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AN OBSERVATION OF ALBINISM IN THE YELLOW-TAILED BLACK COCKATOO

Murray D. Bruce & Ronald I Orenstein

ON 13 February 1974, the authors observed a flock of about twenty Yellow-tailed Black Cockatoos Calyptorhynchus funereus opposite the highest point (650.7 m.) on the Gordon River Road to Lake Pedder, Tasmania. Their movements were followed by telescope as they foraged in treetops on a forest slope approximately 500-600 m. distant. A whiteish bird in their midst, at first taken for a White Goshawk Accipiter novaehollandiae, proved on closer examination to be an albinistic Yellow-tailed Black Cockatoo. The bird was a dirty white above, and yellowish white below. The yellow cheek patch and tail band were discernable, though not as intense as in a normally plumaged bird (cf. Forshaw 1969, Australian Parrots p. 52). A hint of dusky on the head outlined the cheek patch, and the tips of the tail feathers were dusky, forming a distinct band.

After about five or ten minutes of observation, Bruce noted a second albinistic cockatoo in the flock. The bird was probably present from the first but it was not until the entire flock came into view that it was realised that there were two abnormally plumaged individuals present. This second bird was similar in appearance to the first, but with the yellow areas on the head and tail more intense.

Both birds appeared to take a normal part in the activities of the flock, both when perched and when engaged in wheeling flights over the trees, and there was no evidence of discriminatory behaviour towards them on the part of the rest of the flock.

Apparently albinism has not previously been recorded in wild black cockatoos (J. Forshaw pers. comm). However, a specimen of C. funereus in the Australian Museum (A.M. no. 09553), collected at Wiseman's Ferry, NSW, on 8 October 1897, exhibits partial xanthochroism. It is largely yellowish, with patches of black and dark brownish on the back, abdomen, primaries and tail.

We are grateful to J. M. Forshaw for his kind assistance in answering questions on albinism in this species. R. B. Payne and R. W. Storer criticised the manuscript of this note.

TASMANIAN AQUATIC NON-MARINE MOLLUSCA
Part 1. Lymnaea

R. C. Kershaw

Introduction

An increase in the number of enquiries concerning the identity of snails which may carry the sheep liver fluke, has emphasized the need for clarification of the nomenclature.

There is only one readily available publication which contains illustrations of these snails (May & Macpherson, 1958, plate 41, figs. 7, 8, 9.). The names used have been redundant for a number of years. As all the non-marine moluscan fauna is in need of review this paper will constitute the first of a series undertaking this on a preliminary basis.

Only one snail species is known as a vector of the liver fluke in Tasmania. This species is the Lymnaea tomentosa (Pfeiffer) 1855.

Discussion

Tenison Woods (1876) believed his four species to be local and distinct from European and Australian forms. Petterd (1888) noted that the European Lymnaea peregra Muller had become acclimatised. Although commenting on the mounting confusion, he believed he had local forms for which new names were required. He thought the localities precluded the possibility of these snails being introduced.

Johnston (1888) summarised Tenison Woods names noting that that author himself believed by 1878 that his species were in fact the L. peregra Muller. There have been many further attempts to clarify the situation. Thus in one of the most useful works on the liver fluke Clunies Ross & McKay (1929) used the name Limnaea brazieri (Smith). Later taxonomists felt that new generic names were warranted and these have persisted since.

