

TRANSACTIONS  
OF THE  
ROYAL SOCIETY OF NEW ZEALAND

---

ZOOLOGY

---

VOL. 4.

No. 5

MARCH 20, 1964

---

The North Otago Shelf Fauna. Part IV—Chordata  
Classes Reptilia, Aves, Mammalia

By JOHN GRAHAM

Oamaru

[Received by the Editor, July 29, 1963.]

*Abstract*

CHECKLISTS of three Classes of Chordata are presented. *Dermochelys coriacea* was taken in January, 1959. The other recorded species were observed during 1959–63 inclusive. Field notes are briefly discussed and the relative abundance of each species indicated.

INTRODUCTION

THE checklists are compiled from species recorded during commercial fishing operations off North Otago from 1959 to 1963. The faunal zones described and used in the preceding parts of this series are not here applicable. Although some of the species seldom approach closely to the land, the noted exceptions to this behaviour precludes other than the acceptance of a general distribution over the whole area. This is adjacent to the Port of Oamaru and is from the mouth of the Waitaki River (44° 56' S) to the mouth of the Kakanui River (45° 12' S) and extends to approximately 35 km offshore.

A specimen of leathery turtle, *Dermochelys coriacea*, was foul-hooked on fishing tackle and killed in January, 1959. It was received at the Otago Museum on that date. Most marine birds will approach a fishing vessel at sea (more readily when hungry after bad weather) and, thus, may be easily identified. As some few species are more wary or uninterested, they can be seen only in distant flight. Careful observations, discussions with specialists, comparisons with museum exhibits and recourse to authoritative literature and photographs have, with two exceptions, established the identity of those recorded. In a small vessel it is not always practicable, and certainly never wise, to observe the larger mammals other than from a respectful distance, so those only which have been unmistakable in silhouette are listed. A local stranding of *Physeter catodon* confirmed observational accuracy.

## CHECKLISTS OF REPTILIA, AVES, AND MAMMALIA FROM THE NORTH OTAGO SHELF

Abbreviations: C, common; U, uncommon; R, rare.

### Class REPTILIA

#### DERMOCHELYIDAE

*Dermochelys coriacea* Linn.—R. (One only.)

### Class AVES

#### SPHENISCIDAE

*Megadyptes antipodes* Homb. & Jacq.—U.

*Eudyptula minor minor* Forster.—U.

*E. albosignata* Finsch.—R.

#### PROCELLARIIDAE

*Daption capensis australis* Matthews.—C.

*Fulmarus glacialis* (Smith)—R. (Two sightings, June, 1959.)

*Macronectes giganteus* (Gmelin)—C.

*Pachyptila* sp. (probably *P. turtur turtur* (Kuhl).)—C.

*Puffinus* sp. (probably *P. gavia huttoni* (Matthews).)—U.

*P. griseus* Gmelin.—C.

*P. bulleri* Salvin.—R.

*P. carneipes hullianus* Matthews.—U.

#### DIOMEDEIDAE

*Diomedea cauta cauta* Gould.—C.

*D. cauta salvini* (Rothschild).—C.

*D. bulleri* Rothschild.—C.

*D. melanophris impavida* (Matthews).—U.

*D. exulans exulans* Linn.—R.

*D. epomophora epomophora* Lesson.—C.

*D. epomophora sandfordi* (Murphy).—R.

#### PHALACROCORACIDAE

*Phalacrocorax chalconotus* Gray.—R. (Single sighting.)

*Strictocorbo punctatus punctatus* (Sparrman).—C.

### SULIDAE

*Sula bassana serratator* Gray.—U.

#### HAEMATOPODIDAE

*Haematopus ostralegus finschi* Martens.—U.

### LARIDAE

*Larus dominicanus* Lichtenstein.—C.

*L. novaehollandiae scopulinus* (Gray).—C.

*L. bulleri* Hutton.—C.

#### STERCORARIIDAE

*Stercorarius parasiticus* (Linn.).—U.

#### STERNIDAE

*Chlidonias albostratus* (Gray)—U.

*Sterna striata* (Gmelin).—C.

#### ARDEIDAE

*Demigretta matook* (Vieillot).—U.

### Class MAMMALIA

#### CETACEA

##### BALAENIDAE

*Megaptera nodosa* (Bonnaterre).—U.

##### PHYSETERIDAE

*Physeter catodon* Linn.—R.

##### DELPHINIDAE

*Orcinus orca* (Linn.).—R.

*Globicephala* sp. (Probably *G. melaena* (Traill).)—R.

