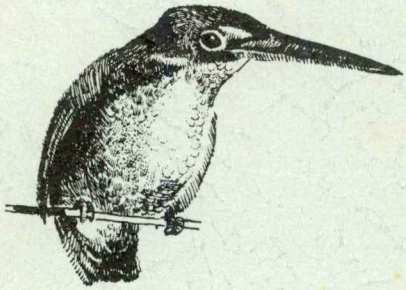
AUSTRALIAN BIRDS



Journal of the
N.S.W. FIELD ORNITHOLOGISTS CLUB

Volume 10 No. 2 December 1975

Registered for Posting as a Periodical, Category B — Price $1.00

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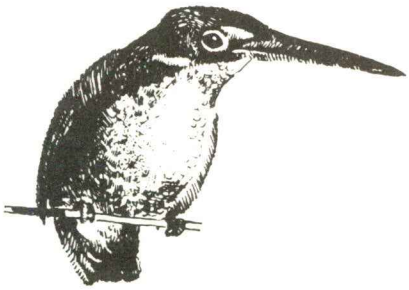

Vol. 10, No. 2 December, 1975

SEABIRDS FOUND DEAD IN NEW SOUTH WALES IN 1974

G. HOLMES and A. K. MORRIS

ABSTRACT

During 1974, 2441 km of the New South Wales coast was travelled by 43 members and friends of the Field Ornithologists Club and 7409 dead seabirds were found. Large mortalities were recorded in January, which included a number of warm water species, and in September, November and December, which consisted largely of Short-tailed Shearwaters. In contrast to 1973 few prions were found and mortality during the winter was very low. Rare species found included a Grey-headed Albatross, three Antarctic Fulmars, a Kermadec Petrel, three Kerguelen Petrels (the first since 1954), a Masked Booby and three Long-tailed Skuas. The number of Pterodroma petrels found was exceptional.

INTRODUCTION

This paper reports on the results obtained by the NSWFOC beach patrol scheme in 1974. The coastline of New South Wales has been divided into ten zones by degrees of latitude (see Fig. 1. in Morris, 1972). Coverage was very good in most zones except Bega and Mallacoota. Within the 2441 km travelled 7409 dead seabirds of 40 species were found, giving a mean mortality of 3.0 birds per km. The previous greatest distance travelled was 927 km in 1973. In 1974 320 patrols totalled 717 km, while Glenn Holmes used a motor cycle to travel the remaining 1724 km, mostly within the Maclean, Coffs Harbour and Hastings zones.

Table 1 shows the number of dead seabirds recorded and the distance patrolled in each zone per month (the distance patrolled indicates the catchment area examined per month). Table 11 shows the monthly distribution of seabird mortality and Table 111 the zonal distribution of the seabirds found. Table 1V gives the details of banded Short-tailed Shearwaters recovered dead in New South Wales in 1974.

The scientific and vernacular names used are generally in accordance with "An Index of Australian Bird Names", CSIRO Division of Wildlife Research Technical Paper No. 20, 1969.

PENGUINS

As ten of the 14 Little Penguins *Eudyptula minor* were found in the months December to March, which is during fledging, then most were probably juvenile. None was found in the five northern zones, where it has not been located breeding north of Crescent Head in the Hastings zone.

PETRELS

An immature Grey-headed Albatross *Diomedea chrysostoma* found at Collaroy on 27 August was the fifth record for N.S.W. (Rogers, 1975). The only other albatross found, a White-capped Albatross *D. cauta,* was consistent with previous records.

Only two Giant Petrels *Macronectes spp.* were found, one of which was a Southern Giant Petrel *M. giganteus.* They were within the usual period of mortality in N.S.W., June to December. Three Antartic Fulmars *Fulmarus glacialoides* found in the Ulladulla and Bega zones, one near Jervis Bay on 22 September and two near Narooma on 22 October, were the sixth to eighth records for N.S.W. (Rogers, 1975). Seven specimens have now been found between Tuggerah and Narooma from June to December. Another was observed off Stanwell Park on 1 January 1958 (Hindwood & McGill, 1958). This pattern of occurrence in N.S.W. is consistent with an Antarctic, summer-breeding species. As cephalopods are apparently an important food item (Serventy et al., 1971) then the pelagic waters of southern N.S.W. constitute a likely wintering area. Only two Cape Petrels *Daption capense* were found, both within the usual period of July to January.

The number of *Pterodroma* petrels found was one of the more unusual aspects of the 1974 mortality. The 31 Great-winged Petrels *P. macroptera* formed easily the largest mortality yet observed in this species, the previous maximum being seven in 1973 (Morris, 1974). Most were found in autumn in the three northern zones, with as many as three in 6 km and four in 10 km near Coffs Harbour in late April. As the species is a winter breeder these birds could not have been recently fledged juveniles. Those found near Coffs Harbour had just completed or were undergoing wing moult, indicating that they were older immatures or perhaps adults (Holmes, *pers. obs.).* The White-headed Petrel *P. lessoni,* a summer-breeding subantarctic species, is likely to occur in N.S.W. in any month (Kenny, 1972). Four were found in the Tweed Heads and Sydney zones in March (two), June and November. The 15 Providence Petrels *P. solandri* found in the Tweed Heads, Coffs Hourbour and Hastings zones was an exceptional number. The eight in late January were perhaps returning from the North Pacific Ocean, as the species is absent at Lord Howe Island from December to mid February

(Fullagar et al., 1974). It is now evident from observations near the edge of the continental shelf (by Rogers, Holmes) that *solandri* and *macroptera* are probably ecological equivalents in northern and southern N.S.W. respectively. The large number of *macroptera* found dead in northern N.S.W. is therefore anomalous, unless it is only abundant there in autumn or it is more abundant in waters well outside the continental shelf. The Kermadec Petrel *P. neglecta* found at Kingscliff on 27 January was the second N.S.W. and Australian record, excluding Lord Howe Island (Rogers, 1975). The four Kerguelen Petrels *P. brevirostris,* fifth to eighth records for N.S.W., were the first since four near Sydney in 1954 (Hindwood & McGill, 1955). The first was found alive at Rushcutters Bay on 25 August, those at Collaroy on 27 August and at Woody Head on 29 August were freshly dead, and the last at Woolgoolga on 15 September had been dead about ten days. It is remarkable that these birds died at such widely separated localities within a period of less then two weeks. Three of the 1954 birds were also found in a short period, from 13 to 21 July. The eight Gould Petrels *P. leucoptera,* an unusually large number, were found within the usual period of December to April (Morris & Sawyer, 1973). This suggests that the immature birds, which would be expected to have a higher mortality rate than the adults, are not numerous until the beginning of incubation (in late November), as in the closely related Black-winged Petrel *P. nigripennis* (Merton, 1970). The one from Ulladulla on 9 February was not considered referable to the nominate race on Cabbagetree Island (P. Fullagar, *in litt.),* and the one found freshly dead at Coffs Harbour on 27 April was a very late date.

