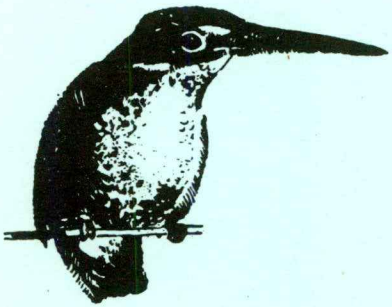
AUSTRALIAN BIRDS



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CORRECTION

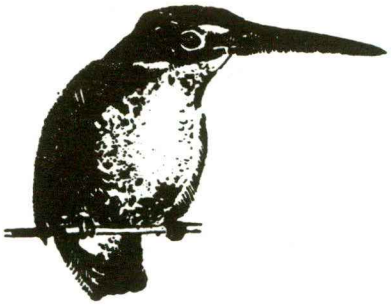
Because of a printer's error the Contents page in Journal is incomplete. Correct table of contents is listed hereunder.

Vol. 18, No. 4 August, 1984

AUSTRALIAN BIRDS

CONTENTS

AUSTRALIAN BIRDS



Vol. 18, No. 4 August, 1984

INSECTS IN FLOWERS:

A POTENTIAL SOURCE OF PROTEIN FOR HONEYEATERS

DAVID McFARLAND

Of the food resources available to nectarivorous honeyeaters directly from flowers, both nectar (Baker & Baker 1975) and pollen (Paton 1981) provide negligible quantities of protein. It is therefore generally considered that honeyeaters rely on insects as the source of their protein requirements (Paton 1982). To date, observations of feeding on insects have usually been divided into hawking and gleaning actions, and the consumption of insects present in flowers has only been inferred (Recher & Abbott 1970, Ford & Paton 1976). Based on observations of hawking rates it has been suggested that nectarivorous honeyeaters have low protein requirements (Paton 1982); however the potential intake of insects from the flowers probed was not considered. The difficulty in testing whether honeyeaters obtain significant protein from insects living in flowers is that when a bird is probing a flower, distance or flower structure (e.g. deep corollas or dense clusters) can make it hard to discern whether insects, nectar or both are being taken.

I obtained data on density and composition of insect communities in *Banksia* inflorescences at Waterfall in the Royal National Park, Sydney between 28 February and 22 August 1980. Honeyeaters were also observed at the same time and place (observation time = 24.3 hr).

The study area was of mixed heath and dry sclerophyll forest with banksias being the main flowering plants. *Banksia ericifolia* and *B. marginata* were dominant in the heath while *B. serrata* and *B. marginata* were common in the forest. Both fresh (with some styles extended) and wilting (with loss of colour and flowers) inflorescences were sampled. For the densely flowered spikes of *B. serrata* and *B. marginata,* each inflorescence was bent over almost horizontal and covered with a plastic bag. After raking the flowers for one minute the bag was carefully removed and the contents examined. *B. ericifolia* inflorescences with their well-spaced flowers were inspected visually. All arthropods present were classified (insects to order) and their abundance estimated.

I never saw honeyeaters probe wilting flowers, so I present here only the results obtained from new inflorescences. Table 1 sets out the data on arthropod densities and composition in the three *Banksia* species used by the honeyeaters. It is of interest that 93.8% of all the coleopterans (beetles, n = 918) found were less than or equal to 5 mm in length and from one group within the family Staphylinidae. This family has also been found in the flowers of *B. integrifolia* (Turner, pers. comm.) The order Coleoptera made up 79.1% of all the arthropods found in all *Banksia* flowers. Beetles were especially common in *B. serrata* and *B. marginata* but in *B. ericifolia* hymenopterans, mainly ants, were the most abundant arthropods.

Beetles have been noted as a major component in the diet of many honeyeater species (Cleland 1911; Lea & Gray 1935; Rose 1973; Matthieson 1973; Ford unpubl. data). Unfortunately the size of the beetles found was not recorded. Of the five families identified, two (Cryptophagidae and Sacarabaeidae) are known to have members which are regular visitors to flowers (Tillyard 1926). The other beetles, Coccinellidae, Carabidae and Chrysomelidae, are mostly found on the leaves and bark of trees. The examination of gut samples as a means of assessing the insect component of diets is unreliable because arthropods are digested at different rates: Most beetles, especially those mentioned above, have tough exoskeletons (especially the elytra) which remain longer in the digestive tract, thus increasing their chance of being detected and identified, unlike the small, soft-bodied insects such as staphylinids.

