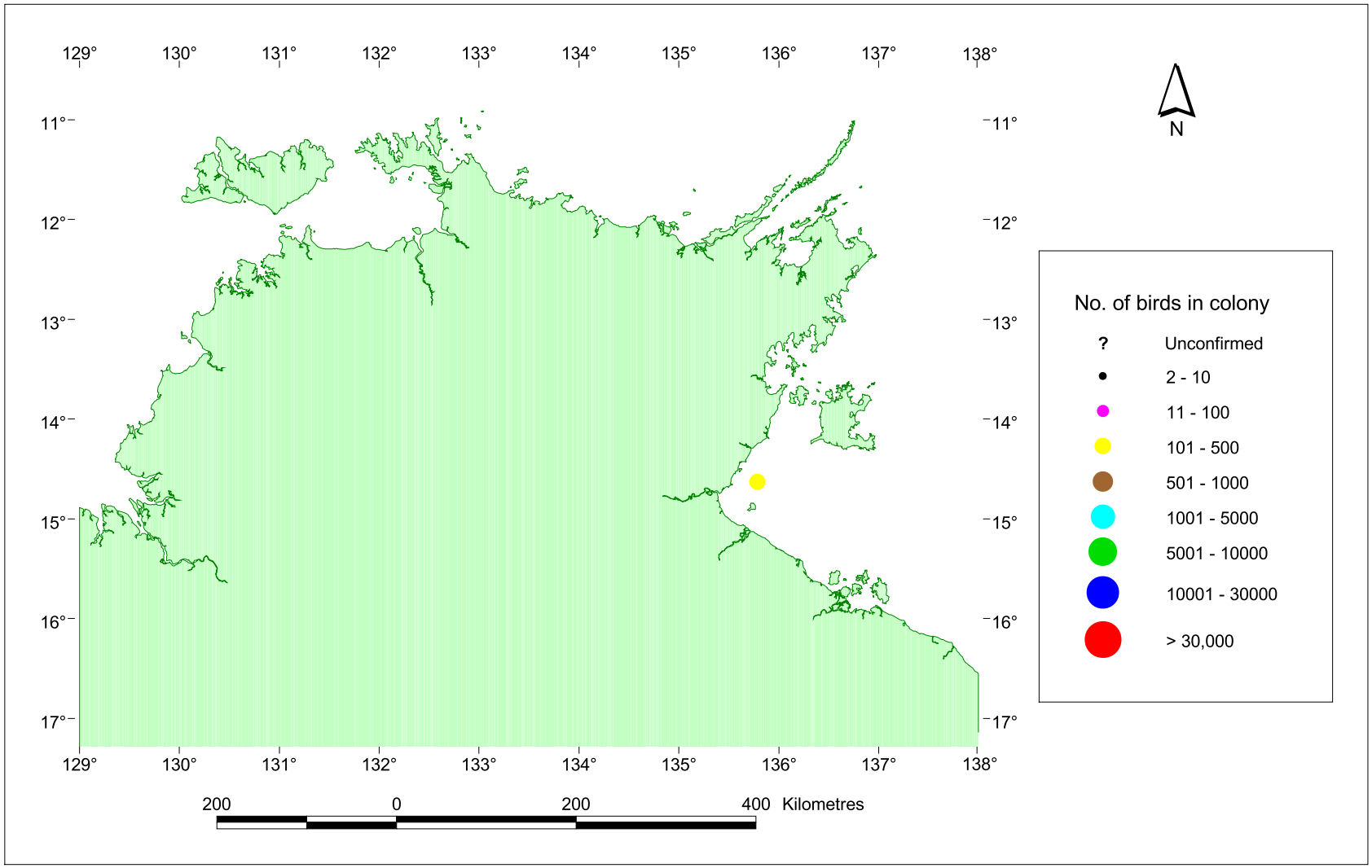

Figure 14. Location and size of colonies containing Lesser Crested Tern.

Plate 6. Hidden nest typical of Silver Gulls. This site (S071) is on one of the Sir Edward Pellew Islands, May 1999. Photo R. Chatto.

Plate 7. Open, dense nesting of Crested Terns. This site (S009) is on a small island off the NW of Melville Island, May 2000. Photo R. Chatto.

CRESTED TERN

Discussing Crested Terns, in terms of distribution, numbers and seasonality of non-breeding birds, is complicated by the fact that many aerial records were recorded as Crested and/or Lesser Crested Terns. Whereas confirmed Crested Tern records only were used to discuss distribution and seasonality, the large number of records which were confirmed to the individual species level allowed a ratio of each confirmed species to be calculated, and then used to breakdown the grouped records to numbers of each individual species. This was used in the section relating to numbers. Although this further approximates statements made here, the large number of these records, and the fact that they were made over the entire survey area and period of the project would lessen the chance of major error.

Geographic Distribution

Non-breeding: Crested Terns were the most widespread and numerous of any the seabird species discussed in this report. They were seen all around the Northern Territory coast and islands, although they were less often seen around the southern part of Van Diemen Gulf and in the south-west (Figure 15). They were less numerous on the west coast, particularly during the breeding season when most probably departed for the breeding colonies to the north of Darwin. However, they were present in large numbers on most of the north and east coasts all year round.

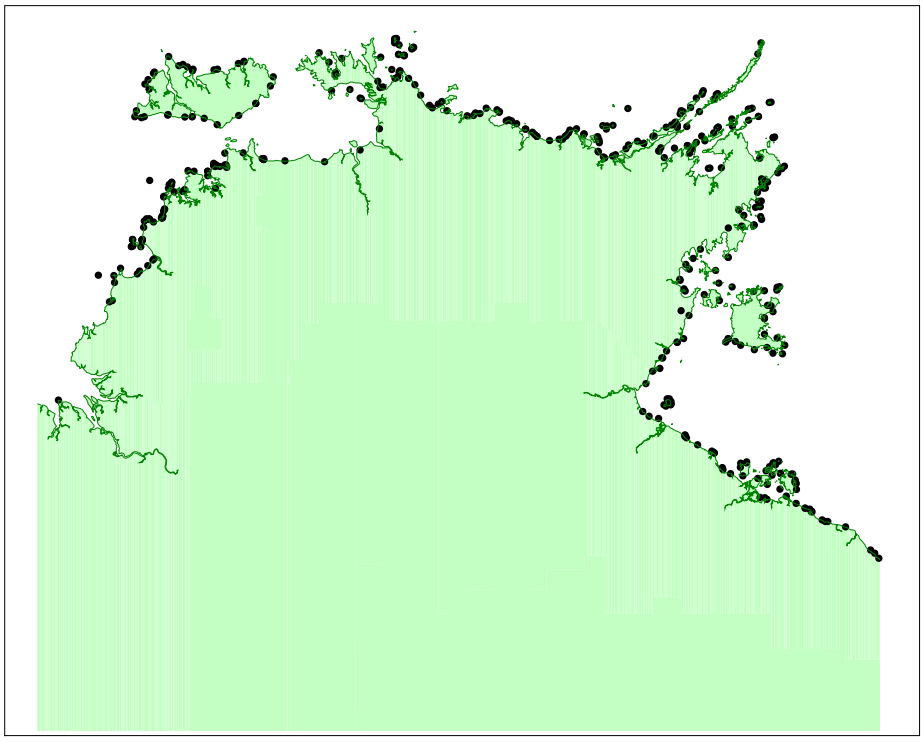

Figure 15. Distribution of all non-breeding Crested Tern records from all surveys.

Breeding: Twenty Crested Tern breeding colonies were confirmed during these surveys (Figure 17). These were distributed around the Northern Territory coast from Melville Island in the north-west to the Sir Edward Pellew Islands in the south-east, although they were mainly grouped in the north-west, the north-east and the south-east. Apart from one colony they were all on small islands. The one exception was on North-West Crocodile Island, which is quite a large island, but one that is well out to sea. Most of the larger Crested Tern colonies were either on islands that only they used or that they were the numerically dominant species. When other species were also present it was often Silver Gulls.

Most of the larger colonies appeared to remain faithful to a single island, although they often shifted location slightly within the island in different years. Similarly, when colonies nested on one of a group of close together small islands they would sometimes shift between islands in different years, but still remained in the same general area.

Crested Terns made little effort to construct a nest. Eggs were laid onto a small depression in the sand or straight onto other substrates. Some nesting occurred among vegetation but most were in open areas on sand, sand/guano, coral rubble or sparsely vegetated (grass or vine) rocky areas.

Numbers

Non-breeding: Over the entire period of the surveys, records of non-breeding Crested Terns totalled approximately 50% of all the records of the nine species discussed here, and 54% of the total numbers. Thus they were clearly the dominant seabird in terms of the number of places they were seen and their total numbers. They tended to be seen at daytime roosts of groups that numbered from a few birds through to many hundreds. The most common roosting flocks were around 200 and the largest single group recorded was 1200. Without including records grouped as Crested/Lesser Crested Terns, forty-six separate counts were made of non-breeding flocks in excess of 200 Crested Terns during the project. During the months September to November, many of these groups were recorded in close proximity to each other in certain areas, roosting at regularly spaced intervals and totalling many thousands of birds in an area. These groups probably included the young of that year and were found in areas such as the rocky points along the coast east of Cobourg Peninsula, the beaches south of Cape Arnhem and the sandy islands exposed at low tide off Vanderlin Island in the Sir Edward Pellew group. These sites tended not to be far from larger breeding colonies.

Breeding: Breeding colonies of Crested Terns around the Northern Territory coast were very large, most having in excess of 5000 birds and two (S009 and S071) having in excess of 50000 birds. These latter two colonies appear to be the largest ever recorded in the world if Walker (1992) is correct in saying the colony of 13000-15000 pairs in the Wellesley was the largest documented. There were only the occasional colonies of low tens and a couple with around 2000 birds. Colonies of Crested Terns were always very densely packed, even though many of the larger colonies had a number of sub-colonies at the sites. Counts in 1994 suggested that over 60000 Crested Terns were breeding around the Northern Territory coast. Although it is possible that the two largest colonies could have been underestimated in that year, the combined total of these two sites alone in 1999 was more than 100000 birds. This could indicate that 1999 was a particularly good year, or perhaps (as also seen in colonies S013 and S030) there is becoming an increasing number of Crested Terns around the NT coast.

In relation to the breeding colonies, Crested Terns made up approximately 6% of the records and 54% of the combined totals for the nine main species discussed in this report. Thus although the number of colonies is not high compared with some species, Crested Terns have the highest number of nesting individuals of all species in the Northern Territory.

With their large egg size and their ease of collection, there are a number of Crested Tern sites that are regularly harvested by Aboriginal people. However, at most large colonies they do not, or more likely cannot, collect all the eggs. Despite this, success (at least to the level of flying young) of Crested Tern colonies appeared quite good, and better than most of the other species (although it is difficult to know with Bridled Terns). Numerous trips to Crested Tern colonies after nesting was completed regularly showed evidence of a lengthy period of use of the site, combined with large numbers of hatched eggs and very few dead young. There were occasional visits that revealed large numbers of dead young, from small chicks through to nearly fledged young. The reason for the failure at the more remote of such sites is unknown but is more likely to be natural rather than anthropogenic. Despite such observations made during these surveys, which involved very little disturbance to the sites, the detailed study of the site done by Watanabe (1999) during 1998 showed only a 5.5% breeding success rate. The disturbance created by spending such a long period of time at the site by this researcher is likely (and mentioned by him in his report) to be directly related to the poor success of this site in that year.

Silver Gull predation of Crested Tern eggs was seen at a number of sites, and White-Bellied Sea-Eagles sometimes nested near or even within colonies, and predated on both young and sitting adults. Several sea eagle feeding roosts were found during the surveys with hundreds of tern carcasses at them. Turtle nesting tracks were also seen going through some colonies.

Blakers *et al.* (1984) document numerous records of Crested Tern breeding colonies in eastern and southern Australia but few in northern Australia. Higgins and Davies (1996) mention four of the colonies discussed in this report. It appears that Crested Tern colonies around the Northern Territory coast are considerably and consistently larger than colonies in other parts of Australia.

Further details are in Table A8 of Appendix A.

Seasonality.

Non-breeding: Crested Terns appeared to be present on the Northern Territory coast all year round, although perhaps in lower numbers in the wet season (Figure 16). From April to July there was a continual decrease in numbers as more birds moved to breeding colonies and were not counted in non-breeding situations. The increase in August corresponds to adults and young leaving the breeding colony areas, and then these numbers remain relatively constant through until December, except for an increase in November. The reason for this is unknown and is more likely due to survey bias rather than a real increase in numbers.

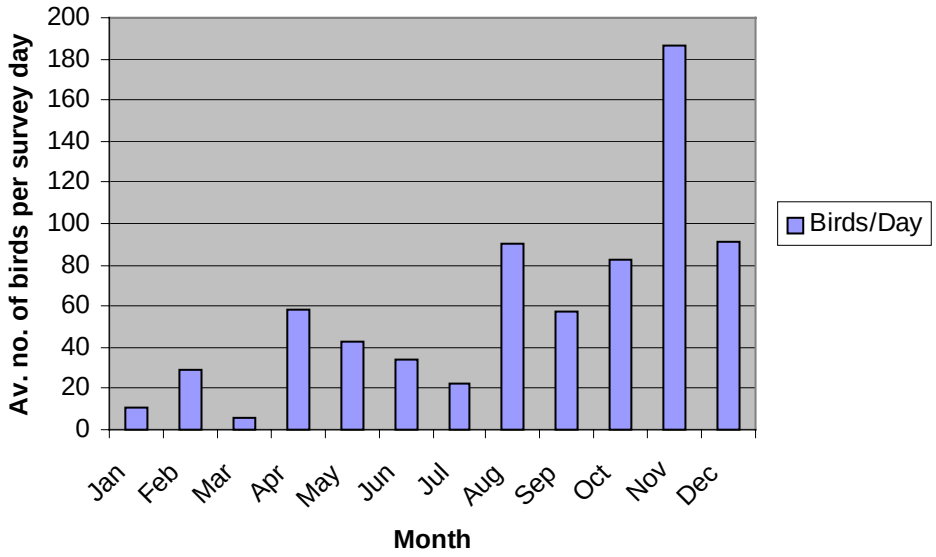

Figure 16. Average number of non-breeding Crested Terns recorded per day for each month.

Breeding: Crested Tern breeding sites around the Northern Territory coast seem to be used very consistently. Most of the larger colonies in particular were not only active in each year they were checked but had long histories of regular use, according to long term locals. Some of the smaller colonies that may often represent excess birds from a large nearby colony, and/or younger birds, were both irregular and less likely to succeed. One such colony is documented in Whiting *et al.* (1997), but not recorded here because it was never a successful site during the course of these surveys.

Crested Tern breeding occurred consistently between March and July around the Northern Territory coast, regardless of the timing of other species nesting at the particular site. Birds began arriving in numbers in breeding plumage in March and April, with most eggs being laid from late April to early June throughout the Northern Territory. Of 34 records of Crested Tern breeding that spanned between February and July, there were 17 recorded in the month of May. The majority of each particular colony laid at around the same time, though small sections of birds at larger sites sometimes started earlier or later within this period. Most colonies were finished, with birds sometimes roosting nearby and other times leaving the island, by July.

Comments relating to eggs/young of Crested Terns, summarised from field notes, are given in Table A9 of Appendix A.

Other Reports of Breeding in the NT (south of the Top End)

Crested Terns are exclusively coastal birds so there would not be expected to be any breeding south of the Top End in the Northern Territory and none has been reported.

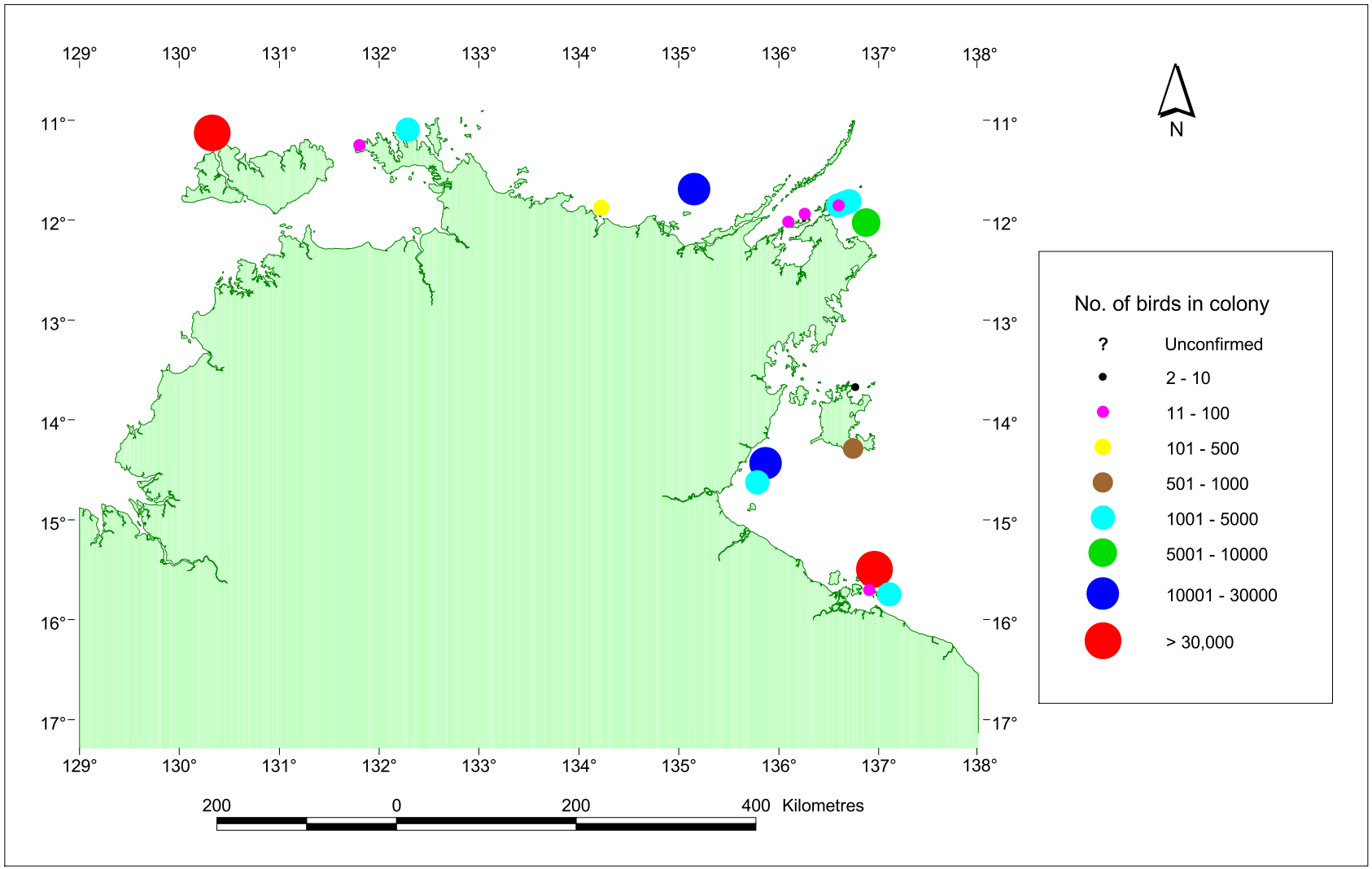

Figure 17. Location and size of colonies containing Crested Tern.

ROSEATE TERN

Geographic Distribution

Non-breeding: Roseate Terns were recorded on only one occasion at a site well away from any of their known breeding colonies. This was of a single bird on a small, tide-exposed sand island off North Perron Island that is on the western coast of the Northern Territory. The few other non-breeding records of Roseate Terns were all within the immediate vicinity of known breeding sites and, except for a couple of instances, very close to the time of the year that those sites were active. The exceptions involved birds recorded at two sites during April on the more outer islands that were north-east of Croker Island. These birds may have been arriving earlier than normal for breeding or they were oceanic hunting birds using the nearest land for a rest. These islands are among the most northerly small islands off the Northern Territory coast and are getting out towards deeper oceanic waters, so they may attract occasional roosting of species such as Roseate Terns that appear to mostly occur around the Northern Territory inshore waters in relation to breeding.

A number of seabird roosting sites located on some of the outer islands appeared to be night roosts. Few birds were seen there at any of the daytime checks. None of these islands were camped on over night and as the helicopters or planes had to be back at base before last light, none of these island roosts were checked on or after dusk. Some of these roosts may have involved species such as Roseate Terns coming in to roost at night, at times outside of their breeding seasons. Such behaviour was suspected with Frigatebirds on Bare Sand and Quail Islands, west of Darwin (Whiting *et. al.* 1997).

Breeding: Thirty-eight Roseate Tern breeding colonies were confirmed during these surveys (Figure 18). A further nine colonies where either Roseate and/or Black-naped were breeding were also located, but identification to species level could not be done from the air. All confirmed Roseate Tern breeding sites were on islands. A small number of colonies were found around Cobourg Peninsula and the islands to the east of Croker Island. Another was on Haul Round Island, near Maningrida on the central north coast, but the majority of colonies were found on islands from NE Arnhem Land down the east coast to the Sir Edward Pellew Islands.

Most Roseate Tern colonies were on small islands that also had other terns breeding at the same time. These other species nearly always included Black-naped Terns, with the two species often being mixed together at a site.

Some Roseate Terns made a little effort (more so than the Black-naped Terns) to construct a nest with a small amount of vegetation if any was in the immediate vicinity, but most laid eggs onto bare sand, coral rubble or rock. In some situations, particularly when on bare rock, eggs would roll between nests. Possible mixed egg nests (Roseate and Black-naped Terns) were seen on a few occasions, including one of 5 eggs.

Numbers

Non-breeding: As per discussion above.

Breeding: Breeding colonies of Roseate Terns around the Northern Territory coast varied in size from a few pairs in association with larger Black-naped Tern colonies to sites with many thousands of Roseate Tern nesting alone. The majority of Roseate Tern colonies were in either the 11-100 or 101-500 size range, however five colonies had in excess of 2000 birds breeding on at least one occasion during the surveys. The largest number of Roseate Terns recorded breeding at the one site during a survey was around 7500, while there were two records of around 5000 birds, and one each of around 4000 and 3000 birds. At some of the currently active breeding sites (some small and some large) there were also high hundreds to low thousands of Roseate Terns roosting in non-breeding plumage on the island. Timely follow-up visits were not possible and it is plausible that some colonies may have been larger than recorded, with some or all of these birds breeding at a later time.

Whether numerically small or large, colonies of Roseate Terns were always quite densely packed. Most eggs were laid in the same location rather than having segregated sub-colonies, however there was usually a fair amount of asynchrony within each colony.

Over the period of the survey, there were 40 times when an estimate, that did not include non-breeding birds or flying young, was made of the size of an active Roseate Tern colony. These totalled over 27000 at an average of a little below 700 per count. If all 38 colonies located during these surveys were active in a given year then a rough estimation of the number of breeding Roseate Terns around the Northern Territory coast would be just over 26000. It is not likely that all colonies would be active in a given year but in 1994 all but two of the 30 colonies checked in that year were active. These calculations do not include the nine colonies recorded as having Roseate and/or Black-naped Terns breeding. Some of these colonies are likely to have included breeding Roseate Terns that did not appear in this estimate.

In relation to the breeding colonies, Roseate Terns made up approximately 14% of the records and 13% of the combined totals for the nine main species discussed in this report. (These figures include the addition of a calculated percentage of Roseate Terns from the Roseate/Black-naped species group records).

Because of the ease of collection, Roseate Tern sites are also subject to harvest of eggs by Aboriginal people. However, because the eggs are smaller and large colonies are not as regular or predictable, Roseate Tern colonies are probably less targeted than Crested Tern colonies. On a number of occasions ground or rock-based Osprey nests were seen adjacent to Roseate or Black-naped Tern colonies. On at least one occasion a Roseate Tern colony had formed on the sand all around an established Osprey nest on the ground. Turtle nesting tracks were also seen going through some colonies. Silver Gulls were seen in the vicinity of Roseate Tern colonies and were likely predators but a relatively low percentage of Roseate Tern breeding sites (16%) actually had Silver Gull colonies on the same island, compared to 45% for Crested Tern sites. Gulls seemed to prefer more vegetated nesting habitats that were not often chosen by either Roseate or Black-naped Terns.

Success at most Roseate Tern colonies, particularly the smaller ones, was not as easy to measure as it was for the Crested Tern colonies. Crested Terns are bigger birds, they have bigger colonies, are often in less exposed sites and tend to leave more sign of well used colonies. However, in some of the larger Roseate Tern colonies, there seemed to be both massive failures and good success, at least to the level of flying young. An example of a massive failure was observed in two visits to Higginson Islet (S030) in May 1994. Early in the month there were over 1500 nests with eggs present, but a visit three weeks later showed that although over 90% of the eggs had hatched, three out of four of the young were dead. The reason for the failure at the more remote sites is unknown but is more likely to be natural (such as food loss) rather than anthropogenic.

Blakers *et al.* (1984) and Higgins and Davies (1996) document a number of Roseate Tern breeding colonies in eastern and south-western Australia and a few in northern Australia. The latter authors also mention four of the Northern Territory colonies that are discussed in this report. Considering the numbers of birds breeding in the colonies documented by these authors, it is clear that Roseate Tern colonies around the Northern Territory coast are considerably and consistently larger than colonies in other parts of Australia.

Further details are in Table A10 of Appendix A.

Seasonality.

Non-breeding: As per discussion above.

Breeding: Based on the sites that could be confirmed as active or not active, it appeared most Roseate Tern breeding sites around the Northern Territory coast were used reasonably consistently. However, there were a number of sites that may have been inactive in a given season but could not be definitely recorded as such due to insufficient follow-up surveys. Hence Roseate Tern breeding may be a little more irregular than the results suggest. Certainly some of the large colonies could be huge one year and not used in the next.

Roseate Tern breeding occurred in two distinct periods of the year. A small number of colonies (both small and large) nested between April and June/July, but the majority nested between September and December/January. At least two sites, possibly four, had breeding at both times of the year during the survey period, and at least one of these (S030) had this definitely occur in the same year (1994). Although no survey was done between late May and late September for this site it appeared that breeding was over two periods and not continuous. At these sites the breeding was extensive in one of

the periods and small in the other, with other terns also breeding at both times. Whether these two peaks represent different populations of Roseate Tern is unknown at this stage.

Looking at colonies where eggs and/or chicks were recorded, it is possible to suggest minimum lengths for breeding seasons based on incubation and fledgling times (Higgins and Davies 1996) for each of these records. These include: March to May (1), April to May (1), April to July (3), May to July (2), August to November (2), September to November (17), September to January (1), October to November (2), October to December (5), October to January (1), November to December (1) and November to January (2). Although there was less surveying during August, the extrapolated references to July and August here include early July and late August, again suggesting a break between two distinct seasons rather than one continuous season.

Comments relating to eggs/young of Roseate Terns, summarised from field notes, are given in Table A11 of Appendix A.

Other Reports of Breeding in the NT (south of the Top End)

Roseate Terns are exclusively coastal birds so there would not be expected to be any breeding south of the Top End in the Northern Territory and none has been reported.

Plate 8. Part of the large Roseate Tern colony (S071) in the Sir Edward Pellew Island Group. Photo R. Chatto.

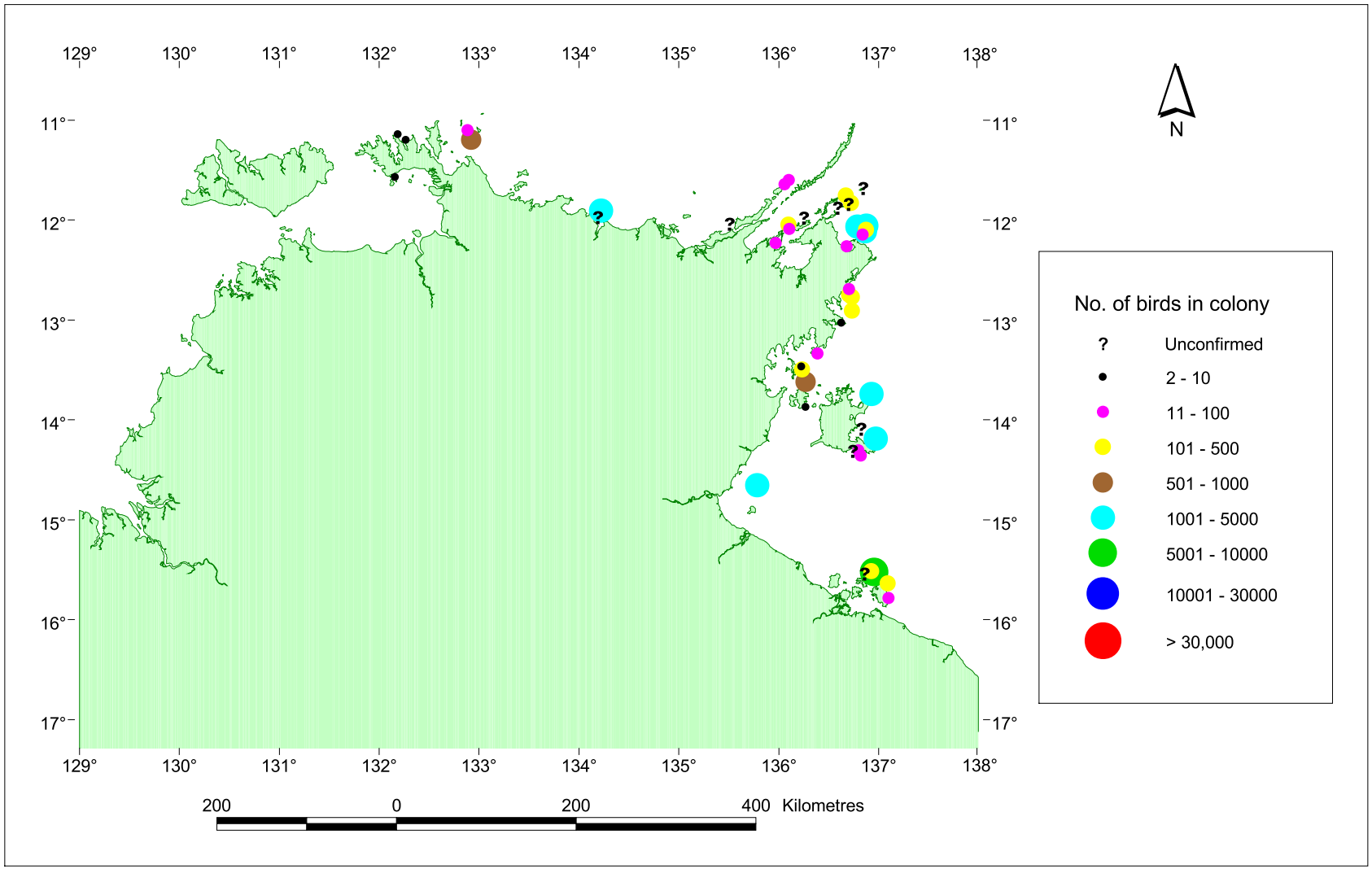

Figure 18. Location and size of colonies containing Roseate Tern.

BLACK-NAPED TERN

Geographic Distribution

Non-breeding: Black-naped Terns are another of the Northern Territory seabirds that are rarely seen in inshore waters outside of their breeding season and/or away from known breeding sites. There were only three records of non-breeding Black-naped Terns in areas that did not have an active breeding colony in the immediate vicinity. Like the Roseate Terns these records were also on the outer islands to the north-east of Croker Island, and there reason for being there is also probably in preparation for breeding a bit later in the year. The situation discussed above, for Roseate Terns in regard to night roosting seabirds, may also apply to Black-naped Terns.

Breeding: Seventy-two Black-naped Tern breeding colonies were confirmed during these surveys (Figure 19). This was easily the highest number of individual sites for any of the species dealt with in this report. A further nine colonies where either Roseate and/or Black-naped were breeding were located, but it was not possible to identify the birds to species level from the air. All breeding sites were on islands. A small colony used only once on the survey period was located on Bare Sand Island, west of Darwin. This was the only colony west of Cobourg Peninsula, where along with the islands to the east of Croker Island, a number of colonies were found. Two more colonies were located along the north coast but the vast majority were found around NE Arnhem Land, Groote Eylandt and the Sir Edward Pellew Islands. Approximately one third of the Black-naped Tern colonies were at a site where only this species was breeding while the remainder were on islands that also had other terns breeding at the same time. This nearly always included Roseate Terns, with the two species often being mixed together at a site.

Although all species could form distinctly separated colony sections around the one island, Black-naped Terns were the most likely to do this. On quite a few islands there were a number of distinct sub-colonies, although there was usually one main site.

Black-naped Terns made little effort to construct any form of nest site, laying eggs onto bare sand, coral rubble or rock. As mentioned with Roseate Terns, eggs, particularly on bare rock sites were prone to roll into other nests on occasions.

Numbers

Non-breeding: As per discussion above.

Breeding: Breeding colonies of Black-naped Terns around the Northern Territory coast varied in size from a few pairs to the largest site that had at least 1300 birds present. The majority of Black-naped Tern colonies were in the 11-100 size range; however, there were also a good number of colonies in the 101-500 size range. Four colonies had in excess of 500 birds breeding on at least one occasion during the surveys.

Black-naped Tern colonies were always quite densely packed and, as with Roseate Terns, laying appeared often to be fairly asynchronous, and there were often more birds flying around defending than appeared to match the number of nests. Although some colonies had all eggs present during visits most of these were early in the nesting period. Most colonies visited by the time older young were present, also showed eggs, indicating a substantial spread of laying dates.

Over the period of the survey, there were 73 occasions when an estimate (that did not include non-breeding birds or flying young) was made of the size of an active Black-naped Tern colony. These totalled over 9300, at an average of a little less than 130 per count. If all 72 colonies located during these surveys were to be active in a given year then a rough estimation of the number of breeding Black-naped Terns around the Northern Territory coast would be just over 9000. It is not likely that all colonies would be active in a given year but in 1994 there were 47 colonies checked and 44 were active. Two were probably active and only one was definitely not active. Again, these calculations do not include the nine colonies recorded only as having Roseate and/or Black-naped Terns breeding.

In relation to the breeding colonies, Black-naped Terns made up approximately 30% of the records, but only 3% of the combined totals for the nine main species discussed in this report. (These figures include the addition of a calculated percentage of Black-naped Terns from the Roseate/Black-naped species group records).

Black-naped Tern sites are also harvested by Aboriginal people, but as their eggs are smaller, and as large colonies are not as regular or predictable in terms of a boat trip out to the island, their eggs are less frequently taken than species such as Crested Tern. Turtle nesting also probably effects some colonies, and Silver Gulls probably take eggs and young, although, as previously said, gulls tend not to nest near Black-naped Terns as often as they do with some other species. Only 12% of Black-naped Tern breeding sites had Silver Gull colonies on the same island.

With the limited surveys and the asynchronous nature of a lot of the colonies (particularly the smaller ones) estimating success at most Black-naped Tern colonies was not easy. Nevertheless there were no instances of large numbers, or a high percentage, of addled eggs or dead young seen at any site. However the exposed nature of many of the sites may have seen such evidence blown or washed away.

Blakers *et al.* (1984) and Higgins and Davies (1996) document numerous records of Black-naped Tern breeding colonies in the Torres Strait and the eastern coast of Queensland, but only mention three from the Northern Territory. Two of these were confirmed during these surveys and the third is listed as a possible site. It is clear that Black-naped Tern colonies around the Northern Territory coast are considerably and consistently larger than colonies in other parts of Australia.

Further details are in Table A12 of Appendix A.

Seasonality.

Non-breeding: As per discussion above.

Breeding: Based on the sites that could be confirmed as active or not active, it appeared most Black-naped Tern breeding sites around the Northern Territory coast were used reasonably consistently. However, there were a number of sites that may have been inactive in a given season but could not be definitely recorded as such because there were insufficient follow-up surveys. Hence Black-naped Tern breeding may be a little more irregular than the results suggest.

Black-naped Tern were recorded breeding at two separate times of the year; between April and May, and between September and December. Of 123 separate breeding records for Black-naped Tern, only three were recorded in the first period. The remainder were fairly evenly spread through September, October and November. Although there was a lower survey effort in August there was no indication of the two periods being continuous as may be the case with Bridled and perhaps Little Terns, which are discussed below. (These figures do not include the addition of a calculated percentage of Black-naped Terns from the Roseate/Black-naped species group records).

Looking at colonies where eggs and/or chicks were recorded, it is possible to suggest minimum length breeding seasons based on incubation and fledgling times (Higgins and Davies 1996) for each of these records. These include: May to July (1), August to October (3), August to November (1), September to November (30), September to December (1), November to December (2), November to January (6) and December to January (1). There were no instances of a colony breeding in both periods.

Comments relating to eggs/young of Black-naped Terns, summarised from field notes, are given in Table A13 of Appendix A.

Other Reports of Breeding in the NT (south of the Top End)

Black-naped Terns are exclusively coastal birds so there would not be expected to be any breeding south of the Top End in the Northern Territory and none has been reported.

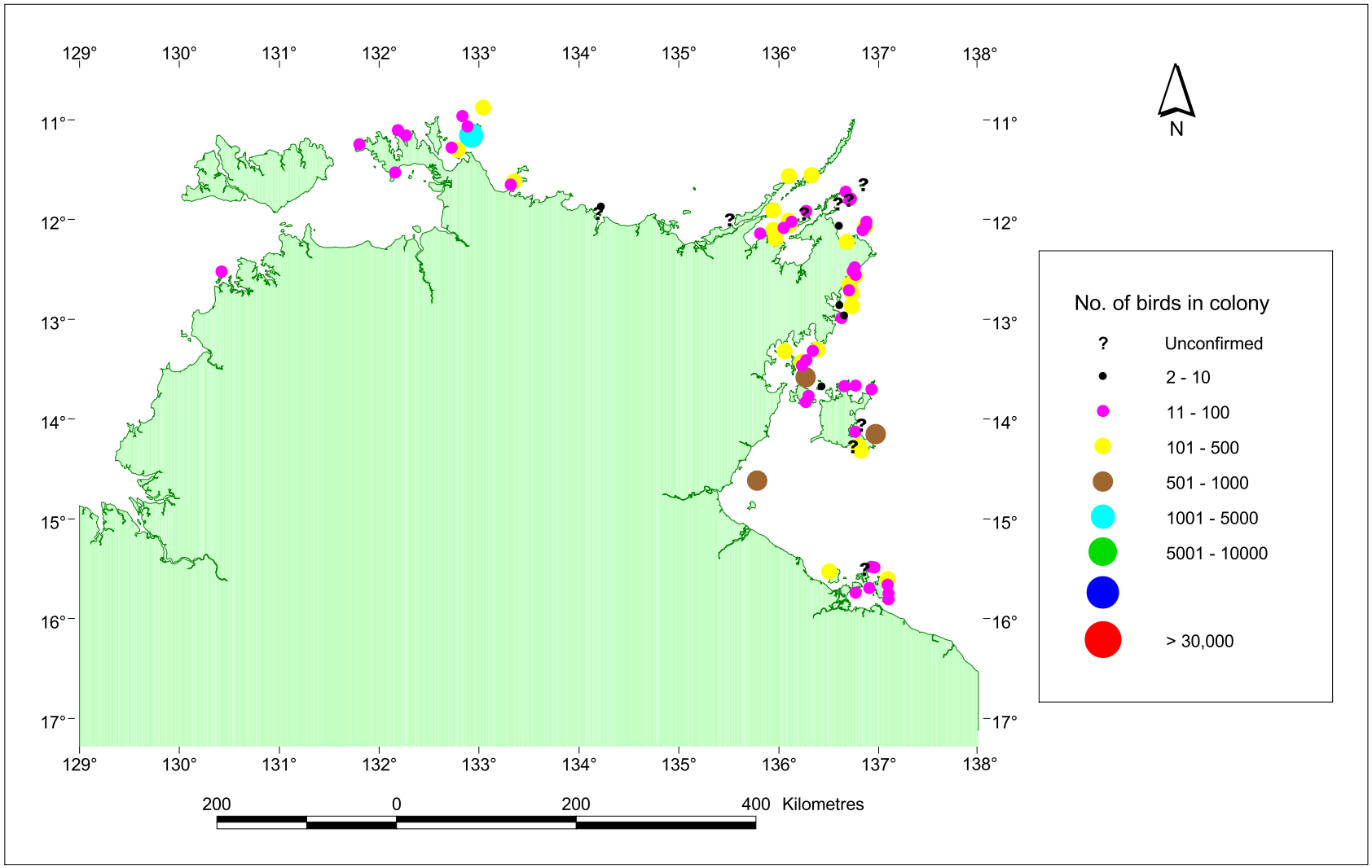

Figure 19. Location and size of colonies containing Black-naped Tern.

Plate 9. Black-naped Tern chick from an island (S049) off the south-east of Groote Eylandt, December 1993. Photo R. Chatto.

Plate 10. Little Tern eggs from a mainland nesting beach (S134) near Numbulwar, May 2000. Photo N. Smit.

LITTLE TERN

Geographic Distribution

Non-breeding: Non-breeding Little Terns were located all around the Northern Territory coast and islands, though they were less commonly seen in the far south-west (Figure 20). Although seen roosting on saline mudflats somewhat inland of the coast or the estuaries of larger river mouths, they were not recorded on wetlands that were more than a kilometre or so in from the coast. They were seen in the sandier coastline habitats, typical of species such Crested and Lesser Crested Tern, but they were also commonly seen in mangrove/mudflat habitats along the coast or inside bays and estuaries, in conjunction with species such as Gull-billed Terns.

Records of the larger flocks of Little Tern were also well spread around the Northern Territory coast and islands.

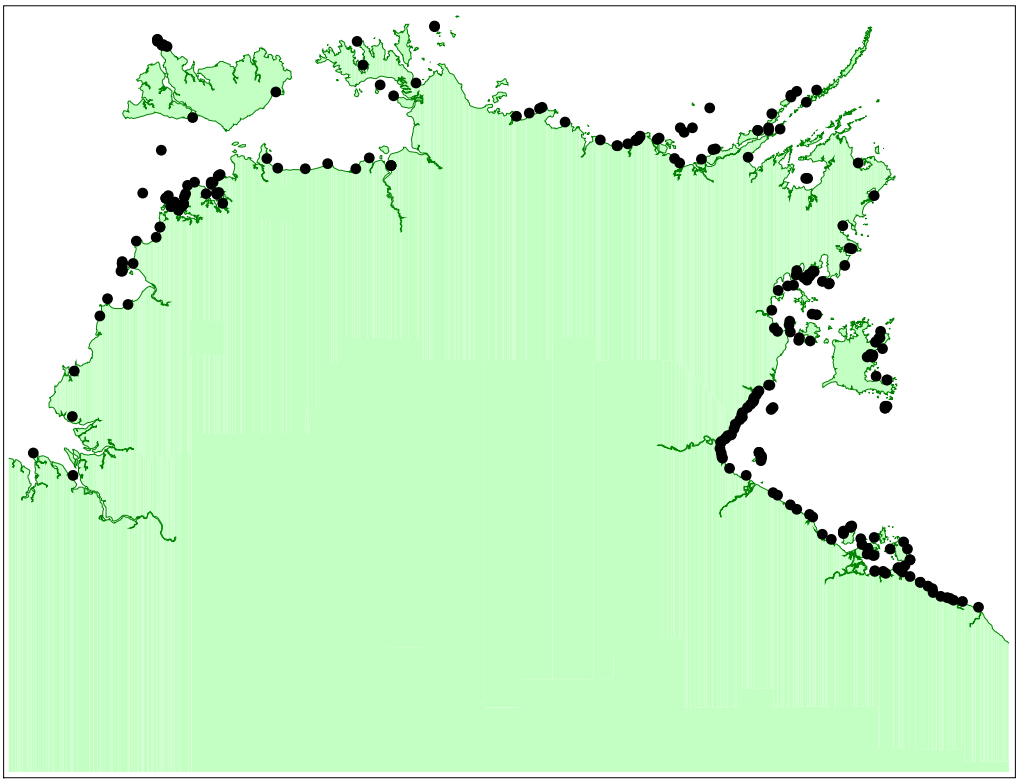

Figure 20. Distribution of all non-breeding Little Tern records from all surveys.

Breeding: Forty-four Little Tern breeding colonies were confirmed during these surveys (Figure 22). These colonies were distributed along the northern coast, from just west of Darwin, to the Queensland border. Although several substantial colonies were found in the north-west and in the vicinity of Groote Eylandt, the best area for Little Tern breeding was the coast just west of, and including, the Sir Edward Pellew Islands through to the Queensland border. There were a number of suitable estuaries with sand spits along the coast between Darwin and the Western Australian border, and Little Tern were recorded along this coastline on a number of occasions, but they were never recorded breeding along this coast. Nevertheless it is possible that some limited breeding may occur along this coast, as small colonies are easily missed from the air.

Little Tern are the only species covered in this report that regularly bred on the beaches of the mainland or large islands; however, they also nested on the beaches of small islands. Little Tern colonies were only recorded on sand beaches, often with shell or coral rubble. 'Nests' were just a small depression in the sand. They were on beaches just above the high tide mark, in among the dunes or on the open blow-out areas amongst or behind the dunes. Some colonies had reasonably concentrated nesting (with

a few metres between each nest), others had a few nests spread over a hundred metres or more. Still others had a mixture of both with 1-3 more concentrated sections but also with some outlying nests. Little Tern colonies were often on the same islands as other species but they usually attempted to nest, separately from the other species even when on the same beach. Silver Gulls often nested close to or among Little Tern breeding sites, although at some regular sites Little Terns began or continued nesting after some of the gulls had started. Gull tracks up to empty nests and dead Little Tern chicks beside Silver Gull nests were commonly seen.

Of all the species covered in this report, this is undoubtedly the one with the highest likelihood of there being more colonies around the Northern Territory coast than have been documented in this report. Sites documented here were not reported as confirmed until a ground survey was done. There are still a number of aerially located probable sites that have yet to be ground checked. Further, because of the difficulty of locating small Little Tern colonies from the air, particularly with the many other species of fauna that were also being recorded during each survey, it is also highly likely that there are other sites that have been missed completely.

It is likely that the coast east of the NT/Qld border, for at least 80 kilometres, would also have good numbers of Little Tern breeding sites. An aerial survey done in this area in November 1999 revealed many suitable sites with Little Tern present and possibly breeding. However, a follow-up chopper/ground survey in June 2000 showed no Little Tern present. This is a time of the year when they have frequently been recorded breeding in the areas that were better surveyed on the NT side of the border, but there were no birds breeding in the NT either at that time. Perhaps it was not a good breeding year in this area, but further surveys are needed for this region. It is also likely that significant numbers of Little Tern breed on the islands off north-west WA. A single trip to one island only (Troughton Island) to investigate a Blue Whale stranding in November 2000 revealed Little Tern breeding at three locations on the island, which itself is a busy helicopter base.

Numbers.

Non-breeding: Over the entire period of the surveys, non-breeding Little Tern records totalled approximately 8.5% of all the records of the nine species discussed here, and 13% of the total numbers. There were at least some Little Tern counted in every month of the year, but it is clear that most migrate away from the Northern Territory coast for part of the year. This is further discussed below under seasonality, but mentioned here because the number of non-breeding Little Tern recorded throughout this project, both in terms of the number of records and the total numbers, dropped off considerably in the months of June, July and August. On a monthly basis these three months combined had only 0.4 % of the records and 2 % of the total numbers for all non-breeding Little Tern recorded during this project. Of forty counts of flocks greater than 100 birds, all were in months other than June, July and August, with the highest number of these larger flocks being in March and November. These two months also correspond to the highest number of records and total number of birds recorded.