The monthly occurrence and proportional representation of the species of prions *Pachyptila spp.* were consistent with previous observations. As in most years the Fairy Prion *P. turtur* was the most abundant species.

The occurrence and proportions of the species of dark shearwaters *Puffinus spp.* were also consistent with previous observations. The mortality of Short-tailed Shearwaters *P. tenuirostris* was probably the largest since 1970 (from data in Morris, 1972, 1973, 1974; Morris & Sawyer, 1973), with 1971 and 1972 being "average" years and 1973 a "below average" year. From the recovery of banded birds (Table IV), 18 of known age class consisted of one just fledged, four at the end of their first year, three older immatures and ten adults. During 1974 an unprecedented number of Grey-backed Shearwaters *P. bulleri* was recorded in N.S.W. (Holmes, 1975). Three of these were found beach-washed, on 6 February near Moruya, on 8 June at Ballina and on 4 November at Woolgoolga. The mortality of Fluttering Shearwaters *P. gavia* was the largest yet observed. The number found dead in each month, 1970 to 1974, is given in Fig. 1. The maximum in February occurs at a time when very few are seen in N.S.W. waters, but coincides with the beginning of fledging in New Zealand. Two Huttons Shearwaters *P. huttoni* were found, on 26 April at Urunga and 27 August at Collaroy. The latter is outside the period October to April given by Morris & Sawyer (1973). Eight Little Shearwaters *P. assimilis* were found between Ballina and Ulladulla from March to November, coinciding with their presence at Lord Howe Island from February to November (Fullagar et al., 1974). The five in June was a large number for this month, which is within the incubation period. The four White-faced Storm-petrels *Pelagodroma marina* found in September and October in the Sydney-Wollongong-Ulladulla zones were within the breeding distribution.

Fig 1. Monthly mortality of Fluttering Shearwater in N.S.W., 1970–1974

J	F	M	A	M	J	J	A	S	O	N	D
4	28	8	2	0	3	2	2	1	12	8	6

GANNETS, CORMORANTS AND TROPICBIRDS

Of the 41 Australian Gannets *Sula serrator* that were found, 28 were immature and six were adult. The previous maximum was 12 in 1973 (Morris, 1974). An adult Masked Booby *S. dactylatra* found near Evans Head on 29 January was the second record for N.S.W., excluding Lord Howe Island where it breeds (Rogers, 1975). The four cormorants breeding in N.S.W. were all found beach-washed, the Pied Cormorant *Phalacrocorax varius* and Little Black Cormorant *P. sulcirostris* being recorded for the first time in the last five years. As usual the Black Cormorant *P. carbo* was the most abundant species. A Red-tailed Tropicbird *Phaethon rubricauda* found near Ballina in January was the first recorded in the last five years. An adult was found freshly dead in the dunes behind Bundagen Beach near Sawtell on 21 March (Rogers, 1975). Three White-tailed Tropicbirds *P. lepturus* were found, at Manly on 1 January (immature), Brunswick Heads on 28 January (adult) and Palm Beach on 25 April (immature). It is curious that *lepturus* is more frequently recorded in N.S.W. than *rubricauda,* for the nearest breeding station is Walpole Island in the Coral Sea, whereas *rubricauda* breeds at Lord Howe Island.

SKUAS, GULLS AND TERNS

The Great Skua *Stercorarius skua* and Pomarine Skua *S. pomarinus* were consistent with previous records. Three Long-tailed Skuas *S. longicaudus,* an adult and two immatures, found at Byron Bay on 28 January were the first specimens for N.S.W. The status of this species in Australia is unknown. The proportion of Silver Gulls *Larus novaehollandiae* to Crested Terns *Sterna bergii,* which in the four previous seasons has always been greater than two to one, was similar in 1974. Sooty Terns *S. fuscata* were found for the fifth year in succession, the seven this year being five adults and two immatures. As more than 100,000 breed at Lord Howe Island (Fullagar et al., 1974), it is expected that small numbers should be recorded annually on the N.S.W. coast. An adult Common Noddy *Anous stolidus* found near Kingscliff on 27 January was the tenth record for N.S.W. Another was found alive away from the coast at Waverton (North Sydney) on 12 January after severe north-easterly winds (Rogers, 1975).

TERRESTRIAL BIRDS

Land and freshwater birds found in addition to seabirds included the White-faced Heron, Reef Heron, Black Swan, Black Duck (2), Brown Quail, King Quail, Spur-winged Plover, Eastern Curlew, Galah (6), Barn Owl, Grass Owl, Kookaburra (2), Yellow-faced Honeyeater and Australian Raven.

PATTERNS OF MORTALITY

Between 24 and 26 January gale force winds were associated with tropical cyclone Wanda in far north coastal and adjacent waters, lessening to strong easterly winds up to 28 January (Anon, 1974). This cyclone caused a moderate mortality in the Tweed Heads zone involving several warm water species, most of which breed on Lord Howe Island. The Providence Petrels, Kermadec Petrel, Masked Booby, Red-tailed Tropicbird, Sooty Terns and Common Noddy were almost certainly from the Island. Other species included the Great-winged Petrel, White-tailed Tropicbird and Long-tailed Skua. This supports evidence (Holmes, *unpublished)* which suggests that the generally southward moving surface water near the edge of the continental shelf in northern N.S.W. is an important feeding area for some species from Lord Howe Island, including the Providence Petrel (June to October?) and White-bellied Storm-Petrel (September to July?).

Three tropical cyclones and their resultant depressions followed, Pam (5–8 February), Zoe (8–17 March) and Alice (22–30 March) (Anon, 1974), but no mortality comparable to that of late January was observed.