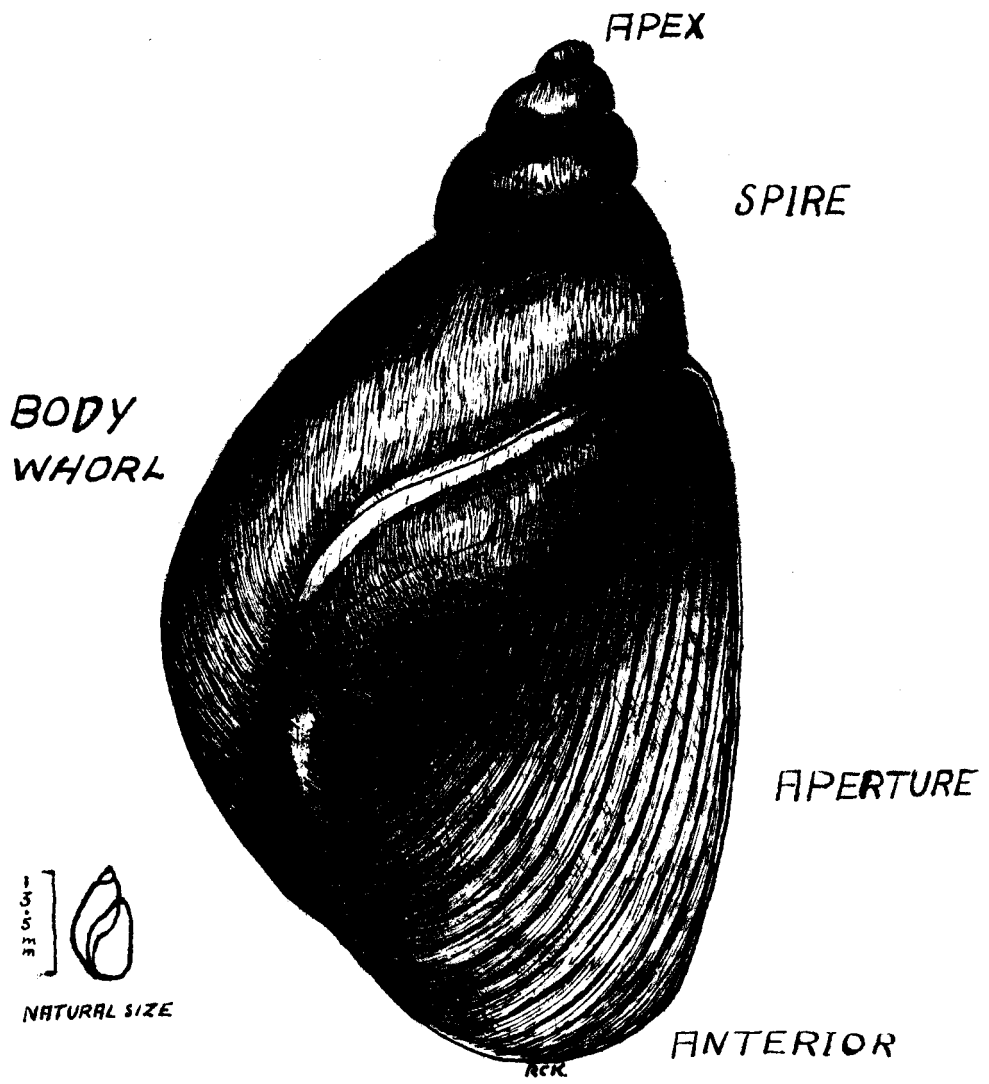
Hubendick (1951) in a world study of the Lymnaeidae described the extraordinary variation present in the known species. He suggested that there were few very variable species in Australia. However the Tasmanian situation was not clear enough to enable Kershaw (1954) to revise the Tasmanian names, accepted by May (1921).

Boray & McMichael (1961) recognising the need, reported on laboratory studies which left no doubt that only two groups of these snails existed in Australia. One of these is based on the species Lymnaea lessoni Deshayes which does not occur in Tasmania. The other is based on Lymnaea tomentosa (Pfeiffer) which does occur in Tasmania. This is the species implicated as a vector of the liver fluke. Other species reportedly introduced appear to have died out.

Despite the range of variation exhibited by the species no difficulty should be found in distinguishing it from native Tasmanian snails. Boray and McMichael (l. c.) have listed all the names previously in use so that revision of collections has been facilitated.

Characters of Lymnaea tomentosa

Shells range in size from 5 to 12 mm in length from anterior to apex with occasional larger specimens. The body whorl is inflated and very large compared



LYMNAEA TOMENTOSA PFEIFFER

to the whorl shell. The spire is comparatively small. The aperture is large and more or less ovate. The observer normally views the shell with the spire uppermost and the aperture facing the observer. In this position it will be noted that the shell is dextral, i.e. the aperture is on the right hand side.

The only comparable shells found in similar situations in Tasmania are sinistral, i.e. the aperture is on the left hand side. These native species will be discussed in a future paper. They have not been implicated as vectors of the liver fluke.

