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Editor.

MINING IN SOUTH WEST TASMANIA

In February the State Government issued "Guidelines for Mineral Exploration Activities within the South West Conservation Area", and the Minister for Mines has stated that they apply to all Conservation Areas and National Parks. While these provide for some improvements to conditions which have applied previously to exploration and mining activity generally in the State, and to that extent must be applauded, we must be deeply concerned that the Government has seen fit to approve these activities in areas previously reserved from such exploitation because of their special value in other contexts.

Especially is this so because it has been clearly stated by the Commonwealth Government that it is submitting the whole of the South West Conservation Area for inclusion in the World Heritage List as an area of unspoiled wilderness of world-wide significance. Conservationists must view this with as much alarm as they do for the fact that only a very small part of The Great Barrier Reef has been included in The Marine Park which was approved by the Commonwealth Parliament in 1975.

DIET OF JUVENILE CRESTED TERNS, *STERNA BERGII*, ON LACHLAN ISLAND

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Abstract

Regurgitated gut contents of juvenile crested terns, *Sterna bergii*, were obtained during a banding exercise. Nine species of fish were positively identified, the composition of which suggested that these birds fed mainly over shallow seagrasses.

On 6th January, 1982, J.G.K. Harris visited Lachlan Island in the Mercury Passage to band juvenile kelp gulls (*Larus dominicanus*) and Pacific gulls (*Larus pacificus*).

He also took the opportunity to band juvenile crested terns (*Sterna bergii*) from a colony of about 250 pairs in the north-east corner of the island.

One hundred and fifty-seven young terns were banded by collecting 15 to 20 at a time into a plastic dustbin, taking it to the edge of the colony and then banding and releasing the birds one at a time from the dustbin.

After completion of each batch of birds, the dustbin was seen to contain the remains of several small fish regurgitated by the terns. All remains complete enough to give a chance of identification were retained and the remainder were tipped out of the bin before collecting the next batch of birds.

Almost all the remains were of fish ranging from 80 mm to 130 mm in length. The only other items were the remains of a small cephalopod (either squid or cuttlefish) and a parasitic isopod.

The fish remains were identified by P.R. Last and are listed below:

Family	Species	No.
Engraulidae	<i>Engraulis australis</i> (Shaw) Australian anchovy	1
Atherinidae	<i>Atherinosoma microstoma</i> (Günther) Small-mouthed hardyhead	1
	<i>Atherinasoma presbyteroides</i> (Richardson) Silverfish	3
	<i>Atherinason hepsetoides</i> (Richardson) Richardson's hardyhead	2
Mugilidae *	<i>Aldrichetta forsteri</i> (Cuvier and Valenciennes) Yellow-eyed mullet	1
Odacidae	<i>Neoodax attenuatus</i> (Ogilby) Slender rock whiting	1
	<i>Neoodax balteatus</i> (Cuvier and Valenciennes) Little rock whiting	4
Monacanthidae	<i>Acanthaluteres spilomelanurus</i> (Quoy and Gaimard) Bridled leatherjacket	6
*	<i>Pencipelta vittiger</i> (Castelnau) Toothbrush leatherjacket	3
TOTAL		22

* Juveniles

The majority of these prey species occur commonly over shallow seagrass beds. There is, however, evidence that the terns fed over both estuarine and marine seagrasses.

The hardyhead, *Atherinosoma microstoma* is a typical inhabitant of brackish environments and during periods of high salinity, *Acanthaluteres spilomelanurus* and *Neoodax balteatus*, may also be common.

The slender rock whiting *Neoodax attenuatus*, has only been recorded south of Bass Strait on one other occasion. It, along with juveniles of *Penicipelta vittiger*, generally lives amongst marine seagrasses.

Engraulis australis and *Atherinasoma presbyteroides* school in surface waters of bays and large estuaries and are not restricted to the shore zone. Consequently some terns may have fed offshore.

BOOK REVIEW

Michael Sharlands "A guide to the birds of Tasmania" (Drinkwater Publishing) is an attractive little book which will interest the casual bird lover. It is not an accurate nor authoritative reference for the student of Tasmanian ornithology.

The author has successfully augmented his third edition of "Tasmanian Birds" published in 1958 by co-opting the creditable skill of local artist Jane Burrell to increase the number of illustrations from the original 13 photographs (1 colour, 12 b & w) to 107, paintings and sketches (67 colour; 40 b & w).

