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WHALE STRANDINGS IN TASMANIA SINCE 1945 WITH NOTES ON SOME SEAL REPORTS

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(with eight tables and one text figure)

ABSTRACT

Five species are added to the last published list of Tasmanian Cetacea together with details of 73 hitherto unrecorded strandings of previously reported species. Details are given of mass strandings of sperm and pilot whales and a table of pigmy right whale strandings is brought up to date. One species is reported from Tasmania for the first time.

INTRODUCTION

I never had the privilege of knowing Clive Lord but very soon after my arrival in Tasmania in 1947 I felt that I should know him and perhaps even meet him soon because his name kept occurring in so many conversations relating not only to natural history but also to other more general matters. Now, his name still appears in the literature and is still referred to in conversations over a wide range of zoological topics so that it is abundantly clear that his labours were not in vain and as long as natural history is studied his work will survive.

An important aspect of Lord's work was his interest in many facets of natural history and also in the history of Tasmania and of its aboriginal peoples. Reference to the Papers and Proceedings of the time shows this interest very clearly in the titles of the papers which he submitted to the journal. In those days it was possible to follow a wide spread of interests, indeed one had to do so as there were so many fascinating facts to be recorded and so few people to do it. The increase in specialization that has occurred in recent years means that workers of such breadth are becoming very rare. However, it was in the Vertebrates that Clive Lord found most of his interests and this was shown in a series of papers with another great Tasmanian, H.H. Scott of Launceston, and resulted finally in the production of the *Vertebrate Animals of Tasmania*.

One of the groups in which Lord was interested was the whales and he published a series of papers on the Cetacea in our Proceedings between 1918 and 1928. These were in collaboration with H.H. Scott whose son still continues a family interest in these animals. Thus, it is not entirely without relevance that I have chosen the Cetacea as the topic for this Memorial Lecture.

I chose 1945 as a starting point since I assumed that Lord and Scott would have reported any important strandings prior to that date. Davies (1963) published the details of our whale fauna but since that date a substantial number of records of strandings both of species new to Tasmania and of new localities have come to light. Some of these records give some useful information on the biology of some of our whales. It now seems appropriate to bring our records up to date from the scattered literature in which the original information was published as well as gathering in reports from previously untapped sources.

Illustrations are not given for each species as this was done by Davies and, in

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any case, the identification of many whales by external characters is very difficult and cranial examination is essential in most of the more obscure species.

Unless otherwise acknowledged, all strandings are reported here for the first time and no strandings have been included after 30/9/1977.

Suborder ODONTOCOETI

The Toothed Whales

These whales are easily identified by the presence of one or more pairs of teeth in each jaw and by the absence of whalebone.

Family PHYSETERIDAE

This is a small family of sperm whales, only one species of the three in the Family occurring positively in Tasmania. Another species may well occur here but has not yet been recorded whilst the last species is tropical in affinities.

Physeter catodon L.
Sperm Whale

A large whale reaching 18 m. with the head square in lateral view, mouth small and triangular in shape with a long aperture; fifty to sixty large teeth in lower jaw only; no dorsal fin but some irregular humps on the posterior back appear above water when swimming; blowhole on top left of head; purplish brown colour with a white mouth.

Distribution: Oceanic throughout the world; usually found in herds, migrates to temperate seas in summer; formed part of the basis of the Tasmanian whaling industry and still is one of our most commonly stranded whales.

Tasmanian Records: Perkins Is., 10/2/1911, 36 males, one female (? 38 and all male - see Scott, 1942a); Stanley, 8/3/1936, male, 14.6 m; Wivenhoe Beach, Burnie, 9/2/1940 (Scott, 1942a); Stanley, ?/?/1958, 9.2 m (*Mercury* 10/5/1958); Yellow Bluff, ?/?/1960; W. of South Croppies Pt. 25/3/1963, alive when first seen (R. Munro, *pers. comm.*); W. of Tomahawk Point, 27/5/1963, male, 13.9 m; S. of Grassy, King Is., ?/12/1967, skull only (J. Gratton Wilson, *pers. comm.*); Burnie, 6/1/1967, "51 feet" (*Mercury*, 7/1/1967); ?/?/?, N. of Granville Harbour mandible seen at next report; N. of Granville Harbour, May 1966, female, 10.5 m; Cape Grim, ?/?/? mandible seen at next report; Cape Grim, late winter 1969, female, 10.5 m with calf, 2 m; the size of the claf suggests that it probably was aborted; Cape Grim, 22/9/1970, 58 whales, details below; Stanley, 28/3/1971, 32 whales, 25-45 feet (*Mercury*, 29/3/1971); Strahan, 10/6/1971, one animal (*Mercury*, 12/6/1971); Three Hummocks Is. 12/1974, one animal; West Beach, N. Tasmania 4-5/10/1975, two females (per. R.H. Green), data in Launceston Mus.

The Cape Grim stranding: A mixed herd of 58 whales were stranded on a rocky platform in a reef-locked shallow bay between Cape Grim and two off-lying islets, The Doughboys. At the site were the remains of a previously stranded cow and calf together with a mandible of an even earlier stranding. Most of the Tasmanian strandings occur on sandy beaches and this site is not usual, being of a rocky substratum, although the Granville strandings also took place off a rocky coast. The sex ratio was 10 males: 48 females (B. Ritchie, *pers. comm.*), my count based on 52 remaining whales was 11:41. The sizes of the whales is shown on table 1. The sex/size composition of the herd suggest that it possibly was a harem although the number of calves suggests that it probably was a nursery. There were no males larger than 14.02 m. A number of females had enlarged or lactating mammary glands although the significance of this was hard to determine as putrefaction was well under way. Five such females were identified with certainty although there may have been more.

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TABLE 1

Length (m) and sex of *Physeter catodon* stranded at Cape Grim, Tasmania, September, 1970.

Males:	3.04,	6.49,	7.35,	7.62,	8.23,	9.15,	9.17,	10.57,	11.13,	12.95
Females:	3.50,	6.04,	7.62,	7.80,	8.35,	8.50,	8.53,	8.78,	9.12,	9.19,
	9.19,	9.33,	9.39,	9.67,	9.73,	9.86,	9.93,	9.97,	10.06,	10.09,
	10.20,	10.25,	10.29,	10.33,	10.36,	10.44,	10.52,	10.57,	10.85,	10.87,
	10.97,	10.97,	11.00,	11.05,	11.05,	11.12,	11.22,	12.04,	12.57	

The sex composition of the Cape Grim school resembles that of the stranding at Gisborne reported by Robson & van Bree (1971) who found 13 males and 46 females. The size distribution was similar in both strandings.

The size of the males indicates that there were no large sexually mature animals in the school, accepting Best's (1969) figure of 13.72 - 14.01 m as the size at which males reach maturity.

The presence of a very small calf of less than 4 m length of each sex strongly suggests that these animals were aborted during the death of the mother as Best's (1970) growth curves suggest a birth length of about 4m for this species. Best (1968) estimated the age of maturity of females as 8.23 m and this would place 35 of the Cape Grim whales as mature with four immature and two not examined. Clarke (1956) estimated the size of weaning as 6.7 m and this indicates that all but four of the immature whales were weaned.

