

RECORDS OF VAGRANT PENGUINS FROM TASMANIA

E. J. WOehler

Australian Antarctic Division, Channel Highway, Kingston, Tasmania 7050, Australia

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SUMMARY

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The documentation of 146 observations of nine species of penguins from three genera indicates that the frequency of reports of vagrant penguins to Tasmania has apparently increased since the 1970s. Four of the species breed at Macquarie Island (King *Aptenodytes patagonicus*, Gentoo *Pygoscelis papua*, Royal *Eudyptes schlegeli* and Rockhopper *E. chrysocome* Penguins), and three on the South Island of New Zealand or cool temperate islands south of New Zealand (Fiordland *E. pachyrhynchus*, Erect Crested *E. sclateri* and Snares Crested *E. robustus* Penguins). Two species are Antarctic breeding species (Adélie *P. adeliae* and Chinstrap *P. antarctica* Penguins).

INTRODUCTION

Previously, the reporting of vagrant penguin records from Tasmania, Australia has been approached by several methods: listing annual records in a systematic list; incomplete reviews, or the listing of one or two prior records for the same species when a new record is published. These approaches are incapable of providing an assessment of the frequency of such vagrants and the spatial and temporal patterns of the records. The documentation of vagrancy in seabirds provides a means for understanding two aspects of a species' ecology. Firstly, the data provide an index of the degree to which vagrancy occurs within that species, and secondly, the range over which individuals are capable of travelling.

In this review, all known records to June 1992 of vagrant penguins (Spheniscidae) from Tasmania and the islands in Bass Strait are presented. Macquarie Island and the offshore islets have been excluded from this compilation.

METHODS

Records of vagrant penguins were collated from several sources. These sources, and their identifiers, used in the tables below, were: published data; museum specimens and records from the Queen Victoria Museum (QVM) in Launceston and the Tasmanian Museum and Art Gallery (TM) in Hobart; records of the Bird Observers' Association of Tasmania (BOAT) and the Tasmanian Department of Parks, Wildlife and Heritage (DPWH); and from unpublished data of BOAT and two of its members: L.E. Wall (LEW) and the author. Harrison (1985) and personal knowledge were used in the identification of birds. Three records of unidentified or unconfirmed birds have been excluded from all analyses (see below). Throughout this review, the nearest breeding locality for each species has been used to describe the minimum distance that the bird(s) must have travelled to reach Tasmania.

RESULTS

A total of 146 observations of vagrant penguins has

TABLE 1

RECORDS OF KING PENGUINS *APTENODYTES PATAGONICUS* FROM TASMANIA

Date	Location	Status/Comments	Source
Dec 1909	Maria Island National Park	Reported killed by fisherman; record unsubstantiated	Hall (1910), Wall (1973)
Jan 1955	Adventure Bay, Bruny Island	Ashore, then returned to sea	Sharland (1956)
21 Jul 1956	Hope Beach, South Arm	Beach-washed carcass	Sharland (1956), Wall (1973)
2 Feb 1970	Derwent Estuary	Mauled by dog; returned to sea No moult recorded	Wall (1973)
15 Mar 1970	Safety Cove, Port Arthur	Immature bird moulting Released 14 April	Wall (1973, 1980b)
26 Mar 1972	Surprise Bay South Coast	Moulting first-year bird	Wall (1973), Hosken <i>et al</i> (1974)
2 Feb 1973	Dover	Live bird ashore	Wall (1973)
10 Feb 1973	Garden Island Creek	Live bird, not in moult, Presumed to be same bird as seen at Dover 2 Feb	Wall (1973, 1980b)
Apr 1974	Strahan	Moulting bird on shore. Presented to Woodville Zoo, Granton	Wall (1980b)
19 Mar 1978	Dover	Near the end of moult, age not recorded	Wall (1980b)
4 Mar 1983	Adventure Bay Bruny Island	Subadult (1 to 2 years old) in moult	Patterson & Rounsevell (1984)
3 Apr 1983	Steels Beach Falmouth	Juvenile in moult	Patterson & Rounsevell (1984)
17 Mar 1987	Noyhener Beach, South Coast	Adult	BOAT
15 Feb 1988	South Cape	One bird. Ashore until 24 Feb	EJW
20 Feb 1988	Triabunna	Seen simultaneously with bird at Eagles Beach. Taken to Maria Island National Park	Patterson (1989)
21 Feb 1988	Eagles Beach, Marion Bay	Bird on beach	Patterson (1989)
20 Mar 1988	Courts Island, South Bruny Island	Swimming, not yet in moult. Moulted, ashore until 2 Apr	Patterson (1989)
8 Mar 1988	Bolton's Beach	Ashore for approximately one week, previously seen at Triabunna. Adult	BOAT
3 Apr 1988	Cloudy Bay, South Bruny Island	Beach-washed. Flesh missing from breast	Patterson (1989)
9 Feb 1989	South Cape Bay	Moulting, ashore until 1 Mar, absent 4 Mar	Patterson (1990)
17 Feb 1989	Cockle Creek	Single bird	EJW