*Cephalorhynchus hectori* (Van Beneden).—U.

*Delphinus delphis* Linn.—C.

##### PINNIPEDIA

##### OTARIDAE

*Neophoca hookeri* Gray.—R.

*Arctocephalus forsteri* (Lesson).—U.

*Mirounga leonina* (Linn.).—U.

## DISCUSSION

The cold surface waters of the sub-antarctic current which flows over the North Otago shelf supports a rich pelagic animal community—the most readily observable species being the juvenile form of *Munida gregaria* which at times covers extensive areas in dense concentrations. These, and plankton with their attendant predatory fishes, provide sustenance for a large population of birds and, to a lesser degree, for migratory and endemic mammals.

As the leathery turtle, *Dermochelys coriacea*, is an oceanic wanderer the recorded specimen was undoubtedly an itinerant in these waters. Its avoidable destruction may be barely justified by its eventual presentation to a museum.

The marine birds of North Otago may be placed in three groups: those which live and feed exclusively at sea are the Procellariidae (other than *Puffinus* spp.), the Diomedidae and the Sulidae; those which are land-based but feed daily at sea or in inter-tidal pools are the Spheniscidae, Phalacrocoracidae, Haematopodidae, Laridae, Sternidae and Ardeidae; and those which are migratory or briefly seasonal in visitation are the *Puffinus* spp. and the Stercorariidae.

A specimen of *Diomedea cauta cauta*, banded by the author in January, 1960, was captured off Mossel Bay, South Africa, in April/May, 1962. Although this specimen was released alive (band removed) this was exceptional as the native fishermen there habitually catch and eat marine birds. It would appear that species of the Diomedidae and the Cape Pigeon *Daption capensis australis* do not generally feed in the daylight, although their flight suggests a constant and vigilant patrol. In eighteen years the author has seen, on two occasions only, a few albatross and mollymawks attacking pelagic fishes. Birds captured in early morning for banding often disgorge a mixture of small animals. Predominant among these is a shrimp-like crustacean (approx. 20 mm) which, although obviously abundant pelagically at some period, has never been observed by the author at any time. Yet many of these birds following a slow-moving trawler on moon-lit nights, have often failed to detect offal thrown close to them. Dazzle from the ship's lights may account for this as the birds apparently experience the same disability when following a vessel trawling towards the sun.

A colony of the yellow-eyed penguin, *Megadyptes antipodes*, on the North Otago Heads, which was probably the most northerly breeding place of this species, has been seriously affected by vandals (May, 1963). The spotted shag, *Strictocarbo punctatus punctatus* and the gulls, *Larus* spp., are the most numerous of the shore-based species. While the former invariably feeds no further than 12 km from the land, formations of *Larus bulleri* may be seen still winging strongly to sea at 35 km.

The main migration of *Puffinus griseus* from North Otago takes place about the end of April (some few remaining throughout the winter) and their return has been noted, always in September of each year, from 1957 to 1962 on the 25th, 15th, 14th, 19th, 28th and 11th respectively.

The transient, larger cetaceans are seen only sporadically and never in large numbers—usually in pairs or singly. *Delphinus delphis*, however, occasionally assembles in vast congregations while still retaining the individuality of small component schools. In shallow, inshore waters *Cephalorhynchus hectori* is seen only seldom and in small family groupings. The seals are rarely noted at sea, being found generally in secluded coastal retreats.

#### ACKNOWLEDGMENTS

I thank Dr R. R. Forster, Otago Museum, for identifying the turtle and for relevant information. I am indebted to Mr F. C. Kinsky, Dominion Museum, for his confirmation of some sea-bird identifications under trying conditions. For setting out the Aves and Mammalia in systematic order I am grateful to Dr R. A. Falla and Mr C. McCann, both of the Dominion Museum.

REFERENCES

FALLA, R. A., 1960. Identification of New Zealand Gulls and Terns. Tuatara, Vol. III, No. 2, pp. 72-76.

KINSKY, F. C., 1959. Photograph of Silver Grey Fulmar. Notornis. Vol. VIII, No. 6, p. 169.

MORELAND, J., 1957. A Guide to the Larger Oceanic Birds of New Zealand. Tuatara, Vol. VI, No. 3, pp. 99-107.

OLIVER, W. R. B., 1955. New Zealand Birds. A. H. & A. W. Reed, Wellington. 661 pp.

PYCRAFT, W. P. The Standard Natural History. Frederick Warne & Co. Ltd., London & New York. 942 pp.

JOHN GRAHAM,  
Maude Street,  
Oamaru, N.Z.