The original text has been extended and improved mainly by the inclusion of some 35 additional species and new information (generally current to 1979) on rarer species from other sources. The style remains anecdotal and contains many historical accounts with references to egg-collecting and the gastronomic merits of protected species. Though entertaining, this information is of limited use to the reader and could perpetuate these acts. It could have been replaced by new information. The book will be an enjoyable and interesting guide for many people.

However, as an authoritative reference it has many shortcomings. The conventions used in selecting, naming and ordering the species listed are inconsistent, dated, and poorly justified; serving only to emphasise the local nature of the book. English names used are often not those in current usage, scientific or "latin" names used are confusing and at times follow those of the now outdated 1926 RAOU Checklist (e.g. Terek Sandpiper, Red-kneed Dotterel). Sharland's confusion over names has resulted in illustrations of cormorants that are called shags in the text. The basis for the inclusion of many species such as Canada Goose, Lesser Redpoll and Red-necked Phalarope, Mallee Ring-neck and a number of others, is unclear, particularly since Northern Giant Petrel and Stewart Island Weka have been omitted. Readers would have been assisted by appendix listings of aviary escapees, extra limital vagrants etc. instead of being led to believe they are Tasmanian birds.

Two subspecies of the Shining Bronze-cuckoo, *lucidus* and *plagosus* have been retained with the status of full species. Many apparently authoritative statements such as the "greatest number of White (Sulphur-crested) Cockatoos seen together has been 80" . . . should have been avoided since they are so readily discredited (e.g. flocks of around 400 birds can be seen near Lake Echo in certain seasons).

The descriptive notes are clear, brief and generally useful but sometimes wrong or inaccurate, (e.g. old Swamp (Marsh) Harriers are pale not dark, adult king penguins' mandibles are pink not red, and head-bobbing is characteristic of all falcons not just the Peregrine falcon).

Ecological information on Tasmanian species, when given, is often not based on Tasmanian experience. For example on p. 94 the Peregrine Falcon in Tasmania has only been recorded nesting on cliffs, lays from 1 to 4 eggs and preys on birds (chiefly Starlings). Insects, reptiles and mammals are not a recorded part of the diet in an extensive Tasmanian study and the insect catching behaviour described is more typical of the Brown Hawk (Falcon). The population is presently stable and the supposed trans-Bassian migration has been discredited by 5 year banding studies on both sides of the Strait.

Sharland makes specific mention of legal protection for only three bird of prey species, giving the impression the rest are not protected. This was the case ten years ago (now — they are all wholly protected). Although he acknowledges an increase in studies on Tasmanian birds, generally, he has not made use of the results of these studies.

The editing is of good standard and typographical errors are few but the bound index had to be replaced by a corrected version which is provided as an insert (watch for this when buying). For around \$20 there are better field guides available, albeit not solely concerned with Tasmanian birds.

David Rounsevell

BREEDING AND FOOD OF THE MASKED OWL

Tyto novaehollandiae

R.H. Green

Introduction

The Tasmanian population of the Masked Owl *Tyto novaehollandiae* is recognised as an endemic subspecies, *T. n. castanops* (Gould, 1837), being considerably larger and darker than other races (Burton 1973). It is widely distributed and well-represented in museum collections, mostly from salvaged, road-killed individuals. Though of considerable interest to ornithologists, the nest and eggs of this subspecies remained undescribed until Hill (1955) published an account of his studies of a pair which nested in the hollow trunk of a large eucalypt near Devonport in the summer of 1954-1955. No further accounts of nests have been published and no eggs of this subspecies are known to exist in collections.

In compiling the following account I gratefully acknowledge the help and co-operation of Mr. Robert Allan who provided observational data and collected food samples.

Breeding

On 25th January 1982 I investigated a report of an occupied Masked Owl's nest near Pateena, about 10 km south of Launceston. It was said that the birds become very noisy after dusk and that the same hollow had been used in at least two previous breeding seasons.

The general area was hilly pastoral country with a few old over-mature eucalypts in the vicinity of the nest site and timbered hills with gorse patches about a kilometre to the east. The tree in which the nest was established was a very large, over-mature White Gum *Eucalyptus viminalis* standing about 100 m from an occupied cottage which formed part of a complex of farm buildings and shelter trees. The breeding owls were said to be undisturbed by general farm activities but their loud nocturnal 'shrieks and chattering' often disturbed the residents of the cottage.