Breeding: Estimating numbers breeding in Little Tern colonies around the Northern Territory coast during these surveys was fairly difficult, even though most of the colonies were reasonably small by comparison with most other species. This is because at most sites there was a large variation in the stage of breeding, from fresh scrapes and eggs through to fledged young at any one visit. Also there was often more (sometimes many more) breeding plumage birds present than appeared nests, although time constraints at most sites prevented the detailed searching of the low-density nesting of many colonies – some having nests spread over several hectares of open sand. Further, sites could not be visited frequently enough to establish the numbers breeding throughout the season. As a result of the above factors, it is likely that many colony sizes based on only one survey are underestimates of the number of birds that ended up attempting to breed at that site for that breeding season.

Colony size varied from several single pair 'colonies' through to one colony with around 100 eggs and 50 young recorded in a single site check. All other colonies consisted of between 4 and 100 birds, with about half in the 2-10 range and half in the 11-100 range.

In relation to the breeding colonies, Little Terns made up approximately 18% of the records and 1% of the combined numbers for the nine main species discussed in this report. Until additional surveys can collect more information on the numbers of birds breeding in each colony throughout the season, attempts to estimate average colony size or total numbers breeding in the Northern Territory would be futile.

Due to the asynchrony of nesting, the small size of eggs, the small and often diffuse colony structure, and the resultant difficulty in finding them, it is unlikely that Aboriginal egg collection is a significant factor for this species. As mentioned above, Silver Gull predation is certainly a factor in the success rate of Little Tern nests. Weather and tide would also have an effect because of the exposed nature of colonies and the frequency of nesting close to high tide lines, but these surveys provided little hard data on the overall success rates of Northern Territory Little Tern colonies. There were no colony surveys that revealed large numbers of recently fledged young.

Blakers *et al* (1984) and Higgins and Davies (1996) record breeding in northern, eastern and south-eastern Australia, with most records coming from the south-east. These surveys have greatly increased the number of records of breeding in the Northern Territory (and thus northern Australia), and shown this area to be far more significant for Little Tern breeding than previously thought – in both summer and winter breeding seasons.

Further details are in Table A14 of Appendix A.

Seasonality.

Non-breeding: As mentioned above, Little Tern numbers are clearly much lower around the Northern Territory coast as a whole during the dry season. Figure 21 clearly shows a drop in numbers per survey day after April. The number of large flocks, the number of records and the total numbers of birds recorded during these surveys then began to rise in September, with all peaking in November and December and then dropping off a little in January and February. This may be related to survey effort or it may mean some Little Terns are moving through the Northern Territory coast and heading further south to areas in south-east Australia where they also breed over summer. The possibility of variations either between or within seasons along different sections of the coast has not been analysed in this report.

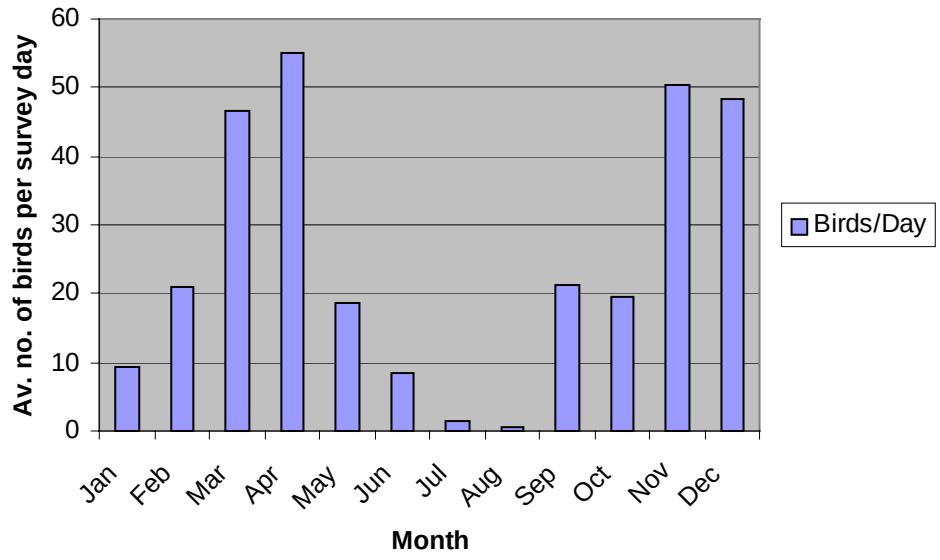

Figure 21. Average number of non-breeding Little Terns recorded per day for each month.

Breeding: Little Tern breeding around the coast of the Northern Territory is very variable in terms of seasonality. There were 101 instances of Little Terns recorded breeding during these surveys. These were recorded in every month except January and August. The most numerous records were in May (24) and October (22), but there were 15 in June, 14 in November and 11 in September. The highest number of breeding birds from these records was clearly in May while the lowest were in March and April. Looking at colonies where eggs and/or chicks were recorded, it is possible to suggest minimum length breeding seasons based on incubation and fledging times (Higgins and Davies 1996) for each of these records. Given the extended nature of Little Tern breeding along the Northern Territory coast, it

is likely that more checks of the sites would have increased these deduced nesting periods. However, as recorded, they include: April to July (2), May to June (7), May to July (4), June to July (3), September to October (7), September to November (1), October to November (2), October to December (1), November to December (3) and December to February (1). These tend to indicate two main periods, one between about late April and July, and the other between September and early January. However, a much lower survey effort in August may have contributed to the lack of breeding records, and it may be more or less a continual season from late April to early January, for at least some colonies but certainly not all colonies. This may be to avoid the major rain periods in the year.

Six colonies were recorded breeding at two different periods (May-July and September-December). Two of these were actually recorded in the same year but unfortunately no surveys were done in the in between period so it is not known whether they were two separate nesting periods or one continuous period.

Comments relating to eggs/young of Little Terns, summarised from field notes, are given in Table A15 of Appendix A.

Other Reports of Breeding in the NT (south of the Top End)

Little Terns are exclusively coastal birds so there would not be expected to be any breeding south of the Top End in the Northern Territory and none has been reported.

Plate 11. A typical Little Tern breeding island, this one (S146) is off the NW of Bathurst Island, May 2000. Photo R. Chatto.

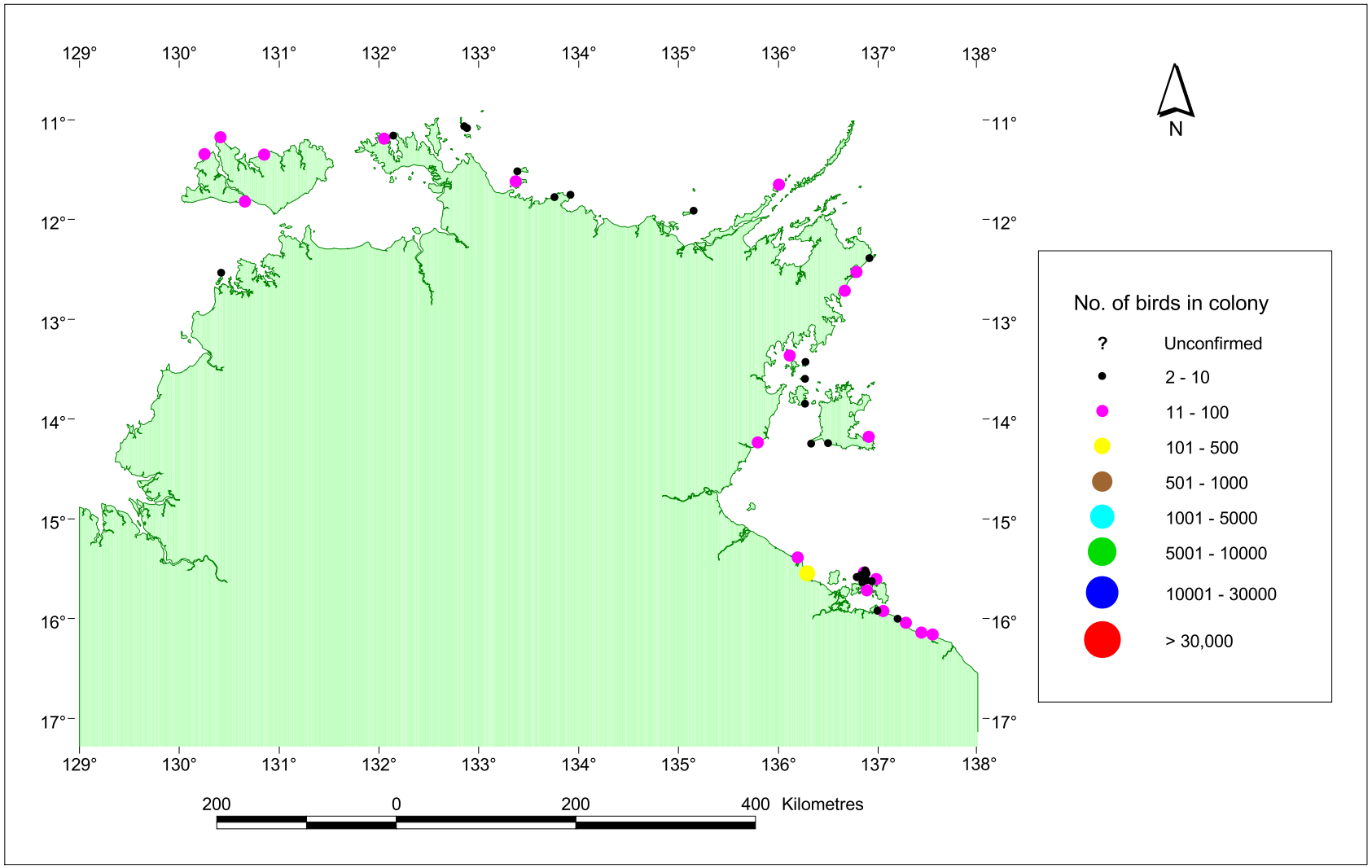

Figure 22. Location and size of colonies containing Little Terns.

BRIDLED TERN

Geographic Distribution

Non-breeding: Like Roseate and Black-naped Terns, and Common Noddies, Bridled Terns are likely to occur in the inshore waters covered by these surveys primarily when involved in breeding. There were a little over 20 records of Bridled Terns that were not at a known colony site but all of these were near known breeding colonies around the time they were active.

A number of roosting sites were located on some of the outer islands which appeared to be night roosts as few birds were seen there at any of the daytime checks. None of these islands were camped on over night and as the aircraft had to be back at base before last light, it meant these island roosts were not checked on or after dusk. Some of these roosts may have involved species such as Bridled Terns coming in to roost at night, during periods outside of their breeding seasons.

Breeding: There were 43 Bridled Tern breeding colonies located during these surveys (Figure 23). Apart from two small colonies in the north-west, all colonies were in the eastern half of the Top End. The main areas were NE Arnhem Land, SE Groote Eylandt and the Sir Edward Pellew Islands. As with the other species, all colonies were on small islands. However, Bridled Tern colonies were mostly found on the higher, rocky islands and were infrequently seen breeding on the lower, flat islands which all of the other species used more frequently. Even where Bridled Terns nested on the same islands as other species, their preference to nest under vegetation and/or rocks, meant they usually nested up on the slopes rather than the beaches or rocks around the edges of the islands.

The concealed nature of their nest sites on rocky islands and the lack of time available to do detailed searches meant few eggs or chicks were seen. Nevertheless nest sites seen in these habitats and those seen on the small number of islands where they nested on sand among vegetation showed that there had been little effort to construct any form of nest.

Numbers.

Non-breeding: As per discussion above.

Breeding: Estimating the number of Bridled Terns breeding at any of their sites was made much more difficult because of the concealed nature of the eggs or young. It was not possible to even roughly ascertain the true percentage of the birds in the area of the colony that were actually breeding, but counts assumed all defending birds were breeding. This was further complicated by the fact that, unlike the other species that could all usually be seen at a site during a given survey, Bridled Terns would progressively come out from under rocks and/or vegetation rather than all take flight at once. Consequently with each pass during an aerial survey more and more birds would emerge, and then when on the ground still more birds would emerge. For the purposes of this report colony sizes were allocated, as with most other site estimates for the other species, on the basis of the largest number of birds seen simultaneously during surveys which is likely to represent a very substantial under-estimate in the case of this species.

Breeding colonies of Bridled Terns around the Northern Territory coast varied in size from a few birds to many thousands. Most of the colonies were classified in the less than 500 birds or more than 1000 birds range. The largest colony is listed in the 10001-30000 range; however, it is possible this colony could have had in excess of 50000 birds present. It (S039) is located on Three Hummocks Island, a group of four adjacent, vegetated, rocky islands between Cape Arnhem and Pt. Alexander.

Compared to other species, a much higher percentage of the estimates of Bridled Tern breeding numbers involved doubt over whether all individuals present were breeding at the time. In estimating an average colony size with other species, such counts could be left out and there were still a reasonable number of counts that could be used. In order to estimate an average colony size of Bridled Terns such counts needed to be included to derive any sort of estimate but is clearly dependent on the assumption that most were actually breeding. On this basis, and assuming no flying young were present, there were 77 estimates of the size of an active Bridled Tern colony. These totaled just over 110000 birds at an average of just over 1400 birds per count. If all 43 colonies were active in a given year then a rough estimation of the number of Bridled Terns breeding around the Northern Territory coast would be just over 60000. Of course these are very rough figures and it is not likely that all colonies would be active in a given year. However, in 1993, 32 out of 35 colonies were checked at the appropriate times and found active, while two were likely to be active and only one not active.

In relation to the breeding colonies, Bridled Terns made up approximately 23% of the records and 29% of the combined totals for the nine main species discussed in this report.

It is unlikely many Bridled Tern colonies would be affected by Aboriginal egg collection, nor would the eggs or young of most be affected by adverse weather, because of their concealed and hence inaccessible and sheltered nature. No information on the success or otherwise of these colonies was collected during this project.

Within the Northern Territory, Blakers *et al.* (1984) and Higgins and Davies (1996) only refer to Bridled Tern colonies on Haul Round Island and the Sir Edward Pellews, but document a number of colonies along the Queensland coast and in the south-west of Western Australia. Colony sizes referred to by these authors in these other states vary considerably but few are listed with over 1000. If the majority of the birds recorded at the larger Northern Territory colonies do actually breed at these sites, then it appears the Northern Territory coast has nationally significant Bridled Tern breeding.

Further details are in Table A16 of Appendix A.

Seasonality.

Non-breeding: As per discussion above.

Breeding: The breeding stage of most of the individual Bridled Tern colonies was not recorded during this project because of the hidden nature of the 'nests' (many of which were not even possible to access) and the short duration of most visits. Further, comments on seasonality are made more difficult because of the extended and sometimes inconsistent breeding seasons of this species, and the infrequency of site checks. Apart from a small number of records of eggs or chicks reported in some site checks, comments are primarily based only on records of 'breeding' or 'not breeding'.

Of 130 records of Bridled Tern breeding all were between March and June, or September and December. Eighteen were recorded between March and May, while 110 were recorded between September and December, with the most (43) being in November. At colonies where eggs and/or chicks were noted, it is possible to suggest minimum lengths for breeding seasons based on incubation and fledgling times (Higgins and Davies 1996) for each of these records. These include: March to July (2), April to July (1), August to December (1), September to November (2), September to December (6), October to January (1), November to February (1) and December to May (1).

At six colonies breeding was recorded during both the March to June and September to December periods. Evidence from at least one colony (S030) suggested breeding through much of the year. At this site, visits over a number of years, in March, April, May (2), September, October, November and December all recorded breeding. One visit in January was the only instance of no birds recorded breeding. Other sites appeared more consistent with breeding in one or other of these two periods, either in the first of these time periods (eg S012) but not in the second, or the second (eg S039) not in the earlier period. Others were less consistent, breeding in one or other (eg S085) or both (eg S061) periods in one year but not repeating the same pattern in a subsequent year, although this may have been a result of moving locations rather than not breeding.

In summary it is very difficult to precisely state the nesting season of Bridled Terns in the Northern Territory but in terms of the area as a whole it appears they breed nearly all year round, but with variations between different colonies and, to a lesser extent, different years. These different breeding times did not appear to be tightly linked to different geographic locations.

Comments relating to eggs/young of Bridled Terns, summarised from field notes, are given in Table A17 of Appendix A.

Other Reports of Breeding in the NT (south of the Top End)

Bridled Terns are exclusively coastal birds so there would not be expected to be any breeding south of the Top End in the Northern Territory and none has been reported.

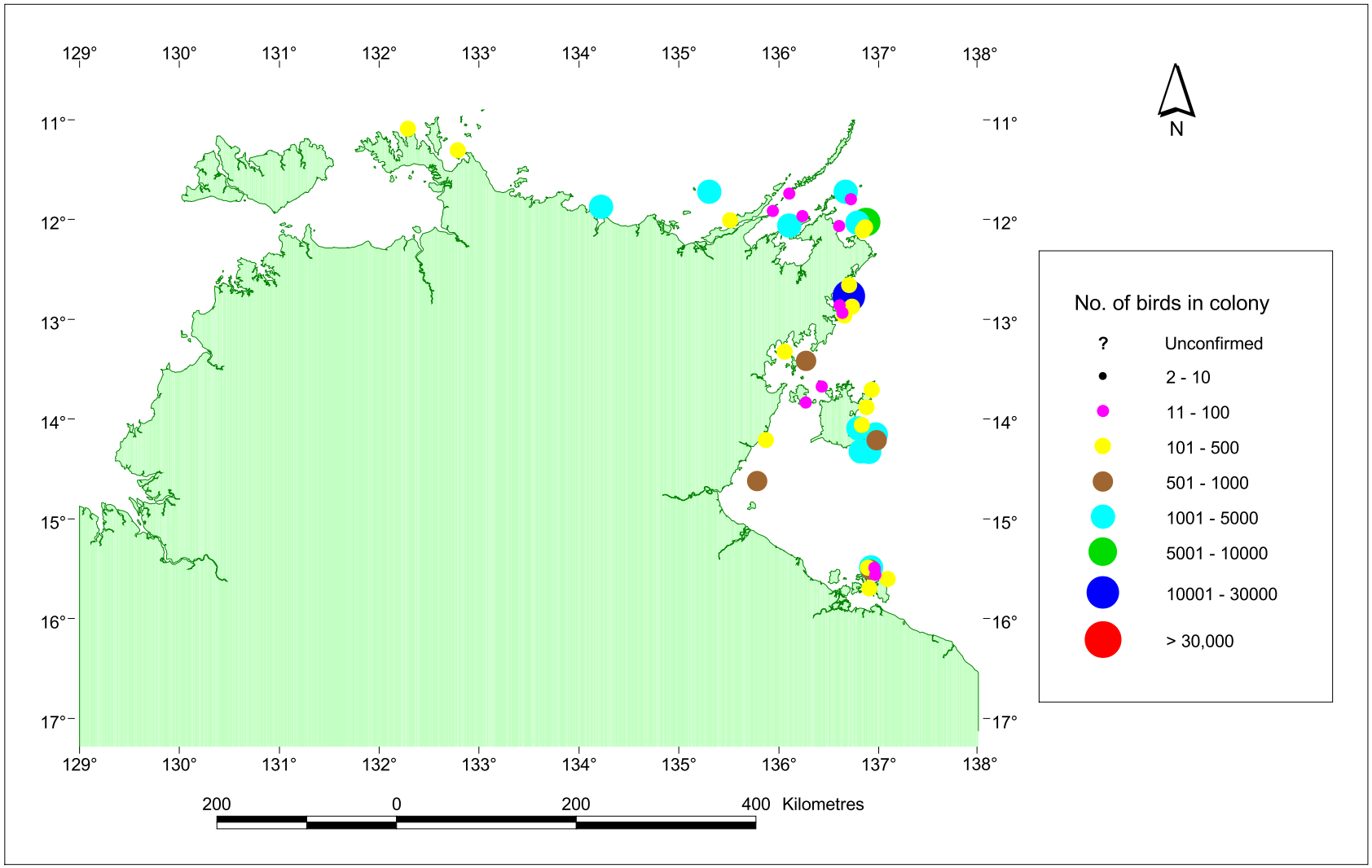

Figure 23. Location and size of colonies containing Bridled Tern

COMMON NODDY

Geographic Distribution

Non-breeding: The Common Noddy is not frequently seen in the Northern Territory, at least in inshore waters. There were only nine non-breeding records of this species throughout the surveys, with all records except one (135 birds), being of less than 20 birds. Although widely spread all sightings were north of latitude 14 degrees.

A number of roosting sites were located on some of the outer islands which appeared to be night roosts as few birds were seen there at any of the day-time checks. None of these islands were camped on over night and as the aircraft had to be back at base before last light, it meant these island roosts were not checked on or after dusk. Some of these roosts may have involved species such as Common Noddies coming in to roost at night, at time outside of their breeding seasons. Such a case was suspected with Frigatebirds on Bar Sand and Quail Islands, west of Darwin (Whiting *et. al.* 1997).

Breeding: Only one Common Noddy breeding colony was found during these surveys (Figure 24). It was on an offshore island in NE Arnhem Land in company with four species of tern breeding at the same time. All nests were on bare rock or vegetation amongst the rocks.

Numbers

Non-breeding: Away from the breeding colony Common Noddies made up approximately 0.1% of the records and 0.1% of the combined totals for the nine species discussed in the main part of this report. They were either seen as single birds, or in the company of Black Noddies (which were not recorded breeding in the Northern Territory).

Breeding: The single colony of Common Noddies consisted of approximately 100 and 300 birds respectively, in the two years the site was checked when this species was breeding.

In relation to the breeding colonies, Common Noddies made up less than 1% of the records and less than 0.2% of the combined totals for the nine main species discussed in this report.

Blakers *et al* (1984) and Higgins and Davies (1996) record Common Noddy breeding on islands off the Queensland and Western Australian coasts. Some of these colonies are of considerable size so it is clear that the Northern Territory is of only minor significance for Common Noddy breeding. The colony located in the Northern Territory during these surveys represents the first confirmed Common Noddy breeding colony in the Northern Territory.

The details of this colony are shown in Table A18 of Appendix A.

Seasonality.

Non-breeding: The small number of non-breeding records of Common Noddies were between September and March, which was the time of the year the single breeding colony was recorded.

Breeding: The Common Noddy was confirmed breeding in two years, both of which showed the birds on eggs in early May. These were the only two years that the site was checked at that time of year. In one of these years breeding had finished and the birds gone by mid September.

Comments relating to eggs/young of Common Noddy, summarised from field notes, are given in Table A19 of Appendix A.

Other Reports of Breeding in the NT (south of the Top End)

Common Noddies are exclusively coastal birds so there would not be expected to be any breeding south of the Top End in the Northern Territory and none has been reported.

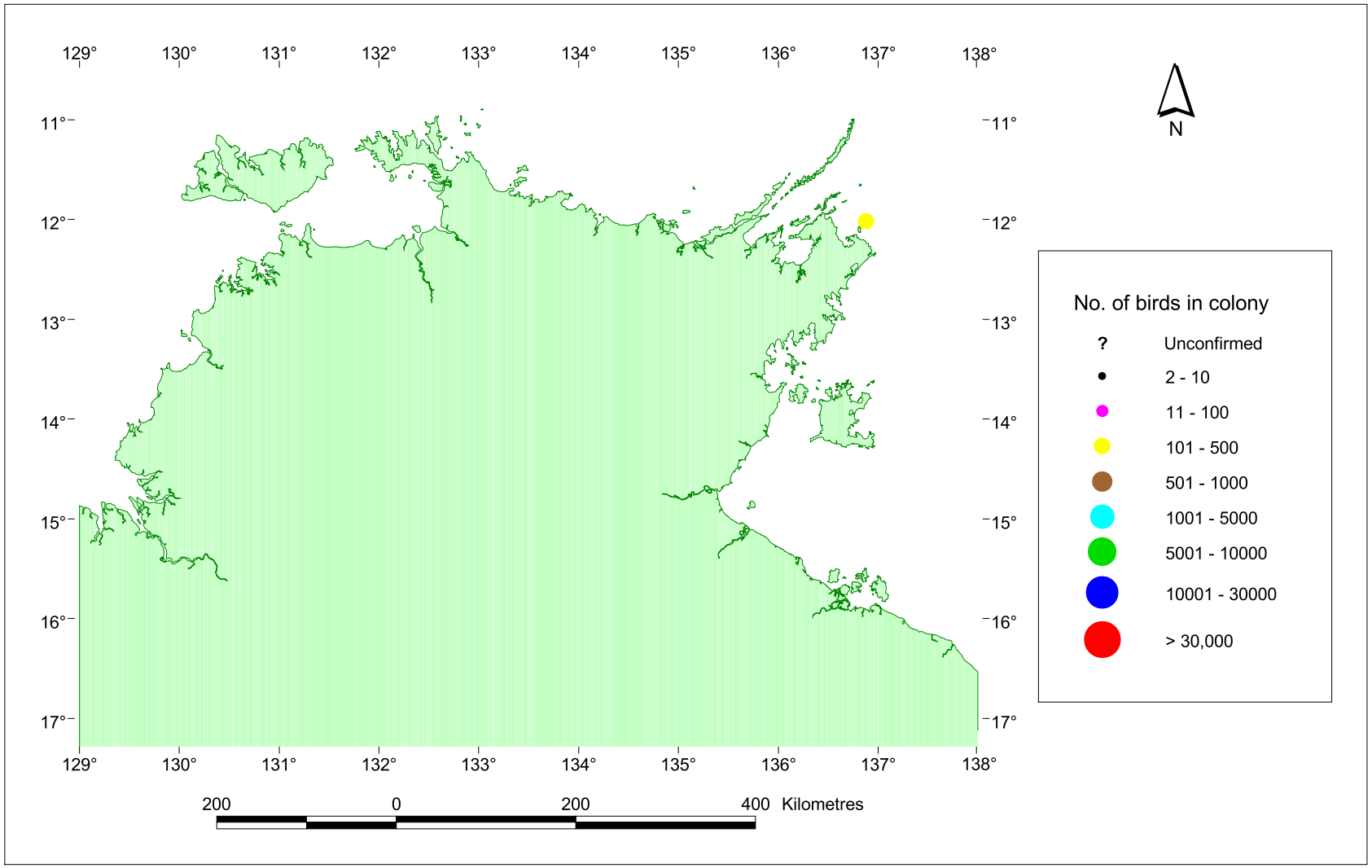

Figure 24. Location and size of colonies containing Common Noddy.

OTHER SPECIES IN BRIEF

The following species are mentioned briefly because they are usually regarded as colonial nesting seabirds that breed in Australia, and they do occur around the Northern Territory coast but have not been recorded breeding in significant numbers during these surveys. Some have been recorded breeding around the Northern Territory coast in small numbers during these surveys but were not discussed in the detailed sections, while others have not been found breeding despite extensive searching.

BROWN BOOBY

Brown Boobies were recorded from around most of the Northern Territory coast (Figure 25). However, they were not seen in the shallower, more turbid water areas such as the south-west, Van Diemen Gulf and the many mangrove lined bays around the coast. They were reasonably frequently seen with fifty-five separate records over the survey period, but were rarely seen in large numbers. All records totaled only just over 3000 birds with the largest group being 750. Most records and the largest numbers were seen off the Northern Territory coast in the northern Gulf of Carpentaria area. Brown Boobies were recorded in all months of the year; however, there are insufficient data to assess seasonal trends.

There were no confirmed breeding sites for Brown Boobies located around the Northern Territory during these surveys, with the nearest breeding site being observed on the Wellesley Islands just over the border into Queensland. There was one site, a large, high rock off the northern coast of Groote Island that may have been a breeding site. It was reported (C. Davis, pers. comm.) to have 200-300 birds on it every year for about six weeks around August. It is a very difficult and quite dangerous site to ground access which can only be done by jumping from a hovering helicopter and climbing down to a series of ledges on the edge of a 100 foot vertical cliff face. Although several records from the air confirmed the site to be at least a roost (though never with more than 500 birds present), it was only able to be ground checked on one occasion, in October 1994. At this time there was no evidence of current or recent breeding, but the site should be checked again.

There were no records made during the surveys of Masked or Red-footed Boobies. However, a single Red-footed Booby was reported from Cobourg Peninsula in October 2000 (H. Puckey, pers. comm.).

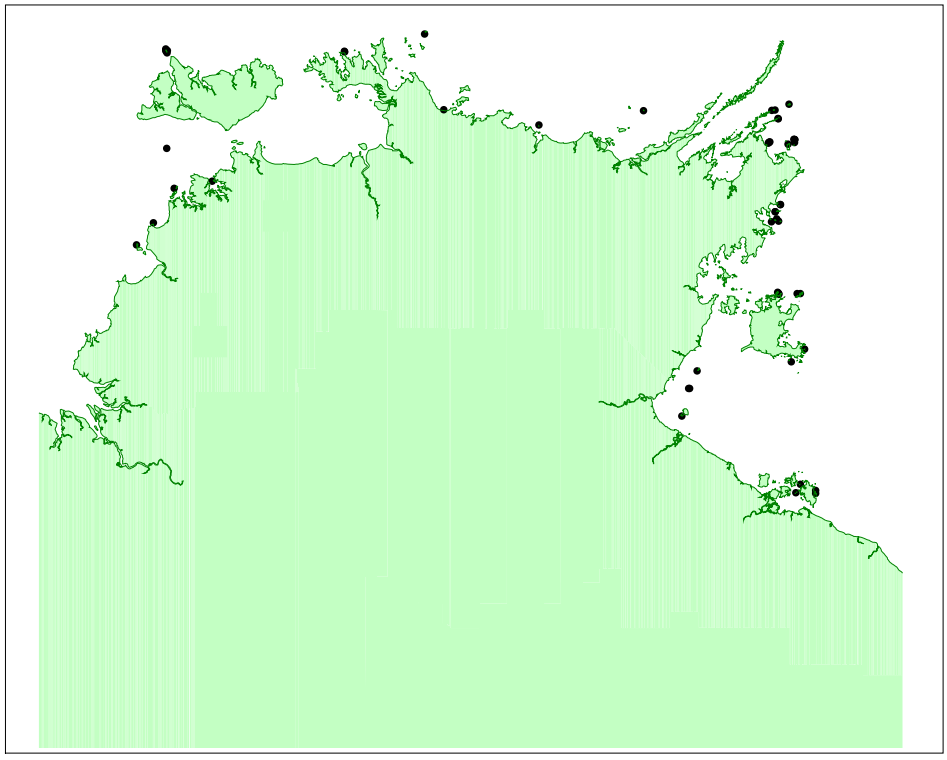

Figure 25. The location of Brown Booby records.

LESSER FRIGATEBIRD

Most of the records of frigatebirds that were made during these surveys were only to the level of family (*Fregatidae*). However, on the few occasions when further identification was possible, all were confirmed to be *Fregata ariel*.

Frigatebirds were recorded from areas similar to those used by Brown Boobies (Figure 26) but there were considerably fewer records (21) and numbers, with most groups being between 1 and 20. Frigatebirds are more likely to remain further out to sea during the day than the boobies. They are more likely to be seen in the inshore waters covered by these surveys during rough weather or in the late evening. Survey effort during both of these times was minimal, and in the case of the latter, it is likely that some of the islands for which there was considerable evidence of nocturnal roosting may have seen this species move in after my departure. Consequently the distribution and numbers of this species are likely to have been underestimated during these surveys. There were insufficient records to make any comment on possible seasonal aspects to the distribution and status of these birds.

There were no confirmed breeding sites for frigatebirds located around the Northern Territory during these surveys, with the nearest breeding site being observed on the Wellesley Islands just over the border in Queensland.

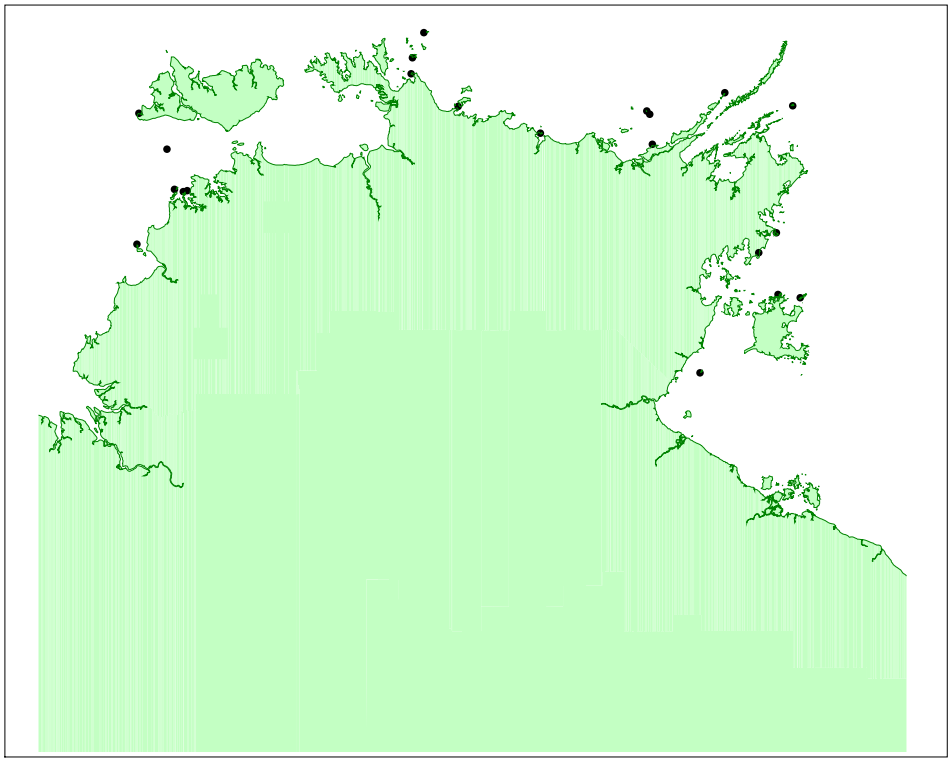

Figure 26. The location of Frigatebird records.

EASTERN REEF EGRET

Eastern Reef Egrets were recorded from all around the Northern Territory mainland coast and offshore islands (Figure 27). They were fairly evenly distributed with no areas of obvious higher densities. There were more than 600 separate records, totaling over 4000 birds, over the survey period. They were mostly seen in singles or small groups, with only nine records of 100 or more with the largest group being 500 spread around one small island near Darwin. This is an unusually high number, and more than double the next largest group, but it is likely these birds had accumulated here to feed on the large number of hatching Flatback Turtles that were emerging at this time of year.

Eastern Reef Egrets were recorded in all months of the year and there were no obvious seasonal departures from the Northern Territory coast. Although the data on this species has not been analysed in any detail, all of the records of flocks of greater than 100 were all in the late August to early October period and they were mostly confined to areas with good Flatback Turtle nesting. Thus there may be some small-scale movement of these birds to coincide with the main Flatback hatching period.

Eastern Reef Egrets are likely to breed all around the Northern Territory coast, but few active sites were found during these surveys. Their habit of breeding as single pairs or in small groups that were much less visible than other egret or seabird colonies meant that sites could rarely be seen from the air. It was not practical to land and check all Eastern Reef Egrets and consequently, breeding sites were only found by chance when conducting ground surveys for other species. Even then, time did not permit searching through the mangroves and other dense coastal vegetation to look for possible isolated nests.

Eastern Reef Egret breeding sites that were found as either currently active or having been used in the past, were mostly on islands but this could have been a reflection of more time spent in areas of easier access to potential breeding sites. Most breeding seemed to be around August to December. A number of sites were also found inactive at this time, or with a lot more nest sites than were actually being used, indicating some inconsistency of site use and/or asynchrony between individuals using a site.

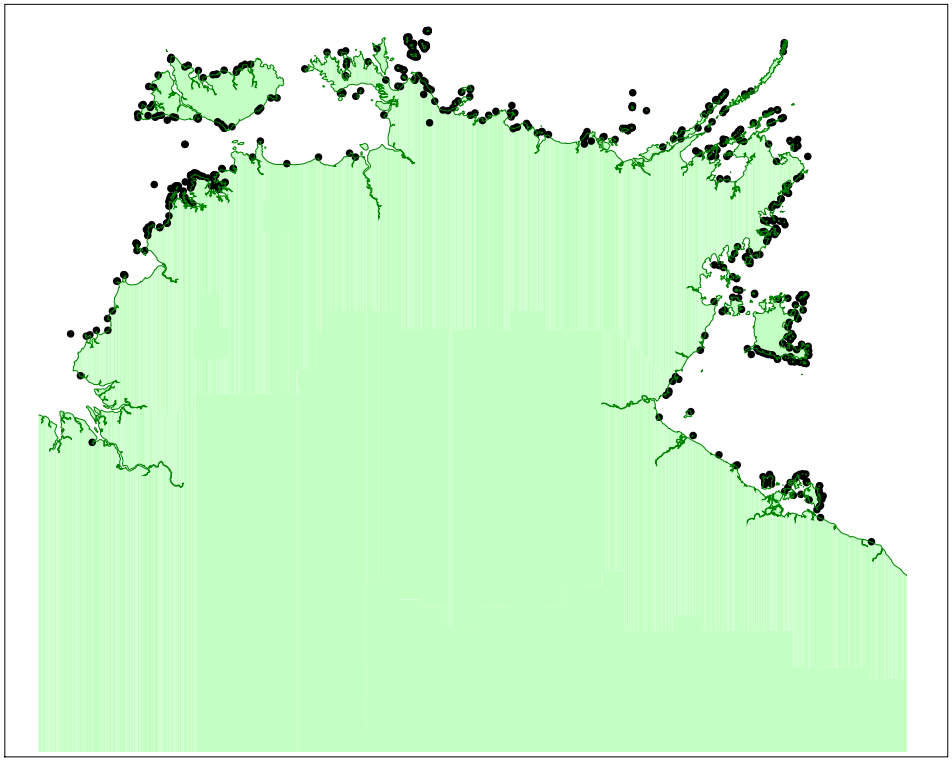

Figure 27. The location of Eastern Reef Egret records.

STRIATED HERON

Striated Herons were commonly recorded from all around the Northern Territory mainland coast and offshore islands (Figure 28). They were fairly evenly distributed with no areas of obvious higher densities. They were usually seen as single birds, but occasionally in small groups, with up to eight birds in an area, and were common in all months of the year.

Striated Herons are likely to breed all around the Northern Territory coast. They almost always breed as single pairs in hidden situations, however they are included here as one colony (along the mid north coast) was located during these surveys. Although several suspected breeding sites, scattered around the Northern Territory coast, were observed during these surveys, time did not permit searching through the mangroves or bushes/rocks to confirm isolated nests. These 'likely' breeding sites were mainly recorded between September and January. However, the one 'colony', with five nests in close proximity (with two checked that both had eggs and small young) was in March.

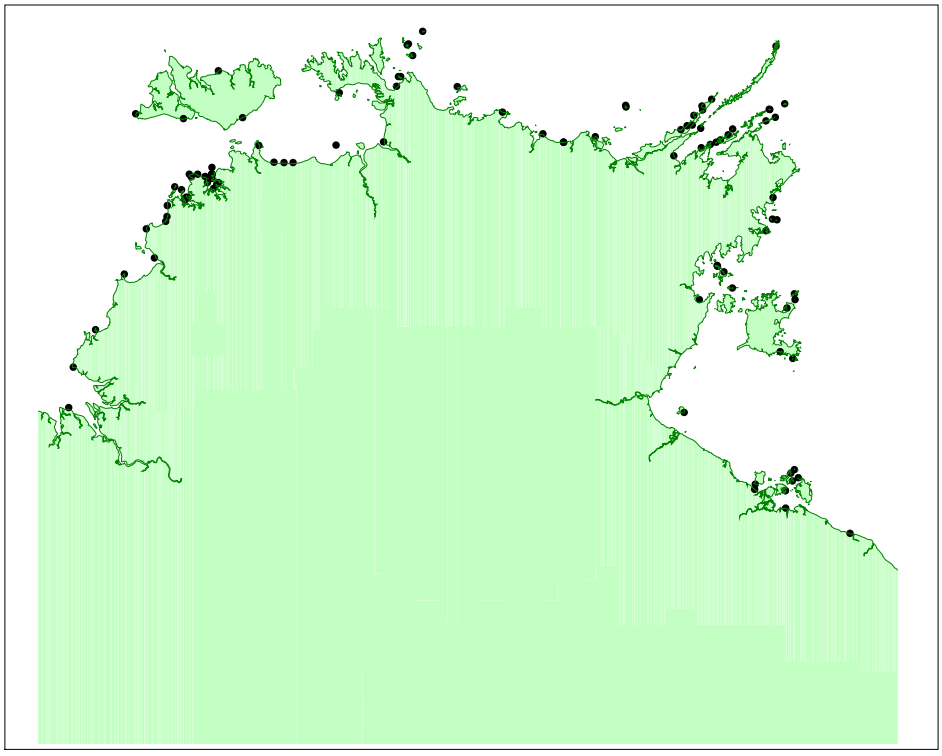

Figure 28. The location of Striated Heron records.

SOOTY TERN

Sooty Terns are only rare visitors to inshore waters around the Northern Territory although they are likely to be more commonly seen further offshore than these surveys covered. They were only recorded on three occasions during these surveys and no breeding was involved. A small number were seen from Black Point on Cobourg Peninsula in November 1991 and two immature birds were handed in exhausted in March 1997 and February 2001. Both examples involved rough weather and strong north-westerly winds indicating, at least with the latter, they may have come from the Ashmore Reef area where they breed.

It is possible that Sooty Terns may have been present among the many Bridled Tern colonies or non-breeding flocks. However, all 'dark-topped' terns were recorded as Bridled Terns during these surveys as the many hundreds of individual birds and eggs examined from many ground checks of Bridled Tern breeding colonies always revealed only Bridled Terns.

BLACK NODDY

Black Noddies are also rare visitors to inshore waters around the Northern Territory. They were recorded on two occasions during these surveys and were not breeding. A small number were seen in association with a larger number of Common Noddies on New Year Island (10º 53.5'E, 133º 2.1'S) in October 1994 and around 500 were seen at S030 in November 1993. On this latter occasion there were only a small number of Common Noddies present. A larger number of Common Noddies then bred at the site in May the next year, but then there were no Black Noddies present.

FUTURE MANAGEMENT

This report has concentrated on reporting the location and status of colonial breeding seabirds, rather than discussing research and management issues in detail, however this section will briefly cover aspects of future management.

The Top End of the Northern Territory is in a very unique position in regard to much of its flora and fauna. Not only is there an immense amount of relatively unmodified habitat which holds large populations of many species, but most of the area is very remote and has not been subject to many of the pressures associated with large human populations. Nevertheless there are issues related to fire, disturbance at nesting sites and traditional harvest that should not be ignored. Commercial fishing may reduces supplies of some fish species that are important as food for seabirds. Weeds may also invade islands and cover potential nesting sites. Even though they appear not to be significant threats at the moment, and there has not been any specific studies done to analyse the levels of impact for these possible threats, they have the potential to cause problems to breeding success, colony nesting habitat and feeding areas in the future.

Evidence of burning on islands was not uncommon, both within and outside of the breeding seasons. Mariners stopping in at islands when passing during breeding can cause significant problems to exposed eggs and small young. Many of these people would be unaware of the harm they could be causing, and some would not even realise that seabirds were breeding on the island. Traditional harvest of seabird eggs may cause a reduction in success for some species at some sites. Although this has clearly been happening for a long time, the potential for increased harvest arising from improved access to islands using motorised boats, and even helicopters, may need to be studied.

Although there are currently no developmental pressures affecting most of the colonies, it is likely that such pressures will increase over the longer term.

Presumably the significance of the Top End for colonial seabird breeding is due to both the amount of habitat, and the lack of disturbance. The immediate future of these colonies depends on maintenance of this situation. It is unlikely that the amount of habitat is going to change considerably in the near future, so we must ensure that the disturbance at these sites is kept at a low level. Such disturbance may also include tourism and even scientific research. Although important information can be obtained by studying such colonies in greater detail, it is easy to cause significant disturbance to sites such as breeding colonies by simply visiting them. Consequently, such research should be controlled and restricted to essential studies confined to the minimum number of colonies, leaving the majority undisturbed.

The priority for the future management of these colonies in the immediate future should be to minimize disturbance to the sites. There are some colonies which need a little more ground work to establish a better understanding of the numbers and species involved - these are discussed under the individual colonies in Appendix B. There are also a small number of colonies which require some specific management (also documented individually in Appendix B). However, most of the remainder of the colonies probably only need to be monitored to the extent necessary to establish they are active and not declining.

Many individual Top End colonial seabird breeding sites tend to be used for many years, so the information in this report is likely to remain relevant for future development proposals in the years to come. The importance of many of these colonies, because of the size and regularity of use of many of them, cannot be stressed highly enough.

REFERENCES

Bajzak, D. and Piatt, J.F. (1990). Computer-aided procedure for counting waterfowl on aerial photographs. *Wildlife Society Bulletin.* **18**:125-129.

Blakers, M., Davies, S.J.J.F. and Reilly, P.N. (1984). *The Atlas of Australian Birds*. Melbourne University Press, Melbourne.

Chatto, R. (1998). Seabird Islands. No. 238. Higginson Islet, North-east Arnhem Land, Northern Territory. *Corella*, **22**(2): 69-70.

Chatto, R. (1999). Seabird Islands. No. 244. Low Rock, South-west Gulf of Carpentaria, Northern Territory. *Corella*, **23**(3): 72-74.

Chatto, R. (2000). *Waterbird Breeding Colonies in the Top End of the Northern Territory, Technical Report No. 69*. Parks and Wildlife Commission of the Northern Territory, Palmerston.

Christidis, L. and Boles, W. E. (1994). *The Taxonomy and Species of Birds of Australia and Its Territories*. RAOU Monograph 2.

Coastal Resources Atlas of the Northern Territory (Referred to as C.R.A. in text). Parks and Wildlife Commission of the Northern Territory document.

Crawford, D. N., (1980). Seasonal fluctuations in numbers of three species of tern in Northern Territory. *Emu* **80**: 166-169.

Frith H. J. and Calaby, J. H., (1974). F*auna Survey of the Port Essington District, Cobourg Peninsula, Northern Territory of Australia*. Division of Wildlife Research Technical Paper No. 28. CSIRO, Australia.

Garnett, S. and Carruthers, I. (1982). Error in aerial surveys of wading birds. *The Stilt*. No. **3**: 5-7. Spring 1982.

Guinea, M. (1990). Observations of Turtles and Birds on Bare Sand Island. *NT Naturalist* (12): 26-27.

Jaensch, R.J., and Vervest, R.M., (1990). *Seabirds at remote wetlands in Western Australia, 1986-88. Part One: Lake Argyle and Lake Gregory*. RAOU Report No. 32.

Jaensch, R.J., (1994). An inventory of wetlands of the sub-humid tropics of the Northern Territory. Report to the Conservation Commission of the Northern Territory, Darwin.

Higgins, P.J. and Davies, S.J.J.F., (1996). *Handbook of Australian, New Zealand and Antartic Birds. Volume 3, Part A.* Melbourne. Oxford University Press.

Nest Record Scheme (Referred to as N.R.S. in text). Environment Australia, Canberra.