A figure is provided to indicate the features which will assist in identification. The three illustrations in May & Macpherson (l. c.) under the names Austropeplea huonensis, Simlimnea gunnii and Simlimnea neglecta provide some indication of the variation which exists. Each of these illustrations is of Lymnaea tomentosa (Pfeiffer).

Distribution

The Lymnaea tomentosa (Pfeiffer) is to be found throughout much of rural Tasmania. It lives in swamps, lagoons, farm dams, ditches, channels and streams. It is able to aestivate in dry mud for some months even at low temperatures. A population may build up very rapidly. Its rapid and successful establishment in Tasmania in the early days of settlement is clear illustration of the colonizing ability of the species.

Acknowledgement

This work has been materially assisted by the loan of a microscope from the Science and Industry Endowment Fund to whom grateful acknowledgement is made.

References

Boray, J.C. & McMichael, D.F. 1961. The identity of the Australian Lymnaeid snail host of Fasciola hepatica L. and its response to environment. Aust. J. Mar. Freshw. Res. 12 (2): 150-163, Pls. 1.-5.

Clunies Ross, I. & McKay, A.C. 1929. The bionomics of Fasciola hepatica in New South Wales and of the intermediate host Limnaea brazieri (Smith). C.S.I.R. Bull. 43 : 1-62

Hubendick, B. 1951. Recent Lymnaeidae, their variation, morphology, taxonomy, nomenclature, and distribution. K. Svensk. Vetensk. Handl. Band 3, 1 : 1-222, Pls. I – V.

Johnston, R.M. 1888. Critical observations on recent contributions to our knowledge of the fresh water shells of Tasmania. Pap. Proc. R. Soc. Tasm. for 1887 : 84-96

Kershaw, R.C. 1955. A systematic list of the mollusca of Tasmania. Pap. Proc. R. Soc. Tasm. 89 : 289-355.

May, W.L. 1921. A revised census of the Tasmanian fluviatile mollusca. Pap. Proc. R. Soc. Tasm. for 1920 : 65-75, 36 fig.

May, W.L. & Macpherson, J.H. 1958. An Illustrated Index of Tasmanian Shells. Govt. Printer Hobart. Plates 1-50, text.

A Note on the Natural History of a Pseudoscorpion

A. J. Dartnall

IN April 1969 two specimens of a pseudoscorpion were collected by the Tasmanian Field Naturalists at Tooms Lake. I identified them as Synsphyronus hanseni (With) and gave some account of its known distribution in Tasmania. We still know very little about our pseudoscorpion fauna though at least 15 species are known to be present, some of which are not yet described.

Synsphyronus hanseni is probably the pseudoscorpion most commonly encountered because it is often found in houses. In 1969 I was able to quote about 8 localities where this species was found. Since that time the locality list has been extended but all that it really demonstrates is that people are more likely to see these animals around Hobart than in the rest of Tasmania - probably because there are more people in the Hobart area to spot them which tells us very little about the distribution of the animal. We do know more about its living habits now. It has been found in houses (often in baths and wash basins), under bark of Eucalyptus globulus and under stones and bricks. It has been recorded from 10 feet above waterlevel at Old Beach and at the summit of Mt. Nelson (1113 feet).

Recently (5.1.1975) Mr. W. Rodgers was collecting fossils at Old Beach and he found a group of pseudoscorpions under a piece of weathered mudstone. The animals were all S. hanseni and each adult female was enclosed in a cocoon of stone particles held together with silk. The cocoon walls were roughly circular and about 5mm in diameter and 2mm high. Presumably these cylinders were closed off by the other side (the bottom) of the crevice in which they were built. Savory (1966) mentions that false scorpions building inside a crevice often continue their cocoon into an igloo shape.

Cocoons are used by pseudoscorpions to protect themselves when moulting, as hibernation chambers and as brood chambers in which they lay their eggs and bring up their young. Two kinds of chamber were apparent in the Old Beach sample. The stone walled cocoons each contained an adult female (body length c. 3mm). Other, less regular cocoons made only of silk contained the cast skins of past instars.