TABLE I

Inflorescence characteristics and arthropod populations in Banksia spp. (Composition and numbers per inflorescence, mean ⅞ standard error.)

Species	Flower Spacing	N*	Arthropods per inflorescence	% COMPOSITION			
				Coleoptera	Hymenoptera	Arachnids	Others
B. serrata	Dense	17	22.4 ⅞ 3.8	68	12	14	6
B. marginata	Dense	46	15.8 ⅞ 2.6	92	4	1	3
B. ericifolia	Spaced	67	1.2 ⅞ 0.3	4	96	0	0

*Number of inflorescences examined.

One of the hypotheses proposed to explain the origin of nectar feeding in birds is that the birds were mainly seeking insects in the flowers (Faegri & Pijl 1979), but there has been no quantitative examination of this resource. As the results in Table 1 show, quite high numbers of insects may be present in inflorescences, particularly those with dense arrangements of flowers. The potential advantage to the birds is that, if the insects are palatable, the presence of both carbohydrate and protein sources together results in considerable savings in time and energy when foraging.

Assessment of the possible importance of flower-inhabiting arthropods to honeyeaters requires detailed study. The following are some suggested avenues of investigation:

(a) Insect numbers in exposed and "caged" inflorescences might be compared from samples taken over a single day or a number of consecutive days. To avoid the effects of enhanced nectar availability on insect numbers, nectar but not insects must be removed periodically from caged flowers. At the same time the behaviour (in particular, the rate and duration of visits) of honeyeaters visiting the exposed inflorescences should be recorded.

(b) The reactions of flower-inhabiting insects to artificial probing could be tested; any avoidance behaviour may indicate predation pressure.

(c) The diet of honeyeaters at flowering banksias might be assessed by netting the birds at the site and obtaining gut samples by the use of emetics (Ford et al. 1982). A comparison of such samples with the arthropod species found in the banksia flowers, foliage or bark, and other surrounding vegetation may indicate to what extent the birds consume insects present in the various micro-habitats.

The results of such investigation may shed more light on both the sources of protein for honeyeaters and the evolutionary pathway that led to nectar-feeding among Australian honeyeaters.

I thank T.R. Lindsey and Drs H.A. Ford, D.C. Paton and G. Pyke for their constructive criticisms on earlier drafts of this note.

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RAINFOREST BIRDS OF THE SHOALHAVEN GORGE, NEW SOUTH WALES

KEVIN MILLS

This note reports on the rainforest bird fauna I recorded at a study area in the lower Shoalhaven River gorge at Tallowa Dam (34°47'S 150°15'E), within the Morton National Park, NSW. Here small rainforest vine thickets, similar to those described by Webb (1968), occur along the water courses which run steeply into the dam (formerly the Shoalhaven River) from cliffs and ridges some 450 metres above (see Fig. 1).

These thickets, about 48 kilometres inland, represent the western limit of rainforest in the Illawarra region. Most are less than four hectares in extent and occur on south and east facing slopes. The dominant tree species are: *Toona australis, Ficus coronata, F. rubiginosa, Diospyros australis* and *Melia azedarach*. Vine species include *Cissus antarctica, C. hypoglauca, Smilax australis* and *Marsdenia rostrata*. Most thickets also contain emergents of *Eucalyptus* spp. or *Syncarpia glomulifera*. In addition to vine thickets, dense stands of *Backhousia myrtifolia* occur around the dam, particularly on steep rocky slopes; such stands often surround the vine thickets. The remainder of the gorge supports eucalypt forest, with western slopes tending to be dryer and with sparser understoreys.

I made many visits to the area during the period 1980-1983 and a complete bird list and rainforest plant list were compiled and are available upon request. This paper reports only on those bird species I found associated with rainforest habitat.