been made, excluding the three unidentified or unconfirmed specimens. These observations were of nine species from three genera. Tables 1 to 6 list records for six of these species; and pertinent aspects are described below. Because there are too few records describing the age or the sex of individuals, no analyses of these data were made. Data on moult were collected more frequently and thus permitted a limited analysis. However, the absence of moult data for any record cannot be assumed to infer an absence of moult. For the four species with greater than 10 records (King, Fiordland, Rockhopper and Royal Penguins), the monthly frequencies are expressed as percentages in Table 7.

King Penguin *Aptenodytes patagonicus*

A total of 21 observations has been made. Of the 20 substantiated observations, all but one were from the south, southeast or east coasts of Tasmania: the other was from the central west coast (Table 1). Only one observation was of a beach-washed bird; all other records were of live birds. There were nine records in the period 1909 to 1978, but 11 after 1980, including six in 1988. Fifteen of the records

were from the months of February and March (71%) and seven of the eight moulting records (88%) were from the months of March and April (Table 7). The breeding population of King Penguins on Macquarie Island, the nearest breeding locality approximately 1500 km southeast of Tasmania, is approximately 80 000 pairs; breeding populations are also present on subantarctic islands in the Indian Ocean (Woehler 1993). At Macquarie Island, the breeding season extends from late November to early April.

Gentoo Penguin *Pygoscelis papua*

Five substantiated records exist of Gentoo Penguins in Tasmania, all but one from the southeast coast (Table 2). All records are of live birds seen ashore, there are no beach-washed records. There was one January record of a moulting bird. The nearest breeding population of Gentoo Penguins is at Macquarie Island, where approximately 4700 pairs nest (Robertson 1986), between August and April. One record in mid January 1990 off the east coast has been excluded; that of a bird attempting to board a fishing vessel.

TABLE 2

RECORDS OF GENTOO PENGUINS *PYGOSCELIS PAPUA* FROM TASMANIA

Date	Location	Status/Comments	Source
25 Mar 1925	Eaglehawk Neck	Bird ashore. No further details	Fletcher (1926), Hindwood & Sharland (1944)
10 May 1975	Marion Bay	Returned to sea after being photographed	LEW, Newman (1976)
30 Dec 1977	Trial Harbour	Live bird	Thomas (1979)
1977	Port Arthur	No details reported. Unsubstantiated	Sharland (1981)
8 Jan 1988	South Cape Bay	Bird alive on beach, age not recorded	Patterson (1989)
27 Jan 1990	Eaglehawk Neck	Moulting bird on beach. Age and sex not determined. Ashore until next day	EJW, Patterson (1990)

Adélie Penguin Pygoscelis adeliae

There has only been one record of an Adélie Penguin in Tasmania, that of a non-moulting second-year bird that came ashore at Fortescue Bay, Tasman Peninsula, between 25 and 31 December 1983 (Tuffy & Fazackerly 1984). Adélie Penguins breed on the Antarctic Continent, the Antarctic Peninsula, and on islands south of the Antarctic Polar Front (Woehler 1993). The nearest breeding localities to Tasmania are those of the Ross Sea area, (approximately 3 500 km southeast), where more than 1 million pairs nest (Woehler 1993). Breeding takes place between mid-October and late March.