The nest was found to be situated about 15 m up in a decayed section of trunk about 1 m in diameter. The entrance hole was about 30 cm across and facing north-east.

At 2030 hours, while light and visibility were still good, a young Masked Owl came to the entrance, its face and breast being clearly visible as it watched and waited in silence. Feathering was well advanced but dirty-white down was still abundant on the breast. On the data of Hill (1955) this bird appeared to be about nine weeks old.

At 2100 hours, almost half of the nestling was visible from below, framed in the entrance hole and it was beginning to 'chatter' in a subdued, impatient manner.

At 2120 hours, when the light had faded to semi-darkness, one adult, soon followed by the other, flew into the nest tree and perched about 3 m from the entrance. The adults were not seen to go close to the young but restlessly flew about the tree 'shrieking' every few seconds.

About this time a pair of Brush-tailed Possums *Trichosurus vulpecula* appeared, one on the ground and the other in the tree, and though one climbed about in the vicinity of the nest, it appeared to ignore and be ignored by the owls. A domestic cat which walked across exposed ground beneath the tree was similarly undisturbed and ignored.

The calling of the owls was recorded and when played back brought an immediate response from the male. It flew to a branch about 3 m above ground in a small sapling about 10 m from the recorder, watching in an inquisitive manner for about five minutes, before returning to the nest tree.

At about 1935 hours, calling ceased, the adults having apparently moved away towards the timbered hills to hunt.

On 3rd March I was advised that the birds were still present and were particularly noisy each night. On 24th March I again visited the site and was told that calling and activity indicated only one young had been reared and that it had left the nest about the first week in March. From about that time the young was not seen at the nest entrance and activity was dispersed about the homestead, especially in the vicinity of old pine trees where the owls were apparently roosting.

Food

A search for regurgitation pellets on the evening of 26th January produced eight from the ground immediately beneath the nest entrance. A further 27 pellets plus disassociated bones from broken pellets and some discarded carcass remains were collected between 25th January and 24th March from beneath nearby trees. The pellets ranged in size from 3 x 3 x 2.5 cm to 10 x 6 x 3 cm. Bone material was well imbedded in fur of the prey and grass and pieces of bark were present in some. Prey species and the number and percentage of times they were represented in pellets are as follows:

- Rabbit *Oryctolagus cuniculus* 19 (54.3%)
- Ship Rat *Rattus lutreolus* 13 (37.1%)
- House Mouse *Mus musculus* 5 (14.2%)
- Brush-tailed Possum *Trichosurus vulpecula* 2 (5.7%)
- House Sparrow *Passer domesticus* 2 (5.7%)
- Common Starling *Sturnus vulgaris* 1 (2.3%)

The disassociated bones included those of 2 Rabbits, 4 Ship Rats, 1 House Mouse, 1 Common Ringtail *Pseudocheirus peregrinus* and 2 Barred Bandicoots *Perameles gunnii*. Discarded carcass remains included 2 Southern Potoroos *Potorous apicalis*, 1 Common Ringtail, and 2 Rabbits. These samples show a significant bias in favour of the introduced vermin animals. The size range of prey taken indicates that size of prey is not significant in prey selection and that species prevalence is probably of importance in determining this owl's diet. It is therefore an opportunistic predator.

Rabbits ranged from small kittens to about three quarters grown, the Common Ringtail and Southern Potoroos were full grown and the Brush-tailed Possum was about half grown. These larger animals must have been carried from some distance but the smaller rats and mice were most likely secured about the farm yard. In only a few instances were two species found in one pellet.

There did not appear to be preference for particular parts of the animals eaten, anterior and posterior parts being about equally represented.

N. Mooney (pers. comm.) successfully hand-reared two young Masked Owls, a male and a female, in the summer of 1981-1982. The tree in which their nest was sited had been blown down and the young rescued and passed to the Tasmanian National Parks and Wildlife Service.

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LITTLE RINGED PLOVER *Charadrius dubius* AT GRANTON

L.E. Wall

On 29 March 1982 three small waders were seen at the south end of Gould's Lagoon at Granton: two were Black-fronted Dotterels *C. melanops* (one adult and one immature) and the third, while looking superficially like another of this species, showed distinct features which separated it from them.