Morgan, D.G. (1986). Estimating vertebrate population densities by line transect methods. *Melbourne College of Advanced Education Occasional Papers* No. 11, March 1986.

Officer, H. R. (1976). Ten days observations of the birds at Gove Peninsula. *The Australian Bird Watcher*. **6**(7): 223-228.

Ross, G., Weaver, K. and Greig, J. (1996). The Status of Australia's Seabirds. P*roceedings of the National Seabird Workshop Canberra, 1-2 November 1993.* Biodiversity Group, Environment Australia.

Sites of Conservation and Recreational Significance Register. (Referred to as S.C.R.S.R. in text). Parks and Wildlife Commission of the Northern Territory document.

Starks, J. (1992). *National breeding census of the Little Tern Sterna albifrons in northern and eastern Australia in 1989*. RAOU Report No. 78, July 1992.

Storr, G.M. (1977). Birds of the Northern Territory. *Western Australian Museum Special Publication* No. 7.

Walker, T.A. (1992). A record crested tern *Sterna bergii* colony and concentrated breeding by seabirds in the Gulf of Carpentaria. *Emu* **9:** 125-156.

Watanabe, Y. (1999). The breeding biology of Crested Tern *Sterna bergii* on Seagull Island, Northern Territory, in relation to egg harvest by Aboriginal people. Northern Territory University.

WBM Oceanics Australia and Claridge, G. (1997). *Guidelines for managing visitation to seabird breeding islands*. Great Barrier Reef Marine Park Authority.

Whiting, S.D., Noske, R.A., Guinea, M.L., Chatto, R., and Donato, D. (1997). Observations of birds on islands in northern Fog bay, Northern Territory. *NT Naturalist* **15**: 27-40.

PERSONAL COMMUNICATIONS

Bond, D. Bawinanga Aboriginal Corporation.

Bradley, J. Borroloola resident.

Bellchambers, K. Parks and Wildlife Commission ranger, formerly Alice Springs.

Burrapung, J. Traditional owner from Elcho Island.

Davis, Col. Perkins Shipping, Groote Eylandt.

Fisher, A. Parks and Wildlife Commission, Darwin.

Guinea, M. Northern Territory University.

Hope, R. Parks and Wildlife Commission ranger, formerly at Black Point.

Johnson, S. Traditional Owner, Vanderlin Island, Sir Edward Pellews.

Norman, B. Parks and Wildlife Commission ranger, formerly Borroloola.

Limpus, C. Queensland National Parks and Wildlife Service.

McKean, J. (dec.) Formerly CSIRO, Darwin.

Munungurritj, N. Dhimurru Land Management Aboriginal Corporation.

Norman, B. Parks and Wildlife Commission ranger, formerly at Borroloola.

Oliver, K. Commercial Fisherman, Borroloola.

Panton, B. Parks and Wildlife Commission, Darwin.

Smit, N. Parks and Wildlife Commission, Darwin.

Perciville, D. Resident, Maningrida.

Puckey, H. Parks and Wildlife Commission, Katherine.

Saunders, T. Ex- Parks and Wildlife Commission ranger, formerly at Black Point

Stevens, M. Parks and Wildlife Commission ranger, formerly at Nhulunbuy.

Wagg, A. Helicopter pilot, Gove.

Walsh, B. Ex- Parks and Wildlife Commission ranger, Nhulunbuy.

Wilson, L. Parks and Wildlife Commission ranger, formerly at Black Point.

Withers, A. Parks and Wildlife Commission ranger, formerly at Black Point and Borroloola.

Woerle, F. Ex- Parks and Wildlife Commission ranger, Murgenella.

Woinarski, J. Parks and Wildlife Commission, Darwin.

Yunupingu, D. (Joe) Dhimurru Land Management Aboriginal Corporation.

APPENDICES

Appendix A.
Summary Tables

The tables detailed in this appendix contain:

- Estimates of the total numbers of adults of all species combined that were present in each colony for that season, and an average for all years (Table A1).
- Estimates of the highest numbers of adults of each individual species present in each colony for that season, and an average for all years. Also for the individual species (or in some cases, species groups) there is an additional table with information on the timing of breeding .

The following tables use a number of codes, or attachments to number estimates. These attachments are a little arbitrary given that they could possibly be attached to many more estimates because of the low frequency of, and lack of intense counting, in site visits during these surveys. They have tended to be used only on the more obvious situations, and hence tend to be more frequently used with some species more than others because of the nature of their breeding. Codes and attachments used in the following tables include:

NIL Recorded as **NIL** only when it was certain that the colony was not being used that year or that an individual species was not breeding. (When a site had no birds in an early in the season aerial or ground visit and/or in an aerial check late in the season, and no other visits were made, a nil was not recorded even though this may have been the case. Hence there are probably a few 'nils' missing from the tables).

BP **B**irds **P**resent at site but either in breeding plumage and not yet started or uncertain whether breeding at the time of recording the birds present. (This latter often applies to colonies that were not confirmed until later years).

BE **B**reeding has previously occurred at site earlier in the year, but had now **E**nded.

NSCA **N**one of that particular **S**pecies seen even though **C**olony was **A**ctive, often because the colony was visited at the incorrect time of the season for that species, but also there could have been only a small number present that were not detected. Differs from NIL in that it cannot confidently be said that none of that species were breeding.

P **P**resent and breeding but unable to give reliable estimate of numbers.

RBB **R**oseate and/or **B**lack-naped Tern **B**reeding but numbers of individual species present unable to be confirmed.

? Where a species group (eg Roseate and/or Black-naped Tern) is confirmed, and although an individual species (eg Black-naped Tern) is likely to be present, they were unable to be separated in terms of numbers present to allocate a size-class for that species in that colony. Used only in 'Allocated Size Class' column of the individual species tables, as opposed to P, RBB entries that are used for each different year in all tables except those referring to timing of breeding.

> Estimate includes flying young. (Used as an attachment to yearly number estimates).

In some colonies there were more birds present than appeared to be breeding at the time. Because of a lack of follow up visits it was not often possible to say whether these birds began breeding at a later stage, although it is likely in many cases because of the extended breeding season of many colonies. When the number of active nests was able to be ascertained the number recorded breeding in the following tables represents twice this number, and neither of the following attachments are included even if there were more birds present in breeding plumage. When the number of nests was unable to be ascertained, the number of breeding plumage/defending birds was recorded and one of the following attachments added to the number.

< Estimate of numbers likely to be significantly less than peak numbers, eg done at time of year when not all birds breeding or unable to view all birds present.

^ Likely that not all birds present at the particular count were breeding at the time. This is frequently likely to also imply that the estimate will be less than peak numbers breeding for the season. In some cases (particularly Table A1, which combines all species, and Table A16, detailing Bridled Terns that have an extended season) both symbols are used, but mostly just one or the other is used.

NB. Map B1 in Appendix B shows the location of each of the colonies by number, as given in the following tables.

Table A1. All species combined - Approximate numbers of birds in each colony for years when surveyed.

Colony No.	ESTIMATED ADULT BIRDS							Average No. (no of sites used)	Allocated colony size
	1993	1994	1995	1996	1997	1998	1999		
S001		28						28(1)	11 - 100
S002			10^					10(1)	11 - 100
S003		NIL		40				40(1)	11 - 100
S004	100	P						100(1)	11 - 100
S005	2	NIL						2(1)	2 – 10
S006	100	NIL		BP				100(1)	101 – 500
S007		2400	160<	100^<				2400(1)	1001 - 5000
S008		2		BP				2(1)	2 - 10
S009		25750^		5100^<			50300	40000(3)[1]	>30000
S010	2<							2(1)	2 – 10
S011	400^	800^						500(2)	101 - 500
SO12	1000^<	10072		5560				7816(2)	5001 – 10000
S013		10020		15010				12505(2)	10001 – 30000
S014	400<	1500						1500(1)	1001 - 5000
S015	250^	P						250(1)	101 - 500
S016	200^							200(1)	101 - 500
S017	150							150(1)	101 - 500
S018		12						12(1)	2 – 10
S019	100	200						150(2)	101 - 500
S020	2100^	1240^<		200<	BP			2100(1)	1001 - 5000
S021	550	300<		250^<	500^			433(3)	501 - 1000
S022	50							50(1)	11 - 100
S023	1680^	356<						1680(1)	1001 - 5000
S024	396				BP			396(1)	101 - 500
S025	80<	5000<					500<	5000(1)	1001 - 5000
S026				P	P				11 – 100
S027		20^						20(1)	11 - 100
S028					100			100(1)	11 - 100
S029				4				4(1)	2 – 10
S030	2040^<	20000^<	P	12300^<	P	P		20000(1)	10001 – 30000
S031	30^>	200^<			150^<			200(1)	101 - 500
S032	3020>	172<		40<	P			2500(1)	1001 - 5000
S033	456	P		20^<	450			450(2)	101 - 500
S034	20							20(1)	11 - 100

Table A1 (cont.). All species combined - Approximate numbers of birds in each colony for years when surveyed.

Colony No.	ESTIMATED ADULT BIRDS							Average No. (no of sites used)	Allocated colony size
	1993	1994	1995	1996	1997	1998	1999		
S035	100	30<						100(1)	101 - 500
S036	100							100(1)	11 – 100
S037	200							200(1)	101 - 500
S038	250^	260						200(2)	101 – 500
S039	10000^				5000^<	7500^	20000^	13750(2)	10001 – 30000
S040	150^	12^			200			175(2)	101 – 500
S041	900^	20<			20<			900(1)	501 – 1000
S042	50^							50(1)	11 – 100
S043	100^<	10<					60^<	100(2)	101 – 500
S044	100^	100		10<				100(1)	101 – 500
S045	450^				P			450(1)	101 – 500
S046	20							20(1)	11 – 100
S047	50	20<						70(2)	11 – 100
S048	620<	2120			5100^			3800(2)	1001 – 5000
S049	240^	P						240(1)	101 – 500
S050	2000^	P						2000(1)	1001 – 5000
S051	50^<	2130^		140<	1000^<			2130(1)	1001 – 5000
S052	12<							12(1)	11 – 100
S053	100^							100(1)	11 – 100
S054	3000^							3000(1)	1001 – 5000
S055	400^				P			400(1)	101 – 500
S056	110^							110(1)	11 – 100
S057	1022^				1000^			1000(2)	1001 – 5000
S058	150							150(1)	101 – 500
S059	80							80(1)	11 – 100
S060	200	P						200(1)	101 – 500
S061	100^<	200^<	550^<				166<	400(2)	501 – 1000
S062		10000					P	10000(1)	10001 – 30000
S063	500^<	9300^<						10000(1)	10001 – 30000
S064		270						270(1)	101 – 500
S065	P				50			50(1)	11 – 100
S066	300	350^				100^<	50<	300(1)	101 – 500
S067		12						12(1)	11 – 100
S068				28^				28(1)	11 - 100

Table A1 (cont.). All species combined - Approximate numbers of birds in each colony for years when surveyed.

Colony No.	ESTIMATED ADULT BIRDS							Average No. (no of sites used)	Allocated colony size
	1993	1994	1995	1996	1997	1998	1999		
S069	200^							200(1)	101 - 500
S070	1300^	2000^<		1800^				1550(2)	1001 - 5000
S071	500<	20200<		650^<			57625<	41000(2)	>30000
S072	300^	1000^						650(2)	501 – 1000
S073	62^							62(1)	11 - 100
S074				P					2 – 10
S075		800^						800(1)	501 - 1000
S076	40							40(1)	11 - 100
S077				100				175(2)[2]	101 - 500
S078				2				2(1)	2 – 10
S079		14						14(1)	11 - 100
S080	500^<	220^<						500(1)	501 - 1000
S081		1000^						1000(1)	501 - 1000
S082	BP	30<	BP				275^	275(1)	101 - 500
S083		200^		P			130^	165(2)	101 - 500
S084		5200^						5200(1)	5001 – 10000
S085		750^<		2250^<				2250(1)	1001 – 5000
S086								200(1)	101 - 500
S087		820^<			350<			1170(2)	1001 – 5000
S088		200^						200(1)	101 - 500
S089		1240			350			795(2)	501 – 1000
S090		320^						320(1)	101 - 500
S091		40	BP(100)				20	60(1)	11 - 100
S092		30^						30(1)	11 - 100
S093		20					29	40(2)	11 - 100
S094	BP(12)	40						40(1)	11 - 100
S095		180						180(1)	101 - 500
S096	BP(20)	14					62^	76(2)	11 - 100
S097		2						2(1)	2 – 10
S098		RBB							11 - 100
S099		2					6<	8(2)	11 - 100
S100	RBB	3560^		P	P			3560(1)	1001 - 5000
S101		20						20(1)	11 - 100

Table A1 (cont.). All species combined - Approximate numbers of birds in each colony for years when surveyed.

Colony No.	ESTIMATED ADULT BIRDS							Average No. (no of sites used)	Allocated colony size
	1993	1994	1995	1996	1997	1998	1999		
S102	12	82^						20(1)	11-100
S103		50						50(1)	11 - 100
S104		400			RBB(100+)			400(1)	101 - 500
S105		200						200(1)	101 - 500
S106	BP(100^)	6<		BP(10<)				6(1)	11 – 100
S107		80						80(1)	11 - 100
S108		50						50(1)	11 - 100
S109	P	28						28(1)	11 - 100
S110		1900						1900(1)	1001 - 5000
S111		100^		2				100(1)	11 - 100
S112		500						500(1)	501 - 1000
S113		20						20(1)	11 - 100
S114		100		RBB(80)				100(1)	11 – 100
S115		52						52(1)	11 – 100
S116		50			P			50(1)	11 – 100
S117		300						300(1)	101 – 500
S118					6			6(1)	2 – 10
S119								300(1)	101 – 500
S120				4				4(1)	2 – 10
S121				40				40(1)	11 – 100
S122				50^				50(1)	11 – 100
S123	NIL	NIL	NIL	2500				2500(1)	1001 – 5000
S124									11 – 100
S125				200				200(1)	101 – 500
S126				2				2(1)	2 – 10
S127				2				2(1)	2 – 10
S128					50			50(1)	11 – 100
S129	BP(12)				P			12(1)	11 – 100
S130					600^			600(1)	101 – 500
S131					30^			30(1)	11 – 100
S132					P		16	16(1)	11 – 100
S133							2	2(1)	2 – 10
S134							30	30(1)	11 – 100
S135	BP(10)		BP(100)			BP(2)	80	80(1)	11 – 100
S136							2	2(1)	2 – 10

Table A1 (cont.). All species combined - Approximate numbers of birds in each colony for years when surveyed.

Colony No.	ESTIMATED ADULT BIRDS							Average No. (no of sites used)	Allocated colony size
	1993	1994	1995	1996	1997	1998	1999		
S137					2		20	20(1)	11 – 100
S138							52^	59(2)[3]	11 – 100
S139							8	8(1)	2 – 10
S140					2<		24	24(1)	11 – 100
S141							204	204(1)	101 – 500
S142							10	10(1)	2 – 10
S143							2	2(1)	2 – 10
S144								8(1)[4]	2 – 10
S145								20(2)[5]	11 – 100
S146								70(1)[6]	11 – 100
S147								2(1)[8]	2– 10
***Total** **No sites** **Average**								**218219** **(174)** **1254**	

* For some years colonies where a reasonable estimation of numbers of birds could be done at selected colonies, the total number of birds (total) was divided by the no of sites.(No. sites) to give an average colony size (Average) for that year.

1 Count of 50000+ in 2000 and 60000+ in 2001

2 Count of 250 in 2000

3 Count of 66 in 2000

4 Count of 8 on 2000 and 6 in 2001

5 Count of 12 in 2000 and 30 in 2001

6 Count of 70 in 2000

7 Count of 2 in 2000

Table A2. Silver Gull - Approximate numbers in each colony for years when surveyed.

Colony Number	ESTIMATED ADULT BIRDS							Allocated Size Class
	1993	1994	1995	1996	1997	1998	1999	
S007		BP(4)	80	P				11-100
S009		750^		100^			400^	101-500
S012		60		60				11-100
S013		20		10				11-100
S020		20	BP	BP(20)	BP			11-100
S032		72		40<				11-100
S043		2					60^	11-100
S047		20						11-100
S061			50^				60	11-100
S062		25^					P	11-100
S064		270		NIL				101-500
S066	100	200						101-500
S071		20					75	11-100
S082							175^	101-500
S083		200^		P			130^	101-500
S084		200^						101-500
S087		20^						11-100
S089		40						11-100
S090		24						11-100
S116		20						11-100
S121				40				11-100
S138							12	11-100

Table A3. Silver Gull – Observations relevant to timing of breeding.

Date	Colony Number	Comments
9.2.96	64	No nesting.
30.3.94	64	Breeding.
29.4.96	121	Hatched and unhatched eggs.
3.5.94	66	Most chicks, up to half grown.
3.5.94	64	Clutches of 1-3 eggs through to half grown young.
3.5.94	62	Eggs, but not all nests seen.
4.5.94	84	Chicks and eggs.
4.5.94	87	Recently fledged young but not all nests seen.
6.5.94	47	Eggs through to near fledged young.
6.5.94	89	Eggs through to recently fledged young.
7.5.94	32	Eggs but not all nests seen.
8.5.94	12	Mostly eggs but odd older chick.
17.5.95	61	Breeding.
23.5.99	61	Eggs through to flying young.
24.5.99	71	Eggs
24.5.99	82	New nests through to runners.
25.5.99	83	New nests through to recently fledged young.
25.5.00	38	Some birds sitting.
12.6.95	7	All eggs.
12.6.96	13	New nests, eggs and hatched shells.
13.6.96	12	Mostly eggs.
24.6.94	9	Eggs, chicks and recently fledged young.
18.6.99	138	Eggs and small chicks.
11.7.96	64	No nesting.
12.9.96	9	Adults still vigorously defending, odd dead young.
21.9.94	116	New nests and eggs at least.
27.9.94	64	Finished.
28.9.94	84	Not breeding.
30.9.94	62	Finished, flying juveniles present.
30.9.94	66	Not breeding
2.10.94	43	1 nest with 2 x 2/3 grown chicks.
1.12.93	64	Not breeding.

Table A4. Caspian Tern - Approximate numbers in each colony for years when surveyed.

Colony Number	ESTIMATED ADULT BIRDS							Allocated Size Class
	1993	1994	1995	1996	1997	1998	1999	
S043		2						2-10
S096							2	2-10
S133							2	2-10
S141							2	2-10

Table A5. Caspian Tern - Observations relevant to timing of breeding.

Date	Colony Number	Comments
23.5.99	S133	Eggs
25.5.95	S096	Young chicks
2.10.94	S043	Eggs
26.10.99	S141	Young chicks

Table A6. Lesser Crested Tern - Approximate numbers in each colony for years when surveyed.

Colony Number	ESTIMATED ADULT NUMBER							Allocated Size Class
	1993	1994	1995	1996	1997	1998	1999	
S063		440						101-500

Table A7. Lesser Crested Tern - Observations relevant to timing of breeding.

Date	Colony Number	Comments
9.2.96	S063	Not breeding.
30.9.94	S063	2/3 eggs, 1/3 small young.

Table A8. Crested Tern - Approximate numbers in each colony for years when surveyed.

Colony Number	ESTIMATED ADULT NUMBER							Allocated Size Class
	1993	1994	1995	1996	1997	1998	1999	
S003		NIL		40				11-100
S007		2000	80<					1001-5000
S009		25000		5000<			50000	>30000
S012	BP	12<		500				101-500
S013		10000		15000				10001-30000
S021		NIL		50				11-100
S025		5000					500<	1001-5000
S026		NIL		P				1001-5000
S030		5000		10000				5001-10000
S044		100						11-100
S047		4						2-10
S062		10000		P			P	10001-30000
S063		4500						1001-5000
S071	P	20000					50000	>30000
S080		P						11-100
S084		4800						1001-5000
S087		800^						501-1000
S122				50^				11-100
S123	NIL	NIL	NIL	2500				1001-5000
S124								11-100[1]

[1] Reliably reported active during 1990-2000 but no dates.

Table A9. Crested Tern - Observations relevant timing of breeding.

Date	Colony Number	Comments
09/02/96	62	Lots of birds but not started yet.
09/02/96	63	No nesting.
14/02/96	9	Not yet started.
16/03/95	25	No nesting.
02/04/94	13	Not started yet.
30/04/96	21	Eggs.
01/05/96	122	Eggs
03/05/96	30	Most eggs, a few chicks.
03/05/94	62	Three different parts. One high percentage chicks, one high percentage eggs, one about the same number eggs and chicks.
03/05/94	63	Eggs.
03/05/96	123	All eggs.
04/05/94	71	Eggs through to small chicks.

Table A9 (cont.). Crested Tern - Observations relevant timing of breeding.

Date	Colony Number	Comments
04/05/94	84	Most eggs, some chicks.
04/05/94	87	Eggs, just starting.
07/05/94	30	Eggs and young.
08/05/94	12	Small number nests, all one egg.
08/05/94	13	All eggs.
24/05/99	71	Most eggs, small no. chicks and some flying young.
27/05/94	25	All eggs.
27/05/94	30	Half grown chicks everywhere.
01/06/99	62	Many runners (Traditional Owner report).
12/06/96	13	Eggs through to 1/2 grown young.
13/06/96	12	All single eggs, one opened - fresh.
18/06/99	9	Some eggs but most creche young.
23/06/99	25	Runners visible from air.
24/06/94	9	New eggs through to 2/3 grown young, but most about 1/2 grown young.
08/07/96	21	Finished, birds roosting nearby.
08/07/96	25	No nesting.
08/07/96	122	Finished, recently fledged young.
08/07/96	123	Finished.
10/07/96	62	Finished but occasional newly fledged bird around.
12/09/96	9	Finished, high 100's dead, well feathered young
16/09/93	62	No nesting.
27/09/94	62	Finished.
28/09/94	84	No nesting.
01/10/96	123	Finished, egg shells remaining.
03/10/94	13	Colony finished, a few dead young still present.
12/11/96	25	Nil nesting.
12/11/93	30	Finished.
30/11/93	71	Finished, been large.
01/12/93	62	No nesting.
30/01/96	25	No nesting.
31/01/96	30	No nesting.

Table A10. Roseate Tern - Approximate numbers in each colony for years when surveyed.

Colony Number	ESTIMATED ADULT NUMBER							Allocated Size Class
	1993	1994	1995	1996	1997	1998	1999	
S004	8	BP						2-10
S006	10	NIL		BP				2-10
S012		5000		NIL				1001-5000
S020	BP	20		BP	BP			11-100
S021	150	180<		200^<	RBB(500^)			101-500
S023	350^	150<						101-500
S024	300				BP			101-500
S026					RBB			?
S028					RBB(100)			?
S030	BP	3000			RBB	RBB		1001-5000
S031		200			RBB(150)			101-500
S032	2500>	40<			RBB(1250)			1001-5000
S033	6				20			11-100
S038		80						11-100
S041	200							101-500
S048	400<	2000			RBB(5000^)			1001-5000
S049	40^	P						11-100
S051		1500^		10<	RBB(1000^)			1001-5000
S055					RBB			?
S058	130							101-500
S060	20	P			RBB(200)			11-100
S063	BP	4000<						1001-5000
S065	P				50			11-100
S070	280			200				101-500
S071	P	120<		RBB(650^<)			7500	5001-10000
S075	RBB(200)	250^						101-500
S085		NIL		1500				1001-5000
S087						RBB(350)		?
S089	BP	640				RBB(350)		501-1000
S090		42^						11-100
S095		100						11-100
S098		RBB		BP				?
S100	RBB	60		P	P			11-100
S102		2						2-10
S103		4						2-10
S104		280			RBB(100)			101-500
S105		130						101-500
S110		600						501-1000
S111		P(100^)						11-100
S114		10		RBB(80)				2-10
S117		40						11-100
S119								?[1]
S124								?[1]
S125				20				11-100
S128					RBB(50)			?
S130	BP				RBB(100)			?
S141							2	2-10

[1] Reliably reported active during 1990-2000 but no dates or numbers.

Table A11. Roseate Tern - Observations relevant to timing of breeding.

Date	Colony Number	Comments
02/02/96	100	Not breeding.
09/02/96	63	Not breeding.
16/03/94	20	Not breeding. No birds present.
29/03/94	41	Not breeding.
30/04/96	20	Not breeding.
30/04/96	21	Eggs, at least.
03/05/96	85	Birds in BP but only odd egg.
04/05/94	70	Not breeding.
04/05/94	71	Eggs and young.
06/05/94	48	Not breeding.
07/05/94	30	1/2 x 1 egg, 1/2 x 2 eggs, occasional x 3 eggs.
07/05/94	31	Eggs at least.
07/05/94	41	Not breeding.
08/05/94	12	Fresh eggs through to half grown young. Two sections, one with most eggs, one most chicks.
24/05/99	71	Most 1-2 eggs and young chicks.
25/05/99	70	Not breeding.
27/05/94	30	1/10 eggs, 9/10 chicks (3/4 dead).
27/05/94	90	Eggs at least.
08/07/96	20	Not breeding.
08/07/96	23	Not breeding.
19/09/94	58	Not breeding.
19/09/94	104	Sitting tight.
21/09/94	20	Eggs, at least.
21/09/94	21	Just commencing, some eggs.
21/09/94	23	Eggs, at least.
21/09/94	90	Defending.
21/09/94	117	Sitting.
24/09/96	125	Most eggs (1's and 2's).
25/09/96	20	Breeding.
28/09/94	75	Scrapes but not yet started with eggs.
28/09/94	95	All eggs.
29/09/94	71	Eggs, not all breeding (yet).
30/09/94	63	1/2 1 egg and 1/2 x 2 egg.
01/10/94	51	Most adults sitting around in BP, a few eggs, yet to really start.
01/10/94	100	Eggs and chicks.
02/10/94	41	Not breeding.
02/10/94	89	All eggs.
02/10/94	103	Eggs.
02/10/94	105	Most eggs: 1/2 x 1 egg and 1/2 x 2 eggs.
03/10/94	12	Not breeding. No birds present.

Table A11 (cont.). Roseate Tern - Observations relevant to timing of breeding.

Date	Colony Number	Comments
04/10/94	110	Most eggs (1's and 2's).
04/10/94	111	Eggs at least.
05/10/94	4	Eggs and small chicks.
05/10/93	114	All eggs.
08/10/97	21	Black-naped and/or Roseate breeding.
09/10/97	58	Not breeding.
09/10/96	70	Eggs at least.
09/10/97	104	Breeding.
13/10/94	48	Most 1 egg. Few 2 eggs and some chicks.
09/11/93	6	All eggs.
12/11/96	21	Two stages: Eggs (most) and recently fledged young (some).
12/11/93	23	10% recently fledged young, some egg shells.
12/11/93	24	Most eggs and young chicks.
12/11/93	30	Some recently fledged young at least.
12/11/93	31	Not breeding.
12/11/93	32	Most eggs, some chicks, some just fledged young.
13/11/93	33	Recently fledged young at least.
28/11/96	114	Breeding.
30/11/93	70	Egg shell and recently fledged young.
02/12/93	41	Some eggs and half grown chicks, but most recent fledged young.
02/12/93	48	Finished (been very large colony).
03/12/93	58	Eggs through to fledged young.
18/12/96	104	Not breeding.
30/01/96	23	Not breeding.
31/01/96	30	Not breeding.

Table A12. Black-naped Tern - Approximate numbers in each colony for years when surveyed.

Colony Number	ESTIMATED ADULT NUMBER							Allocated Size Class
	1993	1994	1995	1996	1997	1998	1999	
S002								11-100[1]
S004	90	P						11-100
S006	90	NIL						11-100
S011	P	300^						101-500
S012				2				2-10
S015	150	P						101-500
S017	150							101-500
S019	100	200						101-500
S020	80^	200^		BP	BP			101-500
S021	400	120<		NIL	RBB(500^)			101-500
S022	50							11-100
S023	30^	BP(6)						11-100
S024	56				BP			11-100
S025	80							11-100
S026					RBB			?
S027		20^						11-100
S028					RBB(100)			?
S030	20	30			RBB			11-100
S031	30	BP			RBB(150)			11-100
S032	120	60^			RBB(1250)			101-500
S033	50				80			11-100
S034	20							11-100
S035	100	30<						11-100
S036	100							11-100
S037	200							101-500
S038	50>	150						101-500
S040	2				P			2-10
S041	300	20<			20<			101-500
S043		2						2-10
S044	100^	100		10<				11-100
S045	250				20<			101-500
S046	20							11-100
S047	50							11-100
S048	20<	20			RBB(5000^)			11-100
S049	200^	P						101-500
S051		500^		30<	RBB(1000^)			501-1000
S053	100^							11-100
S055					RBB			?

Table A12 (cont.). Black-naped Tern - Approximate numbers in each colony for years when surveyed.

Colony Number	ESTIMATED ADULT NUMBER							Allocated Size Class
	1993	1994	1995	1996	1997	1998	1999	
S056	10							2-10
S057	20							11-100
S058	20							11-100
S059	80							11-100
S060	180	P			RBB(200)			101-500
S063		800						501-1000
S067		12						11-100
S070	20			100				11-100
S071	P	60		RBB(650^<)				11-100
S075	RBB(200)	250^						101-500
S076	40							11-100
S077				250				101-500
S080		20						11-100
S086								101-500[1]
S087					RBB(350)			?
S089		760			RBB(350)			501-1000
S090		260^						101-500
S094	BP(12)	40						11-100
S095		80						11-100
S098	RBB			BP				?
S100	RBB	500		P	P			101-500
S101		20						11-100
S102	10	60						11-100
S103		46						11-100
S104		120			RBB(100+)			101-500
S105		70						11-100
S107		80						11-100
S108		50						11-100
S109	P	28						11-100
S110		1300						1001-5000
S111		P(100^)						11-100
S112		500						101-500
S113		20						11-100
S114		90		RBB(80)				11-100
S115		52						11-100
S116		10			P			2-10
S117		260						101-500
S119								?[1]
S124								?[1]
S125				180				101-500
S128					RBB(50)			?
S130					RBB(150)			?
S141							200	101-500

[1] Reliably reported active during 1990-2000 but no dates or numbers.

Table A13. Black-naped Tern - Observations relevant to timing of breeding.

Date	Colony Number	Comments
02/02/96	100	Not breeding.
07/02/96	11	Not breeding.
09/02/96	63	Not breeding.
15/03/95	40	Not breeding.
16/03/95	20	Not breeding.
29/03/94	41	Not breeding.
30/03/94	49	Not breeding.
26/04/93	22	Not breeding.
30/04/96	20	Not breeding.
30/04/96	27	Not breeding.
04/05/94	70	Not breeding.
06/05/94	48	Not breeding.
07/05/94	41	Not breeding.
07/05/94	45	Not breeding.
24/05/94	15	No nesting, no terns present.
25/05/99	70	Not breeding.
27/05/94	25	Not breeding.
27/05/94	90	Eggs, at least.
08/07/96	20	Not breeding.
08/07/96	23	Not breeding.
08/07/96	25	Not breeding.
27/07/92	112	Limpus (pers. comm.) reported 500 BNTE and 500 ROTE in BP appear to be selecting nest sites.
31/08/94	44	100-200 eggs collected by TO's in late August.
18/09/94	25	Not breeding.
18/09/94	90	Eggs.
19/09/94	58	Not breeding.
19/09/94	104	Sitting tight.
21/09/94	19	All eggs - 1/3 single, 2/3 double.
21/09/94	20	Eggs at least.
21/09/94	21	Just commencing, some eggs.
21/09/94	27	Breeding.
21/09/94	115	Eggs, most 1 (ie early).
21/09/94	117	Sitting.
24/09/96	125	Eggs, 1's and 2's.
25/09/96	20	Breeding.
28/09/94	75	1 egg, possibly not yet started in full.
28/09/94	95	Eggs, at least.
29/09/94	67	Eggs at least.
30/09/94	63	All eggs, most doubles.
01/10/94	48	Eggs through to chicks.

Table A13 (cont.). Black-naped Tern - Observations relevant to timing of breeding.

Date	Colony Number	Comments
01/10/94	51	Most not yet started, some 1 and 2 egg nests.
01/10/94	100	Eggs (few) through to chicks (most) & recently fledged young (few).
01/10/94	101	Chicks.
01/10/94	102	Eggs: 1/2 x 1, 1/2 x 2.
01/10/93	110	Not breeding.
02/10/94	41	Eggs 1's and 2's.
02/10/94	89	Eggs.
02/10/94	103	Eggs: 1/2 x 1, 1/2 x 2.
02/10/94	105	Eggs: 1/2 x 1, 1/2 x 2.
03/10/94	107	Eggs 1's and 2's.
03/10/94	108	Eggs 1's and 2's.
04/10/94	11	Variety from single egg through to near flying young.
04/10/94	109	Eggs and newly hatched chicks.
04/10/94	110	Most eggs (1's and 2's, occasional 3) and some chicks.
04/10/94	111	Eggs.
04/10/94	113	Sitting.
05/10/93	4	All egg and young chicks.
05/10/94	114	All eggs: 2/3 x 1, 1/3 x 2.
08/10/97	21	Black-naped and/or Roseate breeding.
09/10/97	45	Breeding.
09/10/97	58	Not breeding.
09/10/96	70	Eggs.
09/10/97	104	Breeding.
09/10/94	112	Eggs 1's and 2's.
14/10/93	15	Most eggs with well-formed young in them.
26/10/99	141	Eggs 1's and 2's.
09/11/93	6	All eggs.
11/11/93	17	Most 1-2 eggs, odd chick.
11/11/93	19	Breeding.
12/11/93	20	Small percentage eggs, egg shell and recently fledged young.
12/11/93	21	2 stages: eggs (most) and recently fledged young (some).
12/11/93	22	Most eggs.
12/11/93	24	Mostly eggs and young chicks.
12/11/93	25	Mostly eggs and young chicks.
12/11/93	30	Some fledged young at least.
12/11/93	31	Chicks at least.
12/11/93	32	Eggs seen at least.
13/11/93	33	Some recently fledged young at least.
17/11/01	77	Eggs.
24/11/93	11	Some egg shell of this season.

Table A13 (cont.). Black-naped Tern - Observations relevant to timing of breeding.

Date	Colony Number	Comments
24/11/93	109	Nesting recently finished.
28/11/96	114	Breeding.
29/11/96	109	Not breeding.
30/11/93	70	Egg shell and recently fledged young.
30/11/93	76	Eggs.
02/12/93	41	Eggs and 1/2 grown young but mostly recently fledged young.
02/12/93	45	Eggs through to fledged young.
02/12/93	46	Eggs.
02/12/97	47	Eggs and chicks.
02/12/97	48	Finished.
03/12/93	38	Recently finished.
03/12/93	49	Chicks and recently fledged young.
03/12/93	53	Chicks and recently fledged young.
03/12/93	57	Breeding.
03/12/93	58	Eggs through to fledged young.
03/12/93	59	Eggs through to fledged young.
03/12/93	60	Odd eggs, most fledged young.
04/12/93	34	Some near fledged young at least.
04/12/93	35	Eggs and chicks.
18/12/96	104	Not breeding.

Table A14. Little Tern - Approximate numbers in each colony for years when surveyed.

Colony Number	ESTIMATED ADULT NUMBER							Allocated Size Class
	1993	1994	1995	1996	1997	1998	1999	
S001		28						11-100
S002			10					2-10
S005	2[1]	NIL						2-10
S008	2			BP				2-10
S010	2							2-10
S018		12						11-100
S029				4				2-10
S052	12<							11-100
S057	2							2-10
S066	200[2]	150^				100^	50^	101-500
S068						28^		11-100
S074				P				2-10
S078				2				2-10
S079		14						11-100
S082	BP	30<	BP				100^	11-100
S089		2						2-10
S091		40	BP(100)				20	11-100
S092		30^						11-100
S093		20					20	11-100
S096	BP(20)	14					60^	11-100
S097		2						2-10
S099		2					6<	11-100
S102	2							2-10
S106	BP(100)	6<		BP(10<)				11-100
S111				2				2-10
S118					6			2-10
S120				4				2-10
S126				2				2-10
S127				2				2-10
S131					30^			11-100
S132				P			16	11-100
S134							30	11-100
S135		BP(10)		BP(100)		BP(2)	80	11-100
S136							2	2-10
S137					2		20	2-10
S138							40^	11-100[3]
S139							8	2-10
S140					2<		24	11-100
S142							10	2-10
S143							2	2-10
S144								2-10[4]
S145								11-100[5]
S146								11-100[6]
S147								2-10[7]

1 Pair also bred in 1992.; 2 200 bred in 1991 and 150 in 1992; 3 60 bred in 2000; 4 8 bred in 2000 and 6 in 2001; 5 12 bred in 2000 and 30 in 2001; 6 70 bred in 2000; 7 2 bred in 2000.

Table A15. Little Tern - Observations relevant to timing of breeding.

Date	Colony Number	Comments
07/02/96	74	Not breeding.
25/02/94	8	Fledged young.
29/04/96	132	Defending.
03/05/94	66	Small numbers eggs and chicks, most not started.
06/05/94	89	Breeding.
15/05/92	66	40 eggs and 1 chick.
18/05/95	135	Breeding probable.
22/05/94	1	All eggs.
23/05/99	134	Eggs (most 2's)
24/05/99	66	Breeding.
24/05/99	82	Most eggs (most 2).
24/05/00	138	Most eggs (most 2's and 3's, some 1's), odd small chick.
24/05/00	145	All eggs.
25/05/94	91	Eggs and young.
25/05/94	92	Eggs and young.
25/05/94	93	Eggs.
25/05/99	96	Mostly eggs (most 2 eggs) and some chicks.
25/05/99	99	Eggs.
26/05/99	91	Breeding.
26/05/99	135	Most eggs (most 2), odd chick.
27/05/99	136	Defending.
27/05/99	137	Defending.
07/06/00	144	Eggs.
13/06/96	68	Eggs.
13/06/96	74	Eggs.
13/06/96	120	Eggs.
14/06/96	78	Breeding.
14/06/96	111	Defending.
18/06/99	138	Defending.
23/06/99	132	Eggs.
23/07/98	66	Most Not breeding. Few eggs and small young.
03/09/95	2	Breeding.
16/09/93	135	Breeding probable.

Table A15 (cont.). Little Tern - Observations relevant to timing of breeding.

Date	Colony Number	Comments
17/09/99	139	All eggs.
28/09/94	79	Eggs.
28/09/94	96	Eggs, most singles, odd double.
29/09/94	97	Eggs.
29/09/94	99	Breeding.
30/09/94	66	Some adults in BP (defending), some scrapes, but no nests seen.
30/09/94	82	Eggs.
01/10/92	5	Downy chicks.
01/10/93	5	Breeding.
02/10/94	106	Defending.
09/10/96	29	Breeding.
09/10/96	126	Defending.
09/10/96	127	Eggs.
11/10/97	131	Small chick.
26/10/99	132	Eggs.
26/10/99	140	Eggs through to half grown chicks.
14/11/93	102	Breeding. (strongly defending).
15/11/99	135	Defending.
16/11/99	91	Eggs and chicks.
16/11/99	93	Breeding.
16/11/99	142	Eggs.
16/11/99	143	Defending.
17/11/01	147	Defending.
20/11/97	118	Defending.
30/11/93	8	Breeding.
30/11/93	10	Breeding.
03/12/93	52	Breeding.
03/12/93	57	Eggs.
16/12/98	135	Breeding probable.
21/12/92	2	Near fledged young.
30/01/96	23	Not breeding.
30/01/96	25	Not breeding.
31/01/96	30	Not breeding.

Table A16. Bridled Tern - Approximate numbers in each colony for years when surveyed.

Colony Number	ESTIMATED ADULT NUMBER							Allocated Size Class
	1993	1994	1995	1996	1997	1998	1999	
S007	NIL	400^		100^				101-500
S011	400^	500^						101-500
S012	1000^<	5000		5000^				1001-5000
S014	400^<	1500^						1001-5000
S015	100^							11-100
S016	200^							11-100
S020	2000^	1000^<		200^<				1001-5000
S023	1300^	200<						1001-5000
S024	40							11-100
S030	2000^<	11000^<	500^<	2000^<	P	3000^<		5001-10000
S032	200^				250^			101-500
S033	400^	P		20^<	350^			101-500
S038	200^	30						101-500
S039	10000^				5000^<	7500^	20000^	10001-30000
S040	150^	12<			P			11-100
S041	400^							101-500
S042	50^							11-100
S043	200^	4<						101-500
S045	200^				P			101-500
S048	200^	100^<			500<			101-500
S050	2000^	P						1001-5000
S051	50^<	2000^		100^<				1001-5000
S054	3000^							1001-5000
S055	400^							101-500
S056	100^							11-100
S057	1000^				1000^			501-1000
S061	100^	200^<	500^<				100<	101-500
S063	500^<	1000^<						501-1000
S069	200^							101-500
S070	1000^	2000^			1500^			1001-5000
S071							50^<	11-100
S072	300^	1000^						501-1000
S073	62^							11-100
S075		300^						101-500
S080	500^	200^						101-500
S081		1000^						501-1000
S085		750^<		P		2000		1001-5000
S088		200^						101-500
S100		3000^		P	P			1001-5000
S102		20^						11-100
S116		30^						11-100
S129	BP(12)				P			11-100
S130	BP				500^			101-500

Table A17. Bridled Tern - Observations relevant to timing of breeding.

Date	Colony Number	Comments
02/02/96	100	Not breeding.
07/02/96	11	No breeding.
09/02/96	12	No breeding, no birds present.
09/02/96	63	Not breeding.
16/02/95	30	Small amount of nesting.
15/03/95	39	Not breeding.
15/03/95	40	Not breeding.
16/03/95	20	No breeding, no birds present.
29/03/94	40	Not breeding.
29/03/94	41	Not breeding.
29/03/94	42	Not breeding.
30/03/94	50	Not breeding.
30/03/94	51	Breeding (many).
30/03/94	54	Not breeding.
30/03/94	61	Breeding.
30/03/94	81	Breeding.
31/03/94	73	Not breeding.
26/04/93	12	Breeding.
30/04/96	20	Not breeding.
03/05/96	30	Chicks seen.
04/05/94	70	Not breeding.
04/05/94	81	Eggs at least.
05/05/94	50	Not breeding.
05/05/94	51	Most if not all finished.
05/05/94	54	Not breeding.
05/05/94	88	Eggs and chicks.
06/05/94	48	Pipping egg found.
06/05/94	57	Not breeding.
07/05/94	30	Eggs through to young.
07/05/94	41	Not breeding.
07/05/94	42	Not breeding.
07/05/94	45	Not breeding.
08/05/94	14	No breeding, no birds present.
23/05/99	61	Breeding.
25/05/99	70	Not breeding.
27/05/94	30	Half grown chicks all over.

Table A17 (cont.). Bridled Tern - Observations relevant to timing of breeding.

Date	Colony Number	Comments
13/06/96	12	Eggs at least.
08/07/96	20	Not breeding.
08/07/96	23	Not breeding.
09/07/96	40	Not breeding.
09/07/96	57	Not breeding.
19/09/94	41	No nesting, but BRTE roosting nearby.
19/09/94	42	No nesting, but BRTE in vicinity.
20/09/94	30	Colony still continuing or starting another season.
20/09/94	54	Not breeding.
20/09/94	55	Not breeding.
20/09/94	80	Breeding.
20/09/94	81	Not breeding.
20/09/94	85	Eggs at least.
21/09/96	40	Not breeding.
21/09/94	116	Eggs at least.
25/09/96	20	Breeding.
27/09/96	81	Not breeding.
28/09/94	73	Not breeding.
29/09/94	70	Breeding.
29/09/94	72	Eggs at least.
30/09/94	61	Breeding.
30/09/94	63	Some eggs, possibly just starting.
01/10/94	51	Breeding. (few)
01/10/94	100	Eggs at lest.
02/10/94	41	No nesting, but BRTE roosting nearby.
03/10/94	14	Eggs through to small chicks, and some older chicks.
04/10/94	11	One egg noted, area not searched.
08/10/97	30	Breeding.
09/10/97	45	Breeding.
09/10/97	57	Breeding.
09/10/96	70	Eggs at least.
10/10/97	54	Not breeding.
13/10/94	48	Small number of birds still defending.
27/10/99	39	Eggs and young.
08/11/93	12	No breeding, no birds present.
11/11/93	15	One near fledged young, eggs may have been raided.

Table A17 (cont.). Bridled Tern - Observations relevant to timing of breeding.

12/11/93	20	Some eggs found.
12/11/93	23	One near fledged chick only.
13/11/93	41	Breeding.
13/11/93	42	Breeding.
13/11/93	54	Breeding.
13/11/93	55	Breeding.
15/11/93	61	Breeding.
17/11/93	50	Breeding.
24/11/93	11	One near fledged chick and some egg shells seen.
30/11/93	69	Eggs through to near fledged young.
30/11/93	70	Eggs through to near fledged young.
30/11/93	72	Egg shell, near fledged young.
30/11/93	73	Breeding.
30/11/93	75	Breeding, recently finished.
30/11/93	80	Breeding, recently finished.
01/12/93	63	Breeding.
02/12/93	40	Recently finished.
02/12/93	41	Breeding.
02/12/93	42	Finished.
02/12/93	45	Egg shell, probably finished.
02/12/93	48	Mostly finished.
03/12/93	38	Recently finished.
03/12/93	39	Recently finished.
03/12/93	50	Chicks heard at least.
03/12/93	54	Breeding.
03/12/93	55	Breeding.
03/12/93	57	Breeding.
18/12/98	30	Breeding.
21/01/96	39	Not breeding.
30/01/96	23	Not breeding.
31/01/96	30	Not breeding.
31/01/96	85	Some defending.

Table A18. Common Noddy - Approximate numbers in each colony for years when surveyed.

Colony Number	ESTIMATED ADULT NUMBER							Allocated Size Class
	1993	1994	1995	1996	1997	1998	1999	
S030		100		300				101-500

Table A19. Common Noddy - Observations relevant to timing of breeding.

Date	Colony Number	Comments
31.1.96	S030	Not breeding
3.5.96	S030	Eggs
7.5.94	S030	All eggs
20.9.94	S030	Not breeding
12.11.93	S030	Not breeding

Appendix B
Individual descriptions of confirmed colonies (S001-S147).

Individual colony breakdown for confirmed colonies

This appendix gives a separate summary of each confirmed colony, all of which are assigned a unique colony identifier (between S001 and S147). These colonies are prefixed by the letter 'S' (for seabird). The colony numbering system does not operate in any particular geographic or date-order. Each colony is characterised by a number of descriptors. The content of some of these is obvious but most are given further explanation below.

Historical Documentation. Refers to a search of previous reports in the scientific literature, explorers' journals, personal communications or other non-scientific sources. Where no other record was found, the colonies are recorded as being located during current surveys. The majority of the colonies reported here were actually located during the current surveys.

Survey dates. Month and year that some form of survey was carried out. These included any sort of brief aerial observation or report by a reliable informant, through to detailed ground surveys. Although primary reference is from the period of the surveys (1990-2000), a few observations prior to and subsequent to this period are also included.

Years confirmed active. Refers only to years in which the colony was checked and recorded as active during the current surveys, extracted from historical references or reported to the author by reliable observers.