During March and April, 27 Australian Gannets were found. These were mostly immatures that had probably just fledged and were therefore inexperienced. The protracted nature of this mortality suggests that food shortage or perhaps disease may have been responsible, rather than adverse weather.

In the Coffs Harbour zone 15 Great-winged Petrels and three Providence Petrels were found freshly beach-washed between 26 April and 1 May. Two other Great-winged Petrels found at this time had been dead for 10–20 days, and one on 17 May about ten days. Seven stomachs of the Great-winged Petrel and all of the Providence Petrel were examined and were empty but for cephalopod beaks. Other species involved in this mortality were the Gould Petrel (1), Hutton's (1), Sooty (1), Short-tailed (5) and Wedge-tailed (12) Shearwaters and Australian Gannet (6). Of the stomachs examined in these species most were empty. Although strong winds along the entire coast on 21 and 22 April (Anon, 1974) preceded this mortality, a widespread food shortage may have been responsible, or at least contributing. As the number of *Pterodroma* petrels in this mortality is exceptional it is possible that there was a particular shortage of cephalopods. At Coffs Harbour, where cephalopods are trawled with prawns in shallow water, the ratio of cephalopods to prawns in March was twice that of April and the absolute amount of cephalopods in April was almost twice that of March (W. Hitchens, *pers. comm.).* However it is difficult to extrapolate this to deeper water where the petrels feed.

In the winter and early spring only 76 prions and two albatrosses were found, compared to 374 prions and ten albatrosses in the corresponding months of 1973 (Morris, 1974). During this period there were occasional gale force and strong winds (Anon, 1974), but none as severe as in July 1973. Observations at sea off Coffs Harbour (Holmes, *unpublished)* showed that prions were present in large numbers from June to August, but only three were beach-washed there in these months. The importance of storms in large prion mortalities is thus further substantiated.

Following prolonged southerly winds between 24 and 27 September, with a maximum at sea of 65 knots on 26 September (RAN Meteorological Office, per C. Sonter), 484 Short-tailed Shearwaters were found in 0.7 km in the Jervis Bay area (Ulladulla zone). In early

October a further 812 found in 8.7 km in this area, 120 in 4.8 km at Cronulla and others at Wollongong were probably beach-washed at much the same time. These birds were near the end of their southward migration and were undoubtedly exhausted by the strong headwind.

The mortality of Short-tailed Shearwaters, as is usual, continued throughout October, November and December. In the Coffs Harbour zone, where the beaches were patrolled most regularly, peaks of mortality occurred on or about 16 and 26 October, 5–8 and 21–23 November, 4 and 9–16 December. In the Sydney area the greatest mortalities were apparently on about 22 November and in the first two weeks of December, which coincide with three of the peaks at Coffs Harbour.

Observations at sea off Sydney (by A. Rogers and others) and off Coffs Harbour (by Holmes) have shown that seabird density decreases northward in New South Wales, as would be expected. As 1974 is the first year in which the coastline has been adequately covered in widely separated localities throughout the year, it is now possible to determine this decrease in density from seabird mortality. For example, from Table I, 2377 seabirds were found in the Maclean-Coffs Harbour-Hastings zones, and 4529 in the much less well covered Sydney-Wollongong-Ulladulla zones. However there appears to be little difference in the diversity of species between the north and south. From Table III, 29 species were found in the five northern zones, and 31 were found in the five southern zones.

ACKNOWLEDGMENTS

During the year 43 members and friends took part in the beach surveys. All credit is due to them for the extensive and valuable results obtained. Our thanks are extended to the following persons who provided information:

B. Ashcroft, J. H. Benham, D. Bleach, M. Brooker, S. Chittick, G. Clancy, C. C. Davey, J. Dixon, B. Forest, E. V. Geiroval, E. Goodiman, C. Gray, R. Gray, J. Gurn, N. Hermes, E. S. Hoskin, M. Johnson, F. J. Johnstone, A. Leishman, A. Lindsey, T. Lindsey, J. McIlroy, E. McDonald, R. McDonald, A. R. McGill, S. Marchant, P. Myben, M. M. O'Neill, V. Pattemore, A. Pearse, P. E. Roberts, D. Sawyer, A. R. Sefton, J. Silburn, C. Sonter, J. Waterhouse, W. Watson, T. Weekes, V. Weir-Wilson, K. Wicks and H. Wilton.

A. Leishman kindly prepared the tables.

D. Purchase, Secretary of the Australian Bird-banding Scheme, and D. L. Serventy provided data on the recovery of banded Short-tailed Shearwaters.

REFERENCES

Anon 1974 Monthly Weather Reviews January-December 1974 N.S.W., Dept. of Science, Bureau of Meteorology

Fullagar, P. J., J. L. McKean & G. F. van Tets 1974 Appendix F, Report on the Birds in 'Environmental Survey of Lord Howe Island' (H. F. Recher & S. S. Clark, Eds), Govt Printer, Sydney

Hindwood, K. A. & A. R. McGill	1955	Sea-bird Mortality in Coastal New South Wales During July, 1954. Emu 55: 148-156
Hindwood, K. A. & A. R. McGill	1958	The Birds of Sydney, Miller, Sydney
Holmes, G.	1975	The Australian Status of the Grey-backed Shearwater. Aust. Birds 9: 98-99
Kenny, T.	1972	White-headed Petrel off Sydney Heads. Birds 7: 21-22
Merton, D. V.	1970	Kermadec Islands Expedition Reports: a General Account of Birdlife. Notornis 17: 147-199
Morris, A. K.	1972	Sea Birds Found Dead in New South Wales in 1970. Birds 7: 33-41
Morris, A. K.	1973	Sea Birds Found Dead in New South Wales in 1971. Birds 7: 53-58
Morris, A. K.	1974	Sea Birds Found Dead in New South Wales in 1973. Aust. Birds 9:1-11
Morris, A. K. & D. Sawyer	1973	Sea Birds Found Dead in New South Wales During 1972. Birds 8: 21-30.
Rogers, A. E. F.	1975	N.S.W. Bird Report for 1974. Aust. Birds 9: 77-97
Serventy, D. L., V. Serventy & J. Warham	1971	The Handbook of Australian Sea-birds, Reed, Sydney