The Cape Grim stranding site yielded meagre information on three separate strandings so it is apparent that this area presents some hazard for Sperm Whales. It was shown by Bannister (1968) that *Physeter* moves parallel to the coast off Western Australia and several authors, notably Best in South Africa, Gaskin in New Zealand, Nishiwaki in Japan, Bannister in Western Australia and Matthews in South Georgia, have noted that the population increases in on-shore areas in the summer. From this it would seem that the Cape Grim stranding was of a school which was following an earlier than usual on-shore movement. However, Gaskin (1972) noted that in New Zealand these whales avoided shallow water areas except for sick or stranded specimens. Best (1969) found that the 300 fathom (approx 550 m) contour limited the shallow water penetration of *Physeter* off the west coast of South Africa.

The 300 fathom contour lies about 180 kilometres off-shore at Cape Grim so it would seem as if these whales were unusually close inshore and probably had become entrapped in the shoals and reefs of the partially enclosed bay. Sperm whales, being a deep water species would lack the experience to handle these conditions.

The date of the stranding may be correlated with a movement along the coast but it was too early to be part of the summer movements. However, it was not possible to determine whether the whales were moving either northwards or southwards or whether they were seeking to enter Bass Strait, which has a maximum depth less than 300 fathoms. There is no doubt that *Physeter* does enter the Strait as five of the 11 Tasmanian strandings have occurred within the Strait, though it may be argued that the reason these whales have stranded there is because they entered the Strait. Clearly, the shallow waters do not deter the whales from entering the area whether they subsequently leave it or not but there is no evidence that herds pass through the Strait as part of their normal movement pattern. The topography of the bay at Cape Grim is such that southbound animals would tend to be more confused than northbound since the latter would tend to be directed offshore by the Doughboy Islands at the southern end of the bay.

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Kogia breviceps (Blainville)
Pygmy Sperm Whale

The head is bulbous and, as in the sperm whale, has the small triangular mouth ventrally placed, with 18-20 curved teeth in the lower jaw only; teeth of the upper jaw buried in the gum; head one fifth to one sixth of total length which is about 4 metres; the small dorsal fin with a very concave rear edge; flippers broad and placed forward on the body; blackish-grey above, whitish below.

Distribution: South Africa (Slater, 1901); Western Australia (Hale, 1963); South Australia (Hale, 1939; Aitken, 1971); New South Wales (Wall, 1851); probably Queensland (Hale, 1963); New Zealand (Gaskin, 1968).

Tasmanian Records: One mandible of unknown origin in Tasmanian Museum (Lord & Scott, 1924); Pearson (1936) gives Tasmania as a record.

Remarks: A common species in the Port Elizabeth district of South Africa (Ross pers. comm.) but never positively recorded from Tasmania. From its distribution it must surely strand here sometime but can easily be confused with pilot whales by casual observers (see Hale, 1931).

Two specimens of *Kogia* were recorded by Hale (1959) from South Australia and were assigned to this species but later these were found to belong to a very similar but smaller species, *K. simus* (Handley, 1966; Aitken, 1971). This species can be separated from *breviceps* by the possession of one pair of maxillary teeth and other cranial features listed by Aitken. This species may also occur in Tasmania.

Family ZIPHIIDAE
The Beaked Whales

The beaked whales are little known and for this reason have provided us not only with the most interesting strandings but also present most intriguing problems of identification as the species frequently can only be recognized by detailed examination of the skull. These whales possess teeth, the number ranging from one pair in the lower jaw to many in each jaw but in general the species recorded here have few teeth. The common name is derived from the beak-like snout. They do not have a tail notch and there is a prominent V-shaped groove under the throat. McCann (1962a) provided a key to the identification of this Family. Little is known of the factors controlling the distribution of the ziphiids although Gaskin (1971) suggested that in New Zealand they appear to be concentrated in waters between 11.6°C and 16.9°C.

Ziphius cavirostris Cuvier
Cuvier's Beaked Whale; Goose-Beaked Whale

Length to nine metres; flippers small; dorsal fin small and placed well back on body; distance from tip of jaw to blowhole is one ninth of total length; eye twice as far from the tip of snout as from inner angle of mouth; two conical teeth at end of lower jaw in males only which also have a forehead bulge.

Distribution: Not yet recorded from the Arctic or Antarctic but generally distributed elsewhere in the northern and southern hemispheres (Mitchell, 1975b); known from South Australia (Aitken, 1971), New South Wales (Iredale & Troughton, 1934), New Zealand (Gaskin, 1972).

Tasmanian Records: Port Arthur, c. 1868 (Scott and Lord, 1920b); Preservation Is. (Scott and Lord, 1920b); Coles Bay - dried skull found on Jan/1950 (Davies, 1963); Cloudy Bay, Jan/1953, male about six m, skull total length 0.935 m (A. & R. Hammond,

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pers. comm); Five miles N.E. of Henty River - dried skull recovered by G. Davis 5/9/1960; Pieman Heads, c. 1972; skull 0.93 m total length recovered in 1974 by Mr. G. Addison; Seymour July 1974, female six m, skull in Tasmanian Museum; Friendly Beaches Jan/1977 male (W. Boyles *pers. comm*.). Only the Seymour specimen was examined as a whole specimen although decomposed. The Friendly Beaches whale was partially buried when examined by W. Boyles. Measurements of the Seymour animal were: - snout - anterior angle of jaw 0.28 m; angle of jaw - orbit 0.295 m; orbit length 30 mm; snout - anterior of blowhole 0.656 m.

Remarks: This species does not commonly strand in Tasmania although it is the most common of the Family. All the Tasmanian strandings are of individuals but the whale probably is not solitary in habits as a mass stranding was reported from the Antilles by van Bree & Kristensen (1974) and Gaskin (1971) saw a herd of 30-35 whales at sea some of which were possibly of this species. It is taken commercially in Japan (Nikiwashi & Ogura, 1972; Mitchell, 1975a) and provided Omura (1972) with material for an osteological study and also providing other information.

Mesoplodon densirostris (Blainville)
Blainville's Beaked Whale; Dense-beaked Whale

General ziphiid form but small in size, not longer than 4.4 m (McCann, 1963); flukes and flippers of moderate length; two massive teeth in lower jaw in the male only but only the tip of tooth projects above the gum; the teeth form a prominent lateral process on the lower jaw; fins placed well forwards, low on body; as with all other members of this genus, identification of the female is difficult. Black colour with grey ventral surface.

Distribution: Most strandings of this species are from tropical or warm temperate waters in the Pacific, Atlantic and Indian Oceans. Nineteen strandings of *M. densirostris* are recorded by Besharse (1971), the only other Australian records being those of Longman (1926) from Yeppoon, Queensland, 1926; Lord Howe Is. (Krefft, 1870).

Tasmanian Records: Marrawah, 31/7/1964, adult male (Guiler, 1966).

Remarks: Most strandings have occurred on coasts with either warm water or warm currents and Moore (1958) believed that this species was of tropical or subtropical habitat. McCann (1964) suggested that the Caribbean is their breeding ground. The Marrawah specimen was the only animal to strand on the eastern side of an oceanic mass.

Bruyns (1968) sighted some beaked whales at sea off the Azores and tentatively assigned them to this species.

Mesoplodon hectori (Gray)
Hector's Beaked Whale

Externals not described as this is a very little known species. The Tasmanian specimen was decomposed and had been attacked after death by sharks with much damage to flukes and fins and leaving the intestines protruding and the dorsal musculature in tatters.

Distribution: South Africa; Tasmania; New Zealand, Falkland Is.

Tasmanian Records: East Cove, Adventure Bay, female, 12/3/1966 (Guiler, 1967).

Remarks: This is one of the rarest of our whales as only six specimens are known, New Zealand and South Africa having two strandings each. The Tasmanian specimen, the skull of which was described in detail by Moore (1972) is the only known mature

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specimen and measured about 3.5 m.