Years confirmed inactive. Refers only to a known site that previously supported breeding but was definitely inactive during the year reported. Where years are not mentioned as either active or inactive it means the colony was not checked (or known about) and may or may not have been active. A colony that was recorded active for two years, and not recorded inactive at all (and this may have been due to the site not being visited in other years), is taken as active two out of two years, and thus a 'regularly used' colony.

Status. See discussion under 'Quality of numerical estimates' in the Methods section.

Species confirmed breeding. Species have been listed here as confirmed to be breeding by observation of a number of things. When eggs and/or young were seen there was obviously no doubt of confirmation. However, species were also recorded as confirmed to be breeding when they were observed sitting, strongly and consistently defending a particular site (eg Little Tern) or progressively coming out from under rocks or vegetation (eg Bridled Tern). Historically referenced colonies or observations reported to the author during the current surveys by reliable observers were also listed as confirmed. Where a 'species group' has not been reliably separated into individual species, then that species group name was recorded as what was confirmed breeding. However, as soon as a particular species was observed to be present in any subsequent survey, it was then listed as confirmed. The bracketed number and date attached to each species in this section indicates the highest estimate made in any survey for that species, at that colony.

Species probably breeding. This includes species considered in this report that were observed near the colony, and the individual species from a species group that was listed as confirmed breeding. For example a confirmed observation of "Black-naped and/or Roseate species" breeding would then have both the individual species listed as probably breeding.

Highest no. birds recorded. This section refers to the highest (all species combined) single count for that colony.

Highest estimated annual usage. This section attempts to approximate the highest total number of birds to have used the colony in a particular breeding season (ie full annual cycle). This differs from the above estimate in that it takes into account the different timing of breeding of the individual species over a complete breeding season and totals each when at their individual peaks.

Allocated colony size. This has been previously discussed in detail in the section entitled 'Quality of Numerical Estimates' (P9). Based on all the information collected, each colony is allocated a minimum size.

Months likely to be active. This section approximates the months of the year that the colony is likely to be active. This is based on observations of the stage of breeding of each of the species during field surveys and known incubation/fledging times, and/or documented or reliable information.

Photographs. This section indicates whether photographs of the colony had been taken at the time of writing this report. These photographs have been numbered and recorded on a database named Photoind.dbf, stored in the Parks and Wildlife Commission PCCOMM network.

Comments. This section contains an overall summary of the colony with explanations of some of the figures/statements made in the above sections, as well as additional comments not included under the previous headings.

Future surveying needed. This section concerns the author's view of the specific work still needed to upgrade the quality of the information on that particular colony. The overall need to monitor the continuing general status of all larger colonies, as was discussed above in Future Management, is taken as accepted and not repeated for each colony in this section. Similarly the need for detailed floristic or structural descriptions of the vegetation and/or substrate of most colonies, which has not yet been attempted, is not repeated for each colony. For all future work, priority should be given to larger or more significant colonies. A "high priority" means that it is important to survey/re-survey the colony because we have insufficient knowledge of its status. A "medium priority" means that sufficient is known to provide an adequate appreciation of the site's status, but it would be desirable to obtain some more information on certain aspects of the colony status. This applies mostly to sites that have to date only been surveyed from the air. A "low priority" is where sufficient information is known about the colony to be able to define its status and management requirements, even if an important colony. It does not need to be specifically targeted for checking in the near future unless in the area on other tasks or if there is some local development or other threat that may place the colony in jeopardy.

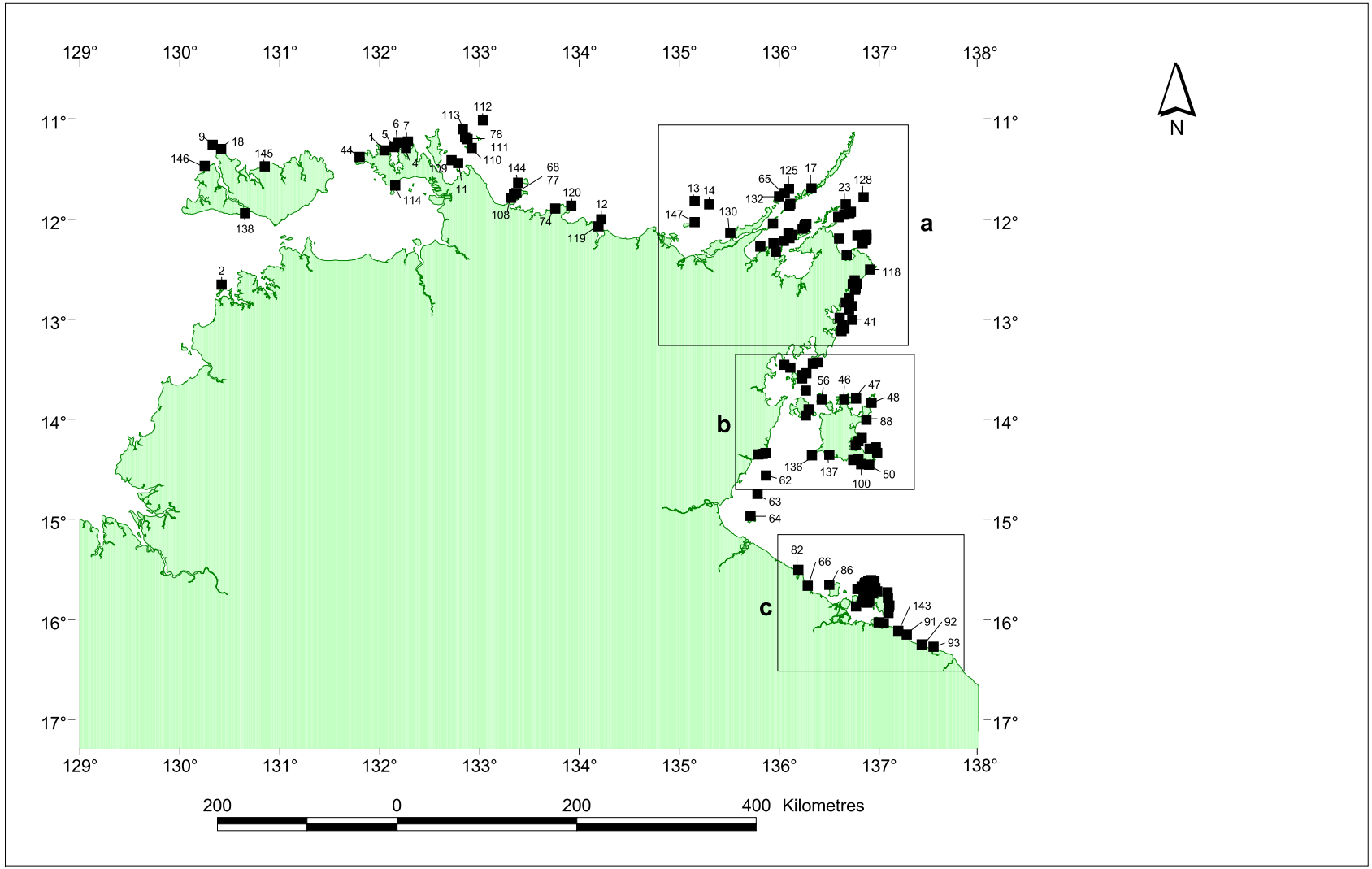

Figure B1. Location of colonies by colony number – confirmed colonies

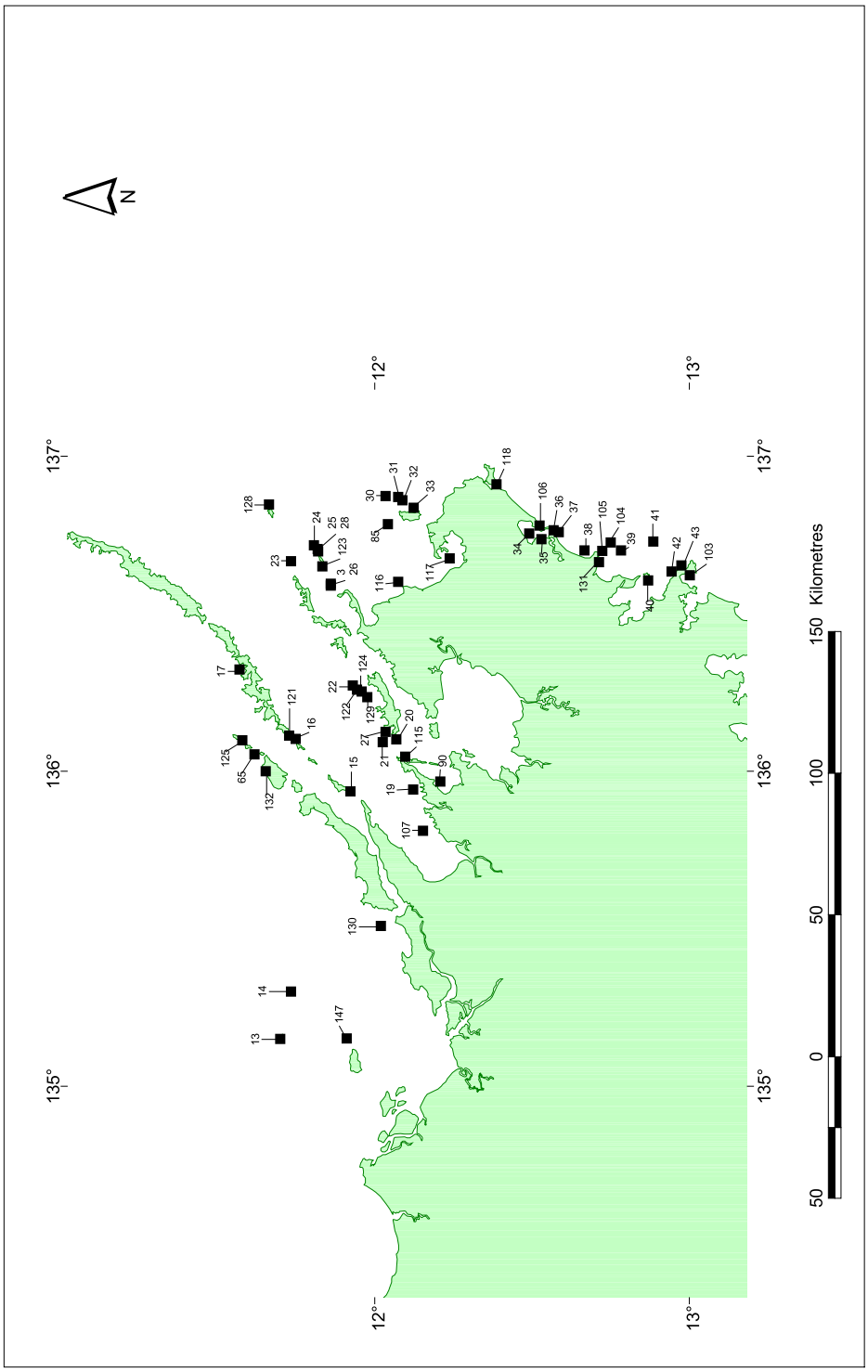

Figure B1a. Location of colonies by colony number – confirmed colonies

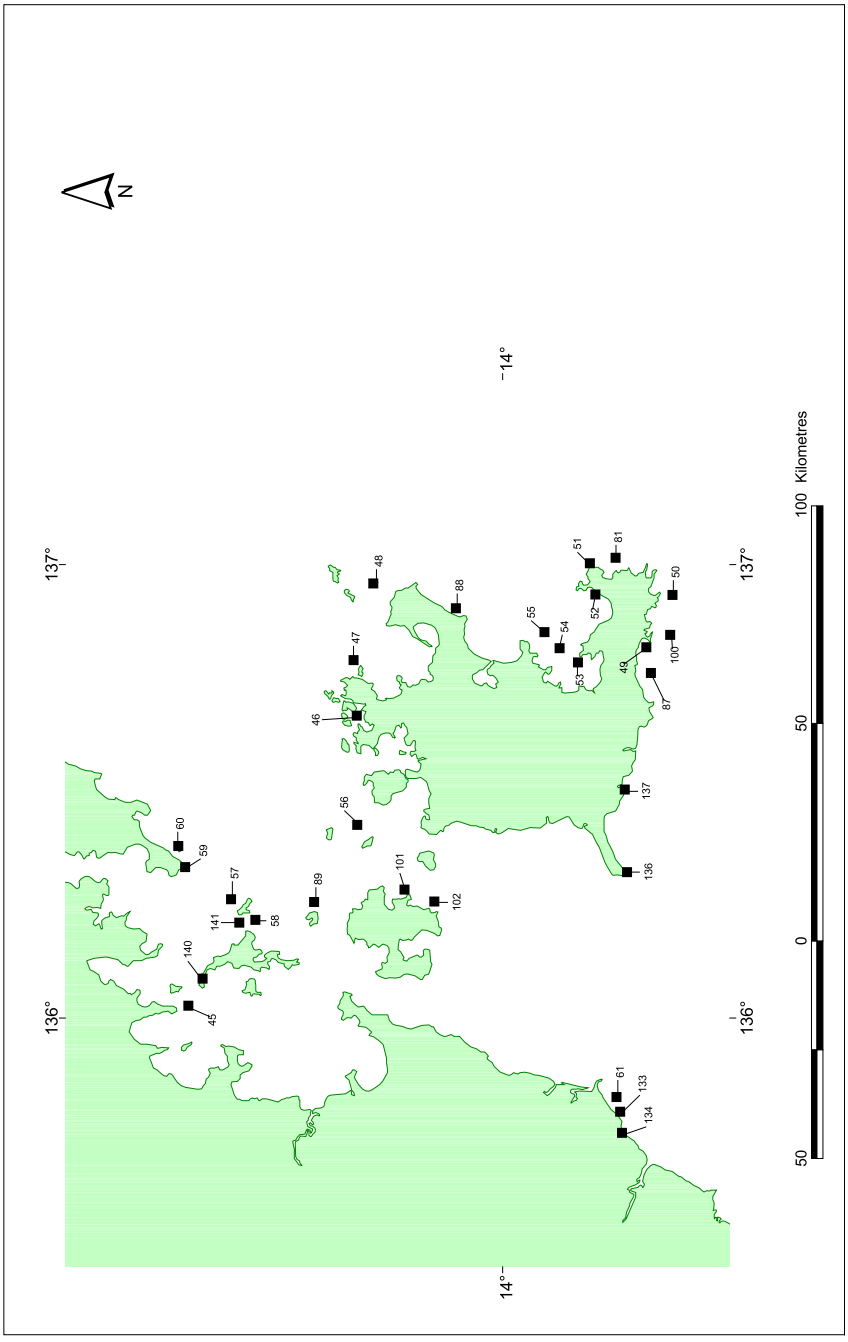

Figure B1b. Location of colonies by colony number – confirmed colonies

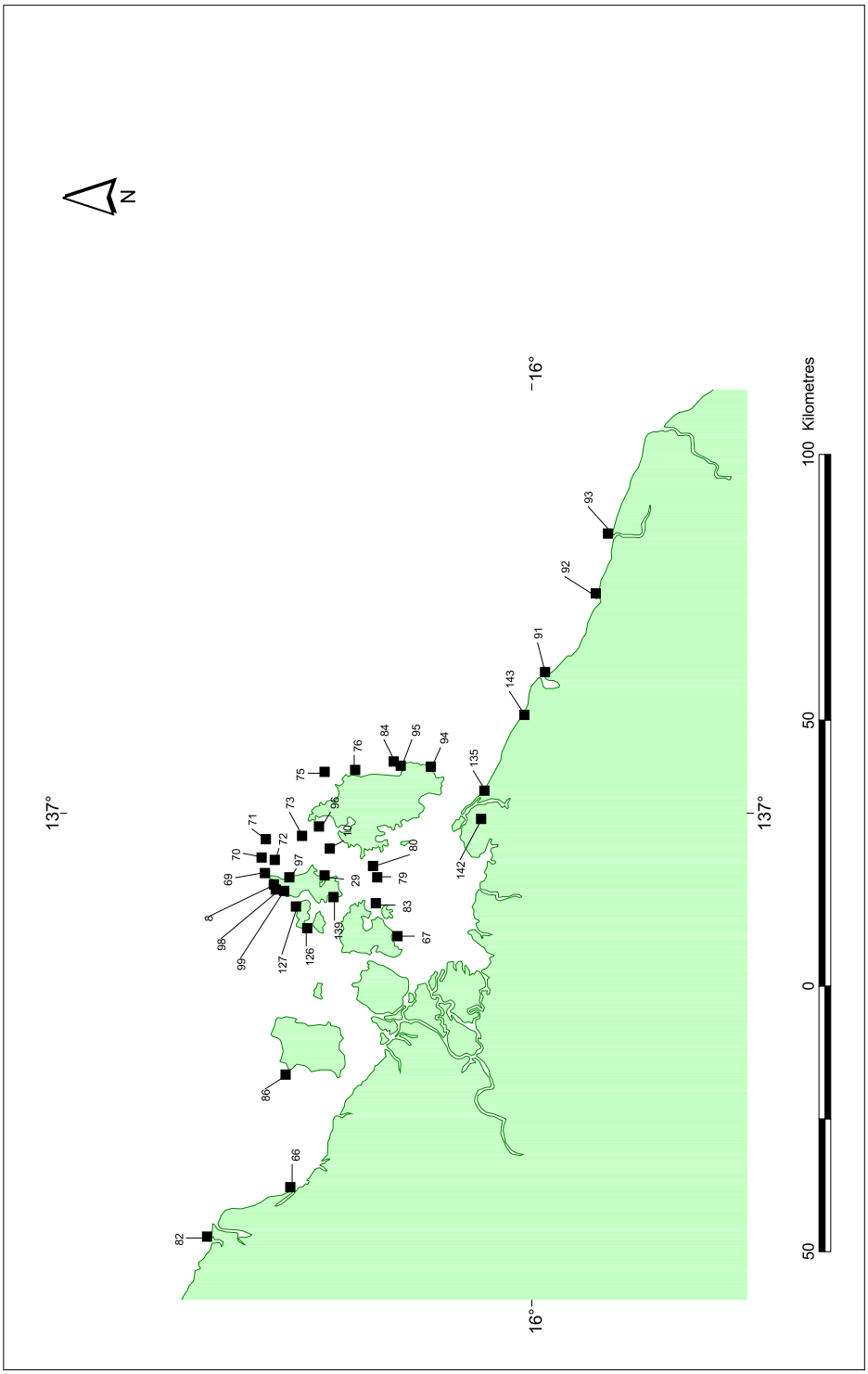

Figure B1c. Location of colonies by colony number – confirmed colonies

Colony Identifier:	S001
General Location:	Coral Bay, Cobourg Peninsula.
Historical documentation:	None found, site reported to author during current surveys.
Land tenure:	Conservation reserve, Gurig Marine Park.
Nesting Habitat:	Sand.
Survey dates:	May 1994, July 1994, November 1999.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (28, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	28 (May 1994).
Highest estimated annual usage:	28 (1994).
Allocated colony size:	11-100
Months likely to be active:	May to July.
Photographs:	No.
Comments:	Little Tern colony on small sand island near Seven Spirits holiday resort. Site reported to author as active in mid 1994 by resort staff. Activity in other years or other times of year is unknown.
Future surveying needed:	Medium priority. Check use at other times of year, particularly Sept-Dec.

Colony Identifier:	S002
General Location:	Bare Sand Island, SW of Darwin.
Historical documentation:	Guinea (1990) reported 20 pair of Black-naped Tern breeding in December 1989.
Land tenure:	Within area leased by Commonwealth as air force bombing range. Currently under Aboriginal land claim.
Nesting Habitat:	Sand, coral rubble.
Survey dates:	August 1992, December 1992, January 1994, September 1995, February 1996, September 1999, November 2000.
Years confirmed active:	1989/90, 1995, 2000 (and possibly 1992).
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(2). Black-naped Tern (40, December 1989), Little Tern (30-40, November 2000).
Species possibly breeding:	
Highest no. of birds recorded:	40 (December 1989).
Highest estimated annual usage:	40 (1989/90).
Allocated colony size:	11-100.
Months likely to be active:	September to January.
Photographs:	3342-47, 5431.
Comments:	Large sand island which has central sand/shell blow-outs that are occasionally used for seabird breeding. Small Black-naped Tern colony on one occasion, possibly extending into survey period. Most eastern NT breeding record of this species. Also small, possibly irregular, Little Tern colony. Small amount of Eastern Reef Egret breeding and possibly also a pair of Great-billed Heron. Quite heavily nested on by Flatback Turtles.
Future surveying needed:	Medium priority. Only known Little Tern or Black-naped Tern colonies in the NT that is west of Darwin, check when in area.

Colony Identifier:	S003
General Location:	One of inner Bromby Islands, east of Cape Wilberforce, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhemland A.L.T.
Nesting Habitat:	Rock, Grass, Sand.
Survey dates:	November 1993, April 1994, May 1994, September 1994, March 1995, January 1996, July 1996, October 1997.
Years confirmed active:	1996.
Years confirmed inactive:	1994.
Status:	Low.

Species confirmed breeding:	(1). Crested Tern (40, 1996).
Species possibly breeding:	Silver Gull.
Highest no. of birds recorded:	40 (1996).
Highest estimated annual usage:	40 (1996).
Allocated colony size:	11-100.
Months likely to be active:	April to June.
Photographs:	938.
Comments:	Small, probably irregular, Crested Tern breeding site on large vegetated rock island with a little sand around parts of the edge. Located in general area of much larger Crested Tern breeding islands, so may represent excess individuals from these main colonies. May also have small amount of Silver Gull breeding.
Future surveying needed:	Low priority. Check if in area during season.

Colony Identifier:	**S004**
General Location:	North Port Bremner, Cobourg Peninsula.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Conservation Reserve.
Nesting Habitat:	Sand, coral rubble.
Survey dates:	October 1993, June 1994, October 1994.
Years confirmed active:	1993 (and possibly 1994).
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(2). Black-naped Tern (90, October 1993), Roseate Tern (10, October 1993).
Species possibly breeding:	
Highest no. of birds recorded:	100 (October 1993).
Highest estimated annual usage:	100 (1993).
Allocated colony size:	11-100.
Months likely to be active:	September to November.
Photographs:	3348.
Comments:	Black-naped and small Roseate Tern colony on a fairly remote sand and rock point. Becomes connected to the mainland at low tide. Not checked often at correct time of year but probably used most years at same time of year, hence is most western such colony in the NT.
Future surveying needed:	Medium priority. Check if active at other times of year, particularly May-June.

Colony Identifier:	**S005**
General Location:	Black Point, Cobourg Peninsula.
Historical documentation:	PWCNT ranger reported a pair of Little Tern with chicks in 1983.
Land tenure:	Conservation Reserve.
Nesting Habitat:	Sand.
Survey dates:	October 1992 and 1993, November 1994.
Years confirmed active:	1992, 1993.
Years confirmed inactive:	1994.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (2, October 1992 and 1993).
Species possibly breeding:	
Highest no. of birds recorded:	2 (1992 and 1993).
Highest estimated annual usage:	2 (1992 and 1993).
Allocated colony size:	2-10.
Months likely to be active:	September to November.
Photographs:	3349-50
Comments:	Single pair (possible the same each year) that chooses to nest on the beach immediately adjacent to Black Point rocks. Possibly goes un-noticed in some years and may be quite regular.
Future surveying needed:	Low priority. However, as site is adjacent to Black Point ranger station could easily be checked regularly.

Colony Identifier:	**S006**
General Location:	Sandy Island No. 1 (Cobourg Peninsula).
Historical documentation:	Site well known to PWCNT rangers based at Black Point, mentioned in internal monthly reports that refer to all species listed here. Frith and Calaby (1974) when reporting Crested Terns breeding on Sandy No. 2 in 1967, said Sandy No. 1 was not used for breeding. However rangers report it being used on a number of occasions, dating back to 1975. Although the large Crested Tern breeding has switched back and forth between this island and the nearby Sandy Island No. 2 (S007), the latter seems to be the preferred site, at least during these surveys. C.R.A. reported breeding Black-naped Tern and Higgins and Davies (1996) report Caspian Tern breeding here, but neither said when.
Land tenure:	Conservation Reserve.
Nesting Habitat:	Sand, grass.
Survey dates:	November 1993, April, June & October 1994, November 1996, November 2000.
Years confirmed active:	1993, Rick Hope (pers. comm), 1996, 2000, H. Puckey (pers. comm.).
Years confirmed inactive:	1994.
Status:	National.
Species confirmed breeding:	(2+). Black-naped Tern (90, November 1993), Roseate Tern (10, November 1993).
Species possibly breeding:	Caspian Tern, Crested Tern.
Highest no. of birds recorded:	100 (October 1993).
Highest estimated annual usage:	100 (1993).
Allocated colony size:	11-100.
Months likely to be active:	October to December.
Photographs:	3351.
Comments:	Small, low sand and rock island which had a Black-naped Tern and small Roseate Tern colony active at least twice during this survey period. May not be used each year but likely to be used at the same time of the year. Has had low thousands of Crested Tern (which currently use the near-by S007 island) recorded breeding during the 1970's and 1980's. Caspian Tern previously reported breeding here by Higgins and Davies (1996) were not seen during these surveys but a pair or two is easily missed in such large-scale surveys. Large clutches (up to 25 eggs) of several Water Whistle Duck nests were recorded in the grass during surveys, and small numbers of turtles nest here. Site is not far from the frequently visited areas of Black Point and Seven Spirits, so boat access to and near the island needs to be restricted during the breeding season.
Future surveying needed:	Low priority (unless Crested Terns move from S007 to use this site). As is relative accessible by Black Point PWCNT rangers, could be checked when in area.

Colony Identifier:	**S007**
General Location:	Sandy Island No. 2, Cobourg.
Historical documentation:	Site well known to PWCNT rangers based at Black Point, mentioned in internal monthly reports referring to all species listed here. Frith and Calaby (1974) report large Crested Tern breeding colony in 1967. They also say Sandy Island No. 1 (S006) did not get used in those days. Sandy No. 2 has been active in most years, dating back to 1979, although the large Crested Tern breeding occasionally switched to Sandy Island No. 1. Sandy No. 2 seems to have been the preferred site during these surveys. Storr (1977) reported breeding Crested Tern. Higgins and Davies (1996) reported nesting Caspian Tern.
Land tenure:	Conservation Reserve.
Nesting Habitat:	Sand, coral rubble, grass.
Survey dates:	October 1993, April, June & October 1994, June 1995, November 1996.
Years confirmed active:	1994 and 1995 (Alan Withers, pers. comm.).
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(3). Bridled Tern (400, October 1994), Crested Tern (2000, June 1994), Silver Gull (80, June 1995).
Species possibly breeding:	Caspian Tern.
Highest no. of birds recorded:	2000 (June 1994).
Highest estimated annual usage:	up to 2400 (1994).
Allocated colony size:	1001-5000.
Months likely to be active:	March to December.
Photographs:	3352-55
Comments:	Reasonably large, grass-centered sand island with a few trees. Has medium to large Crested Tern, and small Silver Gull colonies, which are probably active in most years and

	regular in seasonal timing. Gulls predate on Crested Tern eggs. Also less regular and small Bridled Tern colony (most westerly in the NT) nesting in the grass. Unable to say if all 400 Bridled Tern were breeding at time, in October 1994. Pre-1990 records list Black-naped and Roseate Tern breeding – small colonies of which may have also occurred during this survey period. Osprey, Nankeen Night Heron, Water Whistle Duck were also recorded breeding here during surveys, as were turtles. Brown Boobies and Lesser Frigatebirds roost on island. Site is not far from the frequently visited areas of Black Point and Seven Spirits, so boat access to and near the island needs to be restricted during the breeding season.
Future surveying needed:	Medium priority. As is significant colony and easily accessible by Black Point PWCNT rangers, should be checked when in area.

Colony Identifier:	**S008**
General Location:	Bay between Cape Pellew & Ross Point on Nth Island, Pellews
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, February, July & October 1996.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (2+, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	2+ (November 1993).
Highest estimated annual usage:	2+ (1993).
Allocated colony size:	2-10
Months likely to be active:	October to December.
Photographs:	246-47.
Comments:	This is one of many seabird breeding sites throughout the Sir Edward Pellew Islands. Most colonies are on the many smaller islands that are dotted throughout the Pellews; however, a few Little Tern sites are on beaches of the larger, main islands such as this one. The breeding sites documented in this report were recorded during these surveys. Most of those small islands, and some of the beaches on the larger islands, that did not have seabird breeding recorded on them during these surveys, may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is a Little Tern breeding site that may only support 1 or 2 pairs on an open beach of large island. Site was located in November of the only year that it was properly checked at the appropriate time. May not have been active in 1996 but such a small group can be easily missed from the air.
Future surveying needed:	Low priority. Check if in area, at any time of year, but particularly May-June and Sept-Dec.

Colony Identifier:	**S009**
General Location:	Seagull Island, NW of Cape Van Diemen, Melville Island.
Historical documentation:	C. R. A. reports breeding Silver Gull and Crested Tern and possibly Lesser Crested and Roseate Tern. Storr (1977) reports Crested Tern breeding in April and November.
Land tenure:	Aboriginal Land, Tiwi A.L.T.
Nesting Habitat:	Sand, grass.
Survey dates:	October 1993, February, March, April & June 1994, February, June & September 1996, June 1999, May 2000, May 2001.
Years confirmed active:	1994, 1996, 1999, 2000, 2001.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(2). Crested Tern (60000+ May 2001), Silver Gull (800, April 1994).
Species possibly breeding:	
Highest no. of birds recorded:	60000+ (May 2001).
Highest estimated annual usage:	60000+ (2001).
Allocated colony size:	>30000.
Months likely to be active:	April to September.
Photographs:	3358-65, 6177-6180, 6182-6187, 6639-6674.

Comments:	Large sand island that is mostly covered by grass and vines. Associated with a group of other smaller non-vegetated islands, which are all only about 4 km off Melville Island. Very large Crested Tern colony that appears to be active at the same time of the year each year. It also appears to have been used in most seasons for many years, both during, and prior, to these surveys. These Crested Terns breed in a few separate groups of large numbers of tightly packed nests on sand, guano and/or short grass. The sites of these groups within the island sometimes vary in location between years. Crested Tern eggs have been regularly harvested by Aboriginal TO's for many years. Parts of the island have quite considerable amounts of guano deposits that also indicate that the island has been used for breeding for many years. The island also supports reasonable numbers of breeding Silver Gull. Unlike the terns, the gulls usually build a nest, and nests are scattered, and hidden throughout the island. Full island searches were never done for gull nests. The Gulls tended to be very asynchronous in breeding, starting before the Crested Terns and continuing after them. It is also likely that not all gulls recorded as present during a survey were breeding at the time or possibly even at all during that season. Consequently the number of gulls breeding on the island is likely to be less than the 800 adult birds recorded as present in April 1994, and other counts in the "low 100's" made in other surveys. The island also has large numbers of pre-migrating Little Tern and Common Tern at times, and is used as a roost by other species such as Brown Boobies and Frigatebirds. There is also considerable turtle nesting on the island. Important Olive Ridley nesting site.
Future surveying needed:	Medium priority. Certainly a significant colony but appears reasonably secure at the moment. Has been reasonably well assessed for Crested Tern, however some more information on the numbers of Silver Gull breeding on the island during the season is needed. Monitoring (and management) of on-going traditional egg harvest should be considered.

Colony Identifier:	**S010**
General Location:	David Islet, Sir Edward Pellew Islands.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralbi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, September 1994, May 1999.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1+). Little Tern (2+, November 1993).
Species possibly breeding:	Black-naped Tern.
Highest no. of birds recorded:	2+ (November 1993).
Highest estimated annual usage:	2+ (1993).
Allocated colony size:	2-10
Months likely to be active:	November at least.
Photographs:	148.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This island is a reasonably sized vegetated, sand and rock island with a Little Tern breeding site that may only support 1 or 2 pairs on a beach. Site was located in November of the only year that it was properly checked at this time of year. May not have been active in September1994 but such a small group can be easily missed from the air. Not active in May of 1999, which is a time of the year in which many Little Tern breed in the Top End. The 200+ adult and 4 recently fledged juvenile Black-naped Tern defending over the island in November 1993 probably attempted to breed there earlier. Many empty nest scrapes on an open area of sand may have had the eggs removed earlier by Aboriginal TO's leaving only a small number to have successfully fledged.
Future surveying needed:	Low priority. Check if possible when in area, for Black-naped Tern nesting around Sept-Dec, and any time of year for Little Tern.

Colony Identifier:	**S011**
General Location:	Cowlard Island, East of Croker Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.

Nesting Habitat:	Rocks.
Survey dates:	October & November 1993, April & October 1994, February 1996.
Years confirmed active:	1993, 1994.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(2). Black-naped Tern (300, October 1994), Bridled Tern (500, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	800 (1994).
Highest estimated annual usage:	800 (1994).
Allocated colony size:	101-500
Months likely to be active:	September to November.
Photographs:	3366-73.
Comments:	Quite large and high, vegetated rocky island with some coral rubble beaches, but limited sand. Had Black-naped and Bridled Tern nesting active in September – November in two seasons out of two visited. Not active in April between these two seasons. Black-naped Terns were nesting on ledges in the sandstone cliffs along one side of the island. Breeding had finished by late November, 1993 (egg shell found), but not all of the 300 defending birds present in early October, 1994, appeared to be breeding at the time of the survey. At this stage eggs through to near-fledged chicks were present. 400-500 defending adult Bridled Tern were present in these two years, and although eggs were present in October (1994) and a near fledged chick in November (1993), it was not ascertained what percentage of the birds present were breeding at the times. Eggs/young were hidden deep down in under rocks, most of which were covered by dense grass and ground vines.
Future surveying needed:	Low priority. Check if possible when in area between May & Sept.

Colony Identifier:	**S012**
General Location:	Haul Round Island (Boucat Bay).
Historical documentation:	One of few NT seabird colonies to be reported by several authors. For example, Storr (1977) reported Silver Gull & Crested Tern, Higgins and Davies (1996) reported Bridled Tern, N.R.S. reported Roseate Tern. D. Bond (pers. comm.) reported in 1995, that this colony has been active every year he had been there ie for at least the 20 years prior to 1995. Traditional owners talk about the colony being there for a lot longer.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, sand, vines & grass.
Survey dates:	April & November 1993, May & October 1994, June 1995, February & June 1996, December 1998.
Years confirmed active:	1994, 1995, 1996.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(5). Black-naped Tern (2+, June 1996), Bridled Tern (5000, May 1994 & June 1996), Crested Tern (500+, June 1996), Roseate Tern (5000+, May 1994) & Silver Gull (60+, June 1996).
Species possibly breeding:	
Highest no. of birds recorded:	10000 (May, 1994).
Highest estimated annual usage:	10000+ (1994).
Allocated colony size:	5001-10000
Months likely to be active:	April to August.
Photographs:	3374-80.
Comments:	Reasonably large vegetated sand island with a few rocks and adjacent rock and mangrove area. One of the most significant seabird colonies in the Top End. A large mixed species colony that appears to have been active every season for many years, despite frequent egg harvesting by Aboriginal traditional owners. Colony appears regularly used by low thousands of Bridled Tern and low tens of Silver Gull, both nesting among the grass, while low hundreds of Crested Tern lay eggs on the open sand. Low thousands of Roseate Tern were recorded nesting during these surveys, but their regularity cannot be confirmed because such large Roseate Tern breeding colonies are not always regular at a given place. Only small numbers of Black-naped Tern were recorded breeding during these surveys, but it is possible more could nest in other years. A colony of 150-200 Pied Cormorants nest each year in mangroves growing on a reef adjacent to the sand- island. The majority of breeding takes place through the dry season, even though species such as Roseate and Bridled normally breed later in the season in most other Top End colonies. Unable to confirm if all of the Bridled Tern present were nesting at the time.

Future surveying needed:	Medium priority. This is a relative secure colony that has been reasonably well documented, however, some additional information should be collected during the above season, on seasonal timing and regularity of use. Also another of the islands in which traditional egg harvest should be monitored.

Colony Identifier:	**S013**
General Location:	NW Crocodile Island, NE of Milingimbi.
Historical documentation:	Large numbers of Crested Tern fledglings in a creche in July 1989 (M. Guinea, pers. comm.).
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand & grass.
Survey dates:	November 1993, April, May & October 1994, June 1996.
Years confirmed active:	1989, 1994, 1996.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(2). Crested Tern (10000+, June 1996), Silver Gull (20, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	10000+ (June 1996).
Highest estimated annual usage:	10000+ (1996).
Allocated colony size:	10001-30000.
Months likely to be active:	May to June (Silver Gull may go a bit longer).
Photographs:	3381-94.
Comments:	Large and probably regular Crested Tern colony along the shore and low dunes on the NE part of quite a large well-vegetated island. Small numbers of Silver Gull breed in scattered, hidden nests in behind the dunes, also in the NE part of the island but 50-100 metres south of the Crested Terns. Most nesting at this site is through the dry season only. Crested Tern breeding is very synchronous, however the gulls can have new eggs and fledged young at the same time. Island has considerable flatback and olive ridley turtle nesting (pers. obs.). Although it is about 40 km offshore and suffers from little disturbance, the turtles and terns do make the trip by Aboriginal traditional owners worth while, but how frequently is not known.
Future surveying needed:	Low priority. Although a significant Crested Tern colony it has been reasonably well documented and is quite isolated from disturbance. Check if in the area.

Colony Identifier:	**S014**
General Location:	NE Crocodile Island, NE of Milingimbi.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, April, May & October 1994.
Years confirmed active:	1994 (and probably 1993).
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(1). Bridled Tern (1500, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	1500 (October 1994).
Highest estimated annual usage:	1500 (1994).
Allocated colony size:	1001-5000.
Months likely to be active:	September to November.
Photographs:	3395-3402.
Comments:	Small rock and sand island dominated by large (? Fig) trees. Medium sized Bridled Tern colony if all birds seen present bred there, which was not able to be established because of limited time on site and limited visits to site. Eggs and chicks were present in October (1994) but suspect colony only in early stages at this time. The site is a very small island that is a long way offshore and is even less likely to be disturbed than NW Crocodile (S013).
Future surveying needed:	Medium priority. Although a secure site, more information is needed on numbers of Bridled Tern actually breeding here and their regularity of use of this site. Cost and difficulty of access to this site mean checking this site should be planned in conjunction with other work.

Colony Identifier:	**S015**
General Location:	Small island south of Alger Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Grass and sand.
Survey dates:	April, October & November 1993, April, May & September 1994, March 1995, January & April 1996.
Years confirmed active:	1993, 1994.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(2). Black-naped Tern (150, October 1993), Bridled Tern (100, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	150 (October 1993).
Highest estimated annual usage:	250 (1993).
Allocated colony size:	101-500.
Months likely to be active:	September to November.
Photographs:	3403-05
Comments:	Probably regular Black-naped and Bridled Tern colony on a small sand and grass island surrounded by reef. A. Fisher (pers. comm.) reported eggs taken by Aboriginal traditional owners prior to my ground check in November (1993). Breeding confirmed from aerial survey in September (1994).
Future surveying needed:	Medium priority. Needs more information on numbers, seasonal timing and frequency of traditional take during known active months. Can be surveyed in trip that could include many other sites in this area.

Colony Identifier:	**S016**
General Location:	Island just off NE tip of Bumaga Island, Wessel Islands Chain, NE Arnhemland.
Historical documentation:	A. Fisher (pers. comm.) reported breeding Bridled Tern in October 1993.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand & grass.
Survey dates:	November 1993, April, May & September 1994, March 1995, January, April & July 1996, October 1997.
Years confirmed active:	1993 Fisher (pers. comm).
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Bridled Tern (200, October 1993).
Species possibly breeding:	
Highest no. of birds recorded:	200 (October 1993).
Highest estimated annual usage:	200 (1993).
Allocated colony size:	101-500.
Months likely to be active:	October at least.
Photographs:	3406-08.
Comments:	Small, vegetated sand and rock island just off a larger island. Had a small Bridled Tern colony active in 1993 and possibly not in 1994 and 1997, although aerial surveys then may have been a little early. Unable to confirm if all 200 birds were nesting in October 1993 count.
Future surveying needed:	Medium priority. Only a small colony but needs more information on numbers and seasonal timing. Can be surveyed in trip that could include many other sites in this area.

Colony Identifier:	**S017**
General Location:	Small island just off Raragala Island, Wessel Islands Chain, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, May 1994.

Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Black-naped Tern (150, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	150 (November, 1993).
Highest estimated annual usage:	150 (1993).
Allocated colony size:	101-500.
Months likely to be active:	October to December.
Photographs:	3409.
Comments:	Black-naped colony, active in 1993, but not checked in any other seasons.
Future surveying needed:	Medium priority. Needs to be checked in future seasons during Oct-Dec to establish regularity of use and seasonal numbers. Can be done in a survey that could involve many other sites in this general area.

Colony Identifier:	**S018**
General Location:	Beach at NW tip of Melville Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Tiwi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	February, March & June 1994, June & September 1996, June 1999.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(1). Little Tern (12+, February 1994).
Species possibly breeding:	
Highest no. of birds recorded:	12+ (February, 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	February at least.
Photographs:	1744, 1757-58.
Comments:	Little Tern colony confirmed as active by breeding plumage birds strongly defending an area of beach along coast of Melville Island in February (1994). No nests actually located due to lack of time, but at least 12 of the 50+ birds in the area were in breeding plumage and defending and there could have been more. No other Little Tern colonies found during these surveys were recorded as breeding at this time of the year, but given the extended season of Little Tern breeding in the Top End, this is not impossible. However, at least one juvenile plumage bird was present, so the colony may have been an extended and near finished one that commenced in October/November which is much more commonly seen.
Future surveying needed:	Medium priority. This may be a significant, late in the year Little Tern colony, but it has not been surveyed at the appropriate time. Needs to be checked more thoroughly, particularly during the October to February period.

Colony Identifier:	**S019**
General Location:	Island on western side Flinders Peninsula, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	November 1993, April & September 1994, March 1995, January, April & July 1996, October 1997.
Years confirmed active:	1993, 1994.
Years confirmed inactive:	National.
Status:	Low.
Species confirmed breeding:	(1+). Black-naped Tern (200+, September 1994).
Species possibly breeding:	Silver Gull.
Highest no. of birds recorded:	200+ (September 1994).
Highest estimated annual usage:	200+ (1994).
Allocated colony size:	101-500.

Months likely to be active:	September to November.
Photographs:	No.
Comments:	Reasonably high, vegetated, rocky island with a Black-naped Tern colony that is probably quite regularly used. Appears to be active only in later part of the year. Island also has nesting Sooty Oystercatchers and Eastern Reef Egrets in small numbers. It also has reasonable numbers of migratory waders and a few other waterbirds and seabirds there at times. Small numbers of Silver Gull present during Black-naped Tern breeding may also nest here but this could not be confirmed in the limited visits. This island is one of a chain of smaller islands off the northern side of Flinders Peninsula. There are a lot of potential rock, sand or coral rubble nesting sites on these islands, and it is likely that sites used for nesting by small numbers of Roseate and/or Black-naped Terns may vary from season to season, and hence not always be located during surveys.
Future surveying needed:	Low priority. A fairly secure single species colony that could be checked when in area on other tasks. Checks should also include searches for other species breeding eg Chestnut Rail and Beach Stone Curlew. Can be done with work on the many other colonies in this area.

Colony Identifier:	**S020**
General Location:	Garalja Island, off the tip of the Flinders Peninsula, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks, grass sand.
Survey dates:	November 1993, April, May & September 1994, March 1995, January, April, July & September 1996, October 1997.
Years confirmed active:	1993, 1994, 1996, 1997.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(4). Black-naped Tern (200, September 1994), Bridled Tern (2000, November 1993), Roseate Tern (20, September 1994), Silver Gull (20, September 1994 & 1996).
Species possibly breeding:	
Highest no. of birds recorded:	2100 (November 1993).
Highest estimated annual usage:	2100+ (1993).
Allocated colony size:	1001-5000.
Months likely to be active:	May to December.
Photographs:	3410-23.
Comments:	Reasonably large and high rocky island with vegetation on top and scattered sand beaches around perimeter. Appears that all species recorded here breed each year and regularly in the later half of the year. Bridled Terns breed in deep rock crevices and under vegetation around a lot of the island but not so much on the western side. They breed mostly around the edge but also up on top in places. As with most Bridled Tern sites, it is difficult to ascertain the percentage of defending adult birds actually breeding at a given visit. Their season is extended but mostly appears between September and December. Silver Gull nest in scattered and hidden locations at various places around the island, and like Bridled Tern, have an extended season. Although gulls mostly time their nesting to coincide with the terns, some may nest during the dry, with aerial observations in March (1995) and May (1994) recording possible nesting. Black-naped and Roseate Tern mostly breed on rocks at the north and south ends of the island, and tend to have a shorter and more synchronous season within that of the other two species. It was unable to be confirmed that all of the species referred to in the above November 1993 and September 1994 counts were currently nesting at the time. Island also has good numbers of Eastern Reef Egrets (eg 100+ September 1994). Lots of used nests were seen but only a few were seen being used during surveys. Island also has reasonable Flatback Turtle nesting.
Future surveying needed:	Medium priority. Quite a significant and reasonably secure colony that has been fairly well documented, however, more information is needed on the numbers and timing of Bridled Tern actually breeding. Can be done with work on the many other colonies in this area.

Colony Identifier:	**S021**
General Location:	Small island, Nth of Garalja Island, off the tip of the Flinders Peninsula, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock & coral rubble.
Survey dates:	November 1993, April, May & September 1994, May 1995, January, April & July 1996,

	October 1997.
Years confirmed active:	1993, 1994, 1996, 1997.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(3). Black-naped Tern (400, November 1993), Crested Tern (50, April 1996), Roseate Tern (200, April 1996).
Species possibly breeding:	
Highest no. of birds recorded:	550 (November 1993).
Highest estimated annual usage:	550+ (1993).
Allocated colony size:	501-1000.
Months likely to be active:	April to December.
Photographs:	3424-28.
Comments:	Small grass and vine centred, sand and coral rubble island, which is partly edged by rocks. Isolated and located several km out to sea from the bigger islands in the area. Appears to be a regularly used and quite significant colony. Surveys in April and November of different years showed Black-naped and Roseate Tern breeding at both times. These species may breed in an extended season throughout this period with not all individuals breeding at the same time, or it may be that there are two separate nesting seasons. However, no surveys were done of both these times in the same year, and assessing what is happening is also complicated by Aboriginal traditional harvest of eggs. A small number of Crested Terns, whose eggs were also taken prior to a survey, also use the site but their regularity of use is unknown. Also appears well used as a roost, particularly at night, by both the above mentioned species, and other seabirds and waders.
Future surveying needed:	Medium priority. Clearly a quite significant site and one which needs more information on the numbers and timing of breeding of species during the above mentioned active months. A check of the frequency of egg harvesting could also be done. Can be done with work on the many other colonies in this area.

Colony Identifier:	**S022**
General Location:	Small island north of Inglis Island, English Company Islands, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	April & November 1993, April, May & September 1994, March 1995, May & July 1996.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Black-naped Tern (50, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	50 (November 1993).
Highest estimated annual usage:	50 (1993).
Allocated colony size:	11-100.
Months likely to be active:	September to December.
Photographs:	3429.
Comments:	One of a chain of smaller islands off the northern side of Inglis Island, which is one of the larger English Company chain of islands. There are a lot of potential rock, sand or coral rubble nesting sites on these islands, and it is likely that sites used for nesting by Roseate and/or Black-naped Terns may vary from season to season, and hence not always be located during surveys. This island is a medium sized but high, vegetated, rocky island, with sand spit at one end. Small Black-naped Tern colony on rocks at one location on SW side of island in 1993. Only checked at appropriate time in one year - when it was located. Striated Heron, Chestnut Rail and Eastern Reef Egret also likely to breed on island.
Future surveying needed:	Low priority. Check location, species and numbers of breeding species if in area.

