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A COMMON DOLPHIN AT LAUNCESTON

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Introduction

The Common Dolphin *Delphinus delphis* Linné is a cosmopolitan species. It is characteristically gregarious and while the common social unit ranges from a dozen to a few hundred individuals, there are numerous accounts of much larger aggregations. One of the most striking is a report from north of Cape Kidnappers, New Zealand, where a great herd of dolphins, travelling south in formation, was estimated to be a kilometre wide, extend for about 51 kilometres and to number, conservatively, about a quarter of a million animals (Robson 1976).

Unlike the Pilot Whale *Globicephala melaena* and False Killer Whale *Pseudorca crassidens* the Common Dolphin is seldom subject to stranding in very large numbers: animals that come ashore either do so as a result of misadventure or are dead or ailing at the time. Guiler (1978) lists nine strandings in Tasmania from 1947 to 1977 and gives measurements of two males and two females. The only stranding involving large numbers was in December 1975 when about 100 came ashore on the Channel side of Bruny Island. These were believed to be "from a very large school" observed "constantly breaking water in an area of about 1.5km x 8km".

In his survey of Tasmanian Cetacea, Pearson (1936) makes reference to observations by Scott and Lord (1921) on food but presents no specific local records. Warneke (1983) gives four mass strandings from a total of 27 on the coasts of Tasmania and Victoria, while Gaskin (1968) records 15 strandings in New Zealand, all except one, a group of seven, being of a single individual.

In a paper on this species, Scott and Lord (1921) give dimensions of nine skulls, with locality reports from Tamar Heads, River Derwent, Scamander, North-West Coast and King Island. Of the nine skulls examined by them, six were noted as being in the Queen Victoria Museum; no additions of relevant material had since been made to that institution's collection until the stranding of the present specimen.

On the morning of 7 July 1983 a report was received at the Queen Victoria Museum of a dead dolphin on the bank of the North Esk River in Royal Park, Launceston. At this point, about 60 kilometres from the sea, the water is fresh, though somewhat muddy and polluted. It is subject to marked tidal influences with an average variation in height, in the first week in July, of 3.5 metres.

External Features

When the report was received one of us (Scott) visited the site, took some measurements (Table 1) and made a note on coloration. The animal, a female, had been stranded by the receding tide and was lying, entangled in loose branches, beneath a willow tree. It had obviously been dead for some days. The ground colour was very dark brown, in places approaching black but lighter, medium grey on the chin, top of head back to blow hole and much of the ventral surface. The latter colour may have been, at least in part, a result of post-mortem decay. There was no evidence of any well defined colour pattern usually associated with this species, certainly no indication of "the most elaborate flank markings to be found in any cetacean" (Watson, 1981, p. 270).

Other Features Including Skull

On 12 August when a second inspection was made by one of us (Green), the carcase, still at the original site of stranding, appeared to have undergone very little change. At this visit the abdomen was opened: the

TABLE 1. Dimensions (in centimetres) of a female Common Dolphin stranded at Launceston in August 1983, using the method of Norris (1961).

Length to caudal notch	205
Length to centre of eye	34
Length of gape	24
Length to blow hole	35
Length to anterior insertion of flipper	51
Length to mid point of genital aperture	146
Projection of lower jaw beyond upper	2
Half girth at dorsal origin	58
Eye: horizontal diameter	2
Eye: vertical diameter	4
Length of blow hole	2
Length of flipper, anterior insertion to tip	29
Length of flipper, axilla to tip	16
Height of dorsal fin	16
Length of dorsal fin base	12
Width of flukes, tip to tip	42

stomach was empty; there was no evidence of pregnancy. The head was removed and the skull subsequently cleaned in a dermistid beetle colony at the Museum; it has been added to the collection, Reg. No. 1983/1/66.

Dimensions of the skull were compared with those given by Scott and Lord (1921) for this species and found to be within the range of measurements quoted by them. There were 43 teeth each side of the maxilla and 53 each side of the mandible.

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THE DISTRIBUTION OF *BOTHRIEMBRYON TASMANICUS* (PFEIFFER, 1853) *(PULMONATA: BULIMULIDAE)*

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Introduction

For many years it was believed that *Bothriembryon tasmanicus* (Pfeiffer, 1853), one of our largest snails, was confined to the east coast of Tasmania. Material collected came from coastal localities such as Coles Bay, Swansea, Bicheno and Eaglehawk Neck.