Chinstrap Penguin Pygoscelis antarctica

There are two records of Chinstrap Penguins from Tasmania. Wall (1970) reported an adult present at South Cape Rivulet on 22 November 1968 whose carcass was collected in January 1969. The second was seen swimming in the Bathurst Harbour Channel in January 1980 (Patterson 1981). The nearest breeding location to Tasmania are the Balleny Islands, just to the north of the Ross Sea, Antarctica, where the breeding cycle extends from late October to April.

Fiordland Crested Penguin Eudyptes pachyrhynchus

A total of 50 records of Fiordland Crested Penguins exists from Tasmania, including one collected in 1773 by Forster on Cook's second voyage (Table 3). Between 1773 and 1953, five records from the southeast and east coasts, and one from the northwest, were made. In the period between 1970 and 1979, an additional 20 birds were recorded; mostly from July to September, with records from November to January (Table 7). Thirteen of these records were from the west or northwest coasts, and only seven were from the northeast and east coasts. Between 1980 and 1992, another 24 birds were reported, with records from each month except November. Only one of these was from King Island, and the other 23 were from the southeast or east coasts. At present there is no explanation for

the apparent shift of records away from the southeast and into the west and northwest of Tasmania between 1970 and 1980.

Fiordland Crested Penguins breed on the South Island, New Zealand and its offshore islands, approximately 2000 km to the east. This species is a winter breeder, with adults arriving in June at the colonies and departing in March. Of the 50 records, 23 were from the months of July to September (46%), and seven of the nine moulting records were from January and February (78%).

Rockhopper Penguin Eudyptes chrysocome

At least 18 Rockhopper Penguins have been recorded from Tasmania and King Island (Table 4). The two records for Half Moon Bay, in July 1972, have been treated as one record. Of the 18 records, all but three were from the west or northwest coasts, including King Island, and all of these (except for one where the month was not recorded), were from the months of April (one record), June (one), July (eight), August (three) and September (one). There were 11 records from the months of July and August 1972 combined. Two of the three records from the southeast were in February, the other was from July. The months of June to September accounted for 15 of the 19 records (79%), but there were only two moulting records (one each in February and April).

Rockhopper Penguins breed at Macquarie Island and at several of the subantarctic islands south of New Zealand (Watson 1975). The size of the population at Macquarie Island is undetermined, but there are at least 100 000 pairs (Woehler 1993). Adults are ashore at the breeding grounds from October to April.

Erected Crested Penguin Eudyptes sclateri

The single record of this species is of a beach-washed skull found on Trefoil Island in Bass Strait in early December 1983; the age and sex of the bird could not be determined, (Towney & Skira 1985). Erect Crested Penguins breed at the Antipodes

TABLE 3

RECORDS OF FIORDLAND PENGUINS *EUDYPTES PACHYRHYNCHUS* FROM TASMANIA

Date	Location	Status/Comments	Source
Feb 1773	Adventure Bay	Collected by Forster on Cook's second voyage	Hull (1918), Hindwood & Sharland (1944)
Sep 1913	Devonport	Immature bird collected, specimen no longer available. Previously identified as Rockhopper by Dove (1915)	Hindwood & Sharland (1944)
Apr 1944	Falmouth	Released after capture	Hindwood & Sharland (1944)
12 July 1944	Eaglehawk Neck	Beach-washed, age and sex not recorded	TM, Hindwood & Sharland (1944)
15 Jun 1951	Eaglehawk Neck	Beach-washed, age and sex not recorded	TM
1 May 1953	Falmouth	Beach-washed, age and sex not recorded	QVM
3 Sep 1970	Cape Portland	Juvenile female found alive on beach	QVM
8 Jul 1972	Ocean Beach, Strahan	Juvenile beach-washed	Newman (1973)
22 Jul 1972	Ocean Beach Strahan	Beach-washed adult	Newman (1973)
22 Jul 1972	Ocean Beach Strahan	Beach-washed adult	Newman (1973)
28 Jul 1972	Currie, King Island	Beach-washed sub-adult. Sex not recorded	QVM, McGarvie & Templeton (1974)
29 Jul 1972	Ocean Beach, Strahan	Beach-washed sub-adult. Sex not recorded	QVM
29 Jul 1972	Ocean Beach Strahan	Beach-washed, age and sex not recorded	QVM
29 Jul 1972	Badger Box, King Island	Beach-washed adult male	QVM, McGarvie & Templeton (1974)
5 Aug 1972	Trial Harbour	Beach-washed sub-adult. Sex not recorded	QVM, BOAT
5 Aug 1972	Trial Harbour	Beach-washed female. Age not recorded	QVM, Newman (1973)
24 Aug 1972	King Island	Beach-washed, age and sex not recorded	QVM, Newman (1973)
25 Aug 1972	King Island	Beach-washed, age and sex not recorded	Newman (1973)
20 Sept 1972	Porky Beach, King Island	Beach-washed, age and sex not recorded	QVM, Newman (1973), McGarvie & Templeton (1974)
11 Nov 1972	Scamander	Beach-washed adult, sex not recorded	QVM