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* * *

TABLE I

NUMBER OF DEAD SEABIRDS RECORDED AND DISTANCE PATROLLED ON EACH ZONE IN 1974

ZONE		Jan	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTALS
Tweed Heads	Km	56	17	28	26	2	23	10	10	10	6			
	Birds	95	3	20	13	1	27	–	–	–	205			364
Maclean	Km	25	4	5		30	32	22	30	48	35	30	27	
	Birds	–	1	2		2	1	3	3	2	88	111	95	308
Coffs Harbour	Km	4	12	68	67	96	79	72	69	75	67	93	68	
	Birds	1	1	13	43	8	7	1	1	3	154	860	663	1755
Hastings	Km				1	37	18	22	24	24	37	37	44	
	Birds			–	–	6	1	-	1	2	28	125	151	314
Newcastle	Km	6	6	1	1	1	26	1	1	1	2	2	10	
	Birds	–	–	–	–	–	2	–	–	–	21	15	59	97
Sydney	Km	33	15	16	16	10	8	21	12	4	18	25	18	
	Birds	20	17	12	25	-	1	1	8	3	54	367	930	1438
Wollongong	Km	5	3	7	3	2	14	3	7	5	8	17	15	
	Birds	2	2	2	1	–	4	1	1	–	318	418	409	1158
Ulladulla	Km	19	21	6	1	12	1	14	12	8	17	2	4	
	Birds	58	94	5	-	-	-	3	24	497	815	56	381	1931
Bega	Km							2						
	Birds							1			2			3
Mallacoota	Km	5	4			5							6	
	Birds	4	28			1							8	41
Total Km travelled (not listed)		167	114	162	138	219	232	170	172	184	287	346	250	2441
Total Km patrolled		153	82	131	115	195	201	167	165	175	192	206	192	1974
Total Seabirds recorded		180	164	54	82	18	43	10	38	507	1683	1952	2696	7409
Birds /Km trav/ month		1.1	1.2	0.3	0.6	0.1	0.2	0.1	0.2	2.7	5.8	5.6	10.7	3.0

TABLE II

MONTHLY MORTALITY OF SEABIRDS IN 1974

SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
Little Penguin	3	2	2		I		2			I		3	I4
Unid. Penguin	I												I
Grey-headed Albatross								I					I
White-capped Albatross									I				I
Southern Giant Petrel										I			I
Unid. Giant Petrel	I												I
Antartic Fulmar									I	2			3
Cape Petrel								I		I			2
Great-winged Petrel	3		3	20	4						I		3I
White-headed Petrel			2			I					I		4
Providence Petrel	8			5							2		I5
Kermadec Petrel	I												I
Kerguelen Petrel								3	I				4
Gould Petrel	3	2	I	2									8
Unid. Petrel	I												I
Medium-billed Prion								I					I
Antartic Prion						8		4					I2
Slender-billed Prion									I	I			2
Fairy Prion						3	I	I6	2	6	3		3I
Unid. Prion						2	2	7	9	9	I		30
Flesh-footed Shearwater	I	I								II	2	2	I7
Wedge-tailed Shearwater	II	8	7	I4	4				I	4	I2	3	64
Grey-backed Shearwater		I				I				I			3
Sooty Shearwater	3	2	I	I						2	I4	4	27
Short-tailed Shearwater	II7	I0I	8	20	7	7			488	I620	I898	2662	6928
Fluttering Shearwater	3	I9	7			I		I		4	7	2	44
Huttons Shearwater				I				I					2
Little Shearwater			I	I		5					I		8
Unid. Shearwater	I	5	I							I		5	I3
White-faced Storm-petrel										2	2		4
Australian Gannet	I	2	I5	I2	2	2	4	I	I	I			4I
Masked Booby	I												I
Pied Cormorant	I					I							2
Little Pied Cormorant						I							I
Black Cormorant				I						2	I	I	5
Little Black Cormorant										I			I
Red-tailed Tropic-bird	I												I
White-tailed Tropic-bird	2			I									3
Great Skua								I					I
Pomarine Skua	I												I
Long-tailed Skua	3												3
Silver Gull	5	3	5	4		5	I	I	I	II	5	II	52
Sooty Tern	5		I									I	7
Crested Tern	2					6			I	2	2	2	I5
Common Noddy	I												I
TOTAL	I80	I46	54	82	I8	43	I0	38	507	I683	I952	2696	7409

TABLE III

SEABIRDS FOUND DEAD IN DIFFERENT ZONES IN 1974.

SPECIES	TH	MC	CH	HS	NC	SY	WG	UL	BG	MA	TOTAL
Little Penguin						3	2	7		2	14
Unid. Penguin						I					I
Grey-headed Albatross						I					I
White-capped Albatross								I			I
Southern Giant Petrel								I			I
Unid. Giant Petrel								I			I
Antartic Fulmar								I	2		3
Cape Petrel				I				I			2
Great-winged Petrel	10	I	18			2					31
White-headed Petrel	2					2					4
Providence Petrel	10		4	I							15
Kermadec Petrel	I										I
Kerguelen Petrel		I	I			2					4
Gould Petrel	3		2			2		I			8
Unid. Petrel	I										I
Medium-billed Prion								I			I
Antartic Prion	7		I					4			12
Slender-billed Prion								2			2
Fairy Prion			3		3	6	2	16	I		31
Unid. Prion			2				3	25			30
Flesh-footed Shearwater	3	4	2		6			2			17
Wedge-tailed Shearwater	13	I	22	5	I	16	I	5			64
Grey-backed Shearwater	I		I					I			3
Sooty Shearwater	I	3	9	I		3	5	5			27
Short-tailed Shearwater	272	291	1642	301	85	1359	1109	1830		39	6928
Fluttering Shearwater	8	I	6			11	9	9			44
Huttons Shearwater			I			I					2
Little Shearwater	4		2			2					8
Unid. Shearwater						2	I	10			13
White-faced Storm-petrel						I	I	2			4
Australian Gannet	7	5	20	I		5		3			41
Masked Booby	I										I
Pied Cormorant	2										2
Little Pied Cormorant							I				I
Black Cormorant			I	2	I		I				5
Little Black Cormorant					I						I
Red-tailed Tropic-bird	I										I
White-tailed Tropic-bird	I					2					3
Great Skua							I				I
Pomarine Skua						I					I
Long-tailed Skua	3										3
Silver Gull	I		13	I		15	20	2			52
Sooty Tern	5		2								7
Crested Tern	6	I	3	I		I	2	I			15
Common Noddy	I										I
TOTAL	364	308	1755	314	97	1438	1158	1931	3	41	7409