Legrand (1871) gave additional localities such as Macquarie Harbour (collected by Milligan), South Bruny (collector, Atkinson) and an "Island near Port Davey" (collector, Doherty). Legrand even stated that the species was found all round the island of Tasmania but gave no localities in confirmation of this. Dartnall (1972) suggested that collections should be made to clarify these data. There is no reason to doubt that people of the calibre of Milligan and Atkinson did collect or believed they had snails from the localities given.

These records have not been confirmed. But specimens were found on Maatsukyer Island by Rawlinson (specimen, Tasmanian Museum) and therefore further consideration of this problem is justified.

The genus *Bothriembryon* is considered to have a distribution from north of Shark Bay, Western Australia along the coast to the Great Australian Bight, South Australia (extending inland just into the Northern Territory) and inclusive of Tasmania. (Breure, 1979, Iredale, 1937, Kendrick and Wilson, 1975). It is recorded from Kangaroo Island (Cotton, 1940) but not the islands in Bass Strait, as a Recent species. Fossil *Bothriembryon* are recorded from Western Australia (Kendrick, 1978) and the species *Bothriembryon gunnii* (Sowerby) from Southern Tasmania and the Kent Group, Bass Strait (Kershaw, 1981). McMichael (1968) has recorded a fossil species from the vicinity of Lake Eyre. The writer has recently seen a fossil from St. Francis Island, South Australia. This shell has affinity with Western Australian forms.

There has been no confirmed record of *Bothriembryon* in Victoria. The Tasmanian population appears to have been completely isolated from western populations for a very long time. This isolation is masked by the very strong family resemblances noted by most workers.

The oldest material in the Tasmanian Museum is dated 1889 and is part of the Petterd Collection. One lot is labelled "East Coast" and the second lot "North Coast". In March 1913 T. Stephens donated four specimens from Pipers River to the Museum. No further north coast material has been seen and this record needs confirmation.

Not all early authors provided as much precise locality data as did Legrand (1871). Pfeiffer (1853) when describing *B. tasmanicus* simply gave "Van Diemens Land". Cox (1868) stated "Tasmania, climbing on trees-Gunn". Petterd (1879) provided little in his text but included a distribution table prepared by R.M. Johnston at the end of his Monograph. Johnston (1880) also published this table separately and added the locality "Blue Tier". This may have been an error as it has not been confirmed nor is that a suitable habitat.

Hedley (1891) described material from Maria Island which he received from Petterd. Pilsbry (1900) in his monograph of the family Bulimulidae gave as the distribution "Recent on the East coast of Tasmania, confined to a narrow belt of coast country, and the adjacent Maria Island" quoting Petterd and Hedley as the sources of this information. Pilsbry described a new variety for which he gave the locality data as "East Coast of Tasmania (Petterd)". Unfortunately this added a second taxon with the same generalised type locality. If there are two species it is by no means certain that they are sympatric.

Subsequent authors Petterd and Hedley (1909) and May (1923) also stated "East Coast", the former claiming that *B. tasmanicus* was confined to that region. Smith and Kershaw (1981), overlooking the Maatsukyer Island record, made the same statement.

Known Records

The following tabulation lists the known and recorded localities with the dates of the record (prior to 1900 from the literature) or a known date of collection (after 1900). It will be seen that some literature records have

been confirmed and that distribution is apparently not confined to the East Coast.

North Coast:
Leven, Torquay (Devonport) 1879, 1880.
Pipers River vicinity. 1913.

North East:
Blue Tier 1880. (Probably an error.)

East Coast:
Swansea 1871, 1982.
Freycinet Peninsula 1914.
Coles Bay 1948, 1953, 1955, 1962, 1969, 1970, 1971, 1973.
Wineglass Bay 1962.
Sleepy Bay 1973.
Cooks Beach 1971.
Schouten Island 1981.
Maria Island 1891, 1963, 1965.
Triabunna 1972.
Bicheno 1964, 1971.
Orford 1879, 1880, 1938.
Prossers Bay 1871.
Spring Bay 1879.
Pine Creek 1963.