Each female was carrying a brood chamber under the abdomen. When the eggs are laid they are deposited in a brood chamber which is secreted by the oviduct walls. After hatching, the larvae, which are still attached to the female by short beaks are pumped full of yolk by the female and swell up to about three times their previous size. The brood chamber also enlarges to accommodate the larvae after refuelling, pushing the mother's now empty abdomen high in the air. Most of the S. hanseni females brought to me were at this stage and each brood chamber appeared as an inflated group of sacs - seven in all - carried under the abdomen.

S. hanseni belongs to a group of pseudoscorpions which have exocuticula - extensions of the surface cuticle which are often irregular and flaky in appearance. The gaps in the exocuticula of the adults of this sample contained particles of stone and debris providing good camouflage against the background rock. Their bodies are actually a dark grey-brown. Three nymphs were also found, each of about 1.4mm body length. Each nymph was grey-green in colour and not covered in debris like the adults. The silk mounting cocoons contained exuviae of one smaller size only so these were presumably second stage nymphs.

As pseudoscorpion nymphs moult to the adult stage they acquire more tactile setae on their limbs and mouthparts. The larvae in this sample only had one long seta on the moveable finger of the pedipalp in contrast to two (2) in the adults.

These notes provide a little more information about the natural history of S. hanseni. Much more information awaits the observer. If naturalists find pseudoscorpions the museum will identify the animals. Information about these animals may be found in Savory (1966) who also gives instructions on methods of keeping pseudoscorpions in captivity.

References :

Dartnall, A.J. 1969 - Pseudoscorpions. Tas. Nat. No. 17, p.2.
Savory, T. H. 1966 - False Scorpions. Scientific American 214 (3) : 95 - 100. (Available as a Scientific American offprint from booksellers).

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BOOK REVIEWS

Bird Life by Ian Rowley (Collins Australian Naturalist Library, $9.50)

Ten years ago there was no adequate field guide to the identification of Australian birds, ecology was a seldom used term and the subject of ethology (animal behaviour) was almost unhead of. Today, we have a number of adequate books on bird identification, ecology is a concept discussed with varying degrees of comprehension by all, and the subject of ethology has recently achieved significant scientific status with the award of a Nobel prize to its founders. Consequently, the time was ripe for the publication of a book concerned with the ecology and ethology of the Australian avifauna rather than with species identification. "Bird Life" by Ian Rowley is such a book and represents a most important extension to the range of ornithological literature available on the Australian region.

With the field guides presently available it is possible, with a little perseverance, to become competent at species identification. However, if the ornithologist is to sustain enthusiasm in his subject, an interest must be developed which extends beyond the purely mechanical listing of species seen. In "Bird Life" Rowley shows how developing such an interest can lead to fascinating studies of the life history of bird species. Anyone previously unacquainted with the subject matter will

after reading this book, look at birds with an added dimension of awareness. This is a book concerned with what birds do, how they do it and why each species does its thing in its own unique way.

In the first part of the book the reader is introduced to concepts such as the adaptation of bird species to an existence in different types of habitat, bird behaviour and the factors governing avian reproductive cycles. A constant theme of this part of the book is the influence of the Australian climate on avian evolution in the Australian region. Indeed, Australian studies have shown that many species have adapted to an existence in the arid regions by the development of complex social organization and it has been necessary to revise the Northern-hemisphere orientated concepts which were developed from the font of evolutionary thinking, Victorian England.

The second part of the book is concerned with summarising studies of Australian species. Significantly, most of the work described has been carried out over the past 15 years. In this section the author draws on examples of his own work (Superb Blue Wren Malurus cyaneus and the Australian Raven Corvus coronoides), that of his colleagues in the Wildlife Division of the C.S.I.R.O. (e.g. Frith's study of that extraordinary species the Mallee Fowl Leipoa ocellala) as well as that of independent workers (e.g. Dow's study of the Noisy Miner Manorina melanocephala and Parry's work on the Kookaburra (Dacelo gigas). Descriptions of work on the Tasmanian Native Hen Tribonyx mortiere (Ridpath) and the Tasmanian Mutton-bird Puffinus tenuirostris (Serventy) provide excellent local contant.