TABLE IV

DETAILS OF 19 BANDED SHORT-TAILED SHEARWATERS FOUND DEAD IN NEW SOUTH WALES IN 1974

Band No.	Date Banded	Pullus or Adult	Banding Site	Date Recovered	Place Recovered	Time and Distance
160-63494	10-12-67	A	Montagu Is. N.S.W.	Jan. 1974	Budgewoi	60 Mths, 352 km
160-34863	24-3-61	A	Griffith Is. Vic.	2-1-74	Eden,	153 Mths, 672 km
161-30470	21-4-72	P	Griffith Is. Port Fairy, Vic.	14-1-74	Woodburn	20 Mths, 1456 km
161-16493	3-4-74	P	Montagu Is. N.S.W.	5-5-74	Ulladulla	1 Mth, 104 km
161-19916	13-3-71	A	Griffith Is. Port Fairy, Vic.	29-9-74	Jervis Bay	42 Mths, 811 km
161-04097	10-4-66	A	Griffith Is. Port Fairy, Vic.	6-10-74	Jervis Bay	102 Mths, 810 km
161-29636	20-4-73	P	Griffith Is. Port Fairy, Vic.	12-10-74	Jervis Bay	17 Mths, 810 km
160-57601	26-4-63	P	Griffith Is. Port Fairy, Vic.	Oct? 1974	Palm Beach	? Mths, 964 km
161-28943	24-3-73	P	Griffith Is. Port Fairy, Vic.	2-11-74	Malua Bay	19 Mths, 740 km
160-53484	23-3-63	P	Woolamai, Phillip Is. Vic	4-11-74	Woolgoolga	139 Mths, 1170 km
161-02862	1-5-69	P	Griffith Is. Port Fairy, Vic.	10-11-74	Yamba	54 Mths, 1400 km
160-13721	19-4-60	P	Phillip Is. Vic.	17-11-74	Stockton Beach	174 Mths, 850 km
160-36138	8-4-61	P	Woolamai. Phillip Is. Vic.	23-11-74	Swansea Heads	163 Mths, 818 km
160-13161	24-4-60	P	" " " "	24-11-74	Blue Bay	175 Mths, 796 km
160-13782	19-4-60	P	" " " "	30-11-74	Point Plomer	175 Mths, 1060 km
161-33317	25-4-74	P	Griffith Is. Port Fairy, Vic.	11-12-74	Narooma	7 Mths, 724 km
161-37956	29-3-74	P	South Neptune Is. S.A.	13-12-74	Narrabeen	8 Mths, 1380 km
161-33093	23-4-74	P	Griffith Is. Port Fairy, Vic.	27-12-74	Crowdy Bay	8 Mths, 1183 km
161-34118	27-4-74	P	" " " " "	30-12-74	Eden	8 Mths, 680 km

BREEDING RECORDS FOR THE DARTER AND THE LITTLE BLACK CORMORANT IN THE SYDNEY DISTRICT

E. S. HOSKIN

The status of the Darter *Anhinga melanogaster* in the Sydney District (County of Cumberland) has changed very little since North (1898) wrote "New Holland Darter, not common, but generally dispersed over the County. Frequents rivers and lagoons. Sometimes met with at Botany, the Parramatta River and on Narrabeen Lagoon. Local name Snake-bird' from its long bill and neck".

The position had not changed when North (1912) again wrote "The present species is found, although it is by no means common, in the neighbourhood of Sydney, a fine plumaged old male in the Australian Museum Collection having been procured at Lake Narrabeen". (This specimen is still on display at the Museum and was registered on 29 June 1892).

Another skin in the Museum AM 0.26176 dated 18 October 1918 from a waterhole at the rear of Fowlers Pottery, Marrickville, was the first since the Narrabeen bird. No doubt the birds were occurring during the interim to 28 November 1920 when a skin AM 0.35160 (D'Ombrain Collection) was taken in the Hawkesbury near Penrith. 20 years elapsed before one was seen on 27 February 1940 by E. Nubling near Kookaburra Flat, Royal National Park whilst Keith Hindwood wrote on 25 October 1941 after having seen a Darter at the Botany Water Reserve (which is now inside Kingsford-Smith Airport beside General Holmes Drive) "Have not seen this species previously near Sydney". McGill *(in litt.)*. when in the Company of Allan Keast recorded two at Eastlakes on 14 March 1942, and on a later occasion when by himself, (McGill 1942) saw one in a swamp in the lower Cook's River area on 1 November 1942. There was one record in 1943, two in 1948 and four in 1951 after which there has been a steady increase in observations and, of course, observers. In those early years it was something of a novelty to see a Darter.

Today, with the motor-car and tar-sealed roads, in contrast to the dirt roads and horse and sulky of North's day, one can observe up to six or more in a day, travelling from swamp to swamp in the Hawkesbury district alone. North probably could only visit one or maybe two swamps in a day. Nowdays there are records for every month of the year for the Sydney (County of Cumberland) district, October to January having the largest occurrences. On 4 January 1975 at Bushell's Lagoon, Wilberforce (just outside the County), I saw 25 birds taking up their roosting positions for the night. The birds were perched in tall gums beside a swamp with Black Cormorants *Phalacrocorax carbo,* Little Black Cormorants *P. sulcirostris* and Little Pied Cormorants *P. melanoleucos* keeping them company.

The Darter may be found in a variety of habitats viz., swamps; freshwater streams and rivers; and estuaries but has a preference for the deeper freshwater swamps and pools where it swims to procure its food as do cormorants. Another similarity to cormorants is its habit of sitting on a post in a swamp, or on a tree, with its wings extended to dry, as its plumage is not water-proofed. Very often when disturbed it will fly high in wide circles flapping its wings from four to a dozen times, then gliding for about four seconds. Cormorants fly with quicker and more continuous wing-beats, only occasionally gliding and then mostly when coming in to alight on the water or to a perch. The Darter may be seen swimming, body submerged with only the small head and thin neck visible at a 45° angle in a similar manner to a swimming snake, hence the name "Snakebird".