Colony Identifier:	**S023**
General Location:	Two islands close together and grouped as one site, NE end of the English Company Islands, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.

Nesting Habitat:	Coral rubble, rock, sand.
Survey dates:	November 1993, May & September 1994, March 1995, January & July 1996, October 1997.
Years confirmed active:	1993, 1994, 1997.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(3). Black-naped Tern (30, November 1993), Bridled Tern (1300, November 1993), Roseate Tern (350, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	1680 (November 1993).
Highest estimated annual usage:	1680 (1993).
Allocated colony size:	1001-5000.
Months likely to be active:	September to November.
Photographs:	3430-42.
Comments:	Pair of small circular islands, one with two sand spits. Both are vegetated rocky islands, one higher and with low monsoonal forest over the top. Lower island has Black-naped and Roseate Tern nesting in sand/coral rubble at one end of island and Bridled Tern nesting in rock crevices under vegetation at the other end of the island. The other has just Bridled Tern nesting among rock and vegetation. Bridled Tern sites are difficult to assess for numbers breeding, so whether all of the November 1993 count mentioned above were breeding then is unknown. Insufficient surveys to confidently say that there was no nesting earlier in the year (April/May) on these islands. Striated Heron and Osprey breed at this site and possibly also Silver Gull, Eastern Reef Egret and Chestnut Rail. Some turtle nesting, mainly Hawksbill.
Future surveying needed:	Medium priority. Fairly significant and currently secure seabird colony; however, more information on species, numbers and timing would be of value. Check when in the area during above-mentioned active months.

Colony Identifier:	**S024**
General Location:	Second last island at eastern end of the Bromby Island chain, NE Arnhemland.
Historical documentation:	C.R.A. (Collins, 1987) reported breeding Crested, Bridled & Roseate Terns.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, coral rubble, grass.
Survey dates:	November 1993, May 1994, March 1995, January & July 1996, October 1997.
Years confirmed active:	1993 (and probably 1997).
Years confirmed inactive:	Nil, but probably 1994.
Status:	National (?).
Species confirmed breeding:	(3+). Black-naped Tern (50+, November 1993), Bridled Tern (40, November 1993), Roseate Tern (300, November 1993).
Species possibly breeding:	Crested Tern.
Highest no. of birds recorded:	396 (November, 1993).
Highest estimated annual usage:	396 (1993).
Allocated colony size:	101-500.
Months likely to be active:	October to November.
Photographs:	922.
Comments:	Vegetated, rock and coral rubble island forming part of the Bromby Island chain. May not be as regularly used as the nearby S025 but still has some significant tern breeding when active. This includes the Roseate and/or Black-naped Tern colonies which may shift around a little between seasons over these islands, and/or the large Crested Tern colonies that occasionally may use another island instead of, or as an overflow from, the normally used S025. Black-naped Terns were recorded nesting on sand and coral rubble at sites at both ends of the island and the middle. Roseate Terns were mostly at the eastern end of the island, also in sand/coral rubble. Bridled Tern were nesting among rock and vegetation in a few scattered locations.
Future surveying needed:	Medium priority. A reasonably secure colony, but has only had a ground survey in one year. Further information could be collected on species, numbers and timing when in the area during above mentioned active months.

Colony Identifier:	**S025**
General Location:	Most outer (eastern) island in Bromby Island chain, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.

Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, sand, coral rubble.
Survey dates:	November 1993, May & September 1994, March 1995, January & July 1996, June 1999.
Years confirmed active:	1993, 1994, 1999.
Years confirmed inactive:	1996 (for Crested Tern colony, other species unknown for this year).
Status:	National.
Species confirmed breeding:	(2). Black-naped Tern (80, November 1993), Crested Tern (5000+, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	5000+ (May 1994).
Highest estimated annual usage:	5000+ (1994).
Allocated colony size:	1001-5000
Months likely to be active:	May to July, September to December.
Photographs:	3443-65, 6202.
Comments:	Long, skinny, sand/coral rubble island consisting of smaller and larger vegetation covered ends joined by a narrow sand spit. Rocks around most of the edge. Appears to have large Crested Tern colony active during the dry season of most years. Active in two out of the three seasons checked, but only did one ground survey. Colony in two separate locations, one considerably larger than the other, but both at a similar stage of breeding. Site used later in the year for Black-naped Tern nesting on sand/coral rubble. Only checked in one year at appropriate time so regularity of use unknown for this species. Osprey, Striated Heron and Water Whistle Duck confirmed nesting on island. Turtle breeding, mostly Hawksbill, also.
Future surveying needed:	Low priority. Secure and probably regular Crested Tern breeding site. Further details of yearly use by Crested Tern (dry season) and some more information on numbers and yearly use by Black-naped Tern (later in year) would be useful if in area.

Colony Identifier:	**S026**
General Location:	The 2nd main island of the Bromby Island chain as head out to the NE from Cape Wilberforce, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, grass, rock.
Survey dates:	April & November 1993, April, May & September 1994, March 1995, January, July & October 1996, October 1997.
Years confirmed active:	1990 A. Wagg (pers. comm), 1996, 1997.
Years confirmed inactive:	1993 (for Crested Tern), 1994.
Status:	Low (though may rise to National for years that the large Crested Tern breeding may occur on this island).
Species confirmed breeding:	(2)+. Crested Tern (1000's, 1990), Roseate and/or Black-naped Tern (numbers not recorded, October 1997).
Species possibly breeding:	Roseate Tern, Black-naped Tern.
Highest no. of birds recorded:	"1000's"(A. Wagg pers. comm.) 1990 dry season.
Highest estimated annual usage:	"1000's"(A. Wagg pers. comm.) 1990 dry season.
Allocated colony size:	1001-5000 (when used).
Months likely to be active:	May to July, September to December.
Photographs:	921, 978.
Comments:	Vegetated, rock and coral rubble island forming part of the Bromby Island chain, and one of the islands that appears to have occasional colonial seabird breeding rather than breeding every year, such as S025 for example. This includes the smaller Roseate and/or Black-naped Tern colonies which may shift around a little between seasons over these islands, and/or the large Crested Tern colonies that occasionally use another island instead of, or as an overflow from, the normally used S025. A. Wagg (pers. comm.) reports flying a Aboriginal traditional owner to collect eggs from the thousands present, during the 1990 dry season. J. Woinarski (pers. comm.) reported hundreds of hatched Crested Tern eggs in October (1996), from a colony active earlier that year. Roseate and/or Black-naped Tern could be seen from October (1997) aerial survey to be breeding on rocks in one location on edge of island. Osprey also nest on this island.
Future surveying needed:	Low priority. Not likely to be a regularly used site but should check if in area between May and December, and obtain more information if active.

Colony Identifier:	**S027**
General Location:	Small island just off the NW tip of Inglis Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	May & September 1994, March 1995, April & July 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Black-naped Tern (20+, September 1994).
Species possibly breeding:	
Highest no. of birds recorded:	20+ (September 1994).
Highest estimated annual usage:	20+ (1994).
Allocated colony size:	11-100.
Months likely to be active:	September at least.
Photographs:	1171, 1173.
Comments:	Small, vegetated rock island with a small Black-naped Tern breeding colony active in the later part of the year of the only year it was surveyed at this time. A 1995 aerial survey indicated is the site may also be active at an earlier time in the season (May). This island is one of a chain of smaller islands off the northern side of Inglis Island, which is one of the larger English Company islands. There are a lot of potential rock, sand or coral rubble nesting sites on these islands, and it is likely that sites used for nesting by small numbers of Roseate and/or Black-naped Terns may vary from season to season, and hence not always be located during surveys. Osprey nest on this island.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S028**
General Location:	The 3rd island in from eastern end of the Bromby Island Chain, NE Arnhemland.
Historical documentation:	A. Wagg (pers. comm.) reported Crested Tern breeding 1989.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, grass, rock.
Survey dates:	September 1994, March 1995, January & July 1996, October 1997.
Years confirmed active:	1997 (for Roseate and/or Black-naped Tern).
Years confirmed inactive:	1993, 1994, 1995 & 1996 (for Crested Tern).
Status:	Regionally high (though may rise to national for years that the large Crested Tern breeding may occur on this island).
Species confirmed breeding:	(1+). Roseate and/or Black-naped Tern (100+, October 1997).
Species possibly breeding:	Crested Tern.
Highest no. of birds recorded:	100 (October 1997).
Highest estimated annual usage:	100 (1997).
Allocated colony size:	11-100 (pre-1990 not considered).
Months likely to be active:	October at least.
Photographs:	901.
Comments:	Vegetated, rock and coral rubble island forming part of the Bromby Island chain, and one of the islands that appears to have occasional colonial seabird breeding rather than breeding every year, such as S025 for example. This includes the Roseate and/or Black-naped Tern colonies which may shift around a little between seasons over these islands, and/or the large Crested Tern colonies that occasionally use another island instead of, or as an overflow from, the normally used S025. A. Wagg (pers. comm.) reported large Crested Tern colony on this island in 1989, but these surveys only recorded Roseate and/or Black-naped Tern breeding in 1997.
Future surveying needed:	Low priority. Check if possible when in area - investigate if active.

Colony Identifier:	**S029**
General Location:	SE corner North Island, just north of Walker Point, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	July & October 1996.

Years confirmed active:	1996.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (4, October 1996).
Species possibly breeding:	
Highest no. of birds recorded:	4 (October 1996).
Highest estimated annual usage:	4 (1996).
Allocated colony size:	2-10.
Months likely to be active:	October at least.
Photographs:	941, 5465, 5472.
Comments:	A Little Tern breeding site that may only support 1 or 2 pairs on an open beach of large island. Site was located in October of the only year that it was properly checked at the appropriate time. Example of a site that can be easily missed from the air on other surveys so its regularity of use, or whether there were more Little Tern on other beaches in the vicinity, is unknown.
Future surveying needed:	Low priority. Information needed on how often this site is used, but its small size warrants checking only if possible when in area, at any time of year.

Colony Identifier:	**S030**
General Location:	Higginson Islet, off Nhulunbuy.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass, vines.
Survey dates:	November 1993, April, May & September 1994, March & December 1995, January & May 1996, October 1997, December 1998.
Years confirmed active:	1993, 1994, 1996, 1997.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(5). Black-naped Tern (30, September 1994), Bridled Tern (10000+, May 1994), Common Noddy (300+, May 1996), Crested Tern (10000+, May 1996), Roseate Tern (3000+, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	18,100+ (May 1994).
Highest estimated annual usage:	20000+ (1994)
Allocated colony size:	10001-30000.
Months likely to be active:	March to December.
Photographs:	5459, 3466-76.
Comments:	A high, vegetation-covered rocky island that is located at the northern end of a chain of islands running north from Nhulunbuy. With 5 species (3 breeding in nationally significant numbers) and active for most of the year, it is an extremely significant seabird colony, and probably the most important in the NT. It was active in 4 years out of 4 that it was checked during these surveys, and according to Aboriginal TO's is always active and has been for a long time. It is not easily accessed from a boat and has little appeal for visiting so is relatively undisturbed. Thousands of Crested Terns breed at this site during a regular April to August season - probably every year. Low hundreds of Common Noddy may also be regular dry season breeders, being recorded in 2 out of 2 seasons checked, and not breeding in September of a year that they bred earlier. Bridled Tern appear to have a very extended season, being recorded breeding in nearly every month between March and December, though highest numbers were around May. Roseate Tern have been recorded with eggs and young in early May and mid September of the same year, and possibly breeding in March and December of other years. Consequently they could be breeding all through like the Bridled Tern or, more likely, they are having two separate seasons as the confirmed May and December nestings were in two different parts of the island. A few Black-naped Terns tend to nest in the vicinity when the large Roseate colonies are active. A pair of White-bellied Sea Eagles regularly nest on the ground on top of the island during the dry season. The nest is right in among the nesting terns and a lot are taken by the eagles. Silver Gulls frequent the island but do not appear to nest here, however they do nest on adjacent islands. It is also one of very few sites where Black Noddies were seen during these surveys (500+, November 1993), but they do not breed here. Further information on this island can be found in Chatto (1998).
Future surveying needed:	Medium priority. Clearly an important colony for which a reasonable amount of information has been collected, however some more work needs to be done on the numbers and timing of species such as Bridled and Roseate Tern, during the above mentioned active months.

Colony Identifier:	**S031**
General Location:	Forlsche Rock, north of Nhulunbuy, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	April & November 1993, April, May & September 1994, March 1995, January & May 1996, October 1997, December 1998.
Years confirmed active:	1993, 1994 (and probably 1996, 1997).
Years confirmed inactive:	Nil.
Status:	Regionally high.
Species confirmed breeding:	(2+). Black-naped Tern (30, November 1993), Roseate Tern (200, May 1994).
Species possibly breeding:	Silver Gull.
Highest no. of birds recorded:	200 (May 1994).
Highest estimated annual usage:	200+ (1994).
Allocated colony size:	101-500.
Months likely to be active:	May to November.
Photographs:	815.
Comments:	Small grass-covered rocky island. Situated not far from the large colony on S030, and possibly gets some of the excess nesting birds from that colony. Roseate Tern nesting has been confirmed in May, and possibly also in Sept/Oct, while Black-naped Tern nesting has been confirmed at the later time only. Small numbers of Silver Gull may nest here in the dry season.
Future surveying needed:	Low priority. Small colony, check if possible when in area between May and November.

Colony Identifier:	**S032**
General Location:	East Bremer Islet & chain of rock islands extending for 3 kms to the south. North of Nhulunbuy, NE Arnhemland.
Historical documentation:	C.R.A. reported Silver Gull breeding in 1987.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	November 1993, April, May & September 1994, March 1995, January & May 1996, October 1997, December 1998.
Years confirmed active:	1993, 1994, 1996, 1997.
Years confirmed inactive:	Nil.
Status:	National (when large Roseate Tern site active).
Species confirmed breeding:	(4). Black-naped Tern (120, November 1993), Bridled Tern (250, October 1997), Roseate Tern (2500, November 1993), Silver Gull (72, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	3020 (November 1993).
Highest estimated annual usage:	3020+ (1993).
Allocated colony size:	1001-5000.
Months likely to be active:	May to January.
Photographs:	3477-83.
Comments:	Chain of small rock islands with a larger, rock, sand and vegetation island at the second but one, from the northern end of the chain. Most of the nesting, including the large Roseate Tern colonies, occurs on one of these islands, with the remainder having only small amounts of nesting. Large Roseate Tern nesting was recorded in the later part of the year on 2 out 3 years a survey was done at this time of year. These correspond to years when large Roseate Tern nesting did not occur on the nearby S030 at this time of year. Smaller numbers of Black-naped Terns nest in association with the large Roseate colony, and also at a few other locations within the island chain at the same time. Bridled Terns were only recorded breeding at this site on one occasion, and only in small numbers. These were probably excess birds from S030. Silver Gull appear to have a very extended nesting season, being recorded breeding between May and January. This is probably because they are able to prey on eggs and chicks from the long breeding season of the large seabird colony (S030) that is nearby.
Future surveying needed:	Medium priority. More information on the numbers and timing of species in this colony, especially the large Roseate Tern colony, is needed.

Colony Identifier:	**S033**
General Location:	South East Islet, north of Nhulunbuy, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass, coral rubble.
Survey dates:	November 1993, April, May & September 1994, January & May 1996, October 1997.
Years confirmed active:	1993, 1994, 1996, 1997.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(3). Black-naped Tern (80, October 1997), Bridled Tern (400, November 1993), Roseate Tern (20, October 1997).
Species possibly breeding:	
Highest no. of birds recorded:	450 (October 1997).
Highest estimated annual usage:	450+ (1997).
Allocated colony size:	101-500.
Months likely to be active:	May to November.
Photographs:	3484, 5457-58.
Comments:	Small vegetated rocky island not far from the large colony of S030. Black-naped Tern and small colonies of Bridled and Roseate Tern breed here at the same time that they are breeding in the other large colonies in the area. They are possibly excess birds from these other sites.
Future surveying needed:	Low priority. Check if possible when in area between May and November.

Colony Identifier:	**S034**
General Location:	Island in Port Bradshaw, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November & December 1993, May & September 1994, March 1995.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Black-naped Tern (20, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	20 (November, 1993).
Highest estimated annual usage:	20 (1993).
Allocated colony size:	11-100.
Months likely to be active:	October to December.
Photographs:	3485.
Comments:	Small mostly vegetated sand island with rocks around some of edge. One of several small islands in and near Port Bradshaw that are irregularly bred on to varying degrees between seasons by small numbers of Black-naped, Roseate and/or Bridled Terns. This site has a small number of Black-naped Terns nesting on the rocks. Only surveyed on one occasion at this time of year. No breeding recorded earlier in season of another year. A pair of White-bellied Sea Eagles also nests here.
Future surveying needed:	Low priority. Always likely to be a small colony. Check if possible when in area between September and December. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S035**
General Location:	Island in southern part of Port Bradshaw, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November & December 1993, March & September 1994, March 1995.
Years confirmed active:	1993.

Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Black-naped Tern (100, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	100 (November 1993).
Highest estimated annual usage:	100 (1993).
Allocated colony size:	11-100.
Months likely to be active:	September to January.
Photographs:	No.
Comments:	One of several small islands in and near Port Bradshaw that are irregularly bred on to varying degrees between seasons by small numbers of Black-naped, Roseate and/or Bridled Terns. This one is a small rocky island that had some fairly significant Black-naped Tern nesting in at least one year, but this was the only year it was checked at this time of year. There was no breeding recorded earlier in year of another year that it was checked.
Future surveying needed:	Low priority. Check if possible when in area between September and December. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S036**
General Location:	Small island in mouth of Port Bradshaw, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, March & September 1994, March 1995, January & July 1996, October 1997, December 1998.
Years confirmed active:	1993.
Years confirmed inactive:	1994, 1997.
Status:	Regionally high when numbers of Black-naped Tern such as in 1993 nest there.
Species confirmed breeding:	(1). Black-naped Tern (100, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	100 (November 1993).
Highest estimated annual usage:	100 (1993).
Allocated colony size:	11-100.
Months likely to be active:	November at least.
Photographs:	3486-87, 5515, 5597.
Comments:	One of several small islands in and near Port Bradshaw that are irregularly bred on to varying degrees between seasons by small numbers of Black-naped, Roseate and/or Bridled Tern. This one is a small rocky island that had a significant number of Black-naped Terns nesting in one year out of three.
Future surveying needed:	Low priority. Check if possible when in area between September and December. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S037**
General Location:	Small island in mouth of Port Bradshaw, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November & December 1993, March 1994, July & September 1996.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Black-naped Tern (200, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	200 (November 1993).
Highest estimated annual usage:	200 (1993).
Allocated colony size:	101-500.
Months likely to be active:	November to December.

Photographs:	No.
Comments:	One of several small islands in and near Port Bradshaw that are irregularly bred on to varying degrees between seasons by small numbers of Black-naped, Roseate and/or Bridled Tern. This one is a small rocky island that had significant numbers of Black-naped Terns nesting in the one year that it was surveyed at the appropriate time. None present in September 1996 so they may not have nested that year, although it could have been a little early.
Future surveying needed:	Low priority. Check if possible when in area. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S038**
General Location:	A group of small rock islands, ~ 5 km nth of Wanyanmera Pt, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	November & December 1993, March, September & October 1994, March 1995, September 1996.
Years confirmed active:	1993, 1994.
Years confirmed inactive:	1996.
Status:	National (?).
Species confirmed breeding:	(3). Black-naped Tern (150, October 1994), Bridled Tern (200, November 1993), Roseate Tern (80, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	260 (October 1994).
Highest estimated annual usage:	260 (1994).
Allocated colony size:	101-500.
Months likely to be active:	September to December.
Photographs:	3490-92.
Comments:	One of several small islands in and near Port Bradshaw that are irregularly bred on to varying degrees between seasons by small numbers of Black-naped, Roseate and/or Bridled Tern. This group of rocky islands had small numbers of all three species (but significant for Black-naped Tern) breeding during the later part of the year, in 2 out of the 3 years that surveys were done at this time. There was no breeding in 2 out of 2 years when surveys were done during the March/May time of the year.
Future surveying needed:	Low priority. Check if possible when in area. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S039**
General Location:	Three Hummocks Island Group, south of Wanyanmera Pt., NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	November & December 1993, March 1994, March 1995, January & July 1996, October 1997, December 1998, October 1999.
Years confirmed active:	1993, 1997, 1998, 1999.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(1+). Bridled Tern (20000+, October 1999).
Species possibly breeding:	Black-naped Tern, Roseate Tern.
Highest no. of birds recorded:	20000+ (October 1999).
Highest estimated annual usage:	20000+ (1999).
Allocated colony size:	10001-30000.
Months likely to be active:	October to December.
Photographs:	3493-502, 5519-22, 5600-01.
Comments:	Group of several partially vegetated, granite islands with large amounts of Bridled Tern breeding on the four largest ones, and possibly a small amount of Black-naped/Roseate Tern nesting in places. Bridled Tern nesting here appears to regularly only occurring in the latter part of the year, unlike some other large colonies which have much more extended breeding season. More extended breeding seasons may be influenced by other species of tern breeding at different times of the year, whereas this colony has only

	Bridled Tern nesting. Breeding occurred in 4 out of 4 seasons checked between October and December, and was not occurring in 3 out of 3 seasons when it was checked around May to July. Numbers of birds estimated during surveys of this site are more than likely well under the true number, including the estimate of October 1999. At this time there could have been nearer 50000 but they were very hard to estimate over all 4 of the islands. As always with rock nesting Bridled Terns, it is unable to be said what percentage of these birds were breeding at the time of surveying.
Future surveying needed:	Medium priority. Clearly a large and regularly used, secure colony. Need only be checked for seasonal use if in area, unless detailed work is to be done to attempt to calculate percentages of birds breeding. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S040**
General Location:	Small islands off the SW corner or McNamara Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	November & December 1993, March, September & October 1994, March 1995, January & July 1996, October 1997.
Years confirmed active:	1993, 1994, 1997.
Years confirmed inactive:	Nil.
Status:	Regionally high.
Species confirmed breeding:	(2+). Black-naped Tern (2, October 1994), Bridled Tern (150, November 1993), Roseate and/or Black-naped Tern (200 October 1997).
Species possibly breeding:	Roseate Tern.
Highest no. of birds recorded:	200 (October 1997).
Highest estimated annual usage:	200 (1997).
Allocated colony size:	101-500.
Months likely to be active:	October to November.
Photographs:	3503-05, 5500, 5529.
Comments:	Group of small, vegetated rock islands in a line out from the SW corner of a larger island. Appear to have a small amount of October/November regular nesting of Black-naped, Bridled Terns and possibly Roseate Terns. More significant if Black-naped Tern dominate the Roseate and/or Black-naped Terns recorded in October 1997.
Future surveying needed:	Low priority. Check if possible when in area. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S041**
General Location:	Dudley Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, sand.
Survey dates:	November & December 1993, March, May, September & October 1994, March 1995, January & July 1996, October 1997.
Years confirmed active:	1993, 1994, 1997.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(3). Black-naped Tern (300, December 1993), Bridled Tern (200, December 1993), Roseate Tern (200, December 1993).
Species possibly breeding:	
Highest no. of birds recorded:	900 (December 1993).
Highest estimated annual usage:	900 (1993).
Allocated colony size:	500-1000.
Months likely to be active:	September to December.
Photographs:	3506-13, 5526.
Comments:	Quite a large but low, vegetated sand and rock island, and the most distant from the coast (~15 km) of the islands between Nhulunbuy and Blue Mud Bay. September to December seabird breeding recorded in 3 out of 3 years that it was surveyed at this time of the year. No breeding recorded in 3 out of 3 years when surveys were done around May. Only one of the 3 breeding seasons involved a significant numbers of birds so although the island

	may be regularly used, it may only be occasionally used by the larger numbers of birds. Black-naped and Roseate Tern breed in one area on sand and rocks on the NW side of island, and possibly a second site on another beach on the western side. By December they had mostly recently fledged young. Bridled Tern nested in one area among the granite rocks along the eastern side of the island.
Future surveying needed:	Medium priority. A reasonably secure site but requires more work to establish the frequency of larger colonies. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S042**
General Location:	Group of rocks ~5 Nm NW Cape Grey, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November & December 1993, March & September 1994, March 1995, January & July 1996.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Bridled Tern (50, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	50 (November, 1993).
Highest estimated annual usage:	50 (1993).
Allocated colony size:	11-100.
Months likely to be active:	October to November.
Photographs:	5533-34, 3516.
Comments:	Group of several close granite outcrops that had a small Bridled Tern colony in the one year that is was checked in the October/December period. Uncertain if active in other years. Does not appear to be an extended season Bridled Tern colony as not observed active in two surveys earlier in season in other years.
Future surveying needed:	Low priority. Always likely to be a small colony. Check if possible when in area between September and December. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S043**
General Location:	Single island, ~ 3Nm NNW of Cape Grey, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, grass, rock.
Survey dates:	November & December 1993, March, September & October 1994, March 1995, July 1996, October 1997, May 1999.
Years confirmed active:	1993, 1994, 1999.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(4). Black-naped Tern (2, October 1994), Bridled Tern (100, November 1993), Caspian Tern (2, October 1994), Silver Gull (60, May 1999).
Species possibly breeding:	
Highest no. of birds recorded:	100 (November 1993).
Highest estimated annual usage:	100+ (1993).
Allocated colony size:	101-500.
Months likely to be active:	May to November.
Photographs:	3515-26, 5535, 6114-16.
Comments:	Reasonably sized single, vegetated, granite rock island with a small amount of breeding of four different species. Small numbers of Bridled Tern recorded breeding in two out of two seasons when surveys were done in October/November. There was also at least one pair of Black-naped Terns and a pair of Caspian Terns recorded breeding in 1 out of these 2 surveys. The Caspian Terns nested on a granite boulder on the highest part of the island. Small numbers of Silver Gull were breeding in October (1994) however a May (1999) survey indicated that this is when most of this species bred here, but at this time the other species were not breeding. The site has small Torres Strait Pigeon colony active in

	October, and probably at least one pair of Beach Stone Curlews breeding there.
Future surveying needed:	Medium priority. Not a highly significant colony but one that could do with a little more work to sort out numbers and times for the species breeding there. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S044**
General Location:	Small island 1.5 km NNE of Ardigbiyi Pt, near Cape Don, Cobourg Peninsula.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Conservation Reserve.
Nesting Habitat:	Sand, grass.
Survey dates:	October 1993, June, August & October 1994, November 1996.
Years confirmed active:	1994 L. Wilson (pers. comm), 1996.
Years confirmed inactive:	Nil.
Status:	Regionally high.
Species confirmed breeding:	(2)+. Crested Tern (200, 1994. Wilson pers. comm.), Roseate and/or Black-naped Tern (150, 1994. L. Wilson pers. comm.).
Species possibly breeding:	Black-naped Tern, Roseate Tern, Little Tern.
Highest no. of birds recorded:	350 (1994).
Highest estimated annual usage:	350 (1994).
Allocated colony size:	101-500.
Months likely to be active:	August to November.
Photographs:	No.
Comments:	Small sand and grass island just off the Cobourg Peninsula mainland coast. L. Wilson (pers. comm) reports Aboriginal traditional owners from the nearby outstation collected 100+ larger eggs (which from description appear to be Crested Tern) and 200+ smaller eggs (likely to be Roseate and/or Black-naped Tern) from island in August 1994. A few pairs were observed in aerial surveys in October 1994 (perhaps they missed some eggs or birds re-nesting) and November 1996. TO's also said some nest on the beach on the mainland adjacent as well, but as this is most unlike Black-naped/Roseate, so perhaps they could be Little Tern.
Future surveying needed:	Low priority. Not a highly significant colony and one that probably does not get a chance to be successful very often, so only survey if in area. Needs to have species confirmed however and Black Point PWCNT rangers could obtain information from TO's as to the yearly fate of the colony.

Colony Identifier:	**S045**
General Location:	Island 5 km NW of Isle of Woodah, Blue Mud Bay.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, coral rubble.
Survey dates:	November & December 1993, March, May & September 1994, October 1997.
Years confirmed active:	1993, 1997.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(2). Black-naped Tern (200+, December 1993), Bridled Tern (200, December 1993).
Species possibly breeding:	
Highest no. of birds recorded:	400+ (December 1993).
Highest estimated annual usage:	400+ (1993).
Allocated colony size:	101-500.
Months likely to be active:	October to January.
Photographs:	No.
Comments:	Small grass-topped island with a rocky reef around and with Black-naped and Bridled Tern breeding in 2 years out of 2 that they were surveyed in the October/December period. Both species were in latter part of breeding cycle by December. Not active in May of another year checked. 80+ Little Tern present in December (1993) and although 5% in breeding plumage, none were currently breeding there.
Future surveying needed:	Medium priority. Only ground checked once. Needs another check around October, and one around June to see whether Little Tern breed there. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	S046
General Location:	7 km ESE Chasm Island, NW of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, rock.
Survey dates:	November & December 1993.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Black-naped Tern (20, December 1993).
Species possibly breeding:	
Highest no. of birds recorded:	20 (December 1993).
Highest estimated annual usage:	20 (1993).
Allocated colony size:	11-100.
Months likely to be active:	November to January.
Photographs:	No.
Comments:	Small sand and rock island with small Black-naped colony observed in the only survey of this island. Many, many rocky islands in this area and although this site is the only site found with breeding birds, none appear to have significant breeding colonies. Nevertheless, small groups of nesting Black-naped/Roseate Tern may irregularly use different islands in this area at different times.
Future surveying needed:	Low priority. Small, possibly irregular colony in an area that takes a lot of surveying to cover all the islands, and it is unlikely that there would be any significant colonies in the area. Check only if in immediate area during November to January.

Colony Identifier:	S047
General Location:	Woodhouse Rocks, north of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, coral rubble, sand, grass.
Survey dates:	November & December 1993, March, May & September 1994, February 1996.
Years confirmed active:	1993, 1994.
Years confirmed inactive:	Nil.
Status:	Regionally high.
Species confirmed breeding:	(3). Black-naped Tern (50+, December 1993), Crested Tern (4, May 1994), Silver Gull (20, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	50+ (December 1993).
Highest estimated annual usage:	50+ (1993).
Allocated colony size:	11-100.
Months likely to be active:	April to January.
Photographs:	3527-30.
Comments:	Small sand and coral rubble island covered with grass and surrounded by rocks. Black-naped Tern colony around October/November and small Crested Tern and Silver Gull colony around May. Both only checked in one year so regularity of use unknown. Could be nationally significant if Black-naped Tern colony of this size or bigger each year. Rocks indicate frequent seabird roosting. Osprey nest on the island.
Future surveying needed:	Low priority. Check if possible when in area in above mentioned active months. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	S048
General Location:	Small island 5 km off the NE tip of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass, sand, coral rubble.
Survey dates:	November & December 1993, March, May, September & October 1994, February & July

	1996, October 1997.
Years confirmed active:	1993, 1994, 1997.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(3). Black-naped Tern (20, December 1993 & October 1994), Bridled Tern (500, October 1997), Roseate Tern (5000+, October 1997).
Species possibly breeding:	
Highest no. of birds recorded:	5500+ (October 1997).
Highest estimated annual usage:	5500+ (1997).
Allocated colony size:	1001-5000.
Months likely to be active:	March to December.
Photographs:	3531-41.
Comments:	Small, vegetated sand and rock island half way between the NE tip of Groote Eylandt and the bigger offshore islands around NE Isles. Has very significant Roseate Tern colony (averaging low thousands) which was active around October to December in 3 out of 3 years that it was checked. Small numbers of Black-naped Tern breed with the Roseate Terns. Both primarily nest on grass covered beach rock with numerous small holes and pinnacles. Two surveys around May, including in one of the years that the big Roseate colony was active later in that year, showed no breeding of these species at this time. Island also has a small to medium sized Bridled Tern colony in which nests are primarily hidden in under the thick grass and ground vines. They were found breeding in March, May, October, November and December of 1994. They may breed all through the season, or perhaps have two seasons, as a July (1997) survey revealed none. A pair of White-bellied Sea Eagles nests on the island, as do marine turtles.
Future surveying needed:	Medium priority. Clearly a very significant Roseate colony which is fairly secure, however, further checks on regularity and some information on success would be valuable. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S049**
General Location:	Island off SE Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November & December 1993, March & September 1994, February 1996.
Years confirmed active:	1993, 1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(2). Black-naped Tern (200, December 1993), Roseate Tern (40, December 1993).
Species possibly breeding:	
Highest no. of birds recorded:	240 (December 1993).
Highest estimated annual usage:	240 (1993).
Allocated colony size:	101-500.
Months likely to be active:	October to December.
Photographs:	3542-48.
Comments:	Large, high sandstone outcrop. One of many islands in the SE Groote Eylandt area, that consist mostly of large stacked slabs of sandstone. Some contain little vegetation or sand, and some are very large and high islands. Many are regularly used by seabirds for breeding. This site has a significant Black-naped Tern colony and small Roseate Tern colony, active in 2 out of 2 years checked. Observed active in the October to December period but not in a March survey.
Future surveying needed:	Low priority. Check if possible when in area between September and December. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S050**
General Location:	Island off the SE tip of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November & December 1993, March, May & October 1994, February 1996.

Years confirmed active:	1993, 1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Bridled Tern (2000+, December 1993).
Species possibly breeding:	
Highest no. of birds recorded:	2000+ (December 1993).
Highest estimated annual usage:	2000+ (1993).
Allocated colony size:	1001-5000.
Months likely to be active:	November to December (at least).
Photographs:	3549-50.
Comments:	Sandstone rocky island with scattered bushes but no sand. One of many islands in the SE Groote Eylandt area, that are predominantly made up of stacked large slabs of sandstone. Some contain little vegetation or sand, and some are very large and high islands. Many are regularly used by seabirds for breeding. This island had a Bridled Tern colony breeding deep down in among the large sandstone rock piles that were partly covered by vines. It was confirmed active in 2 out of 2 years during the October to December period, but there was no activity there in a February (1996), March (1994) or May (1994) survey.
Future surveying needed:	Low priority. Clearly a large and regularly used, secure colony. Need only be checked for seasonal use if in area, unless detailed work is to be done to attempt to calculate percentages of birds breeding. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S051**
General Location:	Island of the SE Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, sand.
Survey dates:	November & December 1993, March, May, September & October 1994, July & September 1996, October 1997.
Years confirmed active:	1993, 1994, 1996, 1997.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(3). Black-naped Tern (500, October 1994), Bridled Tern (2000+, March 1994), Roseate Tern (1500, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	2130 (October 1994).
Highest estimated annual usage:	4130+ (1994).
Allocated colony size:	1001-5000.
Months likely to be active:	Uncertain. In various years seen active in March, May, September to December and not active in July, but other months have not been done. May be Bridled Tern are active from October through to May and the others are active from September to December.
Photographs:	3551-58.
Comments:	Pair of close together islands, one being one of the few islands off SE Groote that is not a pile of sandstone slabs. It is a high, vegetated beach rock island with a sand spit at each end. The other is just a small, low sand and rock island. Between them they have some very significant nesting, though it may be a little irregular. Most of the nesting is on the larger vegetated island. Large numbers of Black-naped and Roseate Terns, were just starting (and not all under way) in October, in 2 different years, but in a mid September survey of another year there were few birds present, suggesting that they may not have been going to nest in large numbers in that year. Bridled Tern were found to be breeding in November and December of 1993, March, May and October of 1994. In 2 surveys in 1996 they were not breeding in July but they were in September, but then they were breeding in October of 1997. As no surveys were done outside these times there is insufficient information to be able to say whether the Bridled Terns nested in 2 periods, March-May and September-December, or nested from around September through to May. Marine turtles and a pair of Osprey also nest on the island, and perhaps also Beach Stone Curlew and a pair of Peregrines.
Future surveying needed:	High priority. A very significant island for which we need more information about numbers, seasons and regularity of use, even though a secure colony. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S052**
General Location:	Mainland beach on SE Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November & December 1993, March & September 1994, November 1997.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	Regionally high.
Species confirmed breeding:	(1). Little Tern (12, December 1993).
Species possibly breeding:	
Highest no. of birds recorded:	12 (December 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	December at least.
Photographs:	544.
Comments:	Little Tern colony nesting on a section of beach on the SE part of Groote Eylandt. 12 were nesting in December (1993). There were another 100 in the general area with ~5% in breeding plumage but not defending. Insufficient time on the ground in this area, in only ground survey, to confirm if juveniles present. It is likely this was not the peak nesting time for this colony; however, it is not known whether it was just starting or just finishing. Other surveys in area did not report Little Tern present; however, the particular beach may not have been flown and/or a few Little Tern could have been missed, as this is primarily a turtle surveying area.
Future surveying needed:	Medium priority. Could be a significant Little Tern site. Check in May/June, October/November and perhaps January/February, if in area. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S053**
General Location:	Island in Dalumba Bay, SE Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, rock.
Survey dates:	November & December 1993, March, May & September 1994, July 1996.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Black-naped Tern (100, December 1993).
Species possibly breeding:	
Highest no. of birds recorded:	100 (December 1993).
Highest estimated annual usage:	100 (1993).
Allocated colony size:	11-100.
Months likely to be active:	September to December.
Photographs:	3559-65.
Comments:	One of many islands in the SE Groote Eylandt area, that are predominantly made up of stacked large slabs of sandstone. Some contain little vegetation or sand, and some are very large and high islands. Many are regularly used by seabirds for breeding. This island was a larger one with some vegetation on the rocks and a small amount of sand beach. A significant number of Black-naped Terns were breeding in December (1993) which appeared to be nearly finished for the season. Birds were nesting on sand and rock, but may not have been highly successful. Was not active in May and mid September the following year, but they may have still nested after this.
Future surveying needed:	Low priority. Check around November if in area. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S054**
General Location:	Island in Dalumbu Bay, SE Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.

Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	November & December 1993, March, May & September 1994, February & July 1996, October 1997.
Years confirmed active:	1993.
Years confirmed inactive:	Nil, though possibly 1994 and 1997.
Status:	National (?).
Species confirmed breeding:	(1). Bridled Tern (3000, December 1993).
Species possibly breeding:	
Highest no. of birds recorded:	3000 (December 1993).
Highest estimated annual usage:	3000 (1993).
Allocated colony size:	1001-5000.
Months likely to be active:	November to December at least.
Photographs:	3566-67.
Comments:	One of many islands in the SE Groote Eylandt area, that are predominantly made up of stacked large slabs of sandstone. Some contain little vegetation or sand, and some are very large and high islands. Many are regularly used by seabirds for breeding. This site is a fairly large rock, vegetation and sand island with low thousands of Bridled Tern breeding deep in among vegetation covered rocks during Nov/Dec (at least) of the one year it was surveyed at this time (1993). Breeding was confirmed, however, as with most such colonies, the percentage of the defending birds that were actually breeding is unknown. It was not recorded as active in September (1994) and early October (1997), but it cannot be said that it would not have started after these visits. It was also not active in March and May of 1994, nor in February or July of 1996. Consequently it may not be a regular site. White Bellied Sea Eagles and/or Ospreys breed on the island.
Future surveying needed:	Medium priority. A significant breeding site in at least one year, but its regularity of use should be checked by surveys in Nov-Jan. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S055**
General Location:	Near Dalumbu Bay, SE Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November & December 1993, March & September 1994.
Years confirmed active:	1993.
Years confirmed inactive:	Nil, though possibly 1994.
Status:	Low.
Species confirmed breeding:	(2+). Bridled Tern (400, December 1993), Roseate and/or Black-naped Tern (numbers unknown, October 1997).
Species possibly breeding:	Black-naped Tern, Roseate Tern.
Highest no. of birds recorded:	400 (December, 1993).
Highest estimated annual usage:	400 (1993).
Allocated colony size:	101-500.
Months likely to be active:	November to December.
Photographs:	No.
Comments:	One of many islands in the SE Groote Eylandt area, that are predominantly made up of stacked large slabs of sandstone. Some contain little vegetation or sand, and some are very large and high islands. Many are regularly used by seabirds for breeding. This site consists of 2 adjacent islands, one rounded and one long and skinny. Both consist mostly of piles of large slabs of sandstone. Bridled Terns were recorded breeding in Oct-Dec of the only two years the site was visited at this time of year. The percentage of birds present that were breeding is unknown. Roseate and/or Black-naped Tern were also recorded (from the air) breeding in October of one of those years (1997). Not active in mid September (1994) but may have been too early in season. Eastern Reef Egret, and White Bellied Sea Eagle and/or Osprey breed here also.
Future surveying needed:	Low priority. Not a well documented site but not likely to be a highly significant one. Check if possible when in area between October and January. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S056**
General Location:	Brady Rock, NW Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	November & December 1993, March & September 1994.
Years confirmed active:	1993.
Years confirmed inactive:	Nil, possibly 1994.
Status:	Low.
Species confirmed breeding:	(2). Black-naped Tern (10 December 1993), Bridled Tern (100, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	110 (December 1993).
Highest estimated annual usage:	110 (1993).
Allocated colony size:	11-100.
Months likely to be active:	November to December, at least.
Photographs:	No.
Comments:	Small rock island with lighthouse and small colony of Bridled Tern and Black-naped Tern. Active in Nov/Dec of the one year it was checked at this time. Not active in mid September of another year (1994) but may have commenced breeding after this survey.
Future surveying needed:	Low priority. Likely to only be a small colony and possibly not used every year. Check if possible when in area. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S057**
General Location:	Wedge Rock, NW Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, coral rubble, rock.
Survey dates:	November & December 1993, March, May & September 1994, February & July 1996, October 1997.
Years confirmed active:	1993, 1997.
Years confirmed inactive:	Nil, possibly 1994.
Status:	Regionally high.
Species confirmed breeding:	(3). Black-naped Tern (20, December 1993), Bridled Tern (1000+ December 1993 & October 1997), Little Tern (2, December 1993).
Species possibly breeding:	
Highest no. of birds recorded:	1022 (December 1993).
Highest estimated annual usage:	1022 (1993).
Allocated colony size:	1001-5000.
Months likely to be active:	October to January.
Photographs:	3568-71, 5542-44.
Comments:	Vegetated sandstone rock island with high cliffs on one side and a sand beach on the other side. Bridled Tern breed deep in among vegetation covered rocks on top of island and in the cliff face. Confirmed breeding during Nov/Dec of 1993 and October of 1997. As with most such colonies, the percentage of the defending birds that were actually breeding is unknown. Small Black-naped colony and at least one pair of Little Tern were recorded breeding in December (1993) in the only ground check done at this time of year. Colony was not active in September (1994) but may have started after this visit. Colony was also not active in March and May of 1994, nor in February or July of 1996. However, these aerial surveys could have easily missed an odd pair of Little Tern if they were the only breeding species present at any of these times. Island also has considerable marine turtle (mostly flatback) nesting.
Future surveying needed:	Medium priority. A fairly secure breeding site, however one of reasonable significance that needs more information. Needs to be ground checked between April and October to check further for Little Tern breeding and better assess numbers of the 2 other species breeding. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S058**
General Location:	Small Island 2 km SW of Nicol Island, NW of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, coral rubble.
Survey dates:	November & December 1993, March, May & September 1994, January & July 1996, October 1997.
Years confirmed active:	1993.
Years confirmed inactive:	Nil, possibly not active in 1997.
Status:	Regionally high.
Species confirmed breeding:	(2). Black-naped Tern (20, December 1993), Roseate Tern (130, December 1993).
Species possibly breeding:	
Highest no. of birds recorded:	150 (November & December 1993)
Highest estimated annual usage:	150 (1993).
Allocated colony size:	101-500.
Months likely to be active:	October to January.
Photographs:	3572-75.
Comments:	Small partially vegetated sand and coral rubble island with Roseate and Black-naped Tern breeding Nov/Dec of the only year it was surveyed at this time. Not active in mid September (1994) and mid October (1997). These visits may have been too early or the site maybe only irregularly used. Not active in March and May of 1994 or in July (1997).
Future surveying needed:	Low priority. Check if possible when in area during October to January. Otherwise should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S059**
General Location:	Rocks close to mainland, Cape Shield, NW of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	November & December 1993, March 1994, March 1995.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1+). Black-naped Tern (80+, December 1993).
Species possibly breeding:	Roseate Tern.
Highest no. of birds recorded:	80+ (December 1993).
Highest estimated annual usage:	80+ (1993).
Allocated colony size:	11-100.
Months likely to be active:	October to January.
Photographs:	No.
Comments:	Rocky reef area adjacent to the mainland. Forms an island at high tide but connected to the mainland at low tide. This is the only such ('non-island') site of all colonies documented here, except the mainland beach nesting sites of Little Tern. Active in the one year it was checked at this time, it is not likely to be a regularly successful colony because of its location.
Future surveying needed:	Low priority. Check if possible when in area during October to January. Otherwise should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S060**
General Location:	East side of Gooninnah Island, off Cape Shield, NW of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November & December 1993, March, September & October 1994, March 1995, January, February & July 1996, October 1997.
Years confirmed active:	1993, 1994, 1997.
Years confirmed inactive:	Nil.
Status:	National (?).

Species confirmed breeding:	(2). Black-naped Tern (180, December 1993), Roseate Tern (20, December 1993).
Species possibly breeding:	
Highest no. of birds recorded:	200 (December, 1993).
Highest estimated annual usage:	200 (1993).
Allocated colony size:	101-500.
Months likely to be active:	October to January.
Photographs:	3576-82.
Comments:	Black-naped and Roseate Tern colony on the sandstone boulders on the eastern side of a large vegetated island. Several checks between February and July indicated site likely to only be active late in year. East side of island also used as roost for other seabirds, and marine turtle breeding occurs on beaches on west side of island. Large numbers of Common Sheath-tail Bats roost during the day in the crevices and caves formed by the large sandstone boulders around the edge of the island. The grass and vine covered smaller rocks over the remainder of the top of the island have one of the highest populations of small lizards of any Top End island covered during these surveys.
Future surveying needed:	Low priority. Check if possible when in area during October to January. Otherwise should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S061**
General Location:	Minintirri Island, NE of Numbulwar.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	November 1993, March, May & September 1994, May 1995, February & July 1996, May 1999.
Years confirmed active:	1993, 1994, 1995, 1999.
Years confirmed inactive:	Nil.
Status:	Regionally high.
Species confirmed breeding:	(2). Bridled Tern (500+, May 1995), Silver Gull (60+, May 1999).
Species possibly breeding:	Black-naped Tern, Roseate Tern.
Highest no. of birds recorded:	550+ (May, 1995).
Highest estimated annual usage:	Unknown, but would have been higher than above figure in 1995 as no surveys were done to cover the later in the year breeding.
Allocated colony size:	501-1000.
Months likely to be active:	April to November (at least).
Photographs:	5984-85, 6381-84.
Comments:	Small but high, vegetated beach rock island with extended breeding for a number of species. Bridled Tern were recorded breeding March (1994), May (1994, 1995, 1999), September (1994) and November (1993). They were not breeding in February (1996) or July (1996). Other than some regularity of breeding in May these results seem to indicate a degree of inconsistency in breeding times; however, there are insufficient surveys to be sure. Silver Gull breeding is also not clear. Although only confirmed in May, they also have an extended season, but not as long as the Bridled Tern. As they may not have been breeding in one year, Silver Gull may not breed there every year at this site. Roseate and/or Black-naped Tern may have been breeding there in March and September (1994). Good numbers of Common Sheath-tailed Bats roost during the day in the caves and crevices.
Future surveying needed:	Medium priority. Check if possible when in area, needs more information on species numbers and timing of breeding.