Fraser (1950) suggested that this species is circumpolar in distribution and Guiler (1967) thought that it was rare north of 45°S. latitude. Ross's (1970) discovery of two young specimens from 34°S. in South Africa does not support this latter view and sheds some doubt upon Fraser's suggestion but clearly much has to be learned about this species.

McCann (1962b) concluded that this species represented the young of *Berardius amuxii* but Moore (1968) strongly disagreed with this view and his conclusion that *M. hectori* is a separate species has been followed here.

Mesoplodon bowdoini Andrews
Andrew's Beaked Whale

Slightly slimmer in shape than the usual rather squat *Mesoplodon* form; characteristic large subtriangular teeth, only one pair, situated in the middle of the lower jaw with the teeth not erupting through the gum in the female.

Distribution: South Pacific (Moore, 1963a, 1966).

Tasmanian Records: Marion Bay, date unknown, skull in Tasmanian Museum (Guiler, 1967).

Remarks: This is another little known whale as only eight other specimens appear to have been recorded, five from New Zealand, one from Campbell Island, one from Western Australia (Gaskin, 1972) and one from Victoria (Dixon, 1970).

Mesoplodon layardi (Gray)
Strap-toothed Whale; Layard's Beaked Whale

Larger than most of the genus being up to 5.5 m in the male and 4.5 m in the female (the Japanese records, however, suggest that the female is larger than the male); dark-purplish brown above with some white patches (Gaskin, 1972); bronze-green dorsally (Hale, 1959); males with one pair of large flat tusk-like teeth in the lower jaws which pass outside the rostrum and curl over towards the midline.

Distribution: Nearly world-wide (Moore, 1963b); cosmopolitan (Mitchell, 1975b); frequently stranded in New Zealand (Gaskin, 1972); Victoria (Warneke, 1963); South Australia, 11 specimens (Hale, 1939).

Tasmanian Records: Recherche Bay, 1922 (Flynn, 1922); Recherche Bay, winter of 1925 (Scott & Lord, 1927); Slopen Is. Feb/1966 (Guiler, 1967).

Remarks: Although this whale is well known from New Zealand and South Australian strandings it is not a common species in Tasmania. It may perhaps be significant that all our strandings have taken place on the far south coast of the island.

The species is well known from overseas material, especially Japanese. It has been shown that this species possesses a condylus tertius, a feature which also occurs in *M. densirostris*, *M. grayi* and *M. bidens* (Robson & van Bree, 1972).

Mesoplodon grayi von Haast
Scamperdown Whale; Gray's Beaked Whale

Almost 6 m long; teeth present but inconspicuous, situated towards the end of the mandibular symphysis and larger in the male than the female.

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Distribution: South Africa (Barnard, 1954); South Australia (Hale, 1939); Victoria (Brazenor, 1933); New Zealand (Gaskin, 1968); Patagonia (Oliver, 1922).

Tasmanian Records: Eaglehawk Neck 21/4/1946; Cloudy Bay, Bruni Is. Jan/1968; unlabelled complete skeleton in Tasmanian Museum (Guiler, 1969).

Remarks: This is the most common ziphiid on New Zealand shores, no less than 25 being recorded by Gaskin (1968), but it is not well known from Tasmania. Osteomyelitis was evident in the skulls from both Eaglehawk Neck and Cloudy Bay and may have been the cause of death in the latter specimen.

Berardius arnuxi Duvernoy
Large Beaked Whale; Arnux's Whale

Beak very stubby but large in contrast to other ziphiids; two pairs of teeth at the end of the lower jaw in the male; the teeth are embedded in the gum in the female; this is a large species reaching almost 9 m in length; blackish brown above with greyish ventral surface.

Distribution: South Africa (McLachlan *et al.*, 1966); South Australia (Hale, 1962); New Zealand (Gaskin, 1972); Falkland Is. (Norman and Fraser, 1937); Antarctic (Taylor, 1957).

Tasmanian Records: Visits Tasmanian waters (Lord & Scott, 1924); North of Port Davey in Jan/1977. The skull was very weathered with the sutures opened and loose. The supraoccipital was missing as were much of the pterygoid processes as well as the posterolateral parts of the maxillae. However, such measurements and ratios as could be obtained fell clearly within the parameters for this species as described by Hale (1962).

The skull was drawn to my attention by Mrs. B. Tracey of Kingston High School and was presented by the School to the Tasmanian Museum.

Little is known of this species. Fifteen strandings are known in New Zealand and this record would appear to be about the twentieth known. The only other Australian record is from Port Lorne, South Australia in December, 1935. The current report is the first positive Tasmanian record for the species.

Hyperoodon planifrons Flower
Bottlenosed Whale

Bulbous forehead, dorsal fin placed well back; large size, more than 9 metres; one pair of teeth at the tip of the lower jaw in the male; beak short, forehead bulbous and prominent; darkish brown-black, whitish ventrally.

Distribution: South Australia (Hale, 1931); Western Australia (Flower, 1882); New Zealand (Waite, 1913); Falkland Islands Dependencies (Fraser, 1945).

Tasmanian Records: Nil. Visits Tasmanian seas but only at intervals (Lord & Scott, 1924).

Tasmacetus shepherdii Oliver
Shepherd's Beaked Whale

Differs from all other ziphiids in that it has small teeth in both jaws with the terminal pair well developed; length about 9 m; black dorsally, grey or grey-yellow flanks, white underneath (Gaskin, 1972).

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Distribution: New Zealand (five specimens, Gaskin, 1972); Argentina (Mead & Payne, 1975); Falkland Is. (Smith, 1965).

Tasmanian Records: Nil. May well turn up some time.

Family GLOBICEPHALIDAE
The Large Dolphins

Orcinus orca (L.)
Killer Whale

A large toothed whale up to 9 m in length with a characteristic high shark-like dorsal fin; flippers rounded and paddle shaped; many strong teeth in both jaws; black with prominent white patches on the side and head, belly white; the dorsal fin of old males becomes very large and tends to flop over sideways and the flippers enlarge and reach one fifth of the body length.

Distribution: Cosmopolitan.

Tasmanian Records: Not infrequently seen around our coasts but strandings are unusual; Adventure Bay, 1868 (Lord & Scott, 1924) appears to be the only record.

Remarks: This whale apparently does not strand frequently anywhere as a total of only six strandings have been reported from New Zealand although no less than 38 sightings were reported in 1963-64.

Pseudorca crassidens (Owen)
False Killer Whale

Length about 6 m with a large dorsal fin which is not nearly as large as in the killer whale; bulging forehead (compare with *Globicephala* spp.); teeth of circular cross-section in both jaws; flippers neither paddle-shaped nor elongated; entirely black in colour.

Distribution: Cosmopolitan (Gaskin, 1972).

Tasmanian Records: Adventure Bay (Scott and Lord, 1920); Stanley, 30/5/1936, more than 100 individuals (Pearson, 1936); Stanley, 28/7/1937 (Scott, 1942a); Eaglehawk Neck, Dec./1946 (Tasmanian Museum); Fanny's Bay, Piper River, Oct./1957, one animal; Seal Bay, King Is., Sept./1958, 50 individuals (both records Scott & Green, 1975); Friendly Beaches June/1963 and Nov./1964 (latter stranding was of 50+ individuals); Perkins Island 18/6/1974, 43 individuals; Fortescue Bay Feb./1977 - skull recovered; from a stranding about June, 1976 (B. Knight pers. comm.); skull of unknown origin, Cygnet Area School.