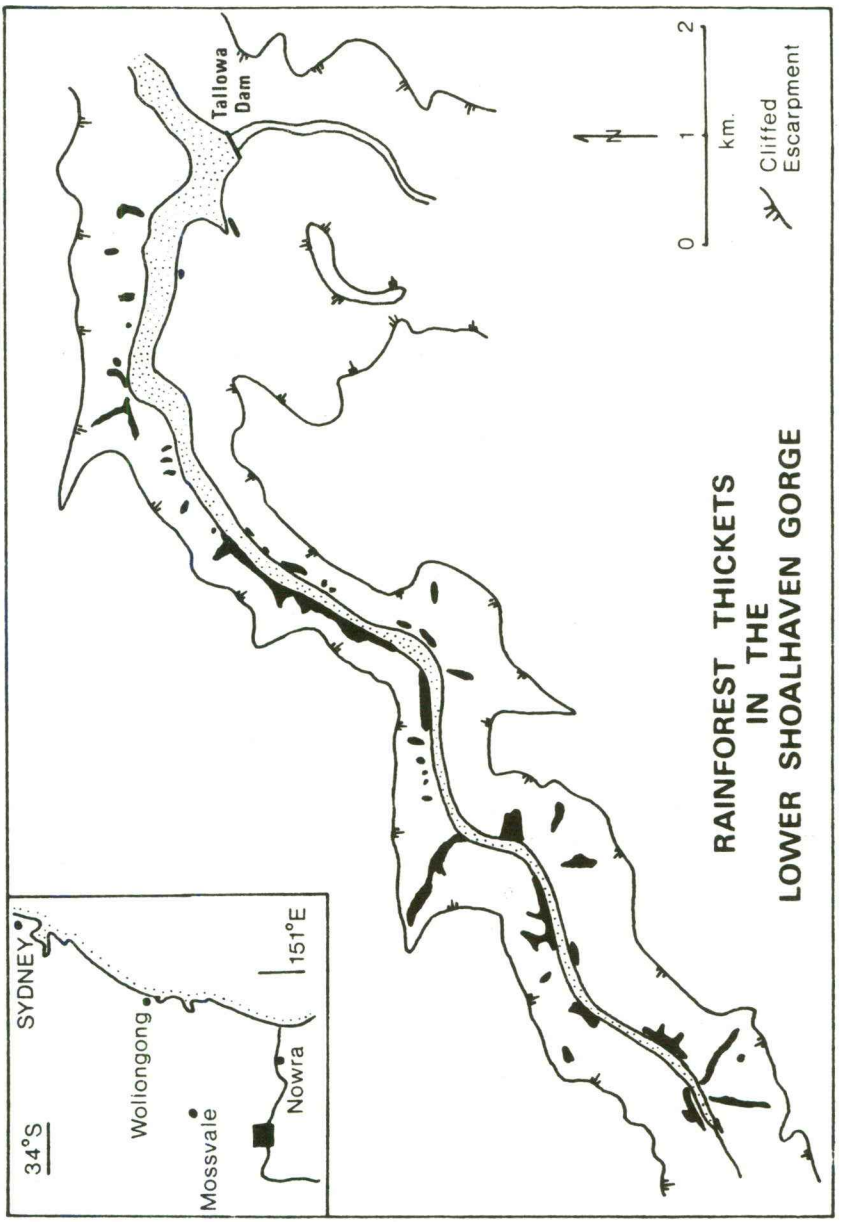

Fig. 1. Map of the study area, showing distribution and extent of rainforest vine thickets.

A total of 21 bird species, listed in Table 1 were found to be characteristic of the rainforest patches. Species which occurred in the vine thickets but which are also common in the surrounding eucalypt forests (e.g. Grey Fantail *Rhipidura fuliginosa* and Brown Thornbill *Acanthiza pusilla)* are not discussed here. The most common species were: Eastern Yellow Robin, White-browed Scrubwren, Eastern Whipbird and Satin Bowerbird. I failed to find only four of the rainforest species occurring elsewhere in the Illawarra area (excluding very rare vagrants): Grey Goshawk *Accipiter novaehollandiae,* Australian Brush-turkey *Alectura lathami,* Emerald Dove *Chalcophaps indica,* and Logrunner *Orthonyx temminckii.* Thus 84% of all local rainforest bird species are represented in the vine thickets.

Of the four species not found, Gibson (1977) reported that the Logrunner is scarce in the Illawarra and Emerald Dove is uncommon and declining. Although the Australian Brush-turkey has been observed in the Shoalhaven area it seems unlikely that the species exists in the wild state here or elsewhere in the Illawarra today.

Table 1. Bird species associated with rainforst vine thickets in the Shoalhaven Gorge. An asterisk (*) indicates a species at or near its western limit of distribution in the region.

