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EDITORIAL

THE cost of producing the Tasmanian Naturalist has exceeded receipts and the deficit has been met each year from Club funds. Clearly this cannot continue indefinitely and the Committee has decided on the following measures. The subscription to the Tasmanian Naturalist will be \$1.00 per annum. This has necessitated that the annual subscription for members of the Tasmanian Field Naturalists' Club be revised as follows :-

Single	\$ 3.00
Family	\$ 4.00
Junior	\$ 1.50

However, this is not just another case of asking more for the same. Starting with this issue the Tasmanian Naturalist has been increased in size from four to eight pages. Thus, we hope that we are continuing to give value for money. One consequence of this change is that we will be able to include longer papers and, in this way, hope that our journal will grow in stature and circulation.

You will, no doubt, have noticed other changes. The heading has been redesigned to incorporate the Club's emblem and I am grateful to Mr. Wall for this. The size of print has been increased which should make the Naturalist easier to read. We hope that these changes meet with your approval.

It is our aim to publish a good journal of general Tasmanian natural history. You may think from the contents of this issue that there is a heavy bias towards ornithology. This is not the intention and I am taking steps to redress the balance. As editor I can only publish the material on hand. Suitable items covering any aspect of Tasmanian natural history will be welcomed, particularly from members of our sister clubs.

A LIST OF BIRDS OF THE MAJOR KENT'S GROUP ISLANDS

J. S. Whinray

The Islands. Deal, about 4400 acres in area, Erith, about 900 acres, and Dover, about 700 acres are the major islands of the Kent Group. All were heavily wooded when first discovered. They were visited by sealers from the early years of the Nineteenth Century and Deal even had a small sealing settlement during the 1820's and 1830's. Deal has been inhabited continuously since the Lighthouse was built in 1847. Periodic burning began during the sealing period and has been continued by the lightkeepers. It has been so constant on Deal and Erith that only small pockets of climax woodland survive. About half of the former woodland of these two islands has been changed to tussock grassland by the burning and grazing. The many introduced grasses and clovers that grow throughout the tussock grassland form the pasture for the Lightstation stock, Brush-tail Opossums and the introduced Red-necked Wallaby. Even Dover Island, though it has never been grazed, has been altered by firing and only about half of its vegetation is in a state of climax.

The Birds. Flame Robins, Japanese Snipe, Pipits, a White-faced Heron and a Black-faced Cuckoo-shrike were the only native birds seen by me in the tussock grassland of Deal Island. However, Starlings, Goldfinches and House Sparrows (especially behind East Cove) were seen often in this grassland. Most native birds were seen on Deal Island in the valley North of the Lighthouse. This carries Eucalyptus nitida woodland and scrub that will be E. nitida woodland if it escapes firing. It is a complex area with an understorey and a ground flora of orchids, ground lichens and mosses. The birds seen here were Tasmanian Thornbill, Satin Flycatcher, Crescent Honeyeater, Green Rosella, Fan-tailed Cuckoo, Flame Robin, English Blackbird, Firetail Finch, Nankeen Kestrel, White-breasted Sea-Eagle, Brown Scrub Wren, Horsfield Bronze Cuckoo, Spine-tail Swift, White-breasted Silveryeye, Goldfinch, Golden Whistler and White-naped Honeyeater. This honeyeater has not been recorded for Tasmania since the 1890 Field Naturalists' Club of Victoria Expedition. A specimen shot then on Deal Island was determined by A. J. Campbell (1890). I was able to call up this species on Deal Island and observe it from close range with field glasses. Its build, general colour, white neck crescent and bright orange-red eye surround all fitted the White-naped Honeyeater skins at the National Museum of Victoria. Campbell (1890) recorded 52 species for Kent's Group. However, 17 of these are only general records. Later visitors have added few species to his list and have seen less than half of the species he recorded. However, their visits have been very brief (Mattingley 1938; Jones 1970). During my month in the Group (Nov. - Dec. 1970) I saw 4 of the species not recorded since 1890 and saw two species viz. Japanese Snipe and Spine-tail Swift, that are new records for the Group. The observations during my stay suggest that the permanent bird population of the major islands numbers less than 40 species. Australian Gannets were seen fishing off Deal Island in East and Storm Coves.