27 Jan 1973	Porky Beach, King Island	Found alive with damaged foot and flipper. Died several weeks later in partial moult	Newman (1973)
Jan 1977	Cape Naturaliste North-east Coast	One bird. No further details	Thomas (1979)
10 Sep 1978	Ocean Beach Ansons Bay	Beach-washed adult male	QVM
4 Nov 1978	Four Mile Creek Falmouth	Beach-washed. Head only. Juvenile, sex not recorded	QVM
3 Dec 1978	Maria Island National Park	Beach-washed	Thomas (1980)
12 Sep 1979	Steels Beach Scamander	Beach-washed sub-adult male recently dead	QVM, Jones (1980)
31 Jan 1981	Maria Island National Park	Moulting, present until 11 Feb	Jones (1982)
21 Feb 1981	Point Puer, Port Arthur	Moulting, present until 1 Mar	EJW, Jones (1982)
4 Sep 1982	Eagles Beach, Marion Bay	Beach-washed	Patterson (1983)
19 Jan 1983	Safety Cove Port Arthur	Moulting bird	Patterson & Rounsevell (1984)
27 Feb 1984	Nye Bay South-west coast	Moulting bird, age and sex not recorded	Rounsevell (1985)
Mar 1985	Tasman Peninsula	Taken to Taranna Marine Park. Still present in early 1987	BOAT
8 Jun 1985	Darlington Beach, Maria Island National Park	Beach-washed, age and sex not recorded	Patterson (1986)
10 Jun 1985	Adventure Bay, Bruny Island	Live bird. Age and sex not recorded	Patterson (1986)
4 Jul 1985	Riedle Bay, Maria Island National Park	Beach-washed. Old carcass	Patterson (1986)
Apr 1986	Prion Beach	Beach-washed, age and sex not recorded	Patterson (1987)
May 1986	Eaglehawk Neck	Live bird taken to Taranna Marine Park	BOAT
5 Jun 1986	Bluestone Bay, Freycinet Peninsula	Moulting bird	Patterson (1987)
22 Aug 1986	King Island	Beach-washed, age and sex not recorded	Patterson (1987)
31 Aug 1986	Marion Bay	Beach-washed, age and sex not recorded	EJW, Patterson (1987)
16 Jan 1987	Coles Bay	Moulting on rocks. Departed two days later	Patterson (1988)
29 Jan 1987	Tasman Peninsula	Moulting bird taken to Taranna Marine Park. Released 4 Mar	Patterson (1988)
23 Sept 1988	Seven Mile Beach	Beach-washed sub-adult. Recently dead	Patterson (1989)
25 Oct 1988	Bolton's Beach, Triabunna	Reported alive on 25 Oct, died on 27 Oct. Age and sex not recorded	TM, Patterson (1989)

7 Jan 1989	Prion Beach	Beach-washed	EJW, Patterson (1990)
27 Aug 1989	Falmouth	One bird	EJW, Patterson (1990)
13 Dec 1989	Tasman Peninsula	Emaciated (corpse?)	TM
20 May 1991	Bicheno	Moulting juvenile died after several days	BOAT
17 July 1991	Bluestone Bay, Freycinet Peninsula	Healthy bird not in moult	BOAT
3 Sep 1991	South Cape Rivulet	Juvenile in good health, present next day	BOAT