South East:
Eaglehawk Neck 1941, 1971, 1973.
Tasmans Bay 1974.
Port Arthur 1871.
Wilmot Harbour 1971.
Betsey Island 1951, 1966.
Recherche Bay 1871.
Bruny Island 1871, 1879.

South West:
Port Davey 1871, 1879, 1880.
Island near Port Davey 1871.
Maatsukyer Island 1970.
New Harbour 1976.

West Coast:
Macquarie Harbour 1871, 1879, 1880.

The habitat

Bothriembryon tasmanicus has been found on trees and shrubs usually close to the sea but sometimes a short distance inland. It has been found in the forks of branches of she-oak and under loose bark of fallen trees or in the ground litter in sheltered places. The environment is usually dry and sandy but it occurs in the forest near Eaglehawk Neck. In this environment it seems to die out at some level of moisture increase but investigation is needed. It is also found clustered on rocks, rock walls and other convenient vertical surfaces.

The animal descends to the ground at night to forage and may be found by torch light in somewhat sheltered vegetated areas such as exist at Coles Bay. The influence of moisture in this habit is not yet clear.

Conclusions

Problems which exist in relation to the determination of the distribution, the source of original type material and the differences between specimens from different localities may be solved with additional material. Of particular importance to this research would be material from Maria Island and from South West localities.

The co-operation of naturalists in collecting more material in sought to facilitate further research. An important contribution could be made in finding the species again in such areas as the vicinity of Macquarie Harbour or at Pipers River. The ecology of *Bothriembryon* in Tasmania is an open field for research.

Acknowledgements

The writer thanks Miss Alison Green for the opportunity to study the Tasmanian Museum *Bothriembryon* collection and the Trustees of the Science and Industry Endowment Fund for support of this Molluscan research.

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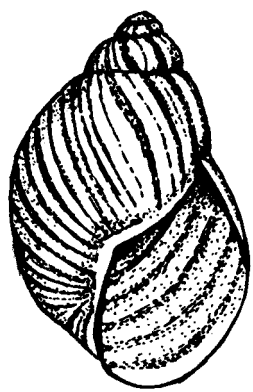

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Figure 1. *Bothriembryon tasmanicus* (Pfeiffer) x3, (after Cox, 1868 and Pilsbry, 1900).

Figure 2. *Bothriembryon brachysoma* Pilsbry 1900, x2, (after Pilsbry, 1900).

Figure 3. *Bothriembryon tasmanicus* (Pfeiffer) x2, Coles Bay morph (drawn from photograph R.C.K.).

THE EFFECT OF A SEVERE FIRE ON THE NUMBER OF BIRD SPECIES IN A WET SCLEROPHYLL ENVIRONMENT

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A severe mid-summer fire, on 23 January 1983, attributed by some observers to an escape from an illegal 'controlled burn' near Mt. Knocklofty, but officially to a careless boy with matches, burnt over a broad area of Mt. Wellington near Lenah Valley, extending to above Junction Cabin and reaching Pinnacle Road in several places. Because of the severity of the fire, which destroyed all ground storey vegetation in its path, and the lateness of the season, no recovery of understorey species was evident until the following spring.

I surveyed both the unburnt and burnt areas in the vicinity of Junction Cabin between the dates 2 October 1983 - 5 December 1983, making 24 visits to each area and recording each species seen or heard during each visit. The total number of observations of each species is given in Table 1.

The average number of species observed per visit to the burnt area was 6.5, compared with 17.5 for the unburnt area. There were no apparent changes in the frequency of occurrence throughout the survey period; bird species found in the burnt area at the beginning of the study still occurred there at the end. Some species were notable for being present frequently in the unburnt area, but never visiting the burnt area, viz. Shining Bronze-cuckoo, Olive Whistler, Golden Whistler, White-browed Scrubwren, Strong-billed Honeyeater. Several other species were present to a lesser extent in the burnt area, viz. Peregrine Falcon, Yellow-tailed Black cockatoo, Black-faced Cuckoo-shrike, Black-headed Honeyeater, Silvereye. In addition, there were several species frequently observed in the unburnt area that were less frequent in the burnt area, viz. Swift Parrot, Green Rosella, Blackbird, Yellow-throated Honeyeater, Crescent Honeyeater, Spotted Pardalote. Several others in Table 1 had a reduced frequency of occurrence in the burnt area. The Striated Pardalote was the only species present in large numbers in the burnt area.