Colony Identifier:	**S062**
General Location:	Sandy Island, SE of Numbulwar.
Historical documentation:	Collins (1987) in C.R.A., reported seabird breeding.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	September & December 1993, March, May & September 1994, February & July 1996, October 1997, June 1999.
Years confirmed active:	1994, 1997, 1999.
Years confirmed inactive:	Nil.

Status:	National.
Species confirmed breeding:	(2). Crested Tern (10000, May 1994), Silver Gull (25, May 1994).
Species possibly breeding:	Little Tern.
Highest no. of birds recorded:	10025 (May 1994).
Highest estimated annual usage:	10025+ (1994).
Allocated colony size:	10001-30000.
Months likely to be active:	April to July.
Photographs:	3583-602.
Comments:	A series of 3 islands (at high tide) in a chain surrounded by exposed sand and rocky reef at low tide. It is a very isolated site, being 20 km from the nearest land, the mainland coast, and 25 km from Low Rock (S063) which is the nearest other seabird colony. The two southern islands of Sandy Island are long and skinny, and are vegetated with grass, vines and the odd shrub. Breeding occurs on both of these islands, but mainly the northern one. Here there is large and probably regular dry season Crested Tern breeding occurring in dense colonies in 2-3 sections. Nesting is on sand and guano (indicating it has been a long used site), in the open and amongst grass or ground vines. Large numbers of dead near-fledged young were present in September 1994. A small Silver Gull colony is also present. Numbers are probably between the 25 (seen early in the season, May 1994) and the 100 (seen in July1996), given that they normally have a more extended season than the Crested Tern. Little Tern may breed in this island as well. They have been noted on several occasions from the air when they could not be confirmed as breeding, but were not breeding for the 2 ground surveys done (May & September 1994). A pair of Ospreys breeds in a very low shrub on the main island. The island chain is also very important for roosting of other seabirds during both day and night. These include Pied Cormorant, Brown Booby and Roseate Tern – a roost of 3000+ of the latter being present in October 1994. Marine turtles also breed here.
Future surveying needed:	Medium priority. Not an easy site to get to but should be checked, especially for Little Tern breeding (June and October) when possible.

Colony Identifier:	**S063**
General Location:	Low Rock, between Groote and the mouth of the Roper River.
Historical documentation:	Storr (1977) reported breeding Crested Tern.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, sand, ground vegetation.
Survey dates:	September & December 1993, March, May & September 1994, February & July 1996.
Years confirmed active:	1993, 1994 (& probably 1996).
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(5). Black-naped Tern (800, September 1994), Bridled Tern (1000+, September 1994), Crested Tern (4500, May 1994), Lesser Crested Tern (440, September 1994) and Roseate Tern (4000, September 1994).
Species possibly breeding:	
Highest no. of birds recorded:	6240 (September 1994).
Highest estimated annual usage:	9300+ (1994).
Allocated colony size:	10001-30000.
Months likely to be active:	April to December.
Photographs:	3603-10, 3612-17.
Comments:	One of the most significant seabird colonies in the Top end, having large number of many species. The site is a sand, coral rubble and rock island surrounded by a rocky reef, and with a stand of tall mangroves in the centre. It is a very isolated site, being ~30 km from the mainland coast, and 25 km from Sandy Island (S062) which is the nearest other seabird colony. Low thousands of Crested Tern breed here during the dry season. Only checked in the one year but likely to be regular. Very large Roseate Tern colony in September of the only year (1994) that it was checked at this time. Although over 4000 were nesting at the time there were another 6000+, (many in breeding plumage) roosting around the island. A large colony (800) of Black-naped Tern and 440 Lesser Crested Tern were also nesting at this time. This is the only site in the Top End (of the 147 located so far) where Lesser Crested Tern have been found breeding. There were 1000+ defending Bridled Tern, also present at this time. Eggs and young were found however it was not possible to say whether all were breeding at this time as most nests were concealed deep in under vegetation covered rocks. A colony of 150+ Pied Cormorants breed in the mangrove trees during the dry season (this is further detailed in Chatto, 2000). A pair of Osprey has 3 nests in the mangroves and it is possible that Eastern Reef Egrets and Sooty Oystercatchers breed here. Flatback Turtles also breed on this island. More detailed information on this site can be found in Chatto (1999).

Future surveying needed:	Low priority. Clearly a highly significant colony, however its isolation means it is quite secure. Check if possible when in area.

Colony Identifier:	**S064**
General Location:	Maria Island, Limmen Bight.
Historical documentation:	C. R. A. reports breeding Silver Gull and old nesting sites of Pied Cormorants.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, rock.
Survey dates:	September & December 1993, March, May & September 1994, February & July 1996.
Years confirmed active:	1994.
Years confirmed inactive:	(Possibly 1996).
Status:	Regionally high.
Species confirmed breeding:	(1). Silver Gull (270, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	270 (May 1994).
Highest estimated annual usage:	270 (1994).
Allocated colony size:	101-500.
Months likely to be active:	March to June.
Photographs:	3618-21.
Comments:	A large, isolated island ~ 20km from the mainland with one of the largest Silver Gull colonies in the Top End, although it is still small by southern standards. The colony is located among sand and rock, with some of the (constructed) nests being under bushes and rocks. Eggs through to half-grown chicks in early May (1994), which was the only year the site was checked at this time, and one of only 2 times it has been ground checked. Eastern (ocean) side well used for seabird roosting and the island has reasonable numbers of shorebirds. Osprey and White-bellied Sea Eagle seen breeding on this island. Good numbers of turtles, mainly Flatbacks, breed here.
Future surveying needed:	Medium priority. This is a large island which has areas suitable for Little Tern and Black-naped/Roseate Tern, and Pied Cormorant breeding. These have not been well ground-checked and should be when in area.

Colony Identifier:	**S065**
General Location:	Rock island NW of Yargara Island, Wessel Island Group, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, April, May & September 1994, March 1995, October 1997, October 1999.
Years confirmed active:	1997 (and possibly 1993).
Years confirmed inactive:	1994, 1999.
Status:	Low.
Species confirmed breeding:	(1)+. Roseate Tern (50+, October 1997).
Species possibly breeding:	Black-naped Tern.
Highest no. of birds recorded:	50+ (October 1997).
Highest estimated annual usage:	50+ (1997).
Allocated colony size:	101-500.
Months likely to be active:	October at least.
Photographs:	6417.
Comments:	Vegetated sand, coral rubble and rock island, in close proximity to a number of others. Confirmed as a small Roseate and possibly also a Black-naped Tern colony in October 1997. It is one of a series of islands in this area that is likely to have small, but irregular, breeding of these species.
Future surveying needed:	Low priority. Check if possible when in area between September and December.

Colony Identifier:	**S066**
General Location:	Sand Spit Island, between the mouth of Rosie Creek and Bing Bong Station, SW Gulf of Carpentaria.

Historical documentation:	None found, site reported to author during current surveys.
Land tenure:	Pastoral lease (Bing Bong Station).
Nesting Habitat:	Sand.
Survey dates:	~ June 1991, 1992, 1993 (A. Withers, pers. comm.), Sept 1993, March, May & September 1994, May 1995, February, July & October 1996, July & December 1998, May & November 1999.
Years confirmed active:	1991, 1992, 1993 (A. Withers, pers. comm), 1994, 1998, 1999 (and possibly 1995).
Years confirmed inactive:	Nil, but possibly 1996.
Status:	National.
Species confirmed breeding:	(2). Little Tern (200, ~ June 1991 & 1993), Silver Gull (200, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	350 (May 1994).
Highest estimated annual usage:	350 (1994).
Allocated colony size:	101-500.
Months likely to be active:	March to October.
Photographs:	3622-25, 6016.
Comments:	A 500+m long, skinny, partially vegetated sand island that is only a few hundred metres offshore and becomes joined to the mainland at very low tides. Site is one of the more significant and regular Little Tern colonies in the Top End. Between 50 and 200 Little Tern are present at most visits to the colony between May and July; however, not all birds are seen to be breeding at any one visit. As breeding has been confirmed in May, June July and September, it appears breeding occurs over an extended season rather than all at once. The numbers recorded with eggs/young by A. Withers (pers. comm.) at a single visit in the 1991-93 seasons seemed higher than by myself in subsequent years. This may mean a decline in breeding, however there is insufficient data to be certain of this. A colony of Silver Gull which also breed on the island, prey on Little Tern eggs and young. Numbers of gulls breeding here are also quite significant by Top End standards, however they may not breed here as regularly as the Little Tern. Pied Oystercatcher breed on this island and it is used as a roost by Pied Cormorants and a number of other terns. Small numbers of waders feed around the exposed flats of the island.
Future surveying needed:	High priority. This is a very significant Little Tern breeding site and one that can be reasonably easily accessed by Borroloola PWCNT ranger staff. It needs more work done to establish numbers and success, and the effect of the Silver Gulls.

Colony Identifier:	**S067**
General Location:	Payne Islet, Sir Edward Pellew Group.
Historical documentation:	C.R.A. states Bradley (1987) reported breeding terns.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	September & November 1993, March, May & September 1994.
Years confirmed active:	1994.
Years confirmed inactive:	Nil, possibly 1993.
Status:	Low.
Species confirmed breeding:	(1). Black-naped Tern (10, September 1994).
Species possibly breeding:	Little Tern.
Highest no. of birds recorded:	10 (September 1994).
Highest estimated annual usage:	10 (1994).
Allocated colony size:	11-100.
Months likely to be active:	September to November.
Photographs:	No.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site had a small colony of Black-naped Tern breeding on the sand in 1 out of 2 years the site was surveyed at that time of the year. A small group of Little Tern observed in November (1993) may have been breeding.
Future surveying needed:	Low priority. Check if possible when in area, particularly for confirmation of Little Tern breeding between April and December.

Colony Identifier:	**S068**
General Location:	Observation Island, north side of South Goulburn Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	February & June 1996, November 2000.
Years confirmed active:	1996.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (28, June 1996).
Species possibly breeding:	
Highest no. of birds recorded:	28 (June 1996).
Highest estimated annual usage:	28 (1996).
Allocated colony size:	11-100.
Months likely to be active:	May to July
Photographs:	3826-27, 5524.
Comments:	Little Tern colony seen as active during June (1996) of one year, however this area has not been surveyed much and Little Tern colonies such as this are easily missed during aerial surveys. Was not active in November (2000).
Future surveying needed:	Medium priority. Check if possible when in area between April and December.

Colony Identifier:	**S069**
General Location:	North Rock, Sir Edward Pellew Group.
Historical documentation:	C.R.A. states Bradley (1987) reported terns nesting. Storr (1977) reported breeding Crested Tern.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	September & November 1993, March, May & September 1994, February & October 1996, May 1999.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1+). Bridled Tern (200+, November 1993).
Species possibly breeding:	Black-naped Tern and Roseate Tern.
Highest no. of birds recorded:	200+ (November 1993).
Highest estimated annual usage:	200+ (1993).
Allocated colony size:	101-500.
Months likely to be active:	November to December.
Photographs:	3626-27, 138.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is a small but high non-vegetated sandstone rock outcrop just off North Island. It has a small, and probably irregular, Bridled Tern colony. Breeding was recorded in November (1993) only. It was checked earlier, in September (1994) and October (1996), and was inactive, however these visits may have been a little early. It is also likely to have small numbers of Roseate and/or Black-naped Tern breeding. Adults and recently fledged young, seen in November (1993), may have bred there earlier, or they may have flown here from another of the many nearby breeding sites. The site does not appear suitable for the Crested Tern reported breeding here by previous authors, and none were seen breeding here during these surveys, although they certainly roost here, as do other seabirds such as Brown Boobies.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S070**
General Location:	Pearce Islet, NE of North Island, Sir Edward Pellew Group.
Historical documentation:	C.R.A. states Bradley (1987) reported terns nesting. S. Johnson (pers. comm.) reported Silver Gulls breeding.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	September & November 1993, March, May & September 1994, February, July & October 1996, May 1999.
Years confirmed active:	1993, 1994, 1996.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(3). Black-naped Tern (100, October 1996), Bridled Tern (2000+, September 1994), Roseate Tern (280, November 1993).
Species possibly breeding:	Silver Gull, Little Tern.
Highest no. of birds recorded:	2000+ (September 1994).
Highest estimated annual usage:	2000+ (1994).
Allocated colony size:	1001-5000.
Months likely to be active:	September to December.
Photographs:	3640-41, 3643-56.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is a large, vegetated, low island. It is the most northerly of the Pellews Islands and close to another couple of small islands, which include one (S071) that has the greatest numbers of breeding seabirds in the Top End. Pearce Islet has significant colonies of Bridled, Roseate and Black-naped Tern. Bridled Tern were recorded breeding in 3 out of 3 years in the Sept/Oct period and not breeding in the March-July period in 3 out of 3 years. No surveys were done in the Dec/Jan period but it is likely breeding would have continued through till then. Roseate and Black-naped Tern were recorded breeding in 2 out of the 3 years during Sept/Oct and not during the same time as the Bridled Tern were not recorded breeding. Roseate/Black-naped Tern would be more likely to finish earlier (around Nov/Dec) than the Bridled Tern, however none of the 3 species had all birds involved in breeding at any one visit. No evidence of Silver Gull breeding was found during these surveys, however there is no reason to doubt S. Johnson (a knowledgable and long-time traditional owner in the area), who says they breed here. A group of Little Tern present in late November (1993) were not breeding then, however the sand spit on the island would be ideal habitat for this species to breed. Large numbers of marine turtles breed on this island, as probably do a few Striated Heron.
Future surveying needed:	Medium priority. Check if possible when in area during September to January for the confirmed species and earlier in year to check for Little Tern breeding.

Colony Identifier:	**S071**
General Location:	Urquhart Islet, NE of North Island, Sir Edward Pellew Group.
Historical documentation:	C.R.A. states Bradley (1987) reports seabird breeding. Storr (1977) also reports seabird breeding.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rock, sand, coral rubble.
Survey dates:	September & November 1993, March, May & September 1994, February, July, October 1996, May 1999.
Years confirmed active:	1993, 1994, 1996, 1999.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(5). Black-naped Tern (60, September 1994), Bridled Tern (50+, May 1999), Crested Tern (50000+, May 1999), Roseate Tern (7500+, May 1999), Silver Gull (75, May 1999).
Species possibly breeding:	
Highest no. of birds recorded:	57600+ (May 1999).
Highest estimated annual usage:	57600+ (1999).
Allocated colony size:	>30000.
Months likely to be active:	March to December.
Photographs:	3654, 3656, 3628-39, 3657, 6042-70, 6373-80.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them

	during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is a reasonably large, low, circular, vegetated, rock and coral rubble island, and is the furthest east of a group of 4 adjacent islands off the NE of North Island. It has the largest number of breeding seabirds of any island in the Top End. Although 5 species regularly breed here the site is dominated by Crested Tern, and to a lesser extent, by Roseate Tern. Many, many thousands of Crested Tern regularly breed on this island between March and July. Most Crested Tern breeding occurs on rocks, coral rubble and among ground vines in two main (500m long) sections around the perimeter of the island with a small amount in the centre of the top of the island. Breeding was recorded in each of the 3 years the site was checked at the appropriate time, however it appears the colony may have shifted to nearby Turtle Islet for the year 2000 season (B. Norman, pers. comm.). Silver Gull breeding is also mostly around the time of Crested Tern breeding, however most of the gulls construct hidden nests in the central part of the top of the island. Like most colonies of Crested Terns, they are fairly synchronous and had most of the birds present on a given visit involved with a nest. Gulls had a more extended breeding season and did not have had all birds present breeding at the time of each visit, although this is somewhat complicated by the hidden and spread out nests of gulls. Also of high significance at this site is the breeding of many thousands of Roseate Terns. These were recorded breeding in large numbers March-May and smaller numbers in Sept/Oct. Whether they continued to breed throughout the season, reducing in numbers toward the latter part of the year, or whether they bred in two separate sessions is uncertain. Each time however there were many more birds present (many in breeding plumage) than were breeding. In the May (1994) count of 7500+ breeding Roseate Terns, there were well over 10000 birds roosting a little away from, and apparently not currently involved with, the colony. The site is also used by small numbers of Black-naped Tern around Sept/Oct and small numbers of Bridled Tern, which were recorded breeding in both May and September. A large White-bellied Sea Eagle feeding roost of terns exists on this island. There is also an undescribed species of the skink, *Glaphyromorphus* that I have observed among the coral rubble of this island that I have not seen on any other islands, including on the very similar and close by Pearce Islet.
Future surveying needed:	Medium priority. A colony that is reasonably secure and fairly well documented however, as it is such a significant seabird colony, it should be more thoroughly documented.

Colony Identifier:	**S072**
General Location:	Hervey Rocks, NE of North Island, Sir Edward Pellew Group.
Historical documentation:	C.R.A. states Bradley (1987) reported seabird breeding.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Sand, coral rubble.
Survey dates:	September & November 1993, March, May & September 1994, February & July 1996, May 1999.
Years confirmed active:	1993, 1994.
Years confirmed inactive:	Nil.
Status:	Regionally high.
Species confirmed breeding:	(1+). Bridled Tern (1000, September 1994).
Species possibly breeding:	Roseate and/or Black-naped Tern.
Highest no. of birds recorded:	1000 (September 1994).
Highest estimated annual usage:	1000 (1994).
Allocated colony size:	501-1000.
Months likely to be active:	September to December.
Photographs:	3658-62, 208.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is a small, low, partially vegetated rock island with a little sand and coral rubble spit off one end. It is close to the large colony on Urquhart Islet (S071) and the colony on Pearce Islet (S070), so probably gets some of the overflow of breeding birds for some species at least. Only Bridled Tern were confirmed breeding at this site, although it is likely Roseate and/or Black-naped Tern also breed here but there were insufficient surveys to confirm such. Bridled Tern were recorded breeding in the September to November period but not in the March to May period, but this site was only ground checked on 2 occasions.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S073**
General Location:	Stevens Rocks, off northern end of Vanderlin Island.
Historical documentation:	C.R.A. states McKean reported breeding Black-naped Tern and Bridled Tern.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	September & November 1993, March, May & September 1994, February 1996.
Years confirmed active:	1993.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Bridled Tern (60, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	60 (November 1993).
Highest estimated annual usage:	60 (1993).
Allocated colony size:	11-100.
Months likely to be active:	November at least.
Photographs:	3663.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is a pair of small rocky islands, one with a little vegetation, the other with a small sand spit off one end. A small Bridled Tern colony was recorded here in November (1993) of the only year a survey was done at this time of year. It was not active in March or May of the following year (1994) so may only be a short duration colony. It was also not active in late September of another year so it may also not be a regular breeding site.
Future surveying needed:	Low priority. Check if possible when in area between September and January.

Colony Identifier:	**S074**
General Location:	Mainland beach just east of Guion Point, NW Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, February, June & November 1996, November 2000.
Years confirmed active:	1996 (and possibly 1993).
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (2+, June 1996).
Species possibly breeding:	
Highest no. of birds recorded:	2+ (June 1996).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	June to August (possibly November).
Photographs:	3828.
Comments:	Mainland beach site where at least one pair of Little Tern was confirmed breeding in June (1999), however larger numbers were then present and these may have bred a little later. There were also 150 (seen only from the air) present, with some probably breeding, in November (1993), however it was not active in November (2000). Beach Stone Curlew probably nest in the vicinity also.
Future surveying needed:	Medium priority. This could be a more significant Little Tern colony and should be checked between June and November to establish whether more birds breed here.

Colony Identifier:	**S075**
General Location:	Group of islands 3 km ENE Three Hummock Pt, NE Vanderlin Island, Sir Edward Pellews.
Historical documentation:	None found, site located by author during surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.

Nesting Habitat:	Coral rubble.
Survey dates:	September & November 1993, May & September 1994, February 1996.
Years confirmed active:	1994 (and possibly 1993).
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(3+). Black-naped Tern (250, September 1994), Bridled Tern (300, September 1994), Roseate Tern (250, September 1994).
Species possibly breeding:	Silver Gull.
Highest no. of birds recorded:	800 (September 1994).
Highest estimated annual usage:	800 (1994).
Allocated colony size:	101-500.
Months likely to be active:	September to November.
Photographs:	3666-67.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. A low, reef-surrounded, partially vegetated rock and sand island with a couple of other adjacent small islands. Bridled, Black-naped and Roseate Terns appeared to be just starting to breed in September (1994) but had finished in November (1993). Thus site may be irregularly used, or the birds commenced earlier in the 1993 season. Although birds were defending and in breeding plumage in the September visit, few of any species (in the numbers referred to above) had eggs at the time, however there were a lot of new, still empty scrapes. Unfortunately the site was not visited later that year. Higher numbers of Bridled Tern were seen in the November (1993) visit so the colony may be larger than listed above. Osprey nest present but not seen active in any visit.
Future surveying needed:	Medium priority. Needs to be surveyed in October to ascertain better information on numbers and seasonal timing.

Colony Identifier:	**S076**
General Location:	5 km SW Three Hummock Pt, NE Vanderlin Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	September & November 1993, March & September 1994, July 1996.
Years confirmed active:	1993.
Years confirmed inactive:	Nil (possibly 1994).
Status:	Regionally high
Species confirmed breeding:	(1). Black-naped Tern (40, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	40 (November,1993).
Highest estimated annual usage:	40 (1993).
Allocated colony size:	11-100.
Months likely to be active:	October to December.
Photographs:	No.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is a pair of vegetated beach rock islands joined by a sand spit. It had a small Black-naped Tern colony present (eggs and chicks) in November (1993) but may not have been active in late September (1994). No breeding was observed in 3 visits at other times of the year. May be irregular. Osprey nest present.
Future surveying needed:	Low priority. Check if possible if in area, particularly around late October, early November.

Colony Identifier:	**S077**
General Location:	Bottle Rocks, southern end of South Goulburn Island.
Historical documentation:	None found, site reported by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.

Nesting Habitat:	Rocks, sand.
Survey dates:	February, June & November 1996, November 2000. April 1996 (D. Perciville, pers. comm)
Years confirmed active:	2000. 1996 D. Perciville (pers. comm)
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(1). Black-naped Tern .
Species possibly breeding:	Roseate Tern.
Highest no. of birds recorded:	250 (November 2000).
Highest estimated annual usage:	Unknown.
Allocated colony size:	101-500.
Months likely to be active:	April to May and October to December.
Photographs:	3829-30, 6853 & 54.
Comments:	Small group of rocks off the west coast of South Goulburn Island. D. Perciville (pers. comm.) reported that Aboriginals collected the eggs from about 100 small tern nesting on the rocks. These were almost certainly Black-naped or Roseate Tern. He also mentioned that small terns nesting on the sand beach nearby. These could be the above species or they could be Little Tern. A visit to the site in November 2000 by myself showed 250+ birds breeding. All were Black-naped Tern and all seen were on eggs.
Future surveying needed:	Low priority. Check if possible when in area, particularly if Little Tern breeding looks possible.

Colony Identifier:	**S078**
General Location:	Southern shore of Lawson Island, east of Croker Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	October 1993, May & October1994, February, June & November 1996.
Years confirmed active:	1996.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (2+, June 1996).
Species possibly breeding:	
Highest no. of birds recorded:	2+ (June 1996).
Highest estimated annual usage:	2+ (1996).
Allocated colony size:	2-10.
Months likely to be active:	June at least.
Photographs:	1540-41.
Comments:	Little Tern breeding site on open beach of the southern shore of a large island. Site was only observed on one occasion, but such a site could easily be missed on aerial surveys in the area.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S079**
General Location:	Brown Islet, between Centre and Vanderlin Islands, Sir Edward Pellew Group.
Historical documentation:	C.R.A. states McKean reported mixed tern species breeding here.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	September & November 1993, March & September 1994, February 1996, May 1999.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (14, September 1994).
Species possibly breeding:	
Highest no. of birds recorded:	14 (September 1994).
Highest estimated annual usage:	14 (1994).
Allocated colony size:	11-100.
Months likely to be active:	September to November.

Photographs:	3668-69.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This is a fair sized, vegetated island which had a Little Tern colony confirmed active in late September (1994), however such a site could easily be missed in aerial surveys and it may have been active in other years at this time. A ground check in May (1999) confirmed it was not active at this time of year as well as September (like some Little Tern colonies), at least in that year.
Future surveying needed:	Medium priority. Check if possible when in area, aiming to confirm seasonal regularity and possible additional use at other times of year.

Colony Identifier:	**S080**
General Location:	Willy Islet, between Centre and Vanderlin Island, Sir Edward Pellew Group.
Historical documentation:	C.R.A. states McKean reported mixed tern species breeding and Caspian Tern breeding.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rock, coral rubble.
Survey dates:	September & November 1993, March & September 1994.
Years confirmed active:	1993, 1994.
Years confirmed inactive:	Nil.
Status:	Regionally high.
Species confirmed breeding:	(3). Black-naped Tern (20, September 1994), Bridled Tern (500, November 1993), Crested Tern (unknown number but not large, 1994).
Species possibly breeding:	Caspian Tern.
Highest no. of birds recorded:	500 (September 1994).
Highest estimated annual usage:	500 (1994).
Allocated colony size:	501-1000.
Months likely to be active:	August to January.
Photographs:	3670-71.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. Reasonably sized vegetated rock and coral rubble island at the southern end of the main group of Pellews small islands. A Bridled Tern colony was confirmed active in September (1994) and November (1993) in the only 2 times this site was visited at this time of year. Breeding was deep down in under bush-covered sandstone slabs so the numbers breeding of the numbers present could not be ascertained. A small Black-naped Tern colony was active in late September (1994) but not late November (1993). It may have finished by the later time of the year, or they may not have bred in that year. Evidence of small Crested Tern colony, active during the dry season of 1994, was found in late September of that year, but no surveys were done during the time when it would have been in use. No Caspian Terns were recorded breeding during the few surveys of this island, but they certainly could have bred on this island during the period of these surveys. It would likely be only a pair or two, as I have found on other islands in the area. Osprey nest on island.
Future surveying needed:	Medium priority. Check if possible when in area between March and December, to confirm regularity of use of Bridled and Black-naped Tern, numbers of Crested Tern and to confirm Caspian Tern.

Colony Identifier:	**S081**
General Location:	Small island 10 km NNE Cape Beatrice, SE end Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	November & December 1993, March, May, September & October 1994, July & September 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	Regionally high.

Species confirmed breeding:	(1). Bridled Tern (1000, March 1994).
Species possibly breeding:	
Highest no. of birds recorded:	1000 (March 1994).
Highest estimated annual usage:	1000 (1994).
Allocated colony size:	501-1000.
Months likely to be active:	May to June.
Photographs:	3672-81.
Comments:	One of many islands in the SE Groote Eylandt area, that are predominantly made up of stacked large slabs of sandstone. Some contain little vegetation or sand, and some are very large and high islands. Many are regularly used by seabirds for breeding. This site is a grass topped beach rock island with a sand beach. It has a medium sized Bridled Tern colony that appears to be more active in the March to May period. Nests were hidden down in vegetation covered rock crevices and it is unknown how many of the birds present in March or May (1994) were nesting, but it may not be a high percentage. There appeared to be no breeding in Nov/Dec (1993), Sept/Oct (1994) or July (1996), so this site may only be occasionally used or it may only be used at the earlier March-May period. A pair of White-bellied Sea Eagles nests on the ground on this island. Good numbers of marine turtles nest on the beach area. A colony of Tree Martins may also nest here.
Future surveying needed:	Medium priority. Not a highly significant colony, but one that needs further documentation. Check if possible when in area. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S082**
General Location:	Mainland beach just west of the mouth of Rosie Creek, SW Gulf of Carpentaria .
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Pastoral lease (Bing Bong Station).
Nesting Habitat:	Sand.
Survey dates:	September 1993, March, May & September 1994, May 1995, February, July & October 1996, July & December 1998, May & November 1999.
Years confirmed active:	1994, 1999 (and possibly 1995).
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(2). Little Tern (100, May 1999), Silver Gull (175, May 1999).
Species possibly breeding:	
Highest no. of birds recorded:	275+ (May 1999).
Highest estimated annual usage:	275+ (1999).
Allocated colony size:	101-500.
Months likely to be active:	April to November.
Photographs:	6013-14, 6098.
Comments:	Long skinny sand island at the mouth of a creek in an area surrounded by mangroves and saline mud flats. Becomes joined to mainland at lower tides. A colony of Little Tern appears to use the site fairly frequently although its seasonal timing for breeding seems a little irregular. Of the surveys of the site, breeding could be confirmed in September (1994) and May (1999) but is also strongly suspected in March and May (1994) and May (1995). Breeding was unlikely in July and October (1996) and July (1998). The percentage of birds breeding on the visits that breeding was confirmed was considerably less than the numbers present and defending in the area, suggesting an extended season as well as irregular breeding. A colony of Silver Gulls was confirmed breeding for the first time in May (1999). Pied Oystercatcher and Red-capped Dotterel were also recorded breeding at this site.
Future surveying needed:	High priority. This is likely a very significant Little Tern breeding site, but it is not well understood because most surveys were from the air. More ground surveys are needed between March and November to better document this site and to ascertain whether Silver Gull breeding (and their consequent predation on Little Tern) is now a regular thing.

Colony Identifier:	**S083**
General Location:	Little Island, East of Centre Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rock, grass, sand.
Survey dates:	September & November 1993, March, May & September 1994, February 1996, May 1999.

Years confirmed active:	1994, 1999 (and probably 1996).
Years confirmed inactive:	Nil.
Status:	Regionally high.
Species confirmed breeding:	(1). Silver Gull (200, April 1994).
Species possibly breeding:	Roseate and/or Black-naped Tern.
Highest no. of birds recorded:	200 (April 1994).
Highest estimated annual usage:	200+ (1994).
Allocated colony size:	101-500.
Months likely to be active:	February to July (and possibly September to November).
Photographs:	3682-83, 6026-28.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is a reasonably sized rock and coral rubble island with a reasonable cover of bushes and grass. A fairly significant (for the Top End) Silver Gull colony was recorded breeding in 2 out of 2 (probably 3 out of 3) years that it was checked, so appears to be a regular one. It is a site that is regularly used according to S. Johnson (pers. comm.). This site is one of the few Silver Gull colonies in the Top End to exist on its own on an island as they normally breed alongside other species, particularly Crested and Little Tern. The Gulls constructed well-hidden and widely spaced nests all over the island. The breeding season of any single year seems to extend from at least February to July, with eggs and recently fledged young able to be seen in the one visit. A small colony of Roseate and/or Black-naped Tern that was seen in aerial surveys in September (1993 & 1994) were almost certainly breeding here as well. A pair of Osprey breed on the island and it is also used for roosting by other seabirds, migratory waders and Pied Cormorants.
Future surveying needed:	Low priority. Check if possible when in area during gull breeding season and in Sept/Oct to confirm Roseate and/or Black-naped Tern breeding.

Colony Identifier:	**S084**
General Location:	Jimmy Islet, east of Vanderlin Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rock, coral rubble, sand.
Survey dates:	September & November 1993, March, May & September 1994, February & July 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(2). Crested Tern (5000+, May 1994), Silver Gull (200, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	5200+ (May 1994).
Highest estimated annual usage:	5200+ (1994).
Allocated colony size:	5001-10000.
Months likely to be active:	March to June.
Photographs:	3688-92.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is quite a large vegetated rock island with a sand-spit off one end, that forms part of a chain of various sized smaller islands on the eastern side of Vanderlin Island. A large Crested Tern colony was confirmed in the only year the site was visited at the appropriate time of year. Sept/Oct breeding of other species was not present in 2 years checked. The Crested Terns breed in 2 sections - up on top of the island on rocks and ground among the vegetation and on rocks and coral rubble nearer the edge of the island. A reasonably size Silver Gull colony was also present up on top of the island among the rocks and regrowth grass from a previous burn. As usual it appeared not all gulls were nesting on the visit in early May (unlike the terns) although, also as usual, gull nests were hidden and harder to find. Osprey and Striated Heron breed on island.
Future surveying needed:	Low priority. As only checked the once at the appropriate time this site needs checking for seasonal regularity, when in area during March to June.

Colony Identifier:	**S085**
General Location:	Veronica Island, north of Nhulunbuy, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	November 1993, April, May & September 1994, March 1995, January & May 1996, December 1998.
Years confirmed active:	1994, 1996, 1998.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(2). Bridled Tern (2000, December 1998), Roseate Tern (1500, May 1996)).
Species possibly breeding:	
Highest no. of birds recorded:	2000 (December 1998).
Highest estimated annual usage:	2259 (1996).
Allocated colony size:	1001-5000.
Months likely to be active:	April to December.
Photographs:	3693, 5460-61, 5640.
Comments:	Small, vegetated coral rubble and rock island with Bridled and Roseate Tern breeding. A lighthouse is present on the island. Situated not far from the large colony on S030, it possibly gets some of the excess nesting birds from that colony, particularly in the case of Bridled Terns. It appears the Roseate Terns, however, may use one or the other island in the case of their large breeding colonies. There was no Roseate Terns breeding from April to late September in 1994, but there was a large colony active in May 1996, whereas on nearby Higginson Islet there was a large colony in May 1994 (which continued and was still active in September) and none in May 1996. The Bridled Tern situation is not so clear. It seems to be a smaller scale version of Higginson Islet breeding, ie varying numbers of birds present and perhaps varying percentages of these birds actually involved in breeding from March right through to December, but lacking the distinct peak around May that occurs on Higginson Islet.
Future surveying needed:	Medium priority. Check when in area any time between March and December, needs more information on timing and regularity of use of both species.

Colony Identifier:	**S086**
General Location:	Small island, just off the NW point of West Island, Sir Edward Pellew Group.
Historical documentation:	C.R.A. states Bradley (1987) reported breeding terns.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rocks
Survey dates:	November 1993, March, May & September 1994, February & July 1996.
Years confirmed active:	1992 A. Withers (pers. comm).
Years confirmed inactive:	Nil, possibly 1994 and 1996.
Status:	National (?).
Species confirmed breeding:	(1). Black-naped Tern (200, September 1992).
Species possibly breeding:	Roseate Tern.
Highest no. of birds recorded:	200 (September 1992).
Highest estimated annual usage:	200 (1992).
Allocated colony size:	101-500.
Months likely to be active:	August to October.
Photographs:	3694-95.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is a small, partially vegetated rock and sand island off the NW corner of a larger Pellews Island (West Is.). It was reported as an Aug/Sept Black-naped Tern colony by A. Withers in 1992 but was not seen to be active by myself during these surveys. Is unlikely to have been active in 1994 and 1996 and so may only be an irregular breeding site. Osprey nest on the island.
Future surveying needed:	Low priority. Check if possible when in area between August and December.

Colony Identifier:	**S087**
General Location:	Island in the middle of Marangala Bay, off SE Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	November 1993, March, May & September 1994, February 1996, October 1997.
Years confirmed active:	1994, 1997.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(3+). Crested Tern (800+, May 1994), Silver Gull (20, May 1994), Roseate and/or Black-naped Tern (350, October 1997).
Species possibly breeding:	Black-naped Tern, Roseate Tern.
Highest no. of birds recorded:	820+ (May 1994).
Highest estimated annual usage:	820+ (1994).
Allocated colony size:	1001-5000.
Months likely to be active:	March to October.
Photographs:	3696-98.
Comments:	One of many islands in the SE Groote Eylandt area, that are predominantly made up of stacked large slabs of sandstone. Some contain little vegetation or sand, and some are very large and high islands. Many are regularly used by seabirds for breeding. This site is a relatively large vegetated rock island with a small sand beach. It is the only Crested Tern breeding site in this area, although it could only be confirmed in one year as the site was not visited at the appropriate time in any other year. Not all birds were breeding in early May (1994), however they were only just starting, and this species normally all get going once they start. A small Silver Gull colony was also a little more advanced to coincide with their young being ready to be fed from the tern colony. A significant number of Roseate and/or Black-naped Tern were also observed from the air to be breeding at the site in October (1997). As there was no breeding of these species in mid September (1994), it may be that this site is irregularly used by these smaller terns, but then again perhaps they had not started by then. Eastern Reef Egrets also breed on this island.
Future surveying needed:	Medium priority. Attempts should be made to establish the regularity of use of this site for all species mentioned. Check when in area during June to November. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S088**
General Location:	Small island just north of Mamalimandja Pt, east side of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	November 1993, March, May, September & October 1994, October 1997.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Bridled Tern (200, May 1994).
Species possibly breeding:	Black-naped Tern, Roseate Tern.
Highest no. of birds recorded:	200 (May 1994).
Highest estimated annual usage:	200 (1994).
Allocated colony size:	101-500.
Months likely to be active:	March to June.
Photographs:	3699-3705.
Comments:	One of many islands in the SE Groote Eylandt area, that are predominantly made up of stacked large slabs of sandstone. Some contain little vegetation or sand, and some are very large and high islands. Many are regularly used by seabirds for breeding. This site is a medium sized partially vegetated rock island with a small coral rubble beach. It is actually a little further north of the main SE Groote islands, and is more beach rock rather than sandstone. A small, possibly occasional, Bridled Tern colony was confirmed here in April/May (1994). It was not active later in the season (Sept/Oct) as are many of the larger Bridled Tern colonies. Roseate and/or Black-naped Tern seen to be hunting around

	the island in a brief aerial visit in mid November (1993), and the suitability of breeding habitat here, may indicate that this species also breeds here. They were not present in October (1997) so it may be irregular however.
Future surveying needed:	Low priority. Check if possible when in area between May and November. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S089**
General Location:	Amagbirra Island, NW of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, coral rubble, grass.
Survey dates:	November & December 1993, March, May, September & October 1994, July 1996, October 1997.
Years confirmed active:	1994, 1997.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(4). Black-naped Tern (760, October 1994), Little Tern (2, May 1994), Roseate Tern (640, October 1994), Silver Gull (40, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	1200 (October 1994).
Highest estimated annual usage:	1240 (1994).
Allocated colony size:	501-1000.
Months likely to be active:	March to December.
Photographs:	3706-13, 5540-41.
Comments:	Large, reef-surrounded, low, vegetated, sand, coral rubble and rock island. One of a chain of islands stretching from the NW of Groote into Blue Mud Bay. Island had significant Black-naped and Roseate Tern breeding in October of 1994 and 1997. These were the only 2 years it was checked at this time of year and breeding could be confirmed. Some Roseate and/or Black-naped Tern seen from the air in November (1993) may also have been breeding, further suggesting the regular nature of this colony. Not all of either of these species were involved with a nest in the 1994 survey, but it was only early October so many may not have started as yet. Most birds were nevertheless still in breeding plumage and defending the area where there were hundreds of 'nests' with eggs on the coral rubble. Those not yet with a nest would likely have been starting soon. The 1997 visit was from the air only, so numbers involved with a nest could not be stated. A small Silver Gull colony was confirmed in early May (1994), which was the only occasion this site was visited at that time of year. Eggs and near-fledged young were present then but even with the extended nature of such colonies, breeding would have finished by the time the smaller terns had started. At least 1 pair of Little Tern were breeding in May (1994). Osprey and Sooty Oystercatcher, and possibly Eastern Reef Egret and Striated Heron breed on the island. Good marine turtle breeding also occurs here.
Future surveying needed:	Medium priority. Should check in late October to November to confirm Black-naped and Roseate Terns all breed here. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S090**
General Location:	Small island in Ulundurwi Bay west of Arnhem Bay, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks, grass.
Survey dates:	May & September 1994, March 1995, January 1996.
Years confirmed active:	1994 (and possibly 1995).
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(3). Black-naped Tern (260, May 1994), Roseate Tern (42, May 1994), Silver Gull (24, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	320 (May 1994).
Highest estimated annual usage:	320+ (1994).

Allocated colony size:	101-500.
Months likely to be active:	May to November.
Photographs:	983, 3714-19.
Comments:	Small, vegetated rock, sand and coral rubble island on its own in the NW part of the Arnhem Bay area. Black-naped Tern and small Roseate Tern and Silver Gull colonies confirmed in their early stages in late May (1994). All 3 were still breeding, but much reduced in late September (1994), so it is possible they bred throughout this period.
Future surveying needed:	Low priority. Check if possible when in area during the middle of the year.

Colony Identifier:	**S091**
General Location:	Sand spit to east of Robinson River mouth, SW Gulf of Carpentaria.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Pastoral lease (Seven Emu Station).
Nesting Habitat:	Sand.
Survey dates:	March & May 1994, May 1995, July 1996, December 1998, May & November 1999, June 2000.
Years confirmed active:	1994, 1999 (and possibly 1995 & 1996).
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(1). Little Tern (40+, May 1995).
Species possibly breeding:	
Highest no. of birds recorded:	40+ (May 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	April to December.
Photographs:	3720-29, 6084-86, 6094, 6578-81.
Comments:	This site is part of quite a long sandy coastline starting at the eastern end of Port McArthur and extending past the Queensland border, which has quite a number of Little Tern colonies, particularly on the sand spits at the mouths of creeks and rivers. This mainland beach site appears to have an extended season and significant numbers of Little Tern breeding. Breeding has been confirmed in May (1994 & 1999, and probably 1995) and November (1999), while it was likely in March (1994) and July (1996). There was only one time when there was definitely no breeding (June, 2000) during a visit. At each ground check there were always more birds in breeding plumage and defending than nests located, though extensive searches were not done. Whether breeding is continuous from May to November or in two separate periods is unknown but the above suggests breeding can occur in any month during this period (albeit perhaps in different years) but with only a percentage of the birds with young and/or eggs at any one time. Pied Oystercatcher and Red Capped Dotterel breed at this site (the latter was an egg on top of an old 'cow pat').
Future surveying needed:	Medium priority. Likely to be a more significant colony than surveys have so far suggested. This colony, and other confirmed and possible colonies between Pelican Spit and 50 km east of the NT/Qld border, need further documentation from more surveys which need to be done between March and December.

Colony Identifier:	**S092**
General Location:	Sand spit near mouth of Stockyard Creek, east of Robinson River, SW Gulf of Carpentaria.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Pastoral lease (Seven Emu Station).
Nesting Habitat:	Sand.
Survey dates:	March & May 1994, July 1996, December 1998, May & November 1999, June 2000.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (30, May 1994).
Species possibly breeding:	
Highest no. of birds recorded:	30 (May 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.

Months likely to be active:	April to July at least.
Photographs:	3720-29.
Comments:	This site is part of quite a long sandy coastline starting at the eastern end of Port McArthur and extending past the Queensland border, which has quite a number of Little Tern colonies, particularly on the sand spits at the mouths of creeks and rivers. This mainland beach site may have an extended season and significant numbers of Little Tern breeding, as for S091, however less surveying was done of this (Stockyard Creek) site. Breeding could only be confirmed in May (1994). Although possible on a number of other surveys there was only one time when there was definitely no breeding (June, 2000) during a visit. It is nevertheless likely that this site is similar to the nearby S091 in terms of the remaining comments.
Future surveying needed:	Medium priority. Likely to be a more significant colony than surveys have so far suggested. This colony, and other confirmed and possible colonies between Pelican Spit and 50 km east of the NT/Qld border, need further documentation from more surveys which need to be done between March and December.

Colony Identifier:	**S093**
General Location:	Coast ~25km NW of mouth of the Calvert River, SW Gulf of Carpentaria.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Pastoral lease (Seven Emu Station).
Nesting Habitat:	Sand.
Survey dates:	March & May 1994, July 1996, December 1998, May & November 1999, June 2000.
Years confirmed active:	1994, 1999.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (20, May 1994 & November 1999).
Species possibly breeding:	
Highest no. of birds recorded:	20 (May 1994 & November 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	May to December.
Photographs:	3720-29, 6582-83, 6585.
Comments:	This site is part of quite a long sandy coastline starting at the eastern end of Port McArthur and extending past the Queensland border, which has quite a number of Little Tern colonies, particularly on the sand spits at the mouths of creeks and rivers. This mainland beach site appears to have an extended season and significant numbers of Little Tern breeding. Breeding has been confirmed in May (1994) and November (1999), while it was likely in March (1994). There was only one time when there was definitely no breeding (June, 2000) during a visit. At each ground check there were always more birds in breeding plumage and defending than nests located, though extensive searches were not done. This information suggests breeding could occur in any month, but with only a percentage of the birds with young and/or eggs at any one time.
Future surveying needed:	Medium priority. Likely to be a more significant colony than surveys have so far suggested. This colony, and other confirmed and possible colonies between Pelican Spit and 50 km east of the NT/Qld border, need further documentation from more surveys which need to be done between March and December.

Colony Identifier:	**S094**
General Location:	Small island SE of Vanderlin Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T
Nesting Habitat:	Rock.
Survey dates:	November 1993, September 1994, February 1996.
Years confirmed active:	1993, 1994.
Years confirmed inactive:	Nil.
Status:	Regionally high.
Species confirmed breeding:	(1+). Black-naped Tern (40, September 1994).
Species possibly breeding:	Roseate Tern.

Highest no. of birds recorded:	40 (September 1994).
Highest estimated annual usage:	40 (1994).
Allocated colony size:	11-100.
Months likely to be active:	September to December.
Photographs:	3730.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site consists of 3 small rock islands with some beach that had a small amount of Black-naped Tern, and possibly Roseate Tern, nesting in Sept/Oct of the only year the site was checked. Osprey's nest was also present.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S095**
General Location:	Small island 1 km north of Webinger Pt on Vanderlin Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rock.
Survey dates:	November 1993, September 1994, February 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(2). Black-naped Tern (80, September 1994), Roseate Tern (100, September 1994).
Species possibly breeding:	
Highest no. of birds recorded:	180 (September 1994).
Highest estimated annual usage:	180 (1994).
Allocated colony size:	101-500.
Months likely to be active:	September to October.
Photographs:	No.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site consists of 3 small but high rock outcrops with some beach which had a colony of Black-naped and Roseate Terns, mostly on eggs, in late September (1994). This appears the only time this site was checked on a survey. Osprey nest present.
Future surveying needed:	Low priority. Check if possible when in area. (Difficult to climb up onto).

Colony Identifier:	**S096**
General Location:	Wheatley Island just NW of Vanderlin Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, March & September 1994, February & July 1996, May 1999.
Years confirmed active:	1994, 1999.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(2). Caspian Tern (2, May 1999), Little Tern (60, May 1999).
Species possibly breeding:	
Highest no. of birds recorded:	60 (May 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	April to November.

Photographs:	3731-33, 6035-38.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is a relatively large, high and substantially treed, sand island with a beach and sand spit off the south end. Little Tern confirmed breeding in September (1994) and May (1999). Other aerial visits could not confirm activity one way or the other, however, breeding was likely in November (1993) as well. This site may be another that has a long breeding season with only a percentage of the birds breeding at any one time, or it may have two separate seasons, or it may just be irregular. A pair of Caspian Tern nested among the Little Tern colony in May (1994). Osprey nest on the island.
Future surveying needed:	Medium priority. Need to do further work to establish the Little Tern breeding situation here. Check when in area at any time of the year.