TABLE 4

RECORDS OF ROCKHOPPER PENGUINS *EUDYPTES CHRYSOCOME* FROM TASMANIA

Date	Location	Status/Comments	Source
Nov 1887	King Island	Live bird collected	Dove (1915), Hull (1918)
Jul 1925	Eaglehawk Neck	Beach-washed	Hindwood & Sharland (1944)
12 Jul 1970	Porky Beach, King Island	Beach-washed juvenile male, no crest feathers	QVM
1 Jul 1972	Strahan	Beach-washed adult female	QVM
3 Jul 1972	Porky Beach, King Island	Beach-washed, sub-adult bird. Sex not recorded	QVM
8 Jul 1972	Ocean Beach, Strahan	Beach-washed juvenile male, no crest feathers	QVM
19 Jul 1972	Half Moon Bay, King Island	Beach-washed, age and sex not recorded	QVM
21 Jul 1972	Half Moon Bay, King Island	Beach-washed, age and sex not recorded	Newman (1973)
23 Jul 1972	Porky Beach, King Island	Beach-washed, age and sex not recorded	QVM, Newman (1973)
29 Jul 1972	Ocean Beach,	Beach-washed sub-adult female	QVM
31 Jul 1972	Porky Beach, King Island	Beach-washed, age and sex not recorded	BOAT (1972)
12 Aug 1972	Ocean Beach, Strahan	Beach-washed, age and sex not recorded	Newman (1973)
12 Aug 1972	Ocean Beach, Strahan	Beach-washed, age and sex not recorded	Newman (1973)
12 Aug 1972	Ocean Beach, Strahan	Beach-washed, age and sex not recorded	Newman (1973)
23 Jun 1974	Ocean Beach, Strahan	Beach-washed	Newman (1974)
11 Feb 1977	South Bruny Island	One bird	BOAT (1979)
5 Sep 1978	Turners Beach	Live bird	Thomas (1980)
12 Feb 1990	Maatsuyker Island	Moulting bird, possible juvenile, sex not recorded. Taken by DPWH staff for safe-keeping, released 5 Mar at Maatsuyker Island	EJW, DPWH, Patterson (1990)
16 Apr 1991	Mawson Bay, West Coast	Moulting adult	BOAT

Islands, Campbell Island and the Bounty Islands south of New Zealand (Watson 1975). The birds return to the breeding colonies in September and depart in March.

Snares Crested Penguin *Eudyptes robustus*

There have been six records of this species from Tasmania (Table 5). All were reported from the southeast or east coasts, with no apparent monthly trend in observations. Snares Crested Penguins breed on the Snares Islands, approximately 1400 km south-east of Tasmania, (Watson 1975). Breeding adults return to colonies in September and depart in March.

Royal Penguin *Eudyptes schlegeli*

There are 40 records of Royal Penguins from Tasmania (Table 6). There were 12 records between

1944 and 1977, of which at least 10 were from the east or southeast coasts; all were in February, March or April. A further 28 records were made between 1981 and 1992. Six of these were from King Island, one unknown and 20 were from the east and south coasts. As between 1944 and 1977, the majority of sightings were from February (10), March (10), April (three) and May (two). January, June and September each had one report (Table 7). Of the 40 records, 30 were from February and March (75%). These two months were also when the greatest numbers of moulting records were made (19 of 30 = 63%). Royal Penguins are endemic to Macquarie Island and the nearby Bishop and Clerk Islets, where an estimated 850 000 pairs breed (Copson & Rounsevell 1987). Breeding birds return to their colonies late in September and depart in early April.

TABLE 5

RECORDS OF SNARES CRESTED PENGUINS *EUDYPTES ROBUSTUS* FROM TASMANIA

Date	Location	Status/Comments	Source
27 Aug 1951	Seven Mile Beach	Bird died after a few days ashore	TM, Simpson & McEvey (1972)
15 Dec 1977	South Bruny Island	Live bird	Wall (1980a)
26 Aug 1978	Port Arthur	Live bird	Wall (1980a)
Jun 1979	Okehampton, Triabunna	Beach-washed, age and sex not recorded	QVM, Green (1980)
17 Nov 1985	Safety Cove, Port Arthur	Resting on rocks. Age and sex not recorded	Patterson (1986)
29 Jan 1987	Seven Mile Beach	Found in poor condition on beach. Rehabilitated, released 16 Apr	Patterson (1986)