The most notable of these were the very wide white forehead, the complete white collar, and the black band across the upper breast not extending downwards towards the belly as in the Black-fronted Dotterel. The light brown of the upper-parts was not mottled but smooth, and there was no white wing-stripe during its flight.

The following morning I was able to obtain photographs of the bird with the use of an 800 mm telephoto lens.

My identification as a Little Ringed Plover was confirmed by W. Wakefield who has been familiar with the species in U.K.

This is the first record of it in Tasmania.

CLUB EXCURSIONS**MOUNT FIELD NATIONAL PARK, 7th November, 1981**

P. McQuillan

Over a dozen members and visitors enjoyed a cool but sunny field trip to the sub-alpine reaches of the Park, the aim being to observe alpine insects which are abundant in the November - March period.

First stop was at Lake Fenton; however the early season and low water temperatures meant that few aquatic insect larvae were found but these abound later in the summer. Of great interest were numbers of the small scorpionfly *Nannochorista* sp. resting on the shoreline vegetation.

As in the alpine areas of New Zealand, large flightless grasshoppers are important herbivores in the high altitude areas of Tasmania. These grasshoppers are generally endemic to the highlands and exhibit interesting adaptations to their low-energy environment; for example, their large size, dark colour, flightlessness and long life (several years) all help to conserve energy. The species we found were:— *Russalpia albertisi*, *Kosciuskola* sp., *Tasmaniocris tasmaniensis*, and *Monistria flavogranulata*. The larvae of small moths play an important role as decomposers of dead leaves in many parts of Australia and at this time of year adult moths of the family *Tortricidae* were abundant flying over ground litter.

Next stop was a Wombat Moor which again supports quite high densities of alpine grasshoppers. Here, close to where it was discovered in the 1920's, was one of our interesting day-flying geometrid moths, *Dirce oriplancta*. These endemic, fast-flying, colourful moths virtually replace butterflies at high altitudes — though not completely for also abundant was the Mountain Blue Butterfly, *Neolucia hobartensis*, the larvae of

which feed on *Epacridaceae*. From nearby tarns we recovered the large, sluggish larvae of dragonflies which stalk their prey of aquatic fauna and capture it by means of hydraulically extensible mouthparts.

The day ended with a walk around the perimeter of Lake Dobson. By beating the old dead leaves festooning the trunks of giant pandani we dislodged many nocturnal insects from their hiding places. Significant among these were a new species of tineid moth — the largest yet discovered in Australia and one of the largest in the world — , an undescribed species of geometrid moth (*Neoteristis*), and an interesting gracillariid moth, *Cyphosticha* sp., the larvae of which feed on *Nothofagus*.

CONINGHAM, 6th February, 1982

Before the day became too hot a short visit was made to the lower part of the Lands Dept. Recreation Reserve. Two birds of particular interest were seen — Forty-spotted Pardalote and Satin Flycatcher.

The party then retired to the rocks on the south side of the beach where lunch was taken. Then some roamed along the rocky shore looking at the marine life while others took to the water.

Special note was taken of the small blue crabs which were in large numbers under many of the stones (the tide was very low). Chitons were also observed, and many sea urchins and small pentagonal starfish. Of special interest were a few specimens of the Sea Elephant *Scutus antipodes*, a large black snail whose body is much bigger than its flattish white shell which is generally almost covered by the animal's flesh. The shell is not uncommon but live animals are not frequently seen because they prefer to remain under water.

A SPIDER INCIDENT

A.M. Tagg

On entering the garage we saw a black spider *Ixeuticus robustus* in its web in the window catch a Cream-spot Ichneumon *Echthromorpha intricatoria* by the hind leg. The fly hung on to the web with its front legs crossed and the two middle legs spread out sideways.

As the spider pulled the fly hung on tight and the spider took up any slack that the fly might happen to give. The fly worked its side or middle legs in and out trying to pull away and tried to sting the spider on the head. The spider's head seemed too hard for the fly sting to penetrate as the spider took no notice of it.

The fly seemed to have a strong grip with its front legs crossed, and the struggle had already lasted 27 minutes when something slipped off the bench and apparently pulled the web. I looked away to see what made the noise and on looking back I found that the spider had vanished.

After the fly had put up such a long fight I hadn't the heart to kill it so I untangled its legs and let it go.