	Species	Status
*	Topknot Pigeon *Lopholaimus antarcticus*	uncommon
*	White-headed Pigeon *Columba leucomela*	rare
*	Brown Cuckoo-dove *Macropygia amboinensis*	rare
	Wonga Pigeon *Leucosarcia melanoleuca*	common
	King Parrot *Alisterus scapularis*	uncommon
	Superb Lyrebird *Menura novaehollandiae*	common
	Ground Thrush *Zoothera dauma*	rare
	Rose Robin *Petroica rosea*	uncommon
	Eastern Yellow Robin *Eopsaltria australis*	common
	Golden Whistler *Pachycephala pectoralis*	common
*	Black-faced Monarch *Monarcha melanopsis*	uncommon
	Rufous Fantail *Rhipidura rufifrons*	uncommon
	Eastern Whipbird *Psophodes olivaceus*	common
	Pilotbird *Pycnoptilus floccosus*	rare
*	Large-billed Scrubwren *Sericornis magnirostris*	rare
*	Yellow-throated Scrubwren *Sericornis citreogularis*	uncommon
	White-browed Scrubwren *Sericornis frontalis*	common
*	Brown Warbler *Gerygone mouki*	uncommon
*	Lewin's Honeyeater *Meliphaga lewinii*	common
	Satin Bowerbird *Ptilonorhynchus violaceus*	common
*	Green Catbird *Ailuroedus crassirostris*	uncommon

Nine of the species listed in Table 1 (indicated by an asterisk) are at or close to their western limit of distribution in the region, corresponding to the limit of rainforest. In particular, the White-headed Pigeon is scarce in the Illawarra (Gibson, loc. cit.), and recorded irregularly along the escarpments near the coast and from rainforest patches on the coastal plain. I recorded it on two occasions in the study area, one bird each time and both in 1982 (March and December). The species is seldom recorded south of the Shoalhaven River and Morris, McGill & Holmes (1981) reported its western limit as Macquarie Pass, 45 km to the north-east; these records thus extend its known western limit.

The fruit-eating species (four pigeons, a catbird and the Satin Bowerbird) are dependent upon the availability of fleshy fruits in the area. Plant species within the vine thickets which are important food sources for frugivorous birds include: *Ficus rubinginosa, Diospyrus australis, Livistona australis, Melia azedarach* and (probably) vines such as *Cissus* spp.

The high proportion (84%) of the total local rainforest avifauna found in these vine thickets agrees approximately with results obtained by Howe et al (1981), who reported that small remnant patches of rainforest near Dorrigo in north-eastern New South Wales (about 540 km NNE of my study area), though surrounded by land cleared for farming, were found to contain (between them) about three-quarters of all rainforest bird species found in adjacent extensive undisturbed rainforest. These results suggest that even very small fragments of rainforest may serve as important refuges and dispersal avenues to most rainforest species. Presumably such patches are of special importance to migrants and to nomadic frugivores such as the Topknot Pigeon.

ACKNOWLEDGEMENTS

I wish to thank the Geography Department of Wollongong University for providing facilities used in the production of Figure 1.

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SEASONAL FLUCTUATION OF NUMBERS OF RUDDY TURNSTONES AT BELLAMBI POINT, WOLLONGONG, NSW

KEVIN MILLS

INTRODUCTION

The Ruddy Turnstone *Arenaria interpres* is a cosmopolitan species breeding in the northern summer in Arctic and sub-Arctic areas in Siberia, Alaska, Canada and Greenland. During early spring birds arrive in Australia and also move south from their breeding grounds to New Zealand, Africa and South America (Reader's Digest 1976).

The species is numerous in Australia from September to April, although some birds are present in all months in New South Wales (Morris, McGill & Holmes 1981), and Gibson (1977) also reported that some birds overwinter at Illawarra. This note reports the results of weekly censuses of Ruddy Turnstones at Bellambi Point near Wollongong, NSW (34°22'S 150°53'E) over the period July 1982 to June 1983.

STUDY AREA AND METHODS

Bellambi Point is a rocky headland situated seven kilometres north of the city of Wollongong projecting about one kilometre from the general line of the coast. Besides the rocky shores and platforms there are intervening sandy beaches. The length of the coastline censused is 1.8 km of which about 80 percent is rocky shoreline. The rocky area covers approximately 0.5 hectares at low tide. Situated on the point is a sewerage treatment plant with open settling ponds directly behind the shoreline.