Colony Identifier:	**S097**
General Location:	Sand beach on east side of North Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	September 1994, February 1998, May 1999.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (2, September 1994).
Species possibly breeding:	
Highest no. of birds recorded:	2 (September 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	September to October.
Photographs:	3664, 209, 6040-41.
Comments:	This is one of many seabird breeding sites throughout the Sir Edward Pellew Islands. Most colonies are on the smaller islands that are many and are that dotted throughout the Pellews, however a few Little Tern sites are on beaches of the larger main islands such as this one. The breeding sites documented in this report were recorded during these surveys. Most of those small islands, and some of the beaches on the larger islands, that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is on a wide sandy beach on the eastern side of a large island. A pair of Little Terns were located breeding in late September (1994). Although other surveys were done in this area, it is uncertain whether this particular beach was covered. Also a small number of Little Terns nesting in such a situation could easily be missed, so it is unable to be said how frequently this site is used and how many birds may be involved at other times of year. However it is likely that only the odd pair would nest here, and it is doubtful that a large colony would ever form in this situation.
Future surveying needed:	Low priority. Check if in area, which is more likely to be in regard to marine turtle nesting work.

Colony Identifier:	**S098**
General Location:	Small island in northern end of Paradise Bay, North Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rock.
Survey dates:	March & September 1994, February, July & October 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1+). Roseate and/or Black-naped Tern (numbers unknown, September 1994).
Species possibly breeding:	Black-naped Tern, Roseate Tern.

Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	September to October.
Photographs:	No.
Comments:	This is one of many small islands dotted around the larger, main Sir Edward Pellew Islands. Those documented in this report have had seabird colonies recorded on them during these surveys. Most of those islands that did not have seabird breeding recorded on them during these surveys may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is a small rocky outcrop in a bay at the northern end of a larger island. A PWCNT ranger (pers. comm.) reported Roseate and/or Black-naped Tern breeding here in September (1994). Breeding was not evident when visited by myself in the few other checks done of this area during these surveys but the exact site may not have been checked in September 1994 when visited before told of breeding. Definite not active in October 1996.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S099**
General Location:	Beach along Paradise Bay, North Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	March & September 1994, February & July 1996, May 1999.
Years confirmed active:	1994, 1999.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (6, May 1999).
Species possibly breeding:	
Highest no. of birds recorded:	6 (May 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	6-10.
Months likely to be active:	May to October.
Photographs:	196, 6075.
Comments:	This is one of many seabird breeding sites throughout the Sir Edward Pellew Islands. Most colonies are on the smaller islands that are many and are that dotted throughout the Pellews, however a few Little Tern sites are on beaches of the larger main islands such as this one. The breeding sites documented in this report were recorded during these surveys. Most of those small islands, and some of the beaches on the larger islands, that did not have seabird breeding recorded on them during these surveys, may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site was on either side of a small creek running out through a beach along the northern part of North Island. A small, well spread Little Tern colony was located on both sides of the creek. It was active in both May (1999) and September (1994), and possibly February (1996). This site may be used throughout this period by small numbers of birds or at these individual times, but is unlikely to ever have a large colony in the vicinity.
Future surveying needed:	Low priority. Only a small colony but needs more information on seasonal timing. Check when in area, eg when doing marine turtle work.

Colony Identifier:	**S100**
General Location:	Island off SE tip of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass, coral rubble.
Survey dates:	November 1993, March, May, September & October 1994, February, July & September 1996, October 1997.
Years confirmed active:	1993, 1994, 1996, 1997.
Years confirmed inactive:	Nil.
Status:	National.
Species confirmed breeding:	(3). Black-naped Tern (500, October 1994), Bridled Tern (3000, October 1994), Roseate

	Tern (60, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	3560 (October, 1994).
Highest estimated annual usage:	3560+ (1994).
Allocated colony size:	1001-5000.
Months likely to be active:	August to November.
Photographs:	3734-48.
Comments:	One of many islands in the SE Groote Eylandt area, that are predominantly made up of stacked large slabs of sandstone. Some contain little vegetation or sand, and some are very large and high islands. Many are regularly used by seabirds for breeding. This site is a large, well-vegetated rock, sand and coral rubble island with significant seabird breeding. The most numerous species is the Bridled Tern, these were confirmed breeding in October (1994 & 1997) and September (1996). As they were not breeding in March or May (1994), it appears that they may breed over a shorter period at this site, and over a period which does not include breeding at all in May let alone this being the peak time which it is in some colonies. Bridled Terns on this island nest deep in crevices of large sandstone slabs extending high up onto the island which is also heavily vegetated. Access to these areas is difficult let alone attempting to assess the percentage of birds present that are actually nesting. Black-naped and Roseate Tern nest on coral rubble and rocks around the edge of the island, which is far more accessible. They were breeding in 4 out of 4 years when surveys were done around September to November and not nesting in the one year that May (a time when this species also breeds in other Top End colonies) or February surveys were done. This indicates seasonal regularity here. Many marine turtles breed on this island, and Tree Martins were also found breeding on ledges in the sandstone cliffs.
Future surveying needed:	Medium priority. Clearly a significant colony which could do with some more information on numbers and timing, particularly for Bridled Tern. Check when in area between May and December.

Colony Identifier:	**S101**
General Location:	Hand Islet, eastern side of Bickerton Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, March, September & October 1994.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Black-naped Tern (20, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	20 (October, 1994).
Highest estimated annual usage:	20 (1994).
Allocated colony size:	11-100.
Months likely to be active:	September to October.
Photographs:	No.
Comments:	Low partly vegetated rocky island that is just off the SW corner of a larger island. A small Black-naped Tern colony was not active in March but active in October of the only year (1994) it was surveyed.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S102**
General Location:	North/south chain of islands off SE tip of Bickerton Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, March, September & October 1994.
Years confirmed active:	1993, 1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(4). Black-naped Tern (60, October 1994), Bridled Tern (20, October 1994), Little Tern

	(2, November 1993), Roseate Tern (2, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	82 (October 1994).
Highest estimated annual usage:	82 (1994).
Allocated colony size:	11-100.
Months likely to be active:	September to November.
Photographs:	3749-51.
Comments:	Small north/south running chain of partially vegetated rocky islands with a little bit of beach. September to November colonies of Black-naped, Bridled and Roseate Terns active in 2 out of 2 years. At least 1 pair of Little Tern in November (1993). Eastern Reef Egret and Torres Strait Pigeons also nest at this site.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S103**
General Location:	Small group of islands in Wonga Bay opposite Cape Grey, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, March, September & October 1994, March 1995, July 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(2). Black-naped Tern (46, October 1994), Roseate Tern (4, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	50 (October 1994).
Highest estimated annual usage:	50 (1994).
Allocated colony size:	11-100.
Months likely to be active:	October to November.
Photographs:	863, 3752-54.
Comments:	Small group of partly vegetated sand and rock islands inside a small bay. September to November colony of Black-naped Terns active in the only year the site was surveyed at that time of year. Not active in March or May of that year.
Future surveying needed:	Low priority. Check if possible when in area. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S104**
General Location:	Pair of islands 5 km SE of Wanyanmera Point, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, March, May, September & October 1994, March 1995, January, July & December 1996, October 1997.
Years confirmed active:	1994, 1997.
Years confirmed inactive:	Nil (possibly 1993).
Status:	National (?).
Species confirmed breeding:	(2). Black-naped Tern (120, October 1994), Roseate Tern (280, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	400 (October 1994).
Highest estimated annual usage:	400 (1994).
Allocated colony size:	101-500.
Months likely to be active:	September to November.
Photographs:	3755-58, 5518, 5599.
Comments:	Two of several small islands in and near Port Bradshaw that are irregularly bred on to varying degrees between seasons by small numbers of Black-naped, Roseate and/or Bridled Tern. This site is a pair of adjacent high granite outcrops, one bare of vegetation the other with a patch on top. A Black-naped and Roseate Tern colony was confirmed nesting on bare rock in the October/November period of 2 out of 3 years and not active in the March to May period in 2 out of 2 years.

Future surveying needed:	Low priority. Check if possible when in area. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S105**
General Location:	One of a small group of islands, 2 km south of Wanyanmera Point, NE Arnhemland.
Historical documentation:	C.R.A. states Bunungurritji (1987) reported seabird nesting on islands north and south of Wanyanmera Point.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, coral rubble.
Survey dates:	November 1993, March, September & October 1994, March 1995, January & July 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(2). Black-naped Tern (70, October 1994), Roseate Tern (130, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	200 (October 1994).
Highest estimated annual usage:	200 (1994).
Allocated colony size:	101-500.
Months likely to be active:	October to November.
Photographs:	3759-62, 5598.
Comments:	One of several small islands in and near Port Bradshaw that are irregularly bred on to varying degrees between seasons by Black-naped, Roseate and/or Bridled Tern. This site is a small island among a close group of 4 small and one larger island. It had a small colony of Black-naped and Roseate Tern with eggs on sand/coral rubble in early October (1994). Although area was flown at this time of year in 1993, cannot be certain that this island was checked. Not active in March (1993) or July (1996).
Future surveying needed:	Low priority. Check if possible when in area. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S106**
General Location:	Sand beach, ~4km north Gwapilina Point, near Port Bradshaw, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, March, May, September & October 1994, March & May 1995, January, February & July 1996, October 1997.
Years confirmed active:	1994 (and probably 1993).
Years confirmed inactive:	Nil.
Status:	Low (may increase to National).
Species confirmed breeding:	(1). Little Tern (6, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	6 (October 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	October at least.
Photographs:	3763-64.
Comments:	Blowout area amongst extensive dune system along the coast between Cape Arnhem and Port Bradshaw. Three pair of Little Tern were nesting here in early October (1994), which was the only time it was ground checked. 100 Little Tern seen in such an area in mid November (1993) are likely to be breeding, and even though not all of such groups tend to nest at the one time, this colony could be considerably more significant than the 6 birds currently listed as the colony size. 6 Little Terns recorded in an aerial survey in July (1996) could mean this colony is also one that has an extended breeding season. Other aerial surveys done in the area concentrated more on turtle breeding, with a flight path further away from the dunes, and could easily have missed the difficult to see Little Terns.
Future surveying needed:	Medium priority. Needs to have numbers and seasons better documented. Check when in area. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S107**
General Location:	Island in the middle of Buckingham Bay, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, coral rubble, sand.
Survey dates:	November 1993, April, May, September & October 1994, March 1995, January 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Black-naped Tern (80, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	80 (October 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	October to November (at least).
Photographs:	3765-66.
Comments:	This is a relatively large well-treed sand island with a few rocks and quite extensive sand and coral rubble beaches around the edge of most of it. It is an isolated island in a bay with shorelines more suitable to migratory waders than seabirds, and it is well SW of the remainder of seabird breeding islands associated with the English Company Islands. Consequently it is not likely to ever be a large colony. A colony of Black-naped Tern was confirmed in October (1994) and although birds were present in April and mid November (1993), May (1994) and March (1995), it is unknown whether they were nesting. The island is used for roosting by waders and other terns, and has Torres Strait Island Pigeon nesting, and possibly also Beach Stone Curlew and Pied Oystercatcher nesting as well. Flatback Turtles also nest here.
Future surveying needed:	Medium priority. Needs more ground checks to establish regularity of yearly use and timing within the year. Check when in area.

Colony Identifier:	**S108**
General Location:	Sims Island off South Goulburn Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	October 1994, February & November 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil, but possibly1996.
Status:	National (?).
Species confirmed breeding:	(1). Black-naped Tern (50, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	50 (October 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	October to November.
Photographs:	3768-70.
Comments:	Relatively large, high, vegetated sandstone rock island, with a small beaches. A colony of Black-naped Terns was confirmed breeding on the rocks on the NW corner in October (1994). No birds were present in February or mid November (1996), but these are the only 3 checks of the site. It is not likely to ever be a large colony but it may be a regularly used Black-naped Tern colony.
Future surveying needed:	Low priority. A relatively small colony but its regularity of use needs to be better documented. Check if possible when in area.

Colony Identifier:	**S109**
General Location:	Templer Island, east of Croker Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, coral rubble.
Survey dates:	October & November 1993, April & October 1994, February, June & November 1996.
Years confirmed active:	1994 (and possibly 1993).

Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Black-naped Tern (28, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	28 (October 1994).
Highest estimated annual usage:	28 (1994).
Allocated colony size:	11-100.
Months likely to be active:	September to November.
Photographs:	3771-72.
Comments:	One of a group of relatively large treed islands with sand and coral rubble beaches and some rocky points, to the east and north-east of Croker Island in NW Arnhemland. A small colony of Black-naped Terns was confirmed on a large sand and coral rubble spit on the SW corner of the island in October (1994). Recently fledged birds seen there in late November (1993) and birds seen from the air in late November (1996) indicate that this is probably a fairly regular but small colony. No birds were seen in April (1994) and February and June (1996) indicating that it may only be active in the later part of the year.
Future surveying needed:	Low priority. Check when in area during September to November.

Colony Identifier:	**S110**
General Location:	Grant Island, east of Croker Island, NW Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Coral rubble.
Survey dates:	October & November 1993, April & October 1994, February, June & November 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil, but probably 1993, 1996.
Status:	National (?).
Species confirmed breeding:	(2). Black-naped Tern (1300, October 1994), Roseate Tern (600, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	1900 (October 1994).
Highest estimated annual usage:	1900 (1994).
Allocated colony size:	1001-5000.
Months likely to be active:	September to November.
Photographs:	3773-77.
Comments:	One of a group of relatively large treed islands with sand and coral rubble beaches, to the east and north-east of Croker Island in NW Arnhemland. The breeding sites on this island are the series of north/south running exposed long, skinny islands of coral rubble that run just offshore down the east side of the island. The largest colony of Black-naped Terns found during these surveys was recorded here in October (1994). A significant colony of Roseate Terns (nesting among the Black-naped Terns) was also here. Both species were mostly on eggs, and there was well over 1000 nests. A lack of breeding seen in surveys of this site done in October and November (1993) and November (1996) suggested that such a large colony may be an irregular event at this site. However, this may mean that they choose another site within the area rather than not nesting at all. No breeding in April (1994) and February and June (1996) also suggest that such a site is primarily used late in the year. Osprey and large numbers of marine turtles nest on this island.
Future surveying needed:	Medium priority. The regularity of use of such a significant site, whether here or on an adjacent site, needs to be better documented. Check when in area.

Colony Identifier:	**S111**
General Location:	"Little" Lawson Island, 2 km south of Lawson Island which is east of Croker Island, NW Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Coral rubble.
Survey dates:	October & November 1993, April & October 1994, February, June & November 1996.
Years confirmed active:	1994 (and possibly 1993).
Years confirmed inactive:	Nil (but possibly 1996).
Status:	National (?).
Species confirmed breeding:	(3). Black-naped and Roseate Tern (100 combined, October 1994), Little Tern (2, June 1996).
Species possibly breeding:	

Highest no. of birds recorded:	100 (October 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	101-500.
Months likely to be active:	June (at least) and September to November.
Photographs:	3778-79.
Comments:	One of a group of relatively large treed islands with sand and coral rubble beaches, to the east and north-east of Croker Island in NW Arnhemland. This island had 2 mixed colonies of Black-naped and Roseate Tern breeding in 2 locations on sand and coral rubble on the western side of the island, in early October (1994). Birds present in November (1993) may also have been breeding, however the colony did not appear to be in use in April (1994) or June (1996). At least one pair of Little Tern were breeding on the beach in this area during June (1996). Osprey and turtles nest on this island.
Future surveying needed:	Low priority. Check if possible when in area between May and November.

Colony Identifier:	**S112**
General Location:	New Year Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Coral rubble.
Survey dates:	October & November 1993, April & October 1994, February, June & November 1996.
Years confirmed active:	1994 (and probably 1993).
Years confirmed inactive:	Nil.
Status:	National (?)
Species confirmed breeding:	(1+). Black-naped Tern (500, October 1994).
Species possibly breeding:	Roseate Tern.
Highest no. of birds recorded:	500 (October, 1994). See also Limpus (pers. comm.) below.
Highest estimated annual usage:	500 (1994). See also Limpus (pers. comm.) below.
Allocated colony size:	501-1000.
Months likely to be active:	September to November.
Photographs:	3780-82.
Comments:	One of a group of relatively large treed islands with sand and coral rubble beaches, to the east and NE of Croker Island in NW Arnhemland. This site is the most northerly of the islands in this area and it has extensive coral rubble banks around the eastern end. Here Black-naped Tern breeding in early October (1994). All nests (well over 100) underway and containing eggs. It is also likely that this species and/or Roseate Tern were breeding in November (1993). C. Limpus (pers. comm.) reported ~500 Black-naped and ~500 Roseate Terns selecting nest sites in late July (1992). Hence, although no Roseate Tern were breeding in October (1994), they probably also breed on this island at some stage. Many Roseate and/or Black-naped Tern were seen feeding at sea around this and other islands in this area during the surveys. No breeding was observed in April (1994) and February and June (1996), indicating it is a late in the year colony, and one that appears fairly regular. Osprey and marine turtles breed here also, and quite good numbers of waders were seen roosting there in most surveys. It is also one of the few sites were Black Noddies were recorded (among the Common Noddies) during these surveys.
Future surveying needed:	Medium priority. Need to confirm seasonal frequency of use and Roseate Tern breeding. Check when in area around Oct/Nov.

Colony Identifier:	**S113**
General Location:	Oxley Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Coral rubble.
Survey dates:	October & November 1993, April & October 1994, February, June & November 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil (but possibly 1993 & 1996).
Status:	Low.
Species confirmed breeding:	(1). Black-naped Tern (20, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	20 (October 1994).
Highest estimated annual usage:	20 (1994).

Allocated colony size:	11-100.
Months likely to be active:	September to November.
Photographs:	3783-92.
Comments:	One of a group of relatively large treed islands with sand and coral rubble beaches, to the east and NE of Croker Island in NW Arnhemland. This site is a pair of islands joined at low tide by a sand spit. A small Black-naped Tern colony, breeding on the small exposed coral rubble islands off the eastern side, was confirmed in October (1994). No breeding was apparent in early October (1993) or late November (1996), so colony may be small and irregular. There was also no breeding apparent in April (1994), and February and June (1996). Osprey and many marine turtles nest here, the area between the two sections of the island is also an important roosting area for seabirds and migratory waders.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S114**
General Location:	Warla Island, off southern coast of the Cobourg Peninsula.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Conservation Reserve.
Nesting Habitat:	Sand, coral rubble.
Survey dates:	April & October 1994, June & November 1996.
Years confirmed active:	1994, 1996.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(2). Black-naped Tern (90, October 1994), Roseate Tern (10, October 1994).
Species possibly breeding:	
Highest no. of birds recorded:	100 (October 1994).
Highest estimated annual usage:	100 (1994).
Allocated colony size:	11-100.
Months likely to be active:	September to November.
Photographs:	No.
Comments:	The only seabird breeding site among several islands on the south side of Cobourg Peninsula. A possibly regular (active in 2 out of 2 years checked) colony of mostly Black-naped Tern, but with a few Roseate Tern. Not found to be active in 3 surveys at other times of year.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S115**
General Location:	Small island NE of Probable Island, east of the Flinders Peninsula, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks
Survey dates:	April & September 1994, March 1995, January 1996.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Black-naped Tern (52, September 1994).
Species possibly breeding:	
Highest no. of birds recorded:	52 (September 1994).
Highest estimated annual usage:	52 (1994).
Allocated colony size:	11-100.
Months likely to be active:	September to November.
Photographs:	3793-96.
Comments:	Small rock island with mangroves and a little sand, located just offshore along the eastern side of a large island. Black-naped Tern colony on rocks, confirmed in September (1994) of the only survey done of this area at this time of year. Not active in March (1995) or April (1994).
Future surveying needed:	Low priority. Check if possible when in area around September to November.

Colony Identifier:	**S116**
General Location:	Chain of 3 small islands just north of Melville Bay, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, September 1994, March 1995, October 1997.
Years confirmed active:	1994, 1997.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(3). Bridled Tern (30, September 1994), Silver Gull (20, September), Black-naped Tern (10, September 1994).
Species possibly breeding:	Roseate Tern.
Highest no. of birds recorded:	50 (September 1994).
Highest estimated annual usage:	50 (1994).
Allocated colony size:	11-100.
Months likely to be active:	September to November.
Photographs:	3797-3800.
Comments:	Chain of 3 rock islands just offshore from the mainland, with breeding mainly on the inner one. Small Silver Gull, Bridled and Black-naped Tern breeding site active in 2 out of 2 (probably 3 out of 3) years that it was checked around September to November. Not all birds of any species nesting (although nest sites hidden and/or deep in crevices) in the only ground check (September 1994). No gulls were present in March (1995), but no other surveys were done between March and September which is the more common time for gulls to nest in the Top End. Bridled Tern present in March (1995) may have been breeding. Osprey nest on one of the islands.
Future surveying needed:	Low priority. Check if in area, both in the currently known breeding season and around May/June to check for gull and/or Bridled Tern nesting.

Colony Identifier:	**S117**
General Location:	Granite Islands, Melville Bay, NE Arnhemland.
Historical documentation:	None found, site reported to author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	September 1994.
Years confirmed active:	1994.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(2). Black-naped Tern (260, September 1994), Roseate Tern (40, September 1994).
Species possibly breeding:	
Highest no. of birds recorded:	300 (September 1994).
Highest estimated annual usage:	300 (1994).
Allocated colony size:	101-500.
Months likely to be active:	September to October.
Photographs:	3801-03, 5631.
Comments:	Chain of 4 small rock islands and a few isolated rock outcrops in Melville Bay close to the township of Gove. Reasonably numbers of Black-naped Tern and small numbers of Roseate Tern breed in scattered groups on these islands, probably fairly regularly. Not all birds were checked in the only survey done of this site but not all birds present were actually nesting at the time, but they were in breeding plumage and/or defending.
Future surveying needed:	Low priority. Can be quite easily checked by boat when in Gove, so a better assessment of numbers breeding and regularity would be useful.

Colony Identifier:	**S118**
General Location:	Mainland beach, south of Cape Arnhem, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	May 1999.
Years confirmed active:	1997 (M. Stevens, pers. comm.)
Years confirmed inactive:	Nil.

Status:	Low.
Species confirmed breeding:	(1). Little Tern (6, November 1997).
Species possibly breeding:	
Highest no. of birds recorded:	6 (November 1997).
Highest estimated annual usage:	6 (1997).
Allocated colony size:	2-10.
Months likely to be active:	November to December.
Photographs:	6120.
Comments:	Wide sand ocean beach with extensive dunes. Small Little Tern colony reported by M. Stevens (PWCNT, Nhulunbuy) in November (1997). Numerous flights along this coast, mostly concentrating on breeding turtles and therefore not looking among the dune blowouts, have not reported Little Tern in a potential breeding situation. However a small group could easily be missed and this may still be a fairly regular breeding area for small numbers of Little Tern.
Future surveying needed:	Low priority. Likely not to be a significant colony, but nevertheless it should be checked when in the area to establish frequency of use.

Colony Identifier:	**S119**
General Location:	Island 2kms east of West Point, near Maningrida.
Historical documentation:	None found, site reported to author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	Possibly November 1996.
Years confirmed active:	1995, D. Bond (pers. comm.)
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(2). Black-naped Tern and Roseate Tern ('low hundreds', 'regularly used').
Species possibly breeding:	
Highest no. of birds recorded:	Uncertain ('low hundreds').
Highest estimated annual usage:	Uncertain ('low hundreds').
Allocated colony size:	101-500.
Months likely to be active:	April to August.
Photographs:	No.
Comments:	Small island with a smaller colony than the adjacent Haul Round Island (S012) colony, but one of 'low hundreds' of Black-naped and Roseate Tern that regularly active. Not observed by myself during these surveys. Information from Maningrida resident D. Bond.
Future surveying needed:	High priority. Needs to be checked and documented by PWCNT.

Colony Identifier:	**S120**
General Location:	Hall Point, west of Maningrida.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, February, June & November 1996.
Years confirmed active:	1996.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (4, June 1996).
Species possibly breeding:	
Highest no. of birds recorded:	4 (June 1996).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	June & July (at least).
Photographs:	No.
Comments:	Shell and sand beach in behind mainland point where 2 pair of Little Tern were confirmed in June (1996) of the only time the site was ground visited. Several aerial surveys along the coast in this area have been done over the years, however, a small colony like this

	could easily be missed. Hence it is not known whether this site is active every year, nor whether it is active at other times of the year, possibly involving more birds.
Future surveying needed:	Medium priority. Not likely to be a large colony at any stage, but should be checked when in area between March and November.

Colony Identifier:	**S121**
General Location:	Island situated between Bumaga & Jirrgari Islands, Wessel Chain of island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	November 1993, May & September 1994, March 1995, April 1996.
Years confirmed active:	1996.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Silver Gull (40+, April 1996).
Species possibly breeding:	
Highest no. of birds recorded:	40+ (April 1996).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	March to May (at least).
Photographs:	3805-09.
Comments:	Reasonably sized well-vegetated sand and rock island between 2 larger islands of the extensive Wessel Island chain. Not noted as a colony of Silver Gulls until 1996 in which the first and only ground check was done in April. Unable to say if colony was active on previous aerial surveys, or whether this was new site for gulls. Nests were well spaced and hidden under rocks and vegetation, and contained fresh eggs and evidence of hatched eggs.
Future surveying needed:	Medium priority. Should ascertain whether the colony is regularly used. Check when in area between March and October.

Colony Identifier:	**S122**
General Location:	Small rock and sand island, NW of Inglis Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, coral rubble, rock.
Survey dates:	April & November 1993, May & September 1994, April, May & July 1996.
Years confirmed active:	1996.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Crested Tern (50, May 1996).
Species possibly breeding:	
Highest no. of birds recorded:	50 (May 1996).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	May to July.
Photographs:	3810.
Comments:	This island is one of a chain of smaller islands off the northern side of Inglis Island, which is one of the larger English Company chain of islands. There are a lot of potential rock, sand or coral rubble nesting sites on these islands, and it is likely that sites used for nesting by small numbers of Roseate and/or Black-naped Terns may vary from season to season, and hence not always be located during surveys. This is a very small rock and coral rubble island that barely stays above high tide levels, and hence a fairly precarious place to nest. The rocks are well used as a roost, but some Crested Tern decided to nest on a few square metres of coral rubble, having just commenced in early May (1996). This site had not been noted as a colony until this first and only ground check was done. Unable to say if colony was active on previous aerial surveys, or whether this was new site for the terns. Either way it can never be a large colony and it is probably an irregular one. Juvenile plumage birds seen from the air in July (1996) probably indicated some success.

Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S123**
General Location:	Trio of small islands about mid way along the Bromby chain of islands out from Cape Wilberforce, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	April & November 1993, April, May & September 1994, March 1995, January, May, July & October 1996, October 1997.
Years confirmed active:	1996.
Years confirmed inactive:	1993, 1994,
Status:	Regionally high (when active).
Species confirmed breeding:	(1). Crested Tern (2500, May 1996).
Species possibly breeding:	Bridled Tern.
Highest no. of birds recorded:	2500 (May 1996).
Highest estimated annual usage:	2500 (1996).
Allocated colony size:	1001-5000.
Months likely to be active:	April to June (and possibly October).
Photographs:	3811-3818, 6212.
Comments:	Vegetated, rock and coral rubble island (in 3 sections) forming part of the Bromby Island chain, and one of the islands that appears to have occasional colonial seabird breeding rather than breeding every year (such as S025 for example). This includes the smaller Roseate and/or Black-naped Tern colonies which may shift around a little between seasons over these islands, and/or the large Crested Tern colonies that occasionally use another island instead of, or as an overflow from, the normally used S025 (which was not used in 1996). This site was confirmed breeding in only one year out of a possible three, and with this number, and this species, breeding activity here would be unlikely to be missed on surveys. Bridled Tern seen from the air in October (1997) may have been breeding there. Osprey breed on this island.
Future surveying needed:	Medium priority. Check if possible when in area May/June for Crested Tern and Oct/Nov for Bridled Tern.

Colony Identifier:	**S124**
General Location:	Island, north of Inglis Island, NE Arnhemland.
Historical documentation:	None found, site reported to author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	April & November 1993, May & September 1994, January, May, July & September 1996.
Years confirmed active:	Unknown.
Years confirmed inactive:	1996.
Status:	Low.
Species confirmed breeding:	(2+). Crested Tern (numbers uncertain, time of breeding uncertain), Roseate and/or Black-naped Tern (numbers uncertain, time of breeding uncertain).
Species possibly breeding:	Black-naped Tern, Roseate Tern.
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	July at least.
Photographs:	3819-21, 1121, 1125, 1169.
Comments:	This island is one of a chain of smaller islands off the northern side of Inglis Island, which is one of the larger English Company chain of islands. There are a lot of potential rock, sand or coral rubble nesting sites on these islands, and it is likely that sites used for nesting by small numbers of Roseate and/or Black-naped Terns may vary from season to season, and hence not always be located during surveys. This island is a large, high, well-vegetated island with rocks and beach around the perimeter. As a seabird breeding site it was not observed as active by myself during these surveys, but was told by traditional owners (on site) that both Crested Tern and the smaller tern (likely Black-naped and/or Roseate) nest here at times – they collect the eggs. This island has good marine turtle nesting.
Future surveying needed:	Medium priority. Check during aerial work in the area and return on the ground if appears active.

Colony Identifier:	**S125**
General Location:	Small island between Stevens and Burgungurra Islands, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, coral rubble.
Survey dates:	November 1993, April, May & September 1994, March 1995, January, July & September 1996, October 1997.
Years confirmed active:	1996.
Years confirmed inactive:	1993, 1994.
Status:	National (?).
Species confirmed breeding:	(2). Black-naped Tern (180, September 1996), Roseate Tern (20, September 1996).
Species possibly breeding:	
Highest no. of birds recorded:	200 (September 1996).
Highest estimated annual usage:	200 (1996).
Allocated colony size:	101-500.
Months likely to be active:	September to November.
Photographs:	1317, 3825.
Comments:	Small sand and coral rubble island surrounded by rocks and some mangroves. Black-naped Tern and small Roseate Tern colony first located in September (1996). Not likely to have been active (at least at this time of the year) in 1993 or 1994, it is probably one of the many irregularly used, Roseate and/or Black-naped Tern colonies in this area.
Future surveying needed:	Low priority. Check if possible when in area between September and November.

Colony Identifier:	**S126**
General Location:	SW tip of Watson Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal land, Wurralibi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	March 1994, February, July & October 1996, May 1999.
Years confirmed active:	1996.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (2, October 1996).
Species possibly breeding:	
Highest no. of birds recorded:	2 (October 1996).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	September to November.
Photographs:	228, 273.
Comments:	This is one of many seabird breeding sites throughout the Sir Edward Pellew Islands. Most colonies are on the smaller islands that are many and are that dotted throughout the Pellews, however a few Little Tern sites are on beaches of the larger main islands such as this one. The breeding sites documented in this report were recorded during these surveys. Most of those small islands, and some of the beaches on the larger islands, that did not have seabird breeding recorded on them during these surveys, may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is on one of a number of beaches around one of the larger islands in the Pellews Group. It is on the SE corner of the island and was first located in October (1996) when 1 pair of Little Tern were confirmed breeding. Although the general area is likely to have been flown previously, it cannot be stated whether this site was active prior to this one and only ground visit to date, because small groups of Little Tern nesting on quite large beaches are difficult to find unless specifically looking for them.
Future surveying needed:	Low priority. Needs to be better documented, however never likely to be a significant colony, so check if possible only when in area.

Colony Identifier:	**S127**
General Location:	NE tip of Watson Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal land, Wurralibi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	March 1994, February, July & October 1996, May 1999.
Years confirmed active:	1996.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (2, October 1996).
Species possibly breeding:	
Highest no. of birds recorded:	2 (October 1996).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	September to November.
Photographs:	228, 273.
Comments:	This is one of many seabird breeding sites throughout the Sir Edward Pellew Islands. Most colonies are on the smaller islands that are many and are that dotted throughout the Pellews, however a few Little Tern sites are on beaches of the larger main islands such as this one. The breeding sites documented in this report were recorded during these surveys. Most of those small islands, and some of the beaches on the larger islands, that did not have seabird breeding recorded on them during these surveys, may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site is one of a number of beaches around one of the larger islands in the Pellews Group. It is on the NE corner of the island and was first located in October (1996) when 1 pair of Little Tern were confirmed breeding. Although the general area is likely to have been flown previously, it cannot be stated whether this site was active prior to this one and only ground visit to date, because small groups of Little Tern nesting on quite large beaches are difficult to find unless specifically looking for them.
Future surveying needed:	Low priority. Needs to be better documented, however never likely to be a significant colony, so check if possible only when in area.

Colony Identifier:	**S128**
General Location:	Two small islands NE of Truant Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, coral rubble.
Survey dates:	May 1994, March 1995, July 1996, October 1997.
Years confirmed active:	1997.
Years confirmed inactive:	Nil.
Status:	National (?) if Black-naped, Low if Roseate.
Species confirmed breeding:	(1+). Roseate and/or Black-naped Tern (50, October 1997).
Species possibly breeding:	Black-naped Tern, Roseate Tern.
Highest no. of birds recorded:	50 (October 1997).
Highest estimated annual usage:	50 (1997).
Allocated colony size:	11-100.
Months likely to be active:	October at least.
Photographs:	No.
Comments:	Two small sand, coral rubble and rock islands adjacent to a larger island. They are the furthest NE of all the islands in the English Company chain of islands. First confirmed as a Black-naped and/or Roseate colony in October (1997). It is not known whether it was active in prior years because it had not been appropriately surveyed. It has yet to be ground checked.
Future surveying needed:	Low priority. Check only if in area between September and November.

Colony Identifier:	**S129**
General Location:	Island off the coast of Inglis Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem A.L.T.
Nesting Habitat:	Grass.

Survey dates:	April & November 1993, April, May & September 1994, March 1995, May & July 1996, October 1997.
Years confirmed active:	1993, 1997.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Bridled Tern (12, November 1993).
Species possibly breeding:	
Highest no. of birds recorded:	12 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	October to November.
Photographs:	1055, 1189.
Comments:	This island is one of a chain of smaller islands off the northern side of Inglis Island, which is one of the larger English Company chain of islands. There are a lot of potential rock, sand or coral rubble nesting sites on these islands, and it is likely that sites used for nesting by small numbers of Roseate and/or Black-naped Terns may vary from season to season, and hence not always be located during surveys. This island is a reasonably large, high, well-vegetated island with rocks and coral rubble around the perimeter. A small colony of Bridled Tern were recorded breeding among the rocks and grass on the eastern end of the island in November (1993) and October (1997), however no ground check has been done at this site as yet. No numbers were recorded in the 1997 check so the colony size may have been larger than the 12 given above. No breeding was recorded in March (1995), April (1993 & 1994) and May (1996) so this site appears active from September to December for Bridled Terns.
Future surveying needed:	Medium priority. Not likely to be a significant colony, but one that has not been ground checked. Check if possible when in area.

Colony Identifier:	**S130**
General Location:	Abbott Island, western end of Elcho Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	November 1993, October 1997.
Years confirmed active:	1997 (and probably 1993).
Years confirmed inactive:	Nil.
Status:	Regionally high (National if 100+ Black-naped Tern breed here regularly).
Species confirmed breeding:	(2+). Bridled Tern (500, October 1997), Roseate and/or Black-naped Tern (100+, October 1997).
Species possibly breeding:	Black-naped Tern, Roseate Tern.
Highest no. of birds recorded:	600 (October 1997).
Highest estimated annual usage:	600 (1997).
Allocated colony size:	101-500.
Months likely to be active:	October to November.
Photographs:	1038.
Comments:	Small island off the western end of a large island which has only been aerially surveyed on two occasions, both of which showed Bridled and Roseate and/or Black-naped Tern breeding. The percentage of birds seen from the air that were actually nesting cannot be stated.
Future surveying needed:	Medium priority. Possibly a reasonably significant colony that needs to be better documented by doing a ground survey. Check when in area during September to November.

Colony Identifier:	**S131**
General Location:	Mainland 2-3kms south of Mt. Alexander, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem A.L.T.
Nesting Habitat:	Sand.
Survey dates:	January, February & July 1996, October 1997, May 1999.
Years confirmed active:	1997.

Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (30, October 1997).
Species possibly breeding:	
Highest no. of birds recorded:	30 (October 1997).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	September to November.
Photographs:	No.
Comments:	Sand beach, along mainland coast, with scattered rocks, coral and drift wood. About 30 Little Tern defending area- several at least with a nest. Recorded in October (1997) which was the only time the site was ground visited. Several aerial surveys along the coast in this area have been done over the years; however, a small colony like this could easily be missed. Hence it is not known whether this site is active every year, nor whether it is active at other times of the year, possibly involving more birds.
Future surveying needed:	Medium priority. Check when in area any time, but mainly between May and November. Can be done with other colonies in the Port Bradshaw to Cape Grey area.

Colony Identifier:	**S132**
General Location:	NE Drysdale Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	April 1994, April 1996, October 1997, June & October 1999.
Years confirmed active:	1996, 1999.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (16, June 1999).
Species possibly breeding:	
Highest no. of birds recorded:	16 (June 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	April to November.
Photographs:	6245-47, 6419-24.
Comments:	Section of an extensive shell covered sandy beach along the predominantly beach coastline on the western side of a large, vegetated island. Little Tern located breeding on either side (mostly western) of a small creek. First confirmed (ground) as breeding in June and October (1996), and likely active in April (1996). Several aerial surveys along the coast in this area have been done over the years; however, a small colony like this could easily be missed. Hence it is not known whether this site is active every year, however it does appear to be active over a long season.
Future surveying needed:	Medium priority. Needs further documentation, as could be a more significant Little Tern breeding site. Check when in area any time, but particularly between April and November,

Colony Identifier:	**S133**
General Location:	Amamarrity Island, north of Numbulwar.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, March, May & September 1994, May 1995, February & July 1996, May 1999.
Years confirmed active:	1999.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Caspian Tern (2, May 1999).
Species possibly breeding:	
Highest no. of birds recorded:	2 (May 1999).

Highest estimated annual usage:	2 (1999).
Allocated colony size:	2-10.
Months likely to be active:	May to June.
Photographs:	5986.
Comments:	Single pair of Caspian Tern with 3 eggs in a nest on a small, sand and coral rubble island surrounded by extensive rocky reef exposed at lower tides. Located at the end of May (1999) for the first time. Cannot say whether site has been used prior to this.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S134**
General Location:	Coastal sand spit just north of Numbulwar.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, dead seagrass.
Survey dates:	November 1993, March, May & September 1994, May 1995, February & July 1996, May 1999.
Years confirmed active:	1999.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (30, May 1999).
Species possibly breeding:	
Highest no. of birds recorded:	30 (May 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	May to June.
Photographs:	5987-88.
Comments:	Mainland coast sand-spit, not far north of the town of Numbulwar. Nesting on sand and dead sea-grass. Nests on highest part of spit and also down very close to the high tide line. First located in 1999 with most being on eggs in late May. Several aerial surveys along the coast in this area have been done over the years, and although several records of Little Tern have been made from the air they have not been ground checked. Such colonies like this can easily be missed. It is not known whether this site is active every year, nor whether it is active at other times of the year, possibly involving more birds. However, Little Tern recorded at this site during aerial surveys in November (1993) may indicate that this colony may be a regular one.
Future surveying needed:	Medium priority. Possibly a significant colony and one that needs to be better documented, as does the coastline in this general area. I also suspect other colonies may be along this coastline, particularly in the area between just north of Rantyirrity Point and Rosie Creek. Check whenever in area, particularly in the May to November period.

Colony Identifier:	**S135**
General Location:	Beach east of Pelican Spit.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Pastoral Lease (Greenbank Station).
Nesting Habitat:	Sand.
Survey dates:	September 1993, March 1994, May 1995, July 1996, December 1998, May & November 1999.
Years confirmed active:	1999 (and probably 1993 & 1995).
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (80+, May 1999).
Species possibly breeding:	
Highest no. of birds recorded:	80+ (May 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	April to November.

Photographs:	6080-81, 6571, 6573.
Comments:	This site is part of quite a long sandy coastline starting at the eastern end of Port McArthur and extending past the Queensland border. It has quite a number of Little Tern colonies, particularly on the sand spits at the mouths of creeks and rivers. This site is on an extensive sand spit towards the western end of this section of coast. Breeding was first confirmed by a ground check in May (1999), however aerial observations of Little Tern in this area in May (1995), September (1993) and December (1998) may well have involved breeding birds. Other surveys along the coast in this area may have missed Little Tern, and although results suggest it may be regular and active at other times of the year, this cannot be definitely stated as yet. Nesting at this site in May (1999) was well spread over a 100+ metre section of shell and sand beach, and there was at least 1 other nest 250 metres away from the majority. Of around 30 nests checked all except one had eggs (mostly 2), and this one had a young chick and an egg. Thus it was in its early stages at this time (end May).
Future surveying needed:	Medium priority. This colony, and other confirmed and possible colonies between Pelican Spit and 50 km east of the NT/Qld border, need further documentation from surveys which need to be done between March and December.

Colony Identifier:	**S136**
General Location:	Mainland beach east of South Point, Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, March 1994, February & July 1998, October 1997, May & October 1999.
Years confirmed active:	1999.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (2, May 1999).
Species possibly breeding:	
Highest no. of birds recorded:	2 (May 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	May at least.
Photographs:	No.
Comments:	Wide sand beach that is part of an extensive beach system along the western end of the southern coast of Groote Eylandt. One pair of Little Tern was confirmed breeding in May (1999). This was the only time the site was ground visited. They were not seen from the air and only found when ground checking a marine turtle breeding site. A few aerial surveys along the coast in this area have been done over the years, however, a small colony like this could easily be missed. Hence it is not known whether this site is active every year, nor whether it is active at other times of the year, possibly involving more birds.
Future surveying needed:	Low priority. Check if possible when in area. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S137**
General Location:	Sand spit ~ 10 km east of South Point along south coast of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, March 1994, February & July 1998, October 1997, May & October 1999.
Years confirmed active:	1999 (and probably 1997).
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (20+, May 1999).
Species possibly breeding:	
Highest no. of birds recorded:	20+ (May 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.

Months likely to be active:	May to October.
Photographs:	6107.
Comments:	Sand-spit at the mouth of a creek along the extensive sandy beaches of the western end of the southern coast of Groote Eylandt. First confirmed in May (1999), however a previous aerial record in October (1997) may have also involved breeding birds. The May (1999) survey was the only ground survey of this site and there were 10+ birds seen sitting in a quick check only. A few other aerial surveys along the coast in this area have been done over the years; however, a small colony like this could easily be missed. Hence it is not known whether this site is active every year, nor whether it is active at other times of the year, possibly involving more birds.
Future surveying needed:	Medium priority. Check if possible when in area. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S138**
General Location:	Buchanan Island, south of Melville Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Tiwi A.L.T.
Nesting Habitat:	Sand, grass.
Survey dates:	October 1993, March 1994, February 1996, June 1999, May 2000.
Years confirmed active:	1999, 2000.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(2). Silver Gull (12, June 1999), Little Tern (80, May 2000).
Species possibly breeding:	
Highest no. of birds recorded:	86 (May 2000).
Highest estimated annual usage:	86 (2000).
Allocated colony size:	11-100.
Months likely to be active:	May to July.
Photographs:	6147-50.
Comments:	Small island off the SE tip of Bathurst Island. Twelve Silver Gull were located with eggs and young among small grassy dunes on the southern part of the island in June (1999). 40+ Little Tern in breeding plumage were defending but no colony found on this occasion. In May (2000) 60+ Little Tern were defending an area along the west side of the island and about 100m from the small Silver Gull colony which was again active at the same site as 1999. A check of the Little Tern site showed at least 40 nests (nearly all with 2 or 3 eggs). It is not known whether this site is active every year, nor whether it is active at other times of the year.
Future surveying needed:	Medium priority. Clearly a significant Little Tern colony in at least one year. Further work needs to be done to check the regularity of use each year and if it is used at other times of the year.

Colony Identifier:	**S139**
General Location:	SW end of North Island, Sir Edward Pellew Group.
Historical documentation:	None found, site reported to author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, March 1994, September 1999 (B. Norman).
Years confirmed active:	1999 B. Norman (pers. comm)
Years confirmed inactive:	Nil.
Status:	Regionally high
Species confirmed breeding:	(1). Little Tern (8, September 1999).
Species possibly breeding:	
Highest no. of birds recorded:	8 (September 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	September to October.
Photographs:	No.
Comments:	This is one of many seabird breeding sites throughout the Sir Edward Pellew Islands. Most colonies are on the smaller islands that are many and are that dotted throughout the Pellews, however a few Little Tern sites are on beaches of the larger main islands such as

	this one. The breeding sites documented in this report were recorded during these surveys. Most of those small islands, and some of the beaches on the larger islands, that did not have seabird breeding recorded on them during these surveys, may still have irregular breeding on them from time to time, meaning that the whole Pellews area should be considered together in future seabird management. This site was located for the first time by B. Norman (PWCNT, Borroloola) in September (1999). Four pairs of Little Tern, with eggs, were nesting on a beach on the SW corner of a large island with many beaches (some of which have other Little Tern colonies). Several aerial surveys along the coast in this area have been done over the years; however, a small colony like this could easily be missed. Hence it is not known whether this site is active every year, nor whether it is active at other times of the year, possibly involving more birds.
Future surveying needed:	Low priority. Not likely to be a large colony however one that could do with some more work to better document whether it is a regular site and for what part of the year it is active. Check if possible when in area.

Colony Identifier:	**S140**
General Location:	NW tip of Isle of Woodah, Blue Mud Bay.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, shell.
Survey dates:	September 1994, January, February & July 1996, October 1997, May & October 1999.
Years confirmed active:	1999 (and probably 1997).
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (24, October 1999).
Species possibly breeding:	
Highest no. of birds recorded:	24 (October 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	September to November.
Photographs:	6429-30.
Comments:	Fairly wide shell and sand beach on northern tip of large island. Well-spaced colony of Little Tern first confirmed by ground check in October (1999), although likely to have been active in October (1997). 24+ birds in area and at least 10 nests seen in an incomplete search (eggs through to half-grown young) in October (1999). Probably not active in May (1999). Several aerial surveys along the coast in this area have been done over the years, however, a small colony like this could easily be missed. Hence it is not known whether this site is active every year, nor whether it is active at other times of the year, possibly involving more birds.
Future surveying needed:	Medium priority. Check when in area between May and November. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S141**
General Location:	Cool Yal You Ma Island, NW of Nicol Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, coral rubble.
Survey dates:	March, May & September 1994, January & July 1996, October 1997, October 1999.
Years confirmed active:	1999.
Years confirmed inactive:	Nil (but probably 1997).
Status:	National (?).
Species confirmed breeding:	(3). Black-naped Tern (200+, October 1999), Caspian Tern (2, October 1999), Roseate Tern (2, October 1999).
Species possibly breeding:	
Highest no. of birds recorded:	204 (October 1999).
Highest estimated annual usage:	204 (1999).
Allocated colony size:	101-500.
Months likely to be active:	October to December.
Photographs:	6431-35.

Comments:	Small island to the NW of a larger island. Colony first located in October (1999), mostly with eggs. Other surveys of this site may not have included this site at the appropriate time, although it is doubtful this site was active in 1997.
Future surveying needed:	Medium priority. Check if in area. Should be planned in conjunction with surveying other colonies of the many in the Blue Mud Bay to Groote Eylandt area.