In conclusion, this book represents a significant advance in ornithological literature on the Australian region, bringing much of what is best in Australian ornithology to the general public in a condensed form. However, what has been achieved is dwarfed by the task ahead, and it is confidently anticipated that this book will stimulate a number of both professional and amateur ornithologists of the future to a lifetime of rewarding study.

MIKE NEWMAN

Australian Bush Birds in Colour, by Irene and Michael Morcombe
(A.H. & A.W. Reed, $4.95).

We have come to expect high quality birds photos from the camera of Michael Morcombe, and in this small book he and his co-author have produced a gallery of outstanding pictures as good as anything they have shown before. In the most attractive assortment of some 48 species it is difficult to separate any from the viewpoint of perfection, though perhaps one of the more interesting is his study of the Rufous Scrub-bird. It is extremely hard just to be able to see this elusive little creature in life, let alone to photograph it.

Studies of birds in flight, added to others in brilliant plumage, make this a charming publication. The only thing that strikes a rather unnatural note - this no doubt unavoidable with flash - is found in the birds' eyes where two, and sometimes three, highlight spots reflect this number of separate light sources, to some detriment.

Each colour plate is accompanied by a description of habits, nesting, food, and other useful information.

M. SHARLAND

MARIA ISLAND BIRDS

L. E. Wall

NATIONAL PARKS AND WILDLIFE SERVICE has included in its small publication on Maria Island National Park a list of the birds found there, based on reports by D. R. Milledge (1968), P. Temple-Smith (1968), R. H. Green (1969) and J. H. Hemsley (1969).

In this list the Emu and Cape Barren Goose have been noted as introduced, and other species since introduced by National Parks and Wildlife Service are :- Eastern Rosella, White Cockatoo, Tasmanian Native Hen, Black Swan, Brown Quail, Black Duck, Grey Teal, Chestnut Teal, Blue-winged Shoveler and Bald Coot.
A comparison with previous records, some unpublished, are interesting.

The first detailed list I have read is that of Legge (1887) although Hall (1912) refers to a list prepared by the early explorer Baudin who deposited a list in Paris. Baudin's list included reference to the "Goueland gris" which Hall could not identify. Legge's list included the following which do not appear in the current list:- Brown Bittern, Blue-winged Shoveler, Mountain Duck, Black Swan, Pelican, Curlew, Lewin Water-rail, Common Bronzewing, Little Lorikeet? Tawny Frogmouth, Grey Shrike-Thrush, Emu Wren. As mentioned above several of these have been re-introduced by National Parks & Wildlife Service but most of them are waterfowl which are strongly nomadic and there cannot be any optimism that they will be permanently re-established on the island.

The next published list available to me is Hall (1912) in which he included the following :- Painted Quail, Common Bronzewing, Northern Rosella, Azure Kingfisher, Spine-tailed Swift, Grey Butcherbird, Brown Thornbill, Superb Blue Wren, Wedge-tailed Eagle, Blue-billed Duck, Blue-winged Shoveler, Black Swan, Pied Cormorant, Sooty Albatross. Almost all of these were identified by him personally but there are two which deserve special mention. The Pied Cormorant (Phalacrocorax hypoleucus) is included as well as the White-breasted Cormorant, but the Little Pied Cormorant (P. melanoleucus) is not. This provides a puzzle because the Pied Cormorant (now P. varius) has been included on the Tasmanian list by Mathews (1915) and later authorities, possibly because of this record, although none has quoted a particular occurrence. Tas. Bird Report No. 1 (1971) quotes the first definite record for the Tasmanian area as occurring on King Island in that year.
Hall also mentions in the text "There were quite large flocks of the parrot peculiar to Tasmania (Platycercus browni)" and in the list at the end refers to it as "yellow-billed parrakeet (Platycercus browni)". He did not list the Green Rosella (P. caledonicus) which used to be known commonly as the Yellow-billed Parrot, and because the Northern Rosella (P. browni) is restricted to the northern part of Northern Territory and the Kimberley region of Western Australia I believe that the Green Rosella (P. caledonicus) was what he saw.

It is interesting to note that many of those listed by Legge were again listed by Hall 25 years later and some of them, although not included in the National Parks and Wildlife Service list, have been observed by others in recent years.

(To be continued)

Macquaria