Remarks: This species comes ashore infrequently but often does so in large schools. Details of the Stanley strandings were given by Scott & Green (1975). The Friendly Beaches strandings did not come to my notice until 1966 when no useful measurements could be made, but skulls were recovered.

It is to be noted that most of the strandings of this species occur in the winter or spring and summer-autumn strandings have not been reported. This may be fortuitous but is supported to some extent by New Zealand strandings most of which have occurred from March-July.

A stranding at Bicheno, 16/12/1964, may have been of this species (*Mercury*, 10/12/1964) and further strandings described as "killer whales" but more probably of this

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species occurred at Black River, June/1974 (*Mercury*, 17/6/1974); West Point, Marrawah, Feb./1972 (*Mercury*, 1/3/1972); N.E. Flinders Is. Aug./1974, 50 individuals "25-30 feet long" (*Mercury*, 31/8/1964).

Globicephala macrorhyncha Gray
Tropical Pilot Whale

Differs from the more common *G. melaena* in the proportion of the fin which is about one sixth of the body length; there are cranial differences as well; black in colour.

Distribution: Tropic Seas.

Tasmanian Records: Green's Beach, 9/5/1973, female (Scott & Green, 1975).

Remarks: A tropical species found here only once but may be more frequent and confused with the pilot whale. Scott and Green give measurements of the only Tasmanian specimen.

Globicephala melaena (Traill)
Southern Pilot Whale; Blackfish

Prominent dorsal fin with a long base almost twice as long as high; length, 6-8 m; prominent bulging forehead; flippers long and narrow about one fifth of body length; teeth in both jaws but only at the anterior part compared with *Pseudorca* where they extend the full length of the jaw; frequently with a white-greyish colour patch below throat extending as a line down belly; white saddle posterior to dorsal fin also a patch posterior to eye but melanics are frequent and can be confused with *G. macrorhyncha*.

Distribution: Cosmopolitan. Davies (1960) suggested that the northern and southern populations have been separated since the Pleistocene by *G. macrorhyncha*.

Tasmanian Records: Stanley, 14/10/1935, 300 individuals, 80 males and 114 females in 194 individuals (Pearson, 1936), measurements of these whales given by Scott (1942); Marion Bay, 22/12/1955, 200 individuals; Macquarie Harbour Mar./1959 (Davies, 1963); Marion Bay, 1956, 20 individuals; Ralphs Bay, Aug./1957, one individual; Howrah, 24/11/1957, one female; Seven Mile Beach, Jan./1966 - specimen in Tasmanian Museum; Pardoe Beach 26/3/1967, 150 animals, (*Mercury*, 27/3/1967); Seymour, 23/8/1968, one female; Boomer Beach, Maria Is., 14/1/1973, 33 individuals, mostly females but one male, 4.2 m (A. Hewer pers. comm.); Cox's Bight, Jan./1975, one animal (I. Kendrick, pers. comm.); Two Mile Beach, Dunalley, 18-9/2/1975, 200 individuals; Two Mile Beach, Dunalley, 28/2/1975, two individuals; Seymour, June/1975, female, melanistic, photograph of skull identified by P.H. van Bree; Ocean Beach, Strahan, 18-19/3/1977, five animals. Further strandings believed to be of this species occurred at Cloudy Bay, Nov./1917, 120-130 individuals (letter in *Mercury* whale file). The Seymour Female - measurements, total length 5.46 m; length of flipper 1.08; length of posterior edge of flipper 0.815; width of flukes 0.53; snout to anterior edge of dorsal fin 1.51; length of dorsal fin 0.68; height of dorsal fin 0.28; snout to anterior edge of orbit 0.44; snout to anterior edge of blowhole 0.47. The Two Mile Beach Stranding - Sex ratio 39:54. The mean total length of 39 males was 5.055 m and of 54 females was 4.087 m. The largest male was 6.2 m and the largest female measured 5.55 m and details of the measurements are given in Table 2, and the measurements of a new born, probably aborted, young also are shown in Table 2.

A remarkable feature of this stranding was the apparent rapidity with which decay set in. The whales were examined on the third day after stranding and almost without exception the abdominal wall had ruptured and the intestine was extruded and in many cases had burst. Photographs by Scott (1942b) showed no similar signs of decay two

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TABLE 2

Measurements (in m.) of *Globicephala melaena*, Two Mile Beach, Tasmania 18-19/2/1975. The sample size is shown in brackets after each measurement. The dimensions of a small male, probably aborted, are given in the right hand column.

		Male	Female	Young Male
1.	Total length	5.054 (39)	4.087 (54)	1.87
2.	Snout - anterior orbit	0.417 (6)	0.396 (9)	0.185
3.	- anterior of blowhole	0.43 (6)	0.40 (9)	0.17
4.	- anterior border of flipper	0.748 (6)	0.678 (9)	0.305
5.	- axilla	0.985 (6)	0.887 (9)	0.42
6.	- vent	2.74 (3)	2.384 (8)	1.06
7.	- anterior of dorsal fin	1.613 (6)	1.302 (8)	0.71
8.	- posterior of dorsal fin	2.278 (4)	2.094 (8)	1.01
9.	Height of dorsal fin	0.40 (6)	0.299 (8)	0.14
10.	Length of dorsal fin	0.565 (4)	0.586 (8)	0.30
11.	Length of anterior border of flipper	1.133 (6)	0.861 (9)	0.385
12.	Length of posterior border of flipper	0.847 (6)	0.633 (9)	0.27
13.	Maximum width of flipper	0.288 (5)	0.224 (9)	0.11
14.	Width of flukes	1.055 (6)	0.841 (8)	0.35
Ratio				
	1/14	4.79	4.85	
	1/9	12.63	13.68	
	1/6	1.84	1.71	
	1/11	4.46	4.74	
	1/12	5.97	6.45	
	1/10	8.94	6.97	
	1/8	2.21	1.95	

days after stranding. Experience with other species showed that rupture may not take place for a longer period, if at all. Mr. T. Dunbabin who reported the stranding assured me that the whales were alive on stranding only three days before.

Remarks: The flipper measurements given by Pearson (1936) for the Stanley strandings would place these animals as *G. macrorhyncha* (16.9% of the total body length). However the detailed measurements given by Scott (1942b) show that the flipper length falls within the range for *G. melaena*. None of the parameters measured by Scott showed any marked sexual dimorphism with the exception of the ratio of the length of the dorsal fin to the total length of the animal which is different in the two sexes. This dimorphism was also noted in the animals from Two Mile Beach. It was noted that the length of the dorsal fin in males was very variable and this may accentuate the possible dimorphism.

Some taxonomic dispute exists as to the relationship of this species. The arguments were summarised by Gaskin (1972) who followed Davies (1960) in recognising only one species of Southern Pilot Whale.

The Strahan strandings of March, 1977 occurred after a period of rough weather. The five animals were spread over about 8 km of beach. Only three animals were examined, two females and one male. Also stranded at the same time was an *Arctocephalus* bull and a female *Tursiops*.

This whale frequently strands on our coasts in both small numbers and large schools and is one of our most common species.

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Family DELPHINIDAE
Dolphins

Tursiops truncatus (Montagu)
Bottle-nosed Dolphin

Beak blunt and sharply defined from forehead; 20-22 pairs of teeth in each jaw; dorsal fin prominent and large; length to 4.5 m; dark-grey above (grey-green, Gaskin, 1972), shading to white ventrally; white streak anterior to eye.