Colony Identifier:	**S142**
General Location:	Near tip of Pelican Spit.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Pastoral Lease (Greenbank Station).
Nesting Habitat:	Sand, shell.
Survey dates:	September 1993, March 1994, May 1995, July 1996, December 1998, May & November 1999.
Years confirmed active:	1999.
Years confirmed inactive:	Nil.
Status:	Regionally high
Species confirmed breeding:	(1). Little Tern (10, November 1999).
Species possibly breeding:	
Highest no. of birds recorded:	10 (November 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	November to December.
Photographs:	6567-70.
Comments:	This site is part of quite a long sandy coastline starting at the eastern end of Port McArthur and extending past the Queensland border, which has quite a number of Little Tern colonies, particularly on the sand spits at the mouths of creeks and rivers. This site is the western end of a long sand spit and had birds confirmed as breeding here for the first time in November (1999). Several aerial surveys along the coast in this area have been done over the years, however, a small colony like this could easily be missed. Hence it is not known whether this site is active every year, nor whether it is active at other times of the year, possibly involving more birds.
Future surveying needed:	Medium priority. This colony, and other confirmed and possible colonies between Pelican Spit and 50 km east of the NT/Qld border, need further documentation from more surveys which need to be done between March and December.

Colony Identifier:	**S143**
General Location:	Mainland just west of the Robinson River.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Pastoral Lease (Greenbank Station).
Nesting Habitat:	Sand, shell.
Survey dates:	September 1993, March 1994, May 1995, July 1996, December 1998, May & November 1999.
Years confirmed active:	1999.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (2+, November 1999).
Species possibly breeding:	
Highest no. of birds recorded:	2+ (November 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	November at least.
Photographs:	6577.
Comments:	This site is part of quite a long sandy coastline starting at the eastern end of Port McArthur and extending past the Queensland border, which has quite a number of Little Tern colonies, particularly on the sand spits at the mouths of creeks and rivers. This site is part of an extensive shell and sand spit where 2 pair of Little Tern were confirmed in November (1999) of the only time the site was ground visited. Several aerial surveys along the coast in this area have been done over the years; however, a small colony like this could easily be missed. Hence it is not known whether this site is active every year, nor whether it is active at other times of the year, possibly involving more birds.

Future surveying needed:	Low priority. This colony, and other confirmed and possible colonies between Pelican Spit and 50 km east of the NT/Qld border, need further documentation from more surveys which need to be done between March and December.

Colony Identifier:	**S144**
General Location:	North side of west end of North Goulburn Island.
Historical documentation:	None found, site reported to author during current surveys.
Land tenure:	Aboriginal Land, Arnhem A.L.T.
Nesting Habitat:	Sand, shell.
Survey dates:	February 1996, June 1996, June & November 2000, May 2001.
Years confirmed active:	2000, 2001 (B. Panton, pers. comm.).
Years confirmed inactive:	Nil.
Status:	Regionally high
Species confirmed breeding:	(1). Little Tern (8, June 2000).
Species possibly breeding:	
Highest no. of birds recorded:	8 (June 2000).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	June at least.
Photographs:	6577.
Comments:	Shell and sand beach where 8 Little Tern were confirmed breeding by B. Panton (PWCNT) in June (2000) and May (2001), but it was not active in November of 2000 when visited by myself. These are the only two times the site was ground visited. Two aerial surveys along the coast in 1996 could have missed a small colony like this. It is not known whether this site is active every year, nor whether it is active at other times of the year, possibly involving more birds.
Future surveying needed:	Low priority. Check if possible when in area any time between May and November.

Colony Identifier:	**S145**
General Location:	West of Radford Point, mid-north coast of Melville Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Tiwi A.L.T.
Nesting Habitat:	Sand, shell.
Survey dates:	October 1993, March 1994, February 1996, June 1999, May 2000, June 2001.
Years confirmed active:	2000 and 2001.
Years confirmed inactive:	Nil.
Status:	Regionally high.
Species confirmed breeding:	(1). Little Tern (30, June 2001).
Species possibly breeding:	
Highest no. of birds recorded:	30 (June 2001).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	May and June at least.
Photographs:	6631 & 6632.
Comments:	Shell and sand beach along the north coast of Melville Island where 6 Little Tern nests were confirmed in May (2000) and then again in June (2001) of the only times the site was ground visited. Several aerial surveys along the coast in this area have been done over the years, however, a small colony like this could easily be missed. Hence it is not known whether this site is active every year, nor whether it is active at other times of the year, possibly involving more birds.
Future surveying needed:	Low priority. Check if possible when in area.

Colony Identifier:	**S146**
General Location:	Small island near Brace Point on the west coast of Bathurst Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Tiwi A.L.T.

Nesting Habitat:	Sand, shell.
Survey dates:	October 1993, March 1994, February 1996, June 1999, May 2000.
Years confirmed active:	1999.
Years confirmed inactive:	Nil.
Status:	National (?).
Species confirmed breeding:	(1). Little Tern (70, May 2000).
Species possibly breeding:	
Highest no. of birds recorded:	70 (May 2000).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	May to June at least.
Photographs:	6600-02.
Comments:	Low sand island just off the coast of Bathurst Island. Large colony (>30 nests, all eggs) located for the first time in May (2000). Previous surveys have not seen this colony so it is not known whether this site is active every year, nor whether it is active at other times of the year.
Future surveying needed:	Medium priority. Clearly a significant colony for which more information is needed on the frequency of yearly use and the length of the season it is active.

Colony Identifier:	**S147**
General Location:	North side Little Mooroggna Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand, shell.
Survey dates:	June 1996, November 2000.
Years confirmed active:	2000.
Years confirmed inactive:	Nil.
Status:	Low.
Species confirmed breeding:	(1). Little Tern (2, November 2000).
Species possibly breeding:	
Highest no. of birds recorded:	2 (November 2000).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	November at least.
Photographs:	No.
Comments:	Single pair breeding in November of only visit to site at this time of year. Island visited in June (1996) but not exact site, but do not think was active then.
Future surveying needed:	Low priority. Small island so check for Little Tern breeding if visit site.

Appendix C
Individual colony breakdown for possible and/or historic colonies (S901-S968).

Individual descriptions for possible and/or historic colonies

This appendix gives a separate summary of each possible and/or historic colony, all of which are assigned a unique colony identifier (between S901 and S968). These colonies are prefixed by the letter 'S' (for seabird). The colony numbering system does not operate in any particular geographic or date-order. Each colony is characterised by a number of descriptors. The content of some of these is obvious but most are given further explanation below.

Historical Documentation. Refers to a search of previous reports in the scientific literature, explorers' journals, personal communications or other non-scientific sources. Where no other record was found, the colonies are recorded as being located during current surveys. The majority of the colonies reported here were actually located during the current surveys.

Survey dates. Month and year that some form of survey was carried out. These included any sort of brief aerial observation or report by a reliable informant, through to detailed ground surveys. Although primary reference is from the period of the surveys (1990-2000), a few observations prior to and subsequent to this period are also included.

Years confirmed active. Refers only to years in which the colony was checked and recorded as active during the current surveys, extracted from historical references or reported to the author by reliable observers. As each colony in this section is either a possible or an historic colony, reference to confirmed breeding can only apply to the latter type, otherwise the colony would have been shifted to the confirmed colony (S001-S147) group in Appendix B.

Years confirmed inactive. Refers to a site that is definitely inactive during the year(s) reported. This may relate to a known site that previously supported breeding (historic) or a possible site that was located at some stage during the surveys. As for the confirmed colonies, where years are not mentioned as either active or inactive it means the site was not checked (or known about) and may or may not have been active.

Species confirmed breeding. As each colony in this section is either a possible or an historic colony, reference to confirmed breeding can only apply to the latter type, otherwise the colony would have been shifted to the confirmed colony (S001-S147) group in Appendix B. Historical reference, or reliable personal observations, of colonies reported to the author as active prior to the current surveys are recorded as confirmed species in this section. As for the confirmed colony section, reference to a 'species group' which had not been reliably separated into individual species, was recorded as that group name that was confirmed breeding. The bracketed number and date attached to each species in this section indicates the highest estimate made in any survey for that species, at that colony.

Species probably breeding. This includes separately identified species (or individual species from a group) observed near the possible colony, or recorded as possible species from historic documentation.

Highest no. birds recorded. This section refers to the highest (all species combined) single count for that colony. This may refer to a count of a possible colony during these surveys or a count of an historic confirmed colony.

Highest estimated annual usage. This section attempts to approximate the highest total number of birds to have used the colony in a particular breeding season (ie full annual cycle). This differs from the above estimate in that it takes into account the different timing of breeding of the individual species over a complete breeding season and totals each when at their particular highest. This may refer to a count of a possible colony during these surveys or a count of an historic confirmed colony.

Allocated colony size. This has been previously discussed in detail in the section entitled 'Quality of Numerical Estimates' (P9). Based on all the information collected, each colony is allocated a minimum size. This may refer to a count of a possible colony during these surveys or a count of an historic confirmed colony.

Months likely to be active. This section approximates the months of the year that the colony is likely to be active. This is based on observations of the stage of breeding of each of the species during field surveys and known incubation/fledging times, and/or documented or reliable information.

Photographs. This section indicates whether photographs of the colony had been taken at the time of writing this report. These photographs have been numbered and recorded on a database named Photoind.dbf, stored in the Parks and Wildlife Commission PCCOMM network.

Comments. This section contains an overall summary of the colony with explanations of some of the figures/statements made in the above sections, as well as additional comments not included under the previous headings.

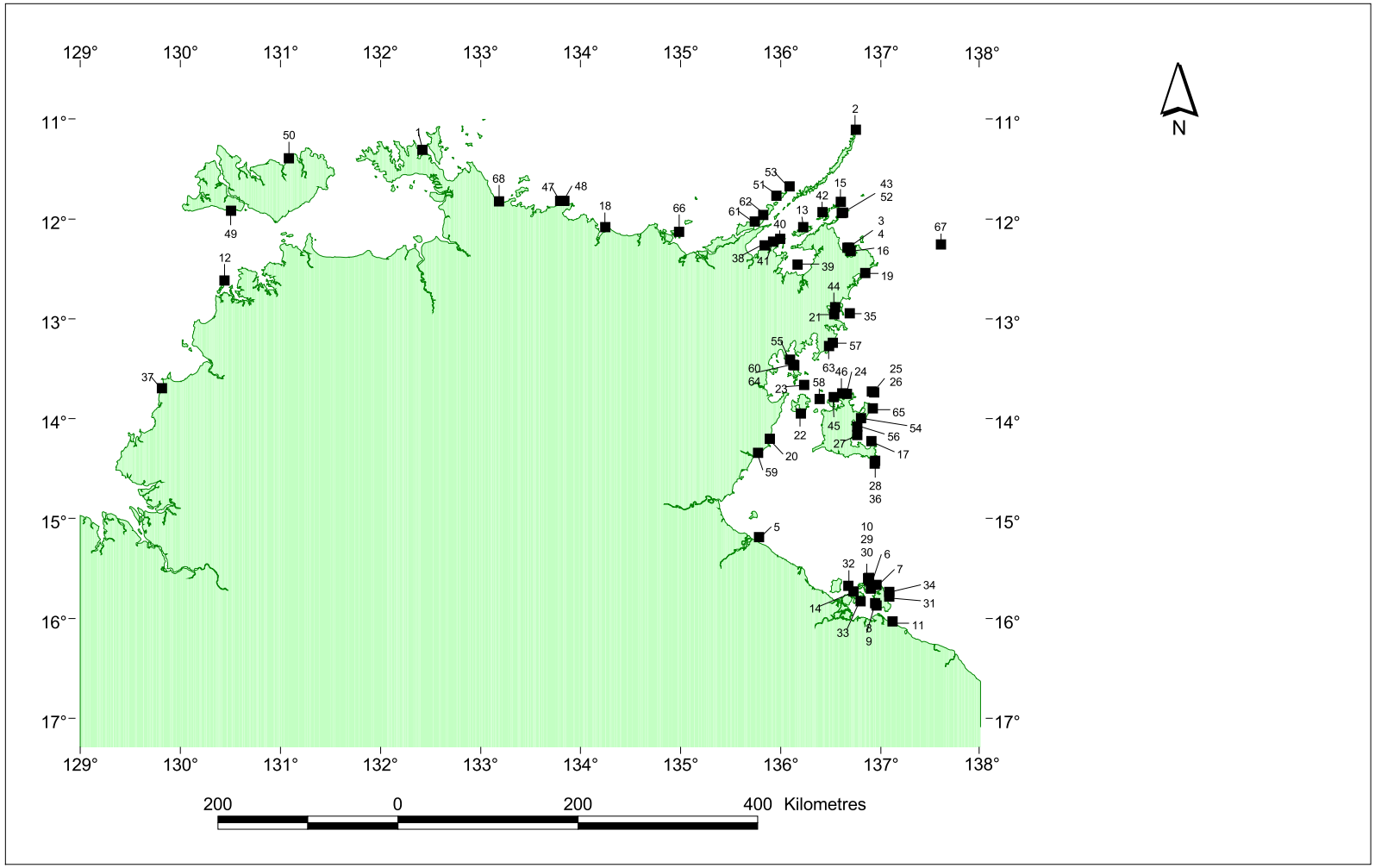

Figure C1. Location of colonies by colony number – unconfirmed and possible colonies

Colony Identifier:	**S901**
General Location:	Raffles Bay, Cobourg Peninsula.
Historical documentation:	T. Saunders in C.R.A. (1987).
Land tenure:	Conservation Reserve.
Nesting Habitat:	Unknown.
Survey dates:	October 1993, April & October 1994.
Years confirmed active:	Unknown.
Years confirmed inactive:	1993, 1994.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Unknown.
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	Unknown.
Photographs:	3356-57, 1646.
Comments:	Two small islands in Raffles Bay reported to be active some time(s) prior to 1987 by T. Saunders. Checked during these surveys, not seen to be active, but could have suitable habitat for Black-naped and/or Roseate Tern breeding.

Colony Identifier:	**S902**
General Location:	One of the smaller islands just off the northern tip of Marchinbar Island, Wessel Island chain, NE Arnhemland.
Historical documentation:	J. Burrapung (pers. comm.).
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	November 1993, November 1994.
Years confirmed active:	Unknown.
Years confirmed inactive:	Nil, during current surveys.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Unknown.
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	Unknown.
Photographs:	No.
Comments:	J. Burrapung (TO) reported that terns breed on a small rocky island just off the far northern tip of the Wessel Islands. Dates unknown. Aerial check in November (1993 & 1994) could not locate definite breeding, so it is likely that this site may only occasionally be used, or used at another time of the year.

Colony Identifier:	**S903**
General Location:	Gove Harbour (Navigation Platform), NE Arnhemland.
Historical documentation:	J. McKean (pers. comm.).
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Unknown (? artificial).
Survey dates:	Not checked during current surveys.
Years confirmed active:	Unknown.
Years confirmed inactive:	Nil, during current surveys.
Species confirmed breeding:	Black-naped Tern.
Species possibly breeding:	
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	April to June and/or September to December.

Photographs:	No.
Comments:	Numbers and dates unknown but likely to be only a small, perhaps occasional colony. Not checked during current surveys.

Colony Identifier:	**S904**
General Location:	Sandspit off Point Dundas, near Gove, NE Arnhemland.
Historical documentation:	Officer (1976).
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	Unknown.
Years confirmed active:	Unknown.
Years confirmed inactive:	Nil, during current surveys.
Species confirmed breeding:	Little Tern.
Species possibly breeding:	
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	Unknown.
Photographs:	No.
Comments:	Numbers and dates unknown but likely to be only a small, perhaps occasional colony. Not checked during current surveys.

Colony Identifier:	**S905**
General Location:	Beatrice Island, Limmen Bight.
Historical documentation:	B. Walsh in C.R.A.
Land tenure:	Aboriginal Land, Marra A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	September & December 1993, March & September 1994.
Years confirmed active:	Unknown.
Years confirmed inactive:	Nil, during current surveys.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Unknown.
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	Unknown.
Photographs:	No.
Comments:	Good seabird (& turtle) breeding reported by B. Walsh. No evidence found to suggest colony active during these surveys, however they were very limited in this area, and the site may be still occasionally used.

Colony Identifier:	**S906**
General Location:	Observation Island, Sir Edward Pellew Group.
Historical documentation:	J. Bradley in C.R.A. (1987).
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	September & November 1993, March & September 1994, February, July & October 1996.
Years confirmed active:	Unknown.
Years confirmed inactive:	Nil, during current surveys.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Bradley suggests Crested, Bridled, Roseate, Black-naped, Lesser Crested and/or Little Tern.

Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	Unknown.
Photographs:	241.
Comments:	Reported by J Bradley as a seabird colony. Site may have been used in November (1993), but no positive evidence found to suggest colony active during these surveys, however these were very limited on this island, and site may be still occasionally used.

Colony Identifier:	**S907**
General Location:	Turtle Islet, Sir Edward Pellew Group.
Historical documentation:	J. McKean (pers. comm.), S. Johnson (pers. comm), B. Norman (pers. comm.).
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	September & November 1993, March & September 1994, February & July 1996, May 1999.
Years confirmed active:	Unknown.
Years confirmed inactive:	Nil (but possibly 1993) during current surveys.
Species confirmed breeding:	Black-naped Tern (McKean), Silver Gull (Johnson).
Species possibly breeding:	Crested Tern (Norman), Caspian Tern.
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	May to December.
Photographs:	3664-65, 6039.
Comments:	No details given for reports of Black-naped Tern or Silver Gull breeding. The large Crested Tern colony from S071 may have shifted to this site for the 2000 season (Norman pers. comm.), and a possible breeding pair of Caspian Tern were recorded during these surveys (May 1999). A small colony of Black-naped Terns may have bred here (November 1993), however no other positive evidence of breeding was found during these surveys.

Colony Identifier:	**S908**
General Location:	Small Islet, Sir Edward Pellew Group.
Historical documentation:	J. McKean (pers.comm.).
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	November 1993, March, May & September 1994, February 1996.
Years confirmed active:	Unknown.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped Tern, Roseate Tern at least.
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	October to December at least.
Photographs:	No.
Comments:	Mixed tern colony, historically reported by J. McKean. Suitable habitat present and possible small Black-naped and/or Roseate Tern colony observed November (1993). No other evidence found during surveys but these were limited in this area and colony may have been active in other years.

Colony Identifier:	S909
General Location:	Jolly Islet, Sir Edward Pellew Group.
Historical documentation:	J. McKean (pers. comm.).
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	November 1993, March & September 1994, February & October 1996.
Years confirmed active:	Unknown.
Years confirmed inactive:	1993, 1994, 1996.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Unknown.
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	Unknown.
Photographs:	287.
Comments:	Mixed tern colony, historically reported by J. McKean. Suitable habitat present. Unlikely to have been active in 1993,1994 or 1996. No other evidence found during surveys but these were limited in this area and colony may have been active in other years.

Colony Identifier:	S910
General Location:	2-3 Rocky islands in the bay between Ross Point and Cape Pellew, North Island, Sir Edward Pellew Group.
Historical documentation:	K. Oliver (pers. comm.).
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	March 1994, February, July & October 1996, May 1999.
Years confirmed active:	Unknown.
Years confirmed inactive:	Unknown.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped Tern, Roseate Tern.
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	September to December at least.
Photographs:	146.
Comments:	Historically reported to have small terns nesting on bare rocks, but Oliver had not been to the area since 1984. No other evidence found during these surveys.

Colony Identifier:	S911
General Location:	Mainland beach, east of Pelican Spit.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	May 1995, July & September 1996, May & November 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	1999.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (50+, May 1995).
Highest no. of birds recorded:	50+ (May 1995).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	Any time between May and November.
Photographs:	No.

Comments:	A group of 50+ Little Tern were seen from the air in May (1995) in a potentially breeding situation but unable to return for ground check. Quite a number of Little Tern colonies along this section of coast so this is quite possibly a site used on at least some occasions, though ground checks in May and November (1999) revealed no activity. Uncertain about in other years during survey period. This site should have a medium priority to check in future.

Colony Identifier:	**S912**
General Location:	South west end of Quail Island.
Historical documentation:	None found, site reported to author during current surveys.
Land tenure:	Within area leased by Commonwealth as air force bombing range. Currently under Aboriginal land claim.
Nesting Habitat:	Sand.
Survey dates:	September & October 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2+, October 1999).
Highest no. of birds recorded:	2+ (October 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	1-10.
Months likely to be active:	October to November.
Photographs:	No.
Comments:	At least 1 pair of Little Tern were reported by N. Smit (PWCNT, Darwin) to be strongly defending in October (1999). None were present in September (1999). May be a regular or occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S913**
General Location:	Long, skinny island, north of Inglis Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem A.L.T.
Nesting Habitat:	Rocks, sand, coral rubble.
Survey dates:	November 1993, April, May & September 1994, March 1995, January, May, July & September 1996, October 1997.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (20+, September 1996), Bridled Tern (300+, September 1994).
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	101-500.
Months likely to be active:	May to December.
Photographs:	1024, 1057-58, 1125.
Comments:	This site is likely to be used for breeding by Black-naped and/or Roseate Tern and Bridled Tern, however could not be confirmed during these surveys. Likely to have been active November (1993) and September (1994 & 1996), while definitely not active April and May (1994), March (1995), January, May and July (1996) and October (1997). Osprey, Torres Strait Pigeons and marine turtles, and possibly Eastern Reef Egrets and Striated Heron nest on the island. This site should have a medium priority to check in future.

Colony Identifier:	**S914**
General Location:	Eagle Rocks off Red Island, NW of Centre Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.

Nesting Habitat:	Rocks.
Survey dates:	September 1994.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns.
Highest no. of birds recorded:	20 (September 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	September at least.
Photographs:	No.
Comments:	Island only flown over once, when 20 Black-naped and/or Roseate Tern were seen to be possibly breeding.

Colony Identifier:	**S915**
General Location:	Small island north of Wigram Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, May 1994, July 1996, October 1997.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped Tern (30, November 1993).
Highest no. of birds recorded:	30 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	September to November.
Photographs:	1194.
Comments:	A small, possible Black-naped Tern colony that had finished and/or had been harvested by Aboriginal traditional owners by late November (1993). Some defending and one begging juvenile present. Not active in May (1994), July (1996) or October (1997). Osprey nest present.

Colony Identifier:	**S916**
General Location:	Melville Bay, NE Arnhemland.
Historical documentation:	Storr (1977).
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	Nil.
Years confirmed active:	Unknown.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Silver Gull.
Species possibly breeding:	
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	June at least.
Photographs:	Nil.
Comments:	Reported by Storr as Silver Gull breeding in Melville Bay. Exact location not given, but may refer to S116. No other Silver Gull breeding recorded Melville Bay during these surveys.

Colony Identifier:	**S917**
General Location:	Rocky outcrop ~100m offshore Ungwariba Point, SE Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	October 1997.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Tern.
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	October at least.
Photographs:	No.
Comments:	Recorded as a possible small Roseate and/or Black-naped Tern colony in the only survey over the island in October (1997).

Colony Identifier:	**S918**
General Location:	North East Point near Maningrida.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	March 1992, November 1993, December 1998.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (6, March 1992).
Highest no. of birds recorded:	6 (March 1992).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	March at least.
Photographs:	No.
Comments:	A possible breeding site for 6 Little Tern seen from the air in March (1992). Flocks of mixed sized terns including Little Tern were seen from the air in November (1993) and December (1998) but no ground check has been done of the site.

Colony Identifier:	**S919**
General Location:	Mainland beach between Cape Arnhem & Port Bradshaw, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, September 1994, March & May 1995, January, February, July & October 1996, October 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2, November 1993).
Highest no. of birds recorded:	2 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	November at least.
Photographs:	No.

Comments:	This is a section of wide sandy coast with extensive dunes and blow-outs between them, and many potential sites for small groups of Little Tern to breed. Quite a number of surveys have been done along this coast but were normally concentrating on marine turtle breeding so the odd pair of Little Tern could easily be missed. The only ground check of this site was October (1999) when there was no breeding.

Colony Identifier:	**S920**
General Location:	~10 kms north of Rantyirrity Point, near Numbulwar.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	March & May 1994, February & July 1996, May 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (5+, March 1994).
Highest no. of birds recorded:	5+ (March 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	March at least.
Photographs:	No.
Comments:	Part of a long section of coast with a number of potential breeding sites for Little Tern. A number of Little Tern records were made along this coast during these surveys, however few were ground checked. At least 5 Little Tern were observed from the air, getting up off the sand at the back of the beach at this site in March (1994). None were seen on any other surveys of the area but the surveys were not concentrating on searching for Little Tern. The site may well be occasionally used at least.

Colony Identifier:	**S921**
General Location:	Two small rock outcrops off southern shoreline of Caledon Bay, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November & December 1993, April & September 1994, March 1995, July 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped Tern (30, November 1993).
Highest no. of birds recorded:	30 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	November to December.
Photographs:	No.
Comments:	Small Black-naped Tern colony on 2 small rocky outcrops close to shore that may have been active in November and December (1993) and September (1994). There was no breeding in April (1994), March (1995) or July (1996), so if active likely an October to December small colony. May be regular if active.

Colony Identifier:	**S922**
General Location:	Small rock outcrop inside South Bay, Bickerton Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	November & December 1993, September 1994.
Years confirmed active:	Nil.

Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Bridled Tern (20, September 1994), Roseate and/or Black-naped Tern (100, September 1994).
Highest no. of birds recorded:	120 (September 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	September to November.
Photographs:	No.
Comments:	Medium sized Black-naped and/or Roseate Tern colony and small Bridled Tern colony that were possibly active in Nov/Dec (1993) and September (1994). Not ground checked and not surveyed on any other occasion.

Colony Identifier:	**S923**
General Location:	Rock Island off NW Burney Island, near Blue Mud Bay.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land, A.L.T.
Nesting Habitat:	Rock.
Survey dates:	November 1993, March 1994, July 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (20, November 1993).
Highest no. of birds recorded:	20 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	November at least.
Photographs:	No.
Comments:	Possible small Black-naped and/or Roseate Tern colony in November (1993), which was the only time the site was checked at this time of year. Not active in March (1994) or July (1996) so may be a regular or occasional small colony around November.

Colony Identifier:	**S924**
General Location:	Small Island off NW Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (20, November 1993).
Highest no. of birds recorded:	20 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	November at least.
Photographs:	No.
Comments:	Possible small Black-naped and/or Roseate Tern colony in November (1993), which was the only time the site was checked. May be a regular or occasional small colony around November.

Colony Identifier:	S925
General Location:	Two small rock outcrops north of Lane Island, NE of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	November 1993, March 1994, July 1996, October 1997.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil, (possibly 1997).
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (90, November 1993).
Highest no. of birds recorded:	20 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	November at least.
Photographs:	No.
Comments:	Possible small Black-naped and/or Roseate Tern colony in November (1993), which was the only time the site was checked at this time of year. Not active in March (1994), July (1996) or October (1997) so may be an occasional small colony around November.

Colony Identifier:	S926
General Location:	Rock outcrop, north of Hawk Island and west of NE Isles.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, October 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil, (possibly 1997).
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (? number, November 1993).
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	November at least.
Photographs:	No.
Comments:	Possible small Black-naped and/or Roseate Tern colony in November (1993). Not active in March (1994), July (1996) or October (1997) so may be an occasional small colony around November.

Colony Identifier:	S927
General Location:	Small island 2 kms east of Lugadamanja Point, Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, September 1994, February 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Bridled Tern (? Number, November 1993).
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	November at least.
Photographs:	No.

Comments:	Possible small Bridled Tern colony in November (1993), which was the only time the site was checked at this time of year. Not active in February (1996). May be a regular or occasional small colony around November.

Colony Identifier:	**S928**
General Location:	Rock Island SE of Cape Beatrice, SE Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, March, May & September 1994, February & July 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Bridled Tern (20, November 1993), Roseate and/or Black-naped Tern (150, November 1993).
Highest no. of birds recorded:	170 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	101-500.
Months likely to be active:	September to November.
Photographs:	No.
Comments:	Possible small Bridled Tern and medium sized Black-naped and/or Roseate Tern colony in November (1993). The latter species may also have been breeding in September (1994). Not active in March or May (1994) and February or July (1996) so may be a regular or occasional colony around November.

Colony Identifier:	**S929**
General Location:	Crawford Islet, NE end of North Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rocks
Survey dates:	November 1993, March & September 1994.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil (possibly 1994).
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped and/or Roseate Tern (100, November 1993).
Highest no. of birds recorded:	100 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	November at least.
Photographs:	No.
Comments:	Possible small Black-naped and/or Roseate Tern colony in November (1993). Not active in March or September (1994) so may be an occasional small colony around November.

Colony Identifier:	**S930**
General Location:	Rocks along east side, northern end of North Island, Sir Edward Pellews Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, February 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (50, November 1993).

Highest no. of birds recorded:	50 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	November at least.
Photographs:	259.
Comments:	Possible small Black-naped and/or Roseate Tern colony in November (1993), which was the only time the site was checked at this time of year. Not active in March (1994). May be a regular or occasional small colony around November.

Colony Identifier:	**S931**
General Location:	Little islands north of Steepcut Rock on east side of Vanderlin Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rock.
Survey dates:	November 1993, March & September 1994, February 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (20+, November 1993).
Highest no. of birds recorded:	20+ (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	November at least.
Photographs:	No.
Comments:	Possible small Black-naped and/or Roseate Tern colony in November (1993) but not in September (1994). Also not active in March (1994) or February (1996). May be an occasional small colony around November. Osprey nest on island.

Colony Identifier:	**S932**
General Location:	Small island to NE of Black Islet, Sir Edward Pellew group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	November 1993, March & September 1994, February & July 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil, (possibly 1994).
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped Tern (2, November 1993).
Highest no. of birds recorded:	2 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	November at least.
Photographs:	144, 275, 278.
Comments:	Possible small Black-naped Tern colony in November (1993) but not in September (1994). Also not active in March (1994) and February or July (1996). May be an occasional small colony around November.

Colony Identifier:	**S933**
General Location:	Fletcher Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Rocks, sand.

Survey dates:	November 1993, March & September 1994.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped Tern (20, November 1993), Little Tern (6, November 1993).
Highest no. of birds recorded:	26 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	November at least.
Photographs:	212-13.
Comments:	Possible small Black-naped and/or Roseate Tern and Little Tern colonies in November (1993) and September (1994) for the latter species. Not active in March (1994). May be an occasional small Black-naped and/or Roseate Tern colony around November and a Little Tern colony any time between May and November.

Colony Identifier:	**S934**
General Location:	Small site among a cluster of islands, just south of Three Hummocks Point, Vanderlin Island, Sir Edward Pellew Group.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Wurralibi A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	November 1993, March, May & September 1994, February & July 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil, (possibly 1994).
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped Tern (<30, November 1993).
Highest no. of birds recorded:	<30 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	November at least.
Photographs:	157.
Comments:	Possible small Black-naped Tern colony in November (1993) but not in September (1994). Also not active in March or May (1994) and February or July (1996). May be an occasional small colony around November. Osprey nest.

Colony Identifier:	**S935**
General Location:	Small rock island, 3 kms NE of Bridgland Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	November & December 1993, September 1994, March 1995, January 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Bridled Tern (50, December 1993).
Highest no. of birds recorded:	50 (December 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	November to December.
Photographs:	No.
Comments:	Possible small Bridled Tern colony in November (1993) but not in September (1994). Also not active in March (1995) or February (1996). May be an occasional small colony around November.

Colony Identifier:	S936
General Location:	Small rock outrrop off Cape Beatrice, Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks, grass.
Survey dates:	December 1993, September & October 1994.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Bridled Tern (100+, December 1993).
Highest no. of birds recorded:	100+ (December).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	December at least.
Photographs:	No.
Comments:	Possible small Bridled Tern colony in December (1993) but not in September or October (1994). May be a regular or occasional small colony around December. Tree Martins may also breed here.

Colony Identifier:	S937
General Location:	Mainland beach just south of Cape Scott.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land, A.L.T.
Nesting Habitat:	Sand.
Survey dates:	October 1995, February 1996, May 2000.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (6, October 1995), Caspian Tern (2, October 1995).
Highest no. of birds recorded:	8 (October 1995).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	October at least.
Photographs:	No.
Comments:	Little colony that may have been active in October (1995). A pair of Caspian Terns may have also been breeding at the site. No activity in February (1996) and May (2000), the latter date being a detailed ground check. May be an occasional or regular breeding site around October.

Colony Identifier:	S938
General Location:	Small island in Buckingham Bay, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock, grass.
Survey dates:	May & September 1994, March 1995, July 1996, October 1997.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped Tern (70, May 1994 & September 1994), Silver Gull (50, May 1994).
Highest no. of birds recorded:	120 (May 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	May and September at least.
Photographs:	3767.

Comments:	Possible small Black-naped Tern colony in May and September (1994), and Silver Gull in May (1994). Also not active in March (1995), July (1996) or October (1997). May be an occasional small gull colony from May onwards and a small Black-naped Tern colony from May to September or at either end of this time period.

Colony Identifier:	**S939**
General Location:	Low Island, Arnhem Bay.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks, coral rubble, sand.
Survey dates:	May 1994, January & July 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped Tern (20, May 1994), Little Tern (40, May 1994), Roseate Tern (20, May 1994).
Highest no. of birds recorded:	80 (May 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	May at least.
Photographs:	1179-80.
Comments:	All 3 species above were defending in May (1994). No confirmation of nesting was found but large island and not all suitable habitat checked. Unable to say anything about potential nesting from January and July (1996) aerial surveys. Wader roost and good marine turtle nesting.

Colony Identifier:	**S940**
General Location:	Most easterly of small islands running east/west along the northern side of Napier Peninsula, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land, A.L.T.
Nesting Habitat:	Rocks, coral rubble.
Survey dates:	September 1994, March 1995, January, April & July 1996, October 1997.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil (possibly 1997).
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (10, September 1994).
Highest no. of birds recorded:	10 (September 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	September at least.
Photographs:	No.
Comments:	Possible small Black-naped and/or Roseate Tern colony in September (1994) but not in October (1997). Also not active in January, April or July (1996). May be an occasional small colony around September.

Colony Identifier:	**S941**
General Location:	Island north of the Napier Peninsula, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Unknown.
Survey dates:	September 1994, March 1995, April & July 1996, October 1997.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil (possibly 1997).

Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (30, September 1994).
Highest no. of birds recorded:	30 (September 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	September at least.
Photographs:	982.
Comments:	Possible small Black-naped and/or Roseate Tern colony in September (1994) but not in October (1997). Also not active in March (1995) and January, April or July (1996). May be an occasional small colony around September.

Colony Identifier:	**S942**
General Location:	Small island north of Astell Island, English Company Islands Chain, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	September 1994.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Bridled Tern (100, September 1994), Black-naped Tern (4, September 1994).
Highest no. of birds recorded:	104 (September).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	September at least.
Photographs:	1191.
Comments:	Possible Bridled and small Black-naped Tern colony in September (1994) which was the only time this site was visited. May be a regular or occasional small colony around September.

Colony Identifier:	**S943**
General Location:	Middle of the Bromby chain of islands, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Vegetation covered rocks.
Survey dates:	September 1994, March 1995, January, May & July 1996, October 1997.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Bridled Tern (100+, September 1994).
Highest no. of birds recorded:	100 (September 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	September at least.
Photographs:	937, 950.
Comments:	Possible small Bridled Tern colony in September (1994) but not in October (1997). Also not active in January, May or July (1996). May be an occasional small colony around September.

Colony Identifier:	**S944**
General Location:	Small islands, west side of Grays Bay, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.

Nesting Habitat:	Rocks.
Survey dates:	September & October 1994, July 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped Tern (50, October 1994), Roseate Tern (450, October 1994).
Highest no. of birds recorded:	500 (October 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	Sept/Oct at least.
Photographs:	846.
Comments:	Possible small Black-naped and large Roseate Tern colony in Sept/Oct (1994). Not active in July (1996). Most of the Roseate Tern were not in breeding plumage in early October (1994), however this (or a nearby site) may have been used by this large number of Roseate Tern, and a small number of Black-naped Tern later that season. This would make it a significant colony. Should be given a bit more priority to check out in future.

Colony Identifier:	**S945**
General Location:	Rocks off the Winchelsea Island, north of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	September 1994.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (10, September 1994).
Highest no. of birds recorded:	10 (September 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	September at least.
Photographs:	No.
Comments:	Possible small Black-naped and/or Roseate Tern colony in September (1994). This was the only survey of this site so it may be a regular or occasional small colony around September.

Colony Identifier:	**S946**
General Location:	Little pile of rocks ESE of Chasm Island, north of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	September 1994.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (50, September 1994).
Highest no. of birds recorded:	50 (September 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	September at least.
Photographs:	No.
Comments:	Possible small Black-naped and/or Roseate Tern colony in September (1994). This was the only survey of this site so it may be a regular or occasional small colony around September.

Colony Identifier:	**S947**
General Location:	Mainland sand spit, west of Cuthbert Point, West of Maningrida.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	June & November 1996, November 2000.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (20, June 1996).
Highest no. of birds recorded:	20 (June 1996).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	June at least.
Photographs:	No.
Comments:	At least 20 Little Tern, including at least one in breeding plumage were present in a potential nesting site in June (1996). An aerial check in November (1996) could not say if Little Tern were present among the other terns at the site, but there were Little Tern in November (2000). May be a regular or occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S948**
General Location:	Cuthbert Point west of Maningrida.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	June & November 1996, November 2000.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (20, June 1994).
Highest no. of birds recorded:	20 (June 1994).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	June at least.
Photographs:	No.
Comments:	At least 20 Little Tern, including at least one in breeding plumage were present in a potential nesting site in June (1996). An aerial check in November (1996) could not say if Little Tern were present among the other terns at the site, but there were no Little Tern in November (2000). May be a regular or occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S949**
General Location:	Beach, SW coast of Bathurst Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Tiwi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	June & September 1996, June 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (10, June 1996).
Highest no. of birds recorded:	10 (June 1996).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.

Months likely to be active:	June at least.
Photographs:	No.
Comments:	At least 10 Little Tern were seen from the air in a potential nesting site in June (1996). Another aerial check in November (1996) failed to see Little Terns at the site. May be a regular or occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S950**
General Location:	Robinson Inlet, west of Port Jaheel, Melville Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal land, Tiwi A.L.T.
Nesting Habitat:	Sand.
Survey dates:	June & September 1996.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2, June 1996).
Highest no. of birds recorded:	2 (June 1996).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	June at least.
Photographs:	No.
Comments:	At least 1 pair of Little Tern were seen from the air in a potential nesting site in June (1996). Another aerial check in September (1996) failed to see Little Tern at the site. May be a regular or occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S951**
General Location:	Main beach, NW end of Drysdale Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	July 1996, June & October 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2, July 1996).
Highest no. of birds recorded:	2 (July 1996).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	July at least.
Photographs:	No.
Comments:	At least 1 pair of Little Tern were seen from the air in a potential nesting site in July (1996). Other aerial checks in June and October (1999) failed to see Little Tern at the site. May be an occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S952**
General Location:	One of the mid Bromby Islands , NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	October 1997.
Years confirmed active:	Nil.

Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns ('a few', October 1997).
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	October at least.
Photographs:	No.
Comments:	A few Black-naped and/or Roseate Tern were seen from the air to be possibly nesting on rocks in October (1997). This was the only survey of this site. May be a regular or occasional breeding site around November.

Colony Identifier:	**S953**
General Location:	Main beach, NE end Burgunngara Island, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	July 1996, October 1997, June & October 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil (possibly 1999).
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (? Numbers, July 1996).
Highest no. of birds recorded:	Unknown.
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	July at least.
Photographs:	No.
Comments:	An unknown number (tape problems) of Little Tern were seen from the air in a potential nesting site in July (1997). Other aerial checks in October (1997), and June and October (1999) failed to see Little Tern at the site. May be an occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S954**
General Location:	A few kms west of Mamalimadja Point, NE Groote mainland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	December 1993, February & July 1996, October 1997, October 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (380, December 1993).
Highest no. of birds recorded:	380 (December 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	October at least.
Photographs:	No.
Comments:	Over 380 Little Tern were present in 3 flocks in the general area in December (1993). Only a small number were in breeding plumage and none were defending but there was potential breeding habitat in the area. At least 1 pair of Little Tern were seen from the air, and looked to be nesting site in October (1997). Other aerial check in January and July (1996), and October (1999) failed to see Little Tern at the site. May be a regular or occasional Little Tern breeding site at any time between, or throughout the period, May to November. Needs to be given a little higher priority in case more of the larger numbers seen in this area breed at some stage.

Colony Identifier:	**S955**
General Location:	Rock off south tip of Round Hill Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Rock.
Survey dates:	November 1993, March & September 1994, October 1997.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil (possibly 1997).
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Terns (20 November 1993).
Highest no. of birds recorded:	20 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	September to November.
Photographs:	No.
Comments:	Possible small Black-naped and/or Roseate Tern colony in November (1993) but not in October (1997). Also not active in March (1994). May be an occasional small colony around November.

Colony Identifier:	**S956**
General Location:	Mainland east side of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, February & July 1997, October 1997, October 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2, October 1997 & 99 and November 1993).
Highest no. of birds recorded:	2, (in each of October 1997 & 99 and November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	October to November.
Photographs:	6437-40.
Comments:	Appears could be a regular Oct/Nov breeding site for at least a pair of Little Tern, but unable to be confirmed.

Colony Identifier:	**S957**
General Location:	Bagbiringula Point, south of Caledon Bay, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, October 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (70, November 1993).
Highest no. of birds recorded:	70 (November 1993).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	November at least.
Photographs:	No.
Comments:	At least 70 Little Tern seen from the air in a potential breeding situation in November (1993), but no ground check able to be done. Another aerial survey in October (1999) did not record Little Tern present so it may be an occasional breeding site any time between May and November.

Colony Identifier:	S958
General Location:	Bustard Island, NW of Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Coral rubble.
Survey dates:	March & September 1994, October 1997.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Black-naped Tern and/or Roseate Tern (100+, October 1997).
Highest no. of birds recorded:	100+ (October 1997).
Highest estimated annual usage:	Unknown.
Allocated colony size:	Unknown.
Months likely to be active:	October at least.
Photographs:	No.
Comments:	In excess of 100 Black-naped and/or Roseate (the former definitely making up some of the numbers at least) appeared to be breeding in October (1997), but could not be ground confirmed. No breeding was apparent in March or September (1994). May be an occasional or regular colony of a reasonable size.

Colony Identifier:	S959
General Location:	Mainland beach north of Numbulwar.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	May 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2, May 1999).
Highest no. of birds recorded:	2 (May 1999).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	May at least.
Photographs:	No.
Comments:	At least 1 pair of Little Tern were seen from the air in a potential nesting site in May (1999) of the only time a survey was done of this site. May be a regular or occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	S960
General Location:	NE side of Isle Woodah, Blue Mud Bay.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	January & February 1996, October 1997, May & October 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil (possibly 1999).
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2, October 1997).
Highest no. of birds recorded:	2 (October 1997).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	October at least.

Photographs:	No.
Comments:	At least 1 pair of Little Tern were seen from the air in a potential nesting site in October (1997). Other aerial checks in January, February and July (1996) and June and October (1999) failed to see Little Tern at the site. May be an occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S961**
General Location:	West side Elcho Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, October 1997 & 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2+, October 1997).
Highest no. of birds recorded:	2+ (October 1997).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	October at least.
Photographs:	6252, 6426-27.
Comments:	At least 1 pair of Little Tern were seen from the air in a potential nesting site in October (1997) and possibly November (1993). Another aerial check October (1999) failed to see Little Tern at the site. May be an occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S962**
General Location:	West side of Elcho Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, October 1997, June & October 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil (possibly 1999).
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2+, October 1997).
Highest no. of birds recorded:	2+ (October 1997).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	October at least.
Photographs:	No.
Comments:	At least 1 pair of Little Tern were seen from the air in a potential nesting site in October (1997) and possibly November (1993). Other aerial checks in June and October (1999) failed to see Little Tern at the site. May be an occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S963**
General Location:	Rocky Point approximately half way between Bagbiringula Point and Point Arrowsmith, NE Arnhemland.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal land, Arnhem Land A.L.T.
Nesting Habitat:	Rocks.
Survey dates:	November 1993, March 1995, February & July 1996, October 1997.
Years confirmed active:	Nil.

Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Roseate and/or Black-naped Tern (50+, October 1997).
Highest no. of birds recorded:	50+ (October 1997).
Highest estimated annual usage:	Unknown.
Allocated colony size:	11-100.
Months likely to be active:	October at least.
Photographs:	5538.
Comments:	Small Black-naped and/or Roseate Tern colony seen from the air as possibly active in October (1997). No other surveys suggested possible breeding so maybe an occasional small colony around October.

Colony Identifier:	**S964**
General Location:	West side of northern end Isle Woodah, Blue Mud Bay.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	October 1997, May & October 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2+, October 1997).
Highest no. of birds recorded:	2+ (October 1997).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	October at least.
Photographs:	No.
Comments:	At least 1 pair of Little Tern were seen from the air in a potential nesting site in October (1997). Other aerial checks in May and October (1999) failed to see Little Tern at the site. May be an occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S965**
General Location:	Eastern most point of NE Groote Eylandt.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 1993, October 1997, October 1999.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2+, October 1997).
Highest no. of birds recorded:	2+ (October 1997).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	October at least.
Photographs:	No.
Comments:	At least 1 pair of Little Tern were seen from the air in a potential nesting site in October (1997). Other aerial checks failed to see Little Tern at the site. May be an occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S966**
General Location:	East end, north side Yabooma Island, off Milingimbi.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	July 1998.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Unknown.
Species possibly breeding:	Little Tern (2, July 1998).
Highest no. of birds recorded:	2 (July 1998).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	July at least.
Photographs:	No.
Comments:	At least 1 pair of Little Tern were seen from the air in a potential nesting site in July (1998) of the only time a survey was done of this site. May be a regular or occasional Little Tern breeding site at any time between, or throughout the period, May to November.

Colony Identifier:	**S967**
General Location:	Unnamed creek west of Calvert River.
Historical documentation:	Starks (1989).
Land tenure:	Pastoral lease (Seven Emu Station).
Nesting Habitat:	Sand.
Survey dates:	Between 11 & 24 June 1989 (Starks).
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Nil.
Species possibly breeding:	Little Tern (3, June 1989).
Highest no. of birds recorded:	3 (June 1989).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	May to July.
Photographs:	No.
Comments:	Small possible colony reported in Starks (1989). No eggs or chicks present on his single visit.

Colony Identifier:	**S968**
General Location:	Mainland beach south-west of North Goulburn Island.
Historical documentation:	None found, site located by author during current surveys.
Land tenure:	Aboriginal Land, Arnhem Land A.L.T.
Nesting Habitat:	Sand.
Survey dates:	November 2000.
Years confirmed active:	Nil.
Years confirmed inactive:	Nil.
Species confirmed breeding:	Nil.
Species possibly breeding:	Little Tern.
Highest no. of birds recorded:	10 (November 2000).
Highest estimated annual usage:	Unknown.
Allocated colony size:	2-10.
Months likely to be active:	October to December.
Photographs:	No.
Comments:	Ten Little Tern seen from the air departing a potentially usable sand spit during November (2000). Not breeding then but may breed here at different time of year.