TABLE 6

RECORDS OF ROYAL PENGUINS *EUDYPTES SCHLEGELI* FROM TASMANIA

Date	Location	Status/Comments	Source
22 Feb 1944	Eaglehawk Neck	Moulting bird ashore for five or six days, then returned to sea. Possibly an adult female	Hindwood & Sharland (1944)
23 Feb 1945	Coles Bay	Moulting bird. Swam off after being handled	Sharland (1945)
16 Mar 1952	Eaglehawk Neck	Ashore until 18 Mar	Cashion (1953)
12 Apr 1952	Pirates Bay	Beach-washed skin and bones only, age and sex not recorded	TM, Cashion (1953)
5 Mar 1962	Adventure Bay, Bruny Island	Male bird came ashore and died later the same day	TM
31 May 1973	Not reported	Two birds in Woodville Zoo, origin unknown	LEW
19 Mar 1974	Safety Cove, Port Arthur	One bird, about to moult	Wall (1974)
15 Mar 1975	Falmouth	Subadult female came ashore and lived for two days	QVM, Tyson (1976)
29 Feb 1976	Trial Harbour	Moulting bird	Thomas (1977)
Feb 1976	Cox Bight	One bird	Thomas (1977)
6 Mar 1976	South East Cape	Live bird photographed	LEW
20 Feb 1977	Safety Cove, Port Arthur	Moulting bird	Thomas (1979)
Jan 1981	Eaglehawk Neck	Moulting bird	Jones (1982)
10 Feb 1981	Bicheno	Moulting female. Age not recorded. Fed until released on 8 Mar	TM Jones (1982)
Mar 1982	Grassy, King Island	Moulting bird ashore	EJW
4 Sep 1982	Eagles Beach, Marion Bay	Beach-washed, age and sex not recorded	BOAT
28 Feb 1983	Eaglehawk Neck	Moulting bird, age and sex not recorded	Patterson & Rounsevell (1984)
28 Feb 1983	Surveyor's Bay	Moulting bird, age and sex not recorded. Present until 4 Mar	Patterson & Rounsevell (1984)
3 Mar 1984	South Cape Bay	Moulting adult, sex not recorded. Present until 5 Mar	BOAT
4 Mar 1984	Cape Wickham, King Island	Moulting sub-adult. Present until 16 Mar	EJW, Rounsevell (1985)
Apr 1984	Eaglehawk Neck	Moulting bird taken to Taranna Marine Park, released after moult	Rounsevell (1985)
18 Feb 1985	Eaglehawk Neck	Live bird. Age and sex not recorded	Patterson (1986)

Mar 1985	Not reported	Bird in poor condition handed to Taranna Marine Park	BOAT
23 Feb 1986	Keetchem Bay	Adult in moult. Sex not recorded	EJW, Patterson (1987)
Apr 1986	King Island	No details recorded	BOAT
May 1986	Eaglehawk Neck	Live bird taken to Taranna Marine Park	BOAT
13 Mar 1987	Risdon	Moulting bird. Taken and released at Green Island	Patterson (1988)
14 Mar 1987	Wilson Bight, South Coast	Adult in moult, sex not recorded	BOAT
19 Apr 1987	Fortescue Bay	Live bird	Patterson (1988)
10 Feb 1988	Risdon	Moulting bird, age and sex not recorded	Patterson (1989)
23 Feb 1988	Currie, King Island	Moulting bird, age and sex not recorded. Died 26 Mar	Patterson (1989), Ross (1988)
26 Feb 1988	Port Arthur	Moulting bird. Died after four days ashore. Emaciated and parasitised	Patterson (1989)
4 Mar 1988	Porky Beach, King Island	Subadult? Previously identified as a Macaroni Penguin	QVM
7 Mar 1988	Falmouth	Moulting bird in poor condition	BOAT
12 Mar 1988	Strahan	Moulting adult died after several days. Sex not recorded	Patterson (1989)
30 May 1990	Nine-mile Beach, King Island	Adult resting on beach	Patterson (1990)
29 Mar 1991	Five Mile Beach	Beachwashed	BOAT
Feb 1991	South Cape Bay	Injured bird later released	BOAT
Feb 1992	Eaglehawk Neck	No details recorded	BOAT