It is interesting to compare the present survey with three past surveys I conducted in the dry sclerophyll foothills of Mt. Wellington. In the aftermath of a non-severe spring fire on Tolmans Hill, Ridgeway (Tasmanian Naturalist No. 53, May 1978, pp. 11-12), the vegetation recovered quickly, and after 11 weeks the number of species observed per visit rapidly increased from the previous average of 2.7 species per visit to 7.0 species per visit, equalling the species count in the relatively species-poor adjacent unburnt area on the other side of a firebreak. The other two previous surveys were on Mt. Nelson (Tasmanian Naturalist No. 57, May 1979, pp. 12-18), the first after a controlled burn at the end of November. The number of species per visit after the fire averaged 6.9 compared to 11.6 before the fire in the identical area. The second Mt. Nelson survey was initiated on 5 October 1978, three days after a severe fire destroyed the vegetation of the Porter Hill area. The survey lasted for 19 weeks, during which time the number of species per visit averaged 5.7 compared with 16.2 species per visit in adjacent unburnt bushland at the same elevation.

TABLE 1. Total number of occurrences of observed species in 24 visits to the burnt area near Junction Cabin and adjacent unburnt area.

	Burnt	Unburnt
Peregrine Falcon	0	2
Yellow-tailed Black Cockatoo	0	3
Swift Parrot	1	18
Green Rosella	2	23
Fan-tailed Cuckoo	12	22
Shining Bronze-cuckoo	0	18
Black-faced Cuckoo-shrike	0	4
Blackbird	6	17
Flame Robin	13	17
Olive Whistler	0	20
Golden Whistler	0	9
Grey Shrike-thrush	23	24
Grey Fantail	12	24
Superb Fairy-wren	1	0
White-browed Scrubwren	0	24
Brown Thornbill	8	7
Tasmanian Thornbill	2	10
Yellow-throated Honeyeater	8	24
Strong-billed Honeyeater	0	23
Black-headed Honeyeater	0	3
Crescent Honeyeater	3	23
New Holland Honeyeater	0	1
Spotted Pardalote	3	18
Striated Pardalote	24	24
Silvereye	0	4
Black Currawong	10	24
Grey Currawong	2	5
Forest Raven	18	24

The latter survey allows an interesting comparison with the present survey. In that survey, many species were observed infrequently, or not at all, in the burnt area, viz. Green Rosella, Fan-tailed Cuckoo, Shining Bronze-cuckoo, Olive Whistler, Golden Whistler, Satin Flycatcher, Superb Fairy-wren, Yellow Wattlebird, Yellow-throated Honeyeater, Strong-billed Honeyeater, Black-headed Honeyeater, Crescent Honeyeater, New Holland Honeyeater, Spotted Pardalote, Silvereye, Grey Butcherbird and Forest Raven. Several of these species did not occur or occurred only rarely in the burnt area of the present survey, which was in a wet sclerophyll environment. Those species that were common to both surveys, however, show a similar reduction in frequency of observation, or total absence, in the burnt area. This is no doubt related to the feeding habits of these species.

The results of the present study, together with the results after the Porter Hill fire, demonstrate that bird numbers remain low for a long time afterwards if the fire is very severe.

A CLUTCH OF HYBRID PARROTS IN THE WILD

L.E. Wall
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Towards the end of August 1983 I was told by the Tasmanian Museum staff that a resident of Midway Point had seen three strange parrots. On 27 August I visited the area and found these birds - a Port Lincoln Ringneck *Barnardius zonarius*, a Pale-headed Rosella *Platycercus adscitus*, and one unidentified - none of them indigenous to Tasmania. They were tame and fed quietly on the ground in a residential area.

Having seen these I recalled a report a couple of years ago of two strange parrots, apparently aviary escapes, at Mount Rummey, a few kilometres nearer to Hobart. A brief enquiry revealed that these, a Port Lincoln Ringneck and a Pale-headed Rosella, had successfully mated in the summer of 1982/83 and produced three nestlings. One of these had died while the other two remained with their parents for several months and came readily for food provided for them. During the winter the two adults and one juvenile disappeared from the area while the second juvenile remained at Mt. Rumney and came for food almost daily. At this time it became very wary and I was only able to get a very brief sight of it during a visit on 10 September.