The List. In the list set out below after Leach (1961) the following abbreviations have been used : D1. for Deal Island; Er. for Erith Island; Do. for Dover Island and

No. for North Rock off Erith Island. An asterisk before a species indicates that it is introduced.

- Phaps elegans* (Common Bronzewing) D1. Er.
Larus novaehollandiae (Silver Gull) D1. Er. Do.
Larus pacificus (Pacific Gull) D1. Er. Do.
Haematopus unicolor (Sooty Oystercatcher) D1. Er. Do.
Gallinago hardwickii (Japanese Snipe) D1.
Notophoxyx novae-hollandiae (White-faced Heron) D1. Er.
Phalacrocorax fuscescens (Black-faced Cormorant) No.
Sula serrator (Australian Gannet) D1.
Haliaeetus leucogaster (White-breasted Sea-Eagle) D1. Do.
Falco cenchroides (Nankeen Kestrel) D1.
Platycercus caledonicus (Green Rosella) D1. Do.
Hirundapus caudacatus (Spine-tail Swift) D1.
Cacomantis pyrrophanus (Fan-tailed Cuckoo) D1. Er. Do.
Chalcites basalis (Horsfield Bronze Cuckoo) D1. Er.
Petroica phoenicia (Flame Robin) D1. Er. Do.
Rhipidura fuliginosa (Grey Fantail) D1. Er. Do.
Coracina novae-hollandiae (Black-faced Cuckoo-Shrike) D1.
Acanthiza ewingii (Tasmanian Thornbill) D1. Er. Do.
Sericornis humilis (Brown Scrub Wren) D1. Er. Do.
Pachycephala pectoralis (Golden Whistler) D1. Do.
 * *Turdus merula* (English Blackbird) D1. Er. Do.
Oreocincla lunulata (Tasmanian Ground Thrush) D1.
Zosterops lateralis (White-breasted Silveryeye) D1. Er. Do.
Melithreptus lunatus (White-naped Honeyeater) D1.
Phylidonyris pyrrhoptera (Crescent Honeyeater) D1. Er. Do.
 * *Carduelis carduelis* (Goldfinch) D1. Er. Do.
 * *Passer domesticus* (House Sparrow) D1.
Zonaeginthus bellus (Fire-tail Finch) D1. Do.
 * *Sturnus vulgaris* (Starling) D1.
Corvus sp. D1. (seen only from a distance)

References:

- Campbell, A. J. 1890 The Victorian Naturalist Vol. 7,
 Jones, J. 1970 South West Island, and other investigations in the Kent Group.
 The birds of the Kent Group. Vic. Nat. 87: 357-365.
 Leach, J. A. An Australian Bird Book. Melbourne 1961.
 Mattingley, A. H. E. Birds of the Hogans and other islands of Bass Strait.
 Emu 38: 7-11

THE AUSTRALIAN LUNGFISH

A. J. Dartnall

A recent addition to the zoological exhibits in the Tasmanian Museum is a live Australian lungfish, Neoceratodus forsteri.

The Dipnoi, or lungfishes, are represented today by three genera, living, one each, in tropical regions of Australia, Africa and South America. In many anatomic features and in their mode of development the lungfishes closely resemble the amphibians and they were once thought to be actual amphibian ancestors. It is now believed that these features were present in their relatives, the ancestral Cross-opterygians, which are represented by only one aberrant offshoot today, the coelacanth. Thus the lungfishes of the present are regarded as distant cousins of our fishy ancestors rather than the actual progenitors of land vertebrates.

Lungfishes appear to have survived only in regions of seasonal drought similar to those thought to be present during the Devonian (about 350 million years ago) and in the past it was thought that Neoceratodus employed its lung to survive in stagnant pools during the summer months. However, Grigg (1965) studied the aerial respiration of N. forsteri in relation to its habits and concluded that the Australian lungfish actually uses its lung as an accessory respiratory organ allowing the fish more metabolic scope than would be possible with gills alone.