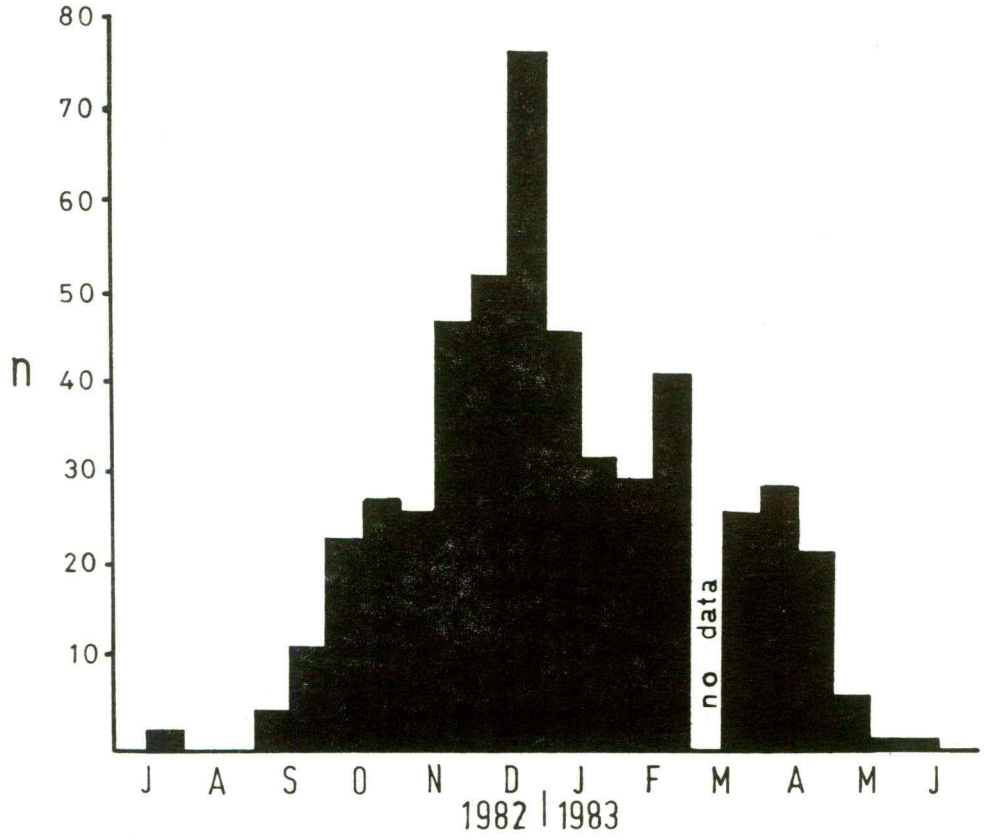
I made at least one visit per week to the area, except for a period of three weeks in March 1983. Visits were made during all phases of the tidal cycle. The whole of the point area was searched on each visit, and numbers of turnstones were recorded along with counts of other species with which they were associated.

RESULTS AND DISCUSSION

Figure 1 presents the greatest number of turnstones observed on any one visit for each two-week period, and shows the pattern of increase and decrease in numbers over the spring to autumn period. The maximum number was recorded in late December (76 birds). That some birds overwinter each year seems evidenced by observations of one or two birds in July 1982 and July 1983. This was further confirmed by a sighting of four birds after the survey period on 31 July 1983.

Birds were usually encountered feeding on the rocky shorelines at low tide or, at high tide, resting amongst seaweed and other debris above the tide line on beaches. Depending on the degree of human disturbance, birds were sometimes also found at high tide resting amongst scattered rock and shell material in a small fenced-off area amongst sand-dune remnants on the northern side of the point. This area offered a refuge for the birds during periods of high disturbance at weekends or at other times. Occasionally birds were observed foraging on one of the sewerage tratment ponds, nearly always at high tide.

Figure 1. Greatest number of Ruddy Turnstones recorded at Bellambi Point, NSW during each two week period, July 1982-June 1983.



I found low numbers of other species associated with turnstones. During December Red-necked Stints *Calidris ruficollis* (max. three) and Sanderlings *Calidris alba* (max. four) were present, and from late February Double-banded Plovers *Charadrius bicinctus* (max. four) were present. Red-capped Plovers *Charadrius ruficapillus* were recorded throughout the year (max. ten, in January).

Bellambie Point appears to be a particularly favourable location for turnstones. They do not occur in such high numbers elsewhere in the district, although during summer up to 13 turnstones were seen on rocky shores on Lake Illawarra, a shallow coastal lagoon to the south of Wollongong. There are plenty of similar rocky shorelines in the district; perhaps the reason why Bellambi Point is particularly favoured is related to the height of the rock platforms above mean low water level; other rocky shores may be exposed for too long during the tidal cycle to support suitably high levels of invertebrate prey for the turnstones.