On 31 October 1974 I visited a secluded swamp between hills at Greendale, 48 km south-west of Sydney but still in the County. The swamp was approximately 460 m long by 90 m wide. On my approach all the birds in the immediate vicinity flew to some tall gums in the swamp where I was able to count 57+ Little Black Cormorants and 12 Darters, another six Darters were scattered over the rest of the swamp. The birds returned several minutes later after I had concealed myself behind a large gumtree. A male Darter, recognised by its dark breast, flew to a nest in a dead paper-bark *Melaleuca Sp.* about 3.5 m above water and about 140 m from my concealment. The bird sat on the nest for the rest of my stay which was about an hours duration. A Little Black Cormorant was sitting on a nest less than two metres away in the same tree.

On a visit on 6 November 1974 the male Darter was found still on the nest and continually renovating it, and the light-breasted female was about 4.5 m away. About 23 m further away in a dead paper-bark was another Darter's nest, a little smaller than the other. A male stood on the edge of the second nest for an hour or more with the female nearby. When she approached the nest, he made a picking gesture at her and uttered a buzzing note not unlike a similar note of the Leaden Flycatcher *Myiagra rubecula,* and then sat in the nest renovating it. They later changed over, the female sitting and the male preening close by. This nest was about 1.5 m above the water. On this occasion 87+ Little Black Cormorants were counted with another two sitting on nests in the same tree as No. 1 Darter's nest, but 50 m from the first cormorant's nest.

A further visit on 28 December 1974 revealed two large buff-coloured young in No. 2 Darter's nest, No. 1 nest being empty and covered with white excreta. Presumably the young fledged successfully. About 31 m away from Darter's nest No. 2, a third nest was found containing three young about three-quarters grown. This nest was situated on a slender branch about 3.5 m above water, in a partly green paper-bark growing in the water. It was within picking distance of three Little Pied Cormorants' nests, two of which were on the same branch as the Darter's nest. Each nest adjoined the other, the third Cormorant's nest was just below the Darter's nest and about two metres away near the trunk of the tree was a fourth Cormorant's nest. All the Little Pied Cormorants were sitting, probably on eggs. This is the first breeding record for the Darters within the County of Cumberland and possibly the only coastal breeding record for New South Wales.

All the nests of the Little Black Cormorants were empty on the December visit but covered with excreta so it would appear that the young successfully fledged too. Only 18 free-flying birds were present on the last visit. This is only the second occasion that Little Black Cormorants have been recorded breeding within the County of Cumberland. The first occasion was on 13 February 1965 when F. Johnstone found a pair nesting within a small colony of Little Pied Cormorants at Kurnell. Little Black Cormorants breed regularly within the County of Northumberland to the north (Morris 1975).

The calls of the Darters could be heard from approximately 460 m away; every few minutes these guttural static notes could be heard in the sanctity of the valley, each call having up to 11 notes and lasting for about five seconds. In flight the wings of the birds could be heard to whistle.

I wish to thank Mr. H. J. DeS. Disney for supplying information on Museum specimens. Some of the notes and the early records have come from the Keith Hindwood Bird Recording Service.

REFERENCES

McGill, A. R. 1942 Bird Movements in the Lower Cooks River District. Emu 42:174.

Morris, A. K. 1975 The Birds of Gosford, Wyong and Newcastle (County of Northumberland). Aust. Birds 9:37-76

North, A. J. 1898 The Birds of the County of Cumberland. Handbook of Sydney: Aust. Assoc. for the Advancement of Science, pp. 68-116

North, A. J. 1912 Nests and Eggs of Birds Found Breeding in Australia and Tasmania. Vol. 3:337. Sydney: Aust. Museum

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DISPLAY OF THE BLACK–FRONTED DOTTEREL

CHRIS SONTER

During an attempt to photograph the Black-fronted Dotterel *Charadrius melanops* at Lamberts Swamp, Yelta in north-western Victoria, I became interested in a threat display being caused by an overlap or intrusion of one pair of dotterels into another pair's feeding territory. At the time of observation the water level in the swamp had been lowered because of pumping action by the Victorian State Rivers and Water Supply Commission. As I was unable to find any mention of the display in the Australian literature available to me, details are set out below.

The birds could have been induced to display as a result of the similarity between the pumping, reducing the waterlevel and the normal drying up of an inland swamp. The status of the Black-fronted Dotterel at Lamberts Swamp is that they are apparently sedentary, the same number of birds being present throughout the year. However, the constant rise and fall in the level of water in the swamp is a problem to the birds, forcing them to defend their feeding and/or breeding territories by this display. It is also possible that at the time of my observations, there was an influx of birds from nearby areas affected by the very slow but definite rise in the level of the Murray River. However, Lamberts Swamp is in no way connected to the flood plains of the Murray River, being a natural low lying depression now used for water storage purposes by the Commission. Salinity of this swamp is high. However, it is utilised by many species of waterbirds, depending on their requirements, particularly when the Murray River is rising or falling.

The display was as follows:- A pair of birds (Nos. 1 and 2) would be feeding along the water's edge or mud when a third bird (No. 3) would arrive nearby but remain a little distant from the feeding pair. Shortly a fourth bird (No. 4) would arrive and it would join the stationary bird (No. 3) and together they would run towards the feeding pair (Nos. 1 and 2). The feeding pair would stop probing the mud and run forward chased by Nos. 3 and 4 whose wings were held in either an aloft or semi-drooped position. Without any warning Nos. 1 and 2 would stop, turn and run back to meet birds 3 and 4. On reaching them, all four would face inwards with their bills pointing to a common centre. A scolding, agitated chattering call was then given by all birds and at the same time each fluttered its wings in a quick repetitive manner. During this portion of the display the body was held in a hunched-up and tense position. This position was held for only three to four seconds, whereon the birds would break-up and retire or continue feeding until the next confrontation occurred.

Although the display, in literal form, could convey to the reader a complicated pattern of behaviour, the process was nevertheless one of basic structure in which a social or mutual confrontation was expressed. In all, the time lapse from the commencement to completion of the display involved as little as one to three minutes. During this form of behaviour it was noticed that never more than four birds participated despite the presence of other *melanops* nearby. However, it was noticed that the confrontation was "open" to these outsiders since,

during my time of observation some of these ventured (probably unintentionally) into close proximity of another bird's feeding area, whereon the display was enacted or repeated. On two occasions it was observed that pairs would frequently engage themselves into a chase of a few metres but this lacked the significance of the behaviour described above.