It appears, that in some air breathing fishes, such as Gymnarchus and Erythrinus the respiratory function of the air bladder has evolved secondarily as an adaptation to life in deoxygenated swamps. Among the lungfishes it seems that selection has favoured maintenance of the lung. The other genera of lungfishes, Protopterus and Lepidosiren, are adapted to withstand aridity by burrowing and building protective cocoons, favouring increased independence on the lung and further gill reduction. Neoceratodus cannot survive such extreme conditions and, in fact, does not appear to need to do so because during Grigg's field investigations it was found that the waterholes of the Burnett and Mary rivers, in which the animal lives, contained abundant oxygen derived from shallower regions of the rivers and large amounts of aquatic vegetation. Grigg concluded that N. forsteri is not just adapted for survival under drought conditions (it cannot survive dry out of water for any length of time); that the lung is used as an accessory respiratory organ during periods of greater activity such as swimming against the current and that the species is the most primitive of the existing Dipnoi.

Visitors to the Tasmanian Museum should note the fleshy-lobed fins of Neoceratodus, upon which the animal can walk both forwards and backwards, the large leathery scales, and, if one is lucky enough to find this mainly nocturnal animal active, its habit of gulping air from the water surface whence it is pumped into the lung by raising the floor of the mouth. Further information and references about Neoceratodus can be found in the papers of G. C. Grigg (see Aust. J. Zool. vol. 13, No. 3, August 1965). The evolutionary significance of the Dipnoi is detailed by A. S. Romer ("The Vertebrate Body", Saunders, 1955) and an account of the distribution and habits of the living lungfishes may be found in G. Sterba's "Freshwater Fishes of the World" (Vista Books, 1961) though the reader should be warned that not all his species are accepted by fish taxonomists.

NEW TASMANIAN WADER RECORDS

F. T. H. Smith, D. R. Milledge & D. G. Thomas

THE month of November 1965 produced three species of migratory waders that had not previously been recorded in Tasmania. All were found within twenty miles of Hobart and were seen by all three of us. It is the purpose of this note to place on record details of these occurrences.

CHARADRIUS MONGOLUS Mongolian Dotterel

A single bird was present at Lauderdale on 28 November. When first seen it was standing by itself in short samphire some twenty yards from the lagoon on the east side of the Hobart-Opossum Bay road. As we approached closer the bird flew, the flight being fast and the wings appearing relatively long. A sudden change of direction and we "lost" the bird and it was considerably later that we re-located it, standing on a patch of bare sand on the other side of the Lagoon. It subsequently moved to the water's edge where it permitted us to approach to within 12 yards. The feature that distinguished mongolus in eclipse from the allied Double-banded Dotterel C. bicinctus, the black eye-patch, was clearly visible and the upper parts were markedly greyer. When we finally put the bird up, the loud call was similar to that of C. alexandrinus being unlike that of bicinctus.

Although Lauderdale, and other seemingly suitable areas close to Hobart have been searched on several later dates, no further sightings of mongolus have been obtained. However, one of us (DGT) found one on the east coast at Ansons Bay on 4 January 1966 where it was associating with C. alexandrinus and Erolia ruficollis.

CALIDRIS MELANOTUS Pectoral Sandpiper

A single bird was tentatively identified as of this species by DM on 18 and 19 November. It was present in Barilla Bay in a samphire swamp close to the Cambridge airfield where it was subsequently seen by DGT on 21 November and by FTHS, in company with DM on 27 November when FTHS confirmed the identification. It was present on 28 November when it was seen by the three of us and both DGT and DM have observed it on subsequent occasions.

The bird concerned was slightly larger and browner than C. acuminata, which were normally present in the swamp and with which it often associated. The plumage was bright and well marked, the distinctive gorget being clearly defined, and this was sufficient to enable the bird to be picked out amongst a flock of acuminata, whether on the ground or in the air. Other marks which left no doubt as to the bird's identity were, the absence of any rufous on the crown, the bright yellow, almost ochre legs, and the dull yellow basal portion of the bill.