TABLE 7

MONTHLY VAGRANT PENGUIN RECORDS FROM TASMANIA BY PERCENT. ONLY FOUR SPECIES WITH GREATER THAN 10 RECORDS ARE INCLUDED

Species, n	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
King Penguin, 21	4.8	38.1	33.3	14.3			4.8					4.8
Fiordland Penguin, 50	14.0	6.0	2.0	4.0	4.0	8.0	18.0	14.0	14.0	2.0	4.0	4.0
Rockhopper Penguin, 19		10.5		5.3		5.3	52.6	15.8	5.3		5.3	
Royal Penguin, 40	2.5	37.5	37.5	10.0	7.5	2.5			2.5			

Crested penguins *Eudyptes* spp.

Two beach-washed carcasses of crested penguins *Eudyptes* spp. were collected in July 1972 from Strahan and King Island. Based on an examination of the carcasses and comparison with other material, these two records are almost certainly of Rockhopper Penguins (pers. obs.) and therefore part of the large wreck of this species in July 1972 (see above and Table 4). However, these two records have not been incorporated into the confirmed Rockhopper Penguin records because the identifications were not definite.

DISCUSSION

Based on the records presented here, it is clear that for many of the penguin species their status in Tasmania and the Bass Strait islands must be revised. Species formerly described as rare stragglers or occasional visitors (King, Rockhopper, Royal and Fiordland Crested Penguins, e.g. Green 1977) are more correctly described as regular visitors. The other species (Adélie, Chinstrap, Gentoo, Erect Crested and Snares Crested Penguins) each have less than six records, and therefore should be described as rare vagrants. However, the true status of each species will never be known accurately, because not all vagrants are seen, or reported.

For some species, the breeding range is relatively confined (e.g. Royal Penguins), and therefore the distances may be considered typical. However, several species have a circumpolar breeding distribution (such as Adélie and Rockhopper Penguins), and the birds may have originated at any of these localities. A factor that further confuses the origins of the vagrants reported here is that for all of the species recorded, the pelagic periods of their lives (post-fledging to first breeding, and winter, nonbreeding periods), are completely unknown. Most of the records listed here are of birds during their nonbreeding times, typically of birds coming ashore to moult after the breeding season. The remainder of the records are of sub-adult birds, either beach-washed or moulting, with only two records of adult birds of potential breeding status recorded from within the breeding season.

Moult in penguins is confined to a short period at the end of the breeding season when the entire plumage is shed and the bird would experience severe loss of body heat in the water. Prior to coming ashore to moult, penguins deposit a body fat store to provide energy for moult and metabolic needs during moult, since the moult is also a fasting period. Moult is thus a critical period, and an inadequate energy supply can be fatal. The excess demands associated with vagrancy may prevent sufficient energy stores being deposited or rapidly deplete those accumulated. Hence the high number

of birds that have been reported to die during or shortly after moult is not unexpected.

Why some species are reported more frequently from particular stretches of coast can be at least partly explained by the proximity of those coasts to the breeding localities. Thus the records of New Zealand (Fiordland, Erect and Snares Crested Penguins) and Macquarie Island (King, Rockhopper, and Royal Penguins) breeding species from the south to east coasts of Tasmania are expected. However, records of the same species from the north to west coasts and King Island indicate that the birds are travelling widely around Tasmania before coming, or being swept, ashore. Vagrants from more distant breeding localities (Adélie and Chinstrap Penguins) would be expected to be under the influence of ocean currents, and thus come ashore more widely. Shifts in the reporting of species, such as that described for Fiordland Crested Penguins, where the majority of records were from the southeast or east coasts prior to 1953, and after 1980, and from the northwest or west coasts during the 1970s are presently unexplainable.

Whereas some of the increased rate of sightings after the 1970s may be explained by an increased public presence on the beaches, both in the time spent and the number of people present, and to some extent the population distribution in Tasmania, it appears from this review that there may have been an increase in the numbers of vagrant penguins of some species reaching Tasmania in recent years. Some of the species' breeding populations are increasing (Woehler 1993), and it is suggested that the increase in the number of vagrant penguins reaching Tasmania is at least partly a function of these increases.

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