During my period of observation I was able to discern four complete 4 X bird displays. The area covered in the threat display involved as little as three square metres.

It would appear that the display was one of a territorial nature where a pair was protecting a certain section of the shoreline as a feeding territory rather than a breeding territory. At the time the observation was made (20 July 1974) it would seem that the conditions for breeding were not quite right because the water level in the swamp was too low. Previous observations have indicated that this species tends to breed when the swamp is full, nesting on a small muddy island. Evidently the pair bond relationship is carried on outside the breeding season or is strengthened as the breeding season approaches, whereby the display is more likely to develop into a breeding display.

This display is probably neither rare nor unusual, but is in all probability an action easily overlooked. However, the display that I have described is not mentioned for any of the six members of the genus treated by J. Gooders (Editor, 1969 Birds of the World 3:841-853). It is normal for *melanops* to converge on inland swamps overnight and set about protecting areas for feeding and for breeding purpses. Such movements are made when either the waters rise thus depriving them of feeding areas or when the waters fall, thus exposing feeding areas. With such a simulated drop in the water level of Lamberts Swamp at the time of observation, the dotterels were acting normally.

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* * *

THE PAINTED HONEYEATER ON THE NORTH COAST OF NEW SOUTH WALES

ARNOLD McGILL

The only paper known to me that gives a comprehensive geographical survey of the Painted Honeyeater *Grantiella picta* is that by K. A. Hindwood (1935 Emu 34:149-157). The accompanying map indicated that, apart from the County of Cumberland, there were no other known records in coastal areas of New South Wales. Yet, at that time, and for many years subsequently, the species periodically visited the shale areas west of Sydney and bred there during the late summer months, coinciding with the fruiting of mistletoe. Such movements were eagerly awaited by Sydney ornithologists, but since around 1960 it has either been com-

pletely absent from the County, or at least their visitations and numbers declined noticeably. In the past few years it has been found nesting in the Bulga-Broke area, County of Northumberland (Morris 1975 Aust. Birds 9:73) about 150 km north of Sydney. However, the nomadic wanderings and dispersal pattern of the Painted Honeyeater are still little understood and shrouded with a good deal of mystery.

At the RAOU 1950 Campout at Darra in northern New South Wales it was not uncommon in one particular area and was eagerly "listed" by all the Camp party. However, in this State the main areas of observance concern somewhat regular movements to the southwest. As it has been found in the western parts of both New South Wales and Victoria, it is surprising that there is no known South Australian record. Storr (1973 List of Queensland Birds p. 126) has shown it to be an uncommon breeding visitor to the north-east Darling Downs arriving September to breed, departing December-February. However, Hindwood's map (*loc. cit.*) and records known to me from the Mt. Isa area indicate that the western parts of that State could be considered its main centre of distribution, with annual irruptions into New South Wales and Victoria to follow the fruiting mistletoe and to breed.

North of the Hunter River in coastal New South Wales it appears so far to be unknown. Therefore, an observation on 15 August 1975 at Mitchell Island (near the mouth of the Manning River) is of general significance. I was able to secure a clear view of one bird and note all the plumage details. The bird was feeding about 11 m up in a flowering eucalypt by the Manning Point Road. This particular strip of tall trees was on the opposite side of the road to a similar patch of flowering Melaleucas where I stopped to observe a flock of 25 Dusky Wood-swallows *Artamus cyanopterus* alighting on the flowering blossoms and feeding actively amidst them. However, I soon found that the number of birds about the flowering Eucalypts opposite was far greater. Noisy Friarbirds *Philemon corniculatus* were vociferous, abundant and pugnacious in this clump, pestering most of the other species.

Scaly-breasted Lorikeets *Trichoglossus chlorolepidotus* and Little Lorikeets *Glossopsitta pusilla* were common amidst the blossoms, as well as Scarlet Honeyeater *Myzomela sanguinolenta* and Brown Honeyeaters *Lichmera indistincta*. By their calls the latter two species were plentiful although with the continued activity I was able to locate only a few of each with the field glasses. I feel sure, for the same reason, that there would have been a small number of Painted Honeyeaters for many birds of similar size were briefly glimpsed flying in and out through the thick foliage. However, one emerged clearly on to a more open branch of an outer limb and the full plumage characteristics, including the pinkish bill, could be clearly seen for fully 30 seconds. Should I be criticized for not remaining longer it would be well to mention that I was badly parked; that I had to be back at Taree for an appointment and that the closest I could get the car safely off the narrow road was some distance further on. Nevertheless my view of only one bird was long and clear enough to be certain of identity.

I have long held the opinion that the Painted Honeyeater was solely a fruit-eater and many other people support this view. However, there was every indication that this species, as well as the wood-swallows, honeyeaters and lorikeets gathered there, feasted on the flowering blossoms and nectar that were there in profusion. Insects, of course, could have provided a food source but no frugivorous diet was discernable. In the flowering Melaleucas, where the many

wood-swallows were observed to land with wings outspread and feed eagerly amid the blossoming outer foliage, no honeyeaters of the size of the Painted were observed to perch. Whatever was the preferred food of this species, there was nothing to support the view in either clump that fruit is the sole diet.

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* * *

THE PINK ROBIN IN NEW SOUTH WALES

J. W. TRUDGEON

Standard reference texts give the distribution of the Pink Robin *Petroica rodinogaster* as Tasmania, Victoria and the Australian Capital Territory. Its status is that of a common breeding species in Tasmania, an uncommon breeding species in north-eastern Victoria and a winter visitor to the A.C.T. (Wilson 1964 Emu 64:209-211). Up until 1960 it had not been recorded in New South Wales (McGill 1960 A Handlist of the Birds of N.S.W.).

In the A.C.T. it is a regular visitor to the Brindabella Ranges between 1 April and 28 July of most years, being first recorded in the winter of 1962 (Lamm et al 1963 Emu 63:57). In the winters 1970-1973 none were recorded but during the winter of 1974 a pair was present in the garden of a house in Scullin, a suburb of Canberra (G. S. Clarke 1975 Canberra Bird Notes 3:2:10).