Many good views of the Pectoral Sandpiper were obtained, especially when it was alone, for it then permitted a close approach. Its habits were quite distinct from those of acuminata, for it adopted an upright stance when on the alert and at times crouched or stood like a snipe. Another characteristic which set this bird apart from acuminata, was its reluctance to leave the samphire swamp. When flushed in the company of a flock of acuminata, the Pectoral Sandpiper would break away and return to the swamp, whereas the Sharp-tailed Sandpipers flew out to

resume feeding or resting on nearby tidal mudflats. At times it was the only wader present there, apart from a few Charadrius alexandrinus and Haematopus ostralegus.

The call of melanotus, a loud, reedy terrp, terrp, terrp, was sufficiently unlike that of any other species present, to be diagnostic. Because of its large size and well-marked plumage, this individual was presumed to be a male.

Since melanotus is a bird of swamps and vegetation-lined water it was anticipated that the bird would leave the area as the pools in the samphire swamp dried up. These pools were completely dry by December when the bird was seen feeding in shallow tidal water in company with Vanellus miles and Pluvialis dominicus. The bird could not be found on 16 January.

CALIDRIS TENUIROSTRIS Great Knot

We also visited Orielton Lagoon on 28 November at a time when the tide had started to ebb in Pittwater. Orielton Lagoon is non-tidal and is used as a rest area by many waders that feed in Pittwater in the vicinity of Sorell. Many flocks of migrant waders were present along the south-east shore of Orielton Lagoon which, in this area, is muddy with rocky reefs. One flock, standing in shallow water, consisted of 13 Knots, C. canutus, and a slightly larger bird with a longer bill which FTHS had no hesitation in identifying as a Great Knot. In addition to being slightly larger this individual was noticeably mottled on the back, with a streaked crown and markings on the breast. In flight the difference in tail and rump patterns of the two Calidris sp. was noted.

This particular flock was difficult to approach, mainly because of the nervousness of a nearby flock of Greenshanks, Tringa nebularia, and eventually all the waders left for Sorell where both species of knot were found feeding well out from the shore.

A second tenuirostris may have been present in a mixed flock of Limosa lapponica and C. canutus but this flock would not permit sufficiently close approach to confirm this. On subsequent visits, DGT has observed only one tenuirostris in the area, but DM saw two Great Knots resting with 3 C. canutus and 20 L. lapponica on a small island in Orielton Lagoon on 16 December. At the time of writing (16 January) at least one C. tenuirostris was still present and under observation by DGT.

(This was written in January 1966 but was not published. The purpose of publishing it now is that the first Tasmanian records of these species have not been published which they should be if they are to be accepted. Further occurrences are given in Emu 70 : 79-85, 1970)

A NOTE ON THE ELEPHANT SEAL (Mirounga leonina)

A. J. Dartnall

A single male elephant seal, about 14 feet in length, was sighted on the beach at Fortesque Bay, S.E. Tasmania on the 27 November 1970. Although bleeding slightly from the vent and small wounds around the snout the animal appeared in good condition otherwise and returned to the water after some ten minutes of observation.

The elephant seal is the only earless seal which breeds in Australia. The

species used to breed on King Island until the colony was exterminated early in the nineteenth century. Individuals regularly come ashore in Tasmania but the nearest breeding grounds are now Heard Island, Macquarie Island and islands south of New Zealand. There is a record of a single female giving birth at Strahan, on the west coast of Tasmania, in November 1958.

The biology of the elephant seal is well known from the work of the biological research programme of the Australian National Antarctic Research Expeditions. Information may be found in "Whales and Seals of Tasmania" by J. L. Davies (published by the Tasmanian Museum) and "A Guide to the Native Mammals of Australia" by W. L. Ride (Oxford University Press). Papers on breeding, growth and distribution have been published in many places; some references are given by the authors quoted above, others will be found in a recent paper by M. M. Bryden (1969, Australian Journal of Zoology Vol. 17 pages 153-177).

ANOGLYPTA LAUNCESTONENSIS REDISCOVERED

IN our last issue (November 1970) we published an appeal by Mr. A. J. Dartnall of the Tasmanian Museum for specimens of the largesnail Anoglypta launcestonensis. Mr. Dartnall, obviously fearing that it might be extinct, offered 50 cents for each live snail collected by junior members of Field Naturalists' Clubs. This proved to be a costly offer as Mr. Dartnall had to pay out \$7.50.