Distribution: Widely distributed in temperate seas. South Australia (Aitken, 1971); Victoria (Wakefield, 1967); New Zealand (Gaskin, 1972).

Tasmanian Records: Tamar River; King Is.; N.W. Coast (Scott & Lord, 1920a); Lisdillon 25/9/1920 - skull in Tasmanian Museum; Stanley, 11/1/1939 (Scott, 1942a); Ralph's Bay, May/1964 - one animal stranded but swam off at high water; Maria Is., Booming Beach, Jan./1973; Ocean Beach Strahan, 18-19/3/1977 five animals, including two female, one male, largest female measured 3.02 m; North-west Bay, 20/7/1977 10 animals.

Remarks: Although a common species it does not strand as often as might be expected. The behaviour of the Ralph's Bay stranding in swimming away on the next tide suggests that these whales are more able to cope with this situation than many others. Only nine records are known from New Zealand.

Tursiops aduncus (Ehrenberg)
Macgillivray's Bottle-nosed Dolphin

Very difficult to distinguish from *T. tursio* (see Ross, 1977). Recorded from Tasmania by Iredale and Troughton (1934) but this needs confirmation.

Lissodelphis peroni (Lacépède)
Right Whale Dolphin

No dorsal fin or hump on back; black dorsally with a vivid white belly fairly sharply demarcated from the black; beak short, 43 pairs of teeth in each jaw.

Distribution: Temperate and Sub-antarctic waters of the South Pacific and Tasman Sea; south of Australia (Gaskin, 1972).

Tasmanian Records: Specimen from Tasmania in Royal College of Surgeons' Museum, London. Date and locality unknown (Davies, 1963).

Remarks: This species has been seen at sea off Tasmania but apparently is oceanic and rarely strands.

Lagenorhynchus cruciger (D'Orbigny)
Southern White-sided Dolphin

Beak very short, almost absent; dorsal fin with a long base and a strongly curved posterior surface; prominent black and white patterns of variable shape on flanks with the black back not clearly set off from the white belly; black circumorbital patch; a small species less than 2 m in length.

Distribution: Oceanic in high latitudes (Gaskin, 1972).

Tasmanian Records: One skull in Tasmanian Museum (Pearson, 1936).

Whale Strandings in Tasmania

Remarks: The colour patterns for this species are so variable that about six other species have been erected to cater for them. However, modern thought is that they are only varieties.

Delphinus delphis L.
Common Dolphin

Slender and graceful with a long beak, tapering forehead; many teeth in both jaws; deep purple brown dorsally and yellow-white ventrally with a pattern of fine stripes round the eye and the base of the beak; dark line from the base of the jaw to the flipper; post-mortem colour changes may leave the belly pink in colour.

Distribution: Cosmopolitan (Norman & Fraser, 1937); South Australia (Aitken, 1971); Victoria (Wakefield, 1967).

Tasmanian Records: Tasmania (Scott & Lord, 1921; Pearson, 1936); Spring Bay, Dec./1955; Eaglehawk Neck, Dec./1944 and 3/6/1967; Seven Mile Beach 15/5/1952; Slopen Main 1/5/1967; South Arm 1/2/1967 - five individuals (all records from the Tasmanian Museum); D'Entrecasteaux Channel - Dec./1975 - about 109 individuals.

Remarks: The only large stranding of this species in Tasmania is that in 1975 when about 100 animals stranded over about 30 km of shore from Adam's Bay to Simpson's Point on the Channel side of Bruny Island. Other strandings have been of small numbers of dolphins.

The D'Entrecasteaux Channel Stranding - It is believed that this stranding occurred from a very large school of dolphins which passed southwards through the Channel early in December. Isolated individuals washed ashore in other places as far away as Howden but it is thought that these animals had floated away from their original point of stranding. The original school was observed by the author and Mr. T.L. Sward when it was south of Zuidpool Rock with animals constantly breaking water in an area about 1.5 km x 8 km. There were other species besides common dolphins in the school as noted from colour patterns but we were not close enough to determine their identity.

The mean length of 15 females was 1.6193 m and that of 12 males was 1.1483 m. Detailed measurements of two specimens of either sex are set out in Table 3. A total of 69 animals were examined from the total of 109 and of these 30 were male and 39 female.

One dead animal had *Zostera* in the stomach according to Mr. G. Davis who was on the site of stranding.

This species appears in North-west Bay, D'Entrecasteaux Channel around June each year and disappears again in December according to Mr. R.M. Nicholl who lives in the area.

Other Dolphins

There are six species of dolphins which are not yet recorded from Tasmania but are known to occur in Tasmanian waters or else have appeared on nearby coasts. These are *Cephalorhynchus hectori*, *C. commersoni*, *Stenella euphrosyne*, *S. caeruleo-alba*, *Grampus griseus* and *Feresa intermedia*. Some of these may well have been observed but confused with *Delphinus* or *Globicephala*. A "spotted dolphin" was reported from Barnes' Bay by Mr. R. Haigh on 13/2/1976 and may have been *Stenella dubia*.

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TABLE 3

Measurements (in m) of two specimens of each sex of *Delphinus delphis*, Great Bay, Tasmania.

	Female	Male	
Total Length	2.09	1.71	2.14
Snout to eye	0.31	0.29	0.335
to blowhole	0.34	0.31	0.35
to anterior dorsal fin	0.90	0.76	0.90
Length of dorsal fin	0.33	0.26	0.32
Posterior of dorsal fin to tail notch	0.86	0.695	0.92
Width of flukes	0.37	0.30	0.33
Snout to anterior of flipper	0.51	0.43	0.51
Width of flipper (axilla)	0.10	0.09	0.095
Posterior of flipper to vent	0.73	0.63	0.75
Length of vent	0.03	0.04	0.06
Vent to tail notch	0.57	0.465	0.75
Length of anterior border of flipper	0.33	0.26	0.23
posterior border of flipper	0.23	0.19	0.18
Teeth - upper jaw	42	43	45
lower jaw	42	46	46

Suborder MYSTACOCETI
 Whalebone Whales
 The Right Whales

Eubalaena australis (Desmoulin)
 Southern Right Whale

No dorsal fin; the bonnet - a roughened area on the head - is characteristic; mouth strongly arched; flippers short and rounded; length about 15-18 m; colour black.

Distribution: Formerly widespread, now greatly reduced in range and numbers.

Tasmanian Records: Used to form the basis of the Tasmanian whaling industry. Seen at sea off Cape Sorell May/1959 (Davies, 1963); Prion Bay 17/4/1974 (*Mercury*, 19/4/1974); S.W. Cape, 18/9/1973 female and calf (A. Cuthbertson *pers. comm.*).

Remarks: A whale with calf that appeared at Blackmans Bay for several years in the 1960's may have been of this species. Although once so common in the River Derwent that it was dangerous to row across the river this species nowadays is rarely seen. It does not strand frequently probably because it often swims in shallow water just outside the surf line and so is used to these conditions.

The Prion Bay specimen was photographed from the air by Mr. V. Reid who reported that the whale had been attacked and driven ashore by a large shark as he saw the incident from his plane.

Copies of the photographs of the S.W. Cape animals clearly are of this species. The female was estimated to be 12-15 m long and was accompanied by her calf in about 12 m of water. The sea conditions had been rough and the sea was described as milky. At one stage the calf nestled alongside the boat and could only be dislodged with difficulty.