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BATHING BY THE WHITE-BELLIED SEA-EAGLE

H.L. BELL

Brown & Amadon (1968, Eagles, Hawks and Falcons of the world, Country Life: London) stated that there are few records of raptores seen bathing in the wild. On 24 December 1961 I was walking down Cawleys Creek in the Royal National Park, New South Wales. The location was in dense rain forest, mainly of Coachwood *Ceropetalum apetalum* and Water Gum *Tristania laurina,* which formed a closed canopy over the creek. From 10 m distance I observed an adult White-bellied Sea-Eagle *Haliaeetus leucogaster* standing in about 15 cm of water in the rocky stream-bed. Its feathers were ruffled as if bathing. The bird flew away along the creek for about 50 m and then ascended through an opening in the canopy. Despite a search I found no evidence of the bird having been feeding so I presume the bird was bathing in what, for this species, must surely be unusual habitat.

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THE CORVIDS OF NORTH-EASTERN NEW SOUTH WALES

S.J.S. DEBUS AND I.A.W. McALLAN

The occurrence of Corvus species in north-eastern New South Wales was discussed in earlier papers (Debus 1980, 1982), and this note presents some recent observations which further clarify their status.

Australian raven *Corvus coronoides*

It was earlier postulated (Debus 1982) that the Australian Raven has pushed eastwards along three major fronts on the Northern Tablelands. These were: (1) along the Bruxner Highway-upper Clarence River; (2) the Armidale-Dorrigo Road; and (3) the Oxley Highway south-east of Walcha. It now appears that the Gwydir Highway is a fourth and equally significant dispersal route. In February 1983, SD found the Australian Raven to be the common resident corvid along the Gwydir Highway eastwards to the Gibraltar Range National Park. In November 1982 he found them breeding at the Mann River bridge on the old Glen Innes-Grafton Road. The latter observation is significant because Australian Ravens do not usually cross escarpment barriers (Rowley 1971), although the cleared Mann River valley is easily visible from peaks in the park. As pointed out in Debus (1982), the Australian Raven has yet to be reliably reported on the coastal plain north of the Hastings River valley.

Forest Raven *Corvus tasmanicus*

The Forest Raven does indeed appear to be a relict and declining species in New South Wales, as suggested by Rowley (1970). It has a patchy and local distribution, and the species is absent from some areas that, judging by its presence in similar nearby country, should be suitable habitat. For instance, it is common in the granite country of Cathedral Rock National Park but is absent from Gibraltar Range National Park.

Although the Forest Raven can be locally common its populations are apparently fragmented, small and isolated (Fig. 1). One such population is on the eastern side of the Barrington Tops and another is to the north of the Gwydir Highway strip occupied by the Australian Raven. Forest Ravens have been recorded in the state forests between Glen Innes and Tenterfield (Lindsey 1982) and at Deepwater (SD pers. obs., April 1981) but SD found none in the Glen Innes district throughout September 1982 where the Australian Raven (in particular) and the Torresian Crow *C. orru* were common.

Recent observations by IM also shed light on the distribution of the Forest Raven. The characteristic deep, gutteral notes of this species were heard for two hours in fog at Barrington Tops on the morning of 20 November 1983, and the duration of calling suggests that the birds were resident. The exact locality was Devils Hole, eight kilometres further west than recorded in