Pink Robins have been recorded twice in New South Wales since 1960. An adult female was mist netted during banding operations at Lake George on 27 April 1963, some 72 km north-east of the localities in the A.C.T. where previously recorded (Wilson *op.cit.).* An adult male was observed at Yeramba Lagoon near Sydney on 20 August 1972 (G. and M. Dibley 1973 Birds 7:60).

The habitat in the Brindabella Ranges where the Pink Robins were banded is that of a wet sclerophyll forest, dominated by *Eucalyptus dalrympleana* Mountain Gum and *E. viminalis* Ribbon Gum with the scrub stratum of acacias and other plants rising to 4.5 m in the deeper and more shaded gullies (Lamm and Wilson 1966 Emu 65:183-205). At Lake George the habitat consists of Ribbon Gum with a dry under-growth of blackberries and briar-roses. At Yeramba Lagoon the Pink Robin was observed in a grove of tall acacias beside a creek.

It is of interest therefore to record that several people, including myself, observed Pink Robins in the Kosciusko National Park during the summer of 1970/1971 when I was stationed there. The robins were observed in small flocks comprising 3 to 10 birds between 11 November 1970 and 6 February 1971. Each flock contained adult males and females, although in the large flocks more immatures than adults were present. The sightings were made at Thredbo (altitude 1400 m); Leather Barrell Spur (1220 m) 22 km S.W. of Thredbo; and at Leather Barrell Creek (1160 m) 20 km S.W. of Thredbo. There was no indication that these birds had bred in the area.

The habitat in which the birds were found was wet sclerophyll forest dominated by *E. delegatensis* Alpine Ash, *E. pauciflora* Snow Gum and Mountain Gum, with an understorey of acacias.

The other observers included Ranger Naturalist B. Gall and four members of the Bird Observers Club. Localities where the birds were found are only 70 km north-west of where they are known to breed in the Snowy Mountains in Victoria. It is possible that these birds were post-breeding flocks of local or near local breeding populations. The birds have not been observed since 6 February 1971 as I moved from the district in early 1972.

Lamm et al *(op. cit.)* states that the Pink Robins observed in the Brindabella Ranges are regular winter visitors arriving after 1 April. It is possible that the Brindabella birds originated from the breeding population that occurs in the Victorian section of the Snowy Mountains. Pink Robins are ground feeders hopping along the ground or perching in the lower branches of acacias, being very difficult to observe in the wet gullies they frequent. Consequently, they are often overlooked, however, once observed the absence of white from the tail of all birds and the overall black of the neck, back, tail and wings of adult males, makes for easier identification. On close observation, the pink breast of the adult male is quite distinct from the breast colours of robins with similar breast markings.

The present status therefore of the Pink Robin in New South Wales is that of a rare post-breeding visitor to the wet sclerophyll forests of the Snowy Mountains, with some birds wintering in the forests of the Southern Tablelands.

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A THIRD SYDNEY RECORD OF THE SPINY-CHEEKED HONEYEATER

DARIEL LARKINS

On 14 June 1975, six members of the NSWFOC visited Pelican Point, Woolooware Bay, where at 1145 hrs Julie Strudwick drew attention to a bird in Coast Banksia *Banksia integrifolia* and *Lantana camara* thickets. Although singing in an undertone, this bird was very difficult to locate until it flew across open ground to a flowering Coral Tree *Erythrina indica* to feed on nectar. It was then identified by me as a Spiny-cheeked Honeyeater *Anthochaera rufogularis,* as I have previously observed this species in western New South Wales on numerous occasions.

The bird was under observation for a period of three hours and the following notes were taken at the time on its description and behavour:- "Smaller than the Little Wattle-bird *A. chrysoptera;* fine dark streaks on crown, broader on back; tail dark brown tipped white; throat and breast apricot buff, paler below with streaking; bill pink tipped black; white band

behind pink gape; blue eye. Flight was undulating with erratic wing beats. The bird fed in the Coral Tree, returning repeatedly to the thickets to sing, mostly in undertones, sometimes with the head thrown back. Louder bubbling calls were heard. The party agreed that only one bird was present. This bird has been recorded on subsequent occasions, the last time on 30 July, 1975.

Prior to the outing there had been a record 34 day dry spell, with dry conditions inland. On 12 June heavy rain fell and gales up to 56 knots blew from the south and south-west. These conditions eased to a few light showers with south to south-west winds gusting up to 30 knots on 14 June. These unusual weather conditions may have been responsible for the presence of this Honeyeater at Woolooware Bay.

The Spiny-cheeked Honeyeater has only been identified in the Sydney District (County of Cumberland) on two previous occasions. On the first occasion Hindwood (1944 Aust. Zoologist 10:231-251) recorded that E. Nubling observed a single bird in his Normanhurst garden feeding on Montbretia blossoms on 8, 10, 13 and 16 August 1938. This varies slightly from the record by Hindwood and McGill (1958 The Birds of Sydney) which concerns "a pair of birds .... at Normanhurst during April, 1938...". Mr. E. Hoskin has checked the record in Hindwood's files and found that the original entry was 'single bird' but this was altered to 'Pair'. The reference in the 'Sydney Birds' file mentions that the Normanhurst record should refer to two birds. The date 'April 1938' was a lapse for 'August 1938'.

These records also state that Mr. Nubling later examined skins of the Purple-gaped Honeyeater *Meliphaga cratitia,* Striped Honeyeater *Plectorhyncha lanceolata* and Spiny-cheeked Honeyeater, and confirmed that 'the bird' was definitely the latter. However, Hindwood's careful alteration of the original entry to 'Pair' indicates there were two birds at Normanhurst. The later use of 'the bird' could be taken for a reference to 'the species'.

The second occasion was on 5 January 1963 when Peter Roberts heard a Spiny-cheeked Honeyeater calling near his home at Mt. Ku-ring-gai. He taped the call and by playback brought the bird into his garden where it stayed most of the morning. Next day he played the call to Keith Hindwood over the telephone. The Pelican Point observation therefore becomes the third Sydney record.

I wish to thank Mr. A. R. McGill and Mr. E. S. Hoskin for drawing my attention to previous records of Spiny-cheeked Honeyeaters in the Sydney district. Mr. McGill pointed out the variation in the published accounts of the Normanhurst record. Mr. Hoskin supplied data from the late Keith Hindwood's records and checked these notes. I thank both for their interest and cheerful assistance. The Department of Science supplied the meteorological data.

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