This species was heavily fished in the early days and its slow speed made it easy

Whale Strandings in Tasmania

to catch and this, combined with its rich oil made it a desirable haul. Sexual maturity in the female is reached at 13-14 m. Although not fished since the early 1920's, recovery has been slow and probably only a few thousand still exist.

Caperea marginata (Gray)
Pygmy Right Whale

A small baleen whale up to 5.5 m without throat grooves, differing from the right whale in having no dorsal fin; inside of mouth is vivid white; whalebone is creamish-ivory coloured with a prominent black border; dorsal surface black, whitish ventrally.

Distribution: South Africa, Western Australia, South Australia, Tasmania, New Zealand, South America. All strandings from these areas were reviewed by Davies and Guiler (1957), and this list is brought up to date in Table 4.

TABLE 4

Details of strandings of *Caperea marginata* following upon the list published by Davies & Guiler (1957).

36	New Zealand	Site unknown	1887-89	van Bree <i>pers. comm.</i>	Vienna Museum
37	Tasmania	Rebecca Creek	Nov./1953	Lyne, <i>pers. comm.</i>	Univ. of Tas.
38		Simpsons Bay	9/1/1959	M. 4.8 m.	See text.
39		Pirates Bay	Nov./1950	F. Guiler, 1961	
40		Pirates Bay	June/1961	F.	
41		Simpsons Bay	Jan./1961	M. 4.5 m.	
42		Elliott Cove	1962	?(per W. Denniss).	
43		Big Taylor Bay	27/4/1966	F.	
44		Big Taylor Bay	11/1/1968	F.	Tas. Museum.
45		Tinderbox	20/9/1966	?(<i>Mercury</i> , 20/9/1966)	
		Near Dennes Point	Dec./1966	?(per W. Denniss).	
		Pt. Hibbs	13/1/1967	F. 4.3 m. per W. Denniss.	
		Pirates Bay	Dec./1974	?(per R. Rish)	
		Chinamans Bay	Mar./1976		
		Cloudy Bay	Mar./1976	M. 6.1 m.	
	South Australia	Port Lincoln	Before 1948	Juvenile, Aitken, 1971.	
		Port Lincoln	16/8/1960	Aitken, 1971.	
	Victoria	Portland	1946	Wakefield, 1967	
	South Africa	False Bay	27/2/1963	2.9 m, Ross <i>et al.</i> , 1975.	
		Port Elizabeth	18/12/1965	2.98 m, Ross <i>et al.</i> , 1975. P.E. Museum	
		Mossel Bay	Dec./1967	Baleen only. Ross <i>et al.</i> , 1975.	
	Falkland Is.			Hamilton, 1952.	
	South Atlantic	32°56'S;12°42'E	29/11/1970	M. 5.47 m, Ivashin <i>et al.</i> , 1972.	
		33°40'S;00°56'E	4/12/1970	F. 6.21 m, Ivashin <i>et al.</i> , 1972.	

In addition a number of sightings have been made of living animals as follows:

South Africa	False Bay	Feb./1965	Ross <i>et al.</i> , 1975.
	False Bay	Feb./1965	Ross <i>et al.</i> , 1975.
	Plettenberg Bay	Dec./1967	Ross <i>et al.</i> , 1975.
	False Bay	Jan.orFeb./1968	Ross <i>et al.</i> , 1975.
South Atlantic	32°56'S;12°42'E	29/11/1970	Ivashin <i>et al.</i> , 1971.
	Crozet Is.	23/2/1970	Budlyenko <i>et al.</i> , 1973.

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Remarks: Specimen No.38 a damaged skull, was presented to me by Dr. A.G. Lyne who found it on a beach in a weatherworn condition from a stranding of unknown date.

Specimen No.39 was a whale which was captured by Messrs. W. and F. Denniss while seine-netting for bait in 2-3 m of water in Simpkins Bay. The whale was totally butchered for bait but J.L. Davies and I were able to positively identify it as a *Caperea*. As far as can be ascertained Mr. Denniss and his son were the first to observe this species alive and at sea. Abstracts of our interview with them read.... "whale sighted in Simpkins Bay at 01.00 hrs on night of 8-9/1/1959, a mild calm moonless night. The whale was sighted in about 3 m of water with the back and fin above water when swimming. Spouts were twin divergent forwards directed at about 3-5 minute intervals. The whale was speared continually and swam at about 8 km/hr only showing a violent reaction when the tail was touched. The whale was forced ashore and died about 0.600 hrs probably due to heavy blood loss (seen subsequently in the tissues). The underside was grey in colour. Post-mortem examination revealed a small intestinal tapeworm and the stomach contained only an amorphous yellow paste. A Leishmann smear did not show any blood parasites. Ring-like dorsal markings with one side of the ring more deeply incised than the other were noted and these are not incompatible with Utrecht's (1959) suggestion that scars of this nature are made by lampreys."

The rate of swimming and the anteriorly directed twin spouts resemble those of *Eubalaena*. The fact that the animal was seen on a moonless night may account for the scarcity of coastal sightings relative to the number of strandings.

The strandings of *Caperea* per month are shown on fig. 1 and it is clear that with more data than was available to Davies & Guiler (1957) these whales are present in Tasmanian waters nearly all the year round except in April-May and August. The absence of strandings in these months may be due to chance rather than to any absence of the whales from our coasts. There appear to be three peaks of abundance, namely December-January, March and June, but this may only be a result of chance in strandings. The strandings in New Zealand and South Africa show some evidence of seasonal occurrence, especially in South Africa but the sample size is very small and there is no apparent reason why the species should not occur there all year round as in Tasmania.

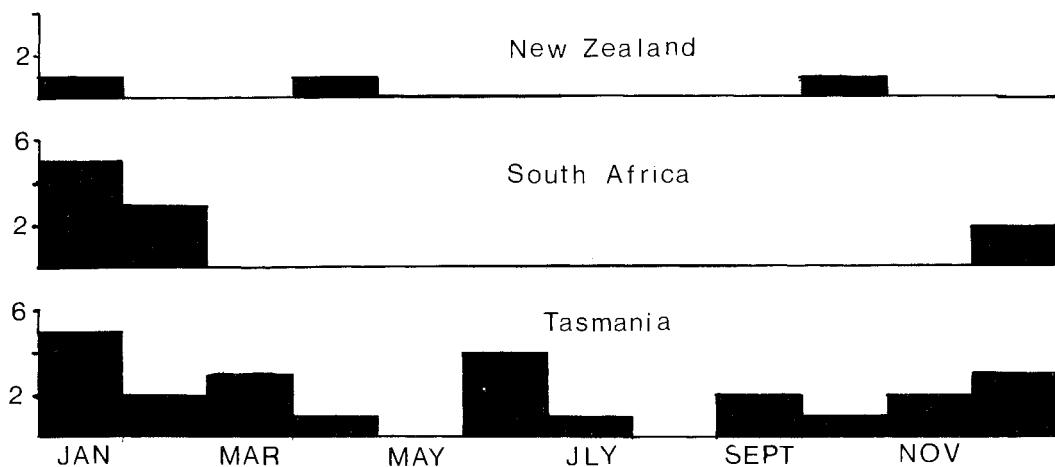


FIG. 1 - Strandings of *Caperea marginata* each month in three southern continents. All known dates of strandings are shown as listed in this paper and Davies & Guiler (1957).

Whale Strandings in Tasmania

Little is known of breeding in *Caperea*, the only evidence being one pregnant female stranded at Eaglehawk Neck in November 1950 (Guiler, 1961). This date is within the breeding season for balaenids.