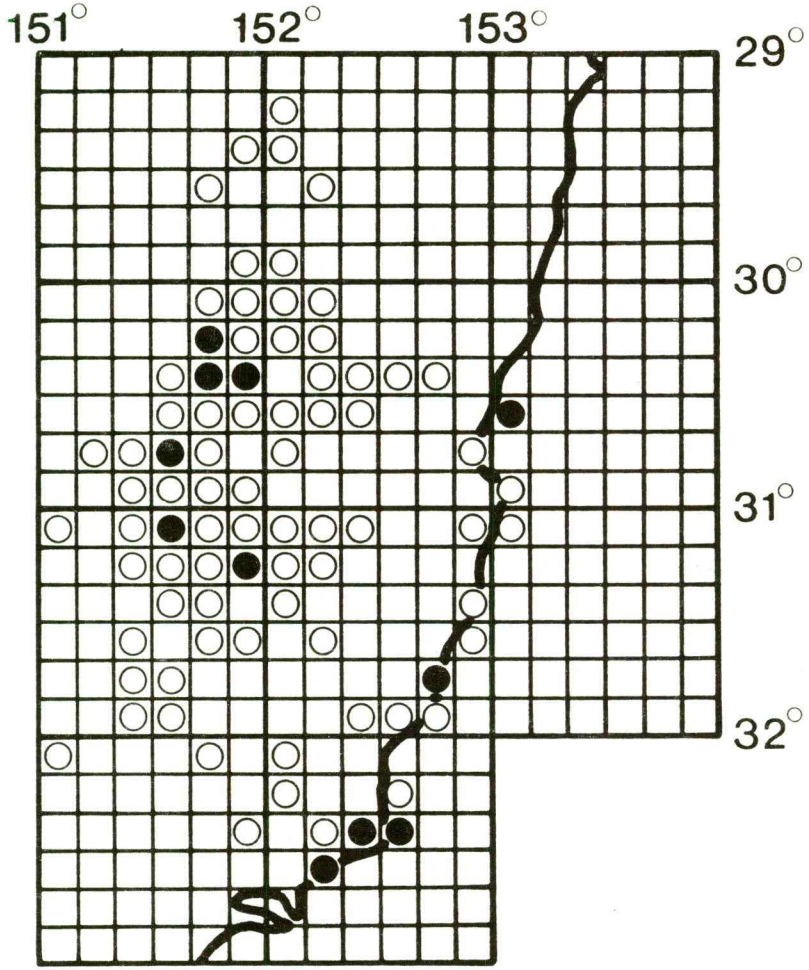

Figure 1. North-eastern New South Wales, showing distribution of Forest Ravens as determined by the NSW Bird Atlas and additional observations by SD and IM. Open circles indicate sight records, filled circles indicate breeding records, and half-filled circles indicate probable breeding. The records illustrate the patchy nature of its distribution and the existence of apparently discrete tableland and coastal breeding populations.

Debus (1980) and only seven kilometres from known breeding areas of the Little Raven *C. mellori* at Polblue Swamp. The two species are thus verging on sympatry in the area, and it is possible that the Forest Raven is widespread in the tall open forests of the Barrington Tops plateau.

In company with K. Lisser and R. Edwards, IM saw several Forest Ravens on the Pacific Highway five kilometres south of Taree on 2 December 1982. This is close to where SD has seen the species at Old Bar. The birds flew through the trees beside the road, and identification was confirmed by their very deep gutteral calls. Nothing in their behaviour suggested that they were resident, and they may have been a mobile flock of non-breeders. The highway is ten kilometres from the coast at this point, and this is further inland than individuals of the coastal population are usually recorded (but see Fig. 1). However, it is the breeding distribution of these birds which is of ecological importance, and more data are required. It also remains to be determined whether Forest Ravens move between the coast and the tablelands.

SYMPATRY

Debus (1982) reported that the three large resident corvids occur together extensively on the Northern Tablelands; he noted instances of all three possible combinations of two species breeding together with the third species present as a non-breeder. It now appears that all three breed sympatrically. In March 1984 SD saw an adult pair each of Australian Ravens, Forest Ravens and Torresian Crows in adjacent territories at Thalgarrah, fifteen kilometres north-east of Armidale. The crows had dependent flying young, and both raven pairs were calling and behaving in a manner typical of resident territorial pairs. Such sympatry is hardly surprising when all three species have already been proved to breed in the area bounded by Ebor, Guyra and Uralla.

ACKNOWLEDGEMENTS

We thank Ms D. Kent for preparing the figure, and Mr R.M. Cooper for kindly supplying the data from the NSW Bird Atlas on which it is based.

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BREEDING HABITAT OF THE LITTLE EAGLE AT ARMIDALE, NEW SOUTH WALES

S.J.S. DEBUS

Several nesting pairs of Little Eagles *Hieraeetus morphnoides* were studied at Armidale, New South Wales in 1980. This paper reports on the nesting habitat and nest site characteristics of eight of these pairs. The information obtained was incidental to the main part of the study which concentrated on behaviour, diet and breeding biology (Debus 1983, 1984).

HABITAT

The eight occupied nests were all within a 15 km radius of Armidale. The general landscape was a mosaic of cleared farming and grazing land, and remnant patches of *Eucalyptus*-dominated open forest, on undulating terrain. Most of the remaining forest was on low, often stony or rocky hills or rises.