It is clear that the three birds at Midway Point were those which had disappeared from Mt. Rumney and the hybrid juvenile was more like a Port Lincoln Ringneck than a Pale-headed Rosella in size and plumage. The brief sighting of the hybrid at Mt. Rumney did not allow me to take detailed notes of its plumage but it was similar to the one at Midway Point. The description of the latter is:- back and wings, green; outer wing coverts, pale blue; crown, green; frontal band, red; nape, blackish; neck, yellow; breast, lemon-yellow; belly, light green; tail, green; cheek-patch, white with light blue on lower edge. It is interesting to note that the hybrid has a red frontal band while the parent Port Lincoln Ringneck has none though some individuals of the species do.

J. Forshaw, in "Australian Parrots", second edition, on page 176, noted of the Port Lincoln Ringneck that "hybridization involving this species is comparatively rare both in the natural state and in captivity. Hybrids with *B. barnardi* [Mallee Ringneck] and with the *Platycercus* spp. have been reared in aviaries".

LITTLE PIGMY POSSUM *CERCARTETUS LEPIDUS*

L.E. Wall
63 Elphinstone Road, Mt. Stuart

While I was walking with a small party on Mt. Connection, part of the Wellington Range west of Hobart, on 16 December 1983 at about 1030 hours my attention was drawn to a "mouse" on the top of a burnt stump of a Snow Gum *Eucalyptus coccifera*. The height above ground level was a little over two metres. The animal's large ears immediately alerted me to its correct identification as a Little Pigmy Possum.

A few seconds later it was joined by another, and as I walked round the stump to get a better view I found two others climbing the trunk. One of these jumped off and disappeared among the heathy ground cover but the other remained long enough to enable me to photograph it. None of these animals had the base of the tail greatly distended, a means of storing fat adopted by both our species of pigmy possums when food is plentiful.

It is usual for the larger Eastern Pigmy Possum *C. nanus* to be found in rainforest country while the Little Pigmy Possum occurs generally in drier forests and heathland, but my only other acquaintance with the latter was in rainforest on the Lower Gordon River about eight years ago. Both species are generally nocturnal in habits, and it is unusual to see four together. Another of this species was seen on 9 March 1984 in a small plant of *Richea dracophylla* on the slopes of Trestle Mountain, about 5 kilometres west of the other sighting.

POSTSCRIPT TO THE MACQUARIE ISLAND ISSUES

(Editor's note: The July 1984 and October 1984 issues were devoted to the biology of Macquarie Island. Lack of space prevented us from using some illustrations to the article by R.J. Tomkins on the Wandering Albatross (Tasmanian Naturalist No. 79, October 1984, pp. 24-32). Three of these illustrations, all drawn by Alison White, are printed here. Bob Tomkins is the human intruder in Fig. 1.)

Figure 1. I am dwarfed whilst recovering this huge Wanderer egg for weighing. In spite of their very large size most males and females are passive during incubation. This is not the case with the males when they are "non-breeders" ..!

Figure 2. Whilst the wary male has a tension releasing flap the female sits coyly on her massive grass and soil nest still "talking" to him.

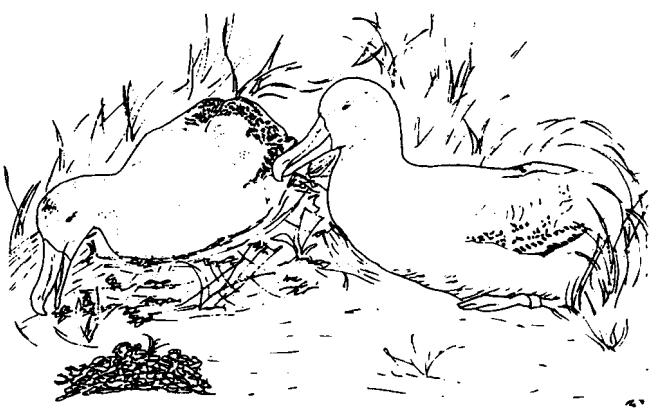

Figure 3. Stretching from the nest the female builds her huge grass and soil nest in only two or three days. Usually she works alone, but in this case her mate helped considerably by quarrying further afield and throwing the sods to within her reach.