The sightings by Russian whalers of *Caperea* in deep water are of interest as these are the first records of the use of deep water by this species. The highly typical flattened, strong ribs of *Caperea* are not characteristic of the Cetacea and, together with the shallow water areas in which strandings usually occur, led Davies & Guiler (1957) to postulate that this species spent some time in shallow water, even perhaps resting on the bottom for feeding. However, it is clear from Ivashin *et al.* (1972) that although in deep waters the whales were feeding at the surface and did not dive to depths of more than 2-3 m and remained submerged for only 2-3 minutes. The Russians reported that dissection of *Caperea* revealed that the whale had a small heart and this suggests a shallow diving species.

The beautiful underwater photographs of *Caperea* (Ross *et al.*, 1975) give a very much slimmer outline than that hitherto described from stranded specimens.

Family BALAENOPTERIDAE

Balaenoptera acutorostrata Lacepede
Piked or Minke Whale

Throat grooves, about 50 in number, extended about halfway to the vent; whalebone short, yellowish, upper jaw not arched; black above, whitish below including underside of flukes.

Distribution: Oceanic, cosmopolitan. Western Australia (Chittleborough, 1953); Victoria (Wakefield, 1963).

Tasmanian Records: Lewisham (new born young), 7/6/1957 (Davies & Guiler, 1958); Tomahawk, Aug./1972, female, 5.48 m (per. G. Parr); Fortescue Bay 6/8/1973, male 3.65 m.

Remarks: The Tomahawk specimen was identified from a photograph taken by Mr. G. Parr who estimated the length at about 5.5m.

The Fortescue whale was in an advanced state of decay with the lower jaw broken off. It had probably been dead at least a month when examined. The birth length of a minke whale is about 3.0 metres and this would indicate that the Fortescue specimen was just recently born as was the Lewisham whale. The Tomahawk specimen is about half grown.

It probably is significant that the strandings occurred during the winter period and that two of these were very young animals indicating that calving takes place in or close to Tasmanian waters. Wakefield (1967) reported a 2.1 m long whale from Victoria stranded in October, 1946.

Balaenoptera musculus (L.)
Blue Whale

Baleen black, dorsal fin very small but flippers relatively large being about one seventh total length; throat grooves extend to beyond posterior end of flipper but not to vent; length to 30 m; greyish blue all over with paler ventral patches.

Distribution: Oceanic. Victoria (Wakefield, 1967; Brazenor, 1950).

Tasmanian Records: Although once an important commercial species these whales have

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not stranded very often in Tasmania and the only record, possibly of this species is from New Norfolk in the River Derwent, May 1825 (*Hobart Town Gazette*, 6/5/1825). A large jaw bone seen in 1965 protruding from a sandhill at the Thornton River, West Coast, may well be of this species.

Balaenoptera physalis (L.)
Southern Finback; Finner

Throat grooves extending halfway from flipper to vent, i.e. to navel; dorsal fin prominent, baleen yellowish white with grey band; 20-30 m; dorsal surface light grey often mottled with white, ventral surface white including underside of flukes and flippers; lower jaw with white on right side, left side grey.

Distribution: Oceanic, all oceans.

Tasmanian Records: Pitt Water, July/1965. Female, about 18 m.

Remarks: The only Tasmanian record was a most unfortunate individual which passed through the narrows at Dodges Ferry and ended up stranded in shallow water near Green Island where it died and was subsequently towed out to sea.

Balaenoptera borealis Lesson
Sei Whale

Balaenoptera edeni Anderson
Bryde's Whale

Neither of these rorquals have been recorded from Tasmania although they probably occur in our waters. The latter species was found in Victoria by Dixon (1970).

Megaptera novaeangliae (Borowski)
Humpback Whale

Readily identified by the enormous flippers with a number of rounded protruber- ances; dorsal fin small and followed by a number of dorsal irregularities; baleen black; 12-15 m; blackish colour merging to greyish; frequently has white circular skin scars; often with barnacles attached to flippers, skin and jaws.

Distribution: All oceans, used to be commercially important.

Tasmanian Records: Bass Strait (Lord & Scott, 1924); Circular Head 4/10/1936 (Scott, 1942a); Marion Bay Oct./1953; Fortescue Bay Jan./1958 - three seen at sea; Darlington, Maria Is. 25-26/4/1969 cow and calf seen at sea.

Remarks: Although once common this species has not stranded very often. In the days of abundance these whales migrated up and down the Tasmanian coast and were often sighted at sea.

Suborder PINNIPEDIA

The Seals

Superfamily PHOCOIDEA
The Earless Seals

Hydrurga leptonyx (Blainville)
Leopard Seal

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Head large with prominent crest; teeth markedly carnivorous and bright white against red gums; spotted grey, yellow white body; nostrils form long prominent slits; about 3.5 m.

Distribution: Mainly Antarctic and Subantarctic seas and islands but moves north during the winter. Western Australia (Serventy, 1948); Victoria (Wakefield, 1963); New South Wales (Troughton, 1951).

Tasmanian Records: Tasmania (Davies, 1963); Ralphs Bay Apr./1968 and 8-10/9/1968; Adventure Bay 2/9/1968 (?same animal); Triabunna 26/9/1974; Margate 4/10/1975; Adventure Bay 11/10/1976, female 2.59 m; Fortescue Bay Apr./1977 mandible recovered (C. Ellis).

Remarks: This is a very agile species and must be treated with caution. It probably is more numerous on our coasts than the absence of early records would suggest.

Lobodon carcinophagus (Hombron & Jacquinot)
Crab-eater Seal

Dark grey shading to light grey on flanks with red-brown circles and irregular patches; teeth very characteristic having lobes on them for filtering their euphausiid food from the water.

Distribution: Pack ice but may wander north.

Tasmanian Record: Ralphs Bay Sept./1945 (Davies, 1963).

Mirounga leonina (L)
Southern Elephant Seal

A large beast, males up to 6 m and weighing 3,500 kg but the females are smaller, about 4 m and 700 kg; skin frequently heavily wrinkled, grey or dark brown, often scarred round the neck; male has an inflatable proboscis; uses forelimbs in terrestrial locomotion.

Distribution: Subantarctic islands.

Tasmanian Records: Formerly widespread and used to be the basis of the King Is. seal industry. A female gave birth to a pup in Strahan Nov./1958 (Davies, 1963); Eaglehawk Neck, Feb./1948, young male; Ralphs Bay, Aug./1961; north of Granville Harbour, 1967, remains found in November; Flinders Is. Mar./1957; Adventure Bay, July/1973; Cloudy Bay 29/2/1975; Parsons Bay, Nubeena 2/3/1976; Meredith River, 17/7/1977.

Superfamily OTARIOIDEA
The Eared Seals

Arctocephalus doriferus (Wood-Jones)
Southern Fur Seal

Brownish yellow but dark brown when wet; uses tail flippers for terrestrial locomotion; males have a mane.

Distribution: S.E. Australia.

Tasmanian Records: This is our common seal and is to be seen all round our coasts and

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is the species commonly found dead on the shores. The species breeds on Tasmanian islands and hauls out at a number of places. Detailed lists of strandings are rather pointless for such a common species.

Neophoca cinerea (Péron & Lesueur)
South Australian Sea Lion

Ears small but visible externally; large size; dark chocolate brown when wet but light brown when dry, like *A. doriferus* this species uses the hind limbs turned forwards in land movement.

Distribution: South Australia.

Tasmanian Records: King Island, pre 1900; Beach East of Cape Barren, Cape Barren Island, 22/2/1973 (both records by courtesy of Mr. P. Andrews, Tasmanian Museum).