The junior members of the Launceston Field Naturalists' Club decided to look for it on Mount Arthur where they found it to be plentiful. Several live animals were delivered to Mr. Dartnall and the building fund of the junior naturalists has benefited by \$7.50. Mr. Dartnall is delighted at the response and to find that Anoglypta launcestonensis is not extinct.

LETTERS TO THE EDITOR

ENDEMIC BIRDS :

The short note on Swift Parrots wintering in Tasmania (Tas. Nat. No. 23, Nov. 1970) contains the following statement:- "However, it is not known to breed outside Tasmania and on this ground I regard it as a Tasmanian endemic species."

Species endemic to this State are quoted as fourteen in number, and are restricted to those which do not occur elsewhere. The term "endemic" is defined in 'A New Dictionary of Birds', edited by A. Landsborough Thomson, 1964, — "term applied to a species or other taxon in relation to a stated area, meaning that it is restricted thereto".

Yours faithfully,

L. E. Wall, 63 Elphinstone Road, Nth. Hobt.
12 January 1971.

The author replies : The point raised by Mr. Wall is one of semantics. He is quite correct that the 'New Dictionary of Birds' gives the definition he quotes. However, the 'Shorter Oxford English Dictionary' gives an alternative definition : the opposite of exotic. The point of real interest is that the Swift Parrot is known

to breed only in Tasmania. It has differentiated sufficiently from its mainland relatives to be placed in a monotypic genus. Presumably it evolved in Tasmania and not on the mainland. It is most unusual for a species whose breeding range is restricted to an island or archipelago to be migratory: so unusual that we do not have a term to distinguish it from species that breed on islands and the adjacent mainlands. Perhaps we should call such species neo-endemics.

COOT NESTING IN TASMANIA

ON the old millpond at Lochmaben, near the Northern Tasmanian village of Nile, I watched a pair of Australian Coot feeding three very small young ones which had been hatched there not more, I believed, than one or two days before. The date was January 16, 1971. In many years of bird-observing, I had never previously had more positive evidence than this that the Coot occasionally nested in Tasmania. It is rather astonishing that breeding is not observed more often, because in some years, for several months at a time, spring and summer included, the species occurs in Tasmania in hundreds. But seemingly overnight large numbers will leave rivers and estuaries and apparently quit the island.

The first authenticated discovery of the Coot's nest and eggs was made by the late Jane Ada Fletcher at Cleveland, thirty miles south of Launceston, in the period September-November, 1909. As recorded in the *Emu*, vol. xi, p. 138, Miss Fletcher found five egg clutches. She sent one clutch to the "Hobart Museum" (now Tasmanian Museum.)

Young coots are distinctive little things for a few days after being hatched. They are covered in dark-grey down, except for the head and throat. The frizzy-looking down on these parts is orange and light red. There is a grey patch on top of the head. The short bill is red with white tip. Hiding behind willows on the bank, I was not more than twenty yards from the three little ones and their parents on the water at Lochmaben.

- MICHAEL SHARLAND

COLOUR VARIATION AND NOTES ON THE GREY-BREASTED SILVEREYE

M. T. Templeton

MOVEMENTS of Grey-breasted Silvereyes through the Loorana area of King Island reaches its peak during the months of May and June. During the 1969 movements two birds stood out because of their white and lemon colouring.

Bird A. Observed 20 May 1969. Forehead, head, nape, back and rump, pale lemon, wings slightly darker lemon, with white primaries and tail white. Chin and throat bright rufous, breast and abdomen very pale lemon with darker flanks. Distinct white eye ring with dark irises. Bird B. Present from 27 May 1969 to 20 June 1969. Forehead white, head and nape pale lemon, upper and lower back slightly darker lemon, rump and tail converts pale lemon, with white tail. Wings pale lemon with white primaries. Chin, throat, breast and abdomen dull white, visible white eye ring and dark irises. Max McGarvie has records of similar birds in the late Autumn of 1963 and 1967 at the northern end of King Island.