Remarks: These are the first records of this species for Tasmania and it may well have been here before but can easily be confused with the fur seal, from which it can be identified by the absence of underfur and by the arrangement of the nails on the flippers.

DISCUSSION

Reference to table 5 will show that certain places have more frequent strandings of Cetacea than others, the greatest number being reported from Stanley and Eaglehawk Neck (seven each), followed by Marion Bay and Cloudy Bay, Friendly Beaches and Seymour, Cape Grim and Granville Harbour. However, some of these places are more liable to have mass strandings than others, notably Stanley, Marion Bay and Friendly Beaches. However, perhaps not too much reliance should be placed upon the frequency of mass relative to single strandings as the former are a conspicuous event and liable to attract attention whereas the single stranding may well pass unnoticed. It is apparent that the N.W. end of Tasmania has more mass strandings than elsewhere and the Marion Bay and Friendly Beaches areas have most in the rest of the State.

TABLE 5

Places in Tasmania from which more than one stranding of Cetacea have occurred, 1945-77. m - indicates a mass stranding.

East Coast		South Coast		North Coast
Seymour	3	Adventure Bay	3	Burnie 2
Friendly Beaches	1 + 2m	Recherche Bay	2	Tomahawk 2
Maria Is.	2 + 1m	Slopen Is.	2	
Marion Bay	2 + 2m	Cloudy Bay	4	
Dunalley	1 + 1m	Seven Mile Beach	2	
Eaglehawk Neck	7	Ralphs Bay	3	Stanley 9 + 3m
Fortescue Bay	3	Big Taylor Bay	2	Cape Grim 2 + 1m
		Simpsons Bay	2 + 1m	

The Eaglehawk Neck area has a large number of strandings but three of these were provided by the pygmy right whale and each of these events took place at the south-eastern end of the beach near the jetty.

Each of the above areas differs from the other in its general features so that it is not possible to seek common topographical features which may in part account for the strandings. Stanley is the most likely place for strandings if we accept that shoal waters with shallow channels are the most dangerous for whales. Eaglehawk Neck

Whale Strandings in Tasmania

on the other hand offers deep water offshore in the bay with no shoals or other obstructions to whales. The common stranding site at the jetty does not experience heavy surf and strandings there cannot be understood other than resulting from illness or navigational error.

Marion Bay and Friendly Beaches both are surf beaches and have temporary sand bars set up in the surf area. The Friendly Beaches, site of many strandings, have a rocky reef offshore which could well cause navigational problems for whales.

The number of strandings each month shows that more strandings of whales can be expected to occur (46.3% of the annual total) during the summer period December-March than in the remaining 8 months of the year (table 6). Such data as are available for seals show a tendency towards winter-spring strandings.

TABLE 6
STRANDING OF WHALES & SEALS IN TASMANIA

All known records of strandings of whales and seals in Tasmania arranged by major groups and by months. A mass stranding is treated as a single event. Only leopard and elephant seals are included in the seal records.

	Sperm Whale	Ziphiids	False Killer	Pilot Whale	Dol- phins	Whales	Pygmy Right Whale	Others	Sub- Tot.	Seals	Total
Jan.	1	3	0	2	2	0	5	1	14	0	14
Feb.	3	0	0	1	1	0	2	0	7	2	9
Mar.	3	1	1	3	2	0	4	0	14	2	16
Apr.	0	1	0	0	0	1	3	1	6	1	7
May	2	0	2	0	3	1	0	1	9	0	9
June	1	0	1	2	0	0	4	1	9	0	9
July	0	2	1	0	0	0	1	0	5	2	7
Aug.	0	0	1	2	0	0	0	2	5	1	6
Sept.	0	0	1	0	1	1	2	0	5	2	7
Oct.	2	0	1	1	0	0	1	2	7	2	9
Nov.	0	0	1	2	0	0	2	0	5	1	6
Dec.	1	0	1	1	3	0	3	0	9	0	9
									95	13	108

Sperm whales may be expected to strand in the summer which might be expected from the migration patterns while False Killer Whales and *Globicephala* apparently are in our waters all year round. The ziphiids are absent from August to December and, apart from one isolated incident, dolphins have not been recorded from June-November. However, we have seen in the case of *Caperea marginata* that more data revealed that the species is present all year round and this may well turn out to be for other species.

AFFINITIES OF THE TASMANIAN CETACEA

The Tasmanian cetacea are derived from four sources (table 7) and two of the elements may be expected to occur here, namely the cosmopolitan and Austral Circumpolar species. However, two species have been found in Tasmania which were of tropical origin, namely *Globicephala macrorhyncha* and *Mesoplodon densirostris*. The former species is described as northern Australian by Mitchell (1975b), whilst *M. densirostris* has been previously recorded from Yeppoon near Rockhampton. Strays from the tropical Indo-Pacific areas thus can reach Tasmania and should be anticipated in the future.

The circumpolar species may penetrate from some distance into all the southern oceanic masses but records of many of them are scanty. Three of this group of whales

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TABLE 7
AFFINITIES OF THE TASMANIAN CETACEA

Species recorded with an asterisk have not been positively recorded but may be expected to occur.

<u>Cosmopolitan</u>	<u>Austral circum polar</u>	<u>Tropical</u>
<i>Megaptera novaeangliae</i>	<i>Mesoplodon hectori</i>	<i>Mesoplodon densirostris</i>
<i>Balaenoptera acutorostrata</i>	<i>bowdoini</i>	<i>Globicephala macrorhyncha</i>
<i>Orcinus orca</i>	<i>grayi</i>	
<i>Pseudorca crassidens</i>	<i>Berardius arnuxi</i>	
<i>Physeter catodon</i>	* <i>Hyperoodon planifrons</i>	
<i>Globicephala melaena</i>	* <i>Tasmacetus shepherdii</i>	
<i>Delphinus delphis</i>	<i>Kogia breviceps</i>	
<i>Mesoplodon layardi</i>	<i>Caperea marginata</i>	
<i>Tursiops truncatus</i>	<i>Balaenoptera musculus</i>	
<i>Ziphius cavirostris</i>	<i>physalis</i>	

have never been found in Tasmania and a watch should be kept for *Kogia breviceps*, *Hyperoodon planifrons* and *Tasmacetus shepherdii*. All of these are odontocetes and the last two are ziphids.

The Family Ziphidae provides us with some of our most exciting whale collecting as some of the species which are likely to be found ashore here are very rare and are known by less than 20 specimens. We know little of their habits, movements or food and any stranding of a beaked whale is of importance.

The number of strandings per annum appears to have increased sharply since 1955 but this may not be the result of an increase in public interest in whales as a result of publicity (table 8). The paucity of reports from Lord's time I feel does show that not many whales came ashore during that period as his interest in the matter was such that he would have recorded their arrival. The early whaling days of the Colony brought an initial interest in whales and this lapsed until the work of Lord, together with Scott, renewed our awareness of these mammals and long may this continue.

TABLE 8
NUMBERS OF WHALE STRANDINGS IN TASMANIA, 1955-1977

A mass stranding is treated as a single stranding. Note that there appears to be a bimodal distribution in the frequency of strandings but this may not be of any significance.

1955	2	1960	3	1965	1	1970	1	1976	3
1956	1	1961	2	1966	7	1971	2	1977	5
1957	4	1962	1	1967	7	1973	4		
1958	1	1963	3	1968	4	1974	7		
1959	3	1964	5	1969	1	1975	5		

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Whale Strandings in Tasmania

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