The Little Eagle nests were in the remnant patches of open forest, not in isolated trees. One exception was a nest in a plantation of exotic pines *Pinus radiata*. The other seven nests were found in all the common vegetation associations: Blakely's Red Gum *Eucalyptus blakelyi* — Yellow Box *E. melliodora* (three nests); Manna Gum *E. viminalis* (two nests); Broad-leaved Stringybark *E. caliginosa* (two nests). These associations were often not clear-cut but graded into one another; Rough-barked Apple *Angophora floribunda* and other eucalypt species were also present at several nest sites.

NEST SITE CHARACTERISTICS

All eight nests were in living trees. Three nests were in a gully, and seven nests were on a slope. The aspect of the slope on which each nest occurred was: northerly 1, southerly 3, easterly 2, westerly 1. There appeared to be a bias towards nesting in a gully on a slope with a southerly or easterly aspect.

All nests were on land used for grazing. None were within the Armidale urban area or on cultivated land, but two were within the zone of high-density rural holdings surrounding the city. Both these nests were about 200 m from occupied houses, and in full view. Several were within 200 m of roads (including the New England Highway), and one was almost on an established walking track through the pine plantation (which was managed for timber).

DISCUSSION

The Little Eagle's main requirement for nesting would appear to be a stand of mature living trees. It appears tolerant of the major land uses (except urbanization) provided some tree cover remains, and is not greatly disturbed by human activity near the nest site. A prerequisite for

successful nesting is of course sufficient hunting habitat nearby; this needs to be diverse enough to support a range of vertebrate prey. Prey at Armidale was, in order of importance, mammals (rabbits), birds (small passerines to Galahs and magpies) and lizards (dragons and large skinks), variously taken from open ground, undergrowth, and the shrub and tree canopy.

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FIRST BREEDING RECORDS FOR THE SILVER GULL IN THE COUNTY OF CUMBERLAND

JANE DALBY, ERN HOSKIN, MAUREEN TYLER AND VIC TYLER

The Silver Gull *Larus novaehollandiae* is common in the Sydney area (County of Cumberland) but it was not hitherto known to breed locally. This note records the first two known instances of breeding in the County of Cumberland.

Silver Gulls usually breed in colonies, and the nearest of these to Sydney are at Five Islands off Port Kembla and on Moon Island off the entrance to Lake Macquarie at Swansea. These colonies are approximately 70 km south of Sydney and 150 km north, respectively; the Five Islands colony has been estimated to contain over 50 000 pairs (Gibson 1979) and that at Moon Island, 1000 pairs (Lane 1979).

On 28 December 1983 two officers of the NSW Water Police found two nests on a 13-metre ketch adrift in Refuge Bay, Cowan Water, adjacent to Ku-ring-gai Chase National Park. One nest contained two live chicks possibly two or three days old, the other a dead chick. The birds were taken back to the Water Police base at Church Point, where they consumed quantities of mashed-up fish provided by concerned staff; they were later taken to Taronga Park Zoo. The details were reported in a local newspaper, the Manly Daily for 29 December 1983.

At Homebush Bay, an inlet of the Parramatta River, on 24 October 1982, Ern Hoskin noticed a juvenal gull so young that it was unlikely to have made the journey from either known breeding colony since fledging. He suspected that breeding had occurred within the immediate area, probably in the old wrecks in Homebush Bay. On 5 October and 29 December 1983 he saw gulls apparently brooding on the flat tops of larger timber piles in the water at the southern end of the bay.

Breeding was confirmed on 21 January 1984 when Jane Dalby, Maureen and Vic Tyler saw adult gulls on three of the piles in the middle of the bay. The pile tops were at least two metres above water level. One bird had two chicks, a second had one, and the third was apparently brooding either eggs or chicks. The chicks were covered with speckled-brown down and were unable to fly. One adult gull with chicks was seen to repel other gulls that approached, except for one that appeared to be its mate.

At Homebush Bay it is some distance to shore from the nest sites. The area abounds with feral cats in the various factories and business establishments along the shore, and foxes are also present; it would appear that the gulls have selected the only safe sites in the area. Although Silver Gulls usually breed on offshore islands, there are records of the birds nesting on piles and in boats elsewhere (eg, Sharland 1965).

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OBITUARY: John Douglas Gibson (1925-1984)

Australian ornithology suffered a severe loss with the passing of John Douglas Gibson on 21 May 1984 at the comparatively early age of 58. For several years previously Doug had suffered from a serious illness, but although severely handicapped he retained his intense and life-long interest in the study of birds.

His first published contribution to ornithology appeared in *The Emu* in 1953, in a paper co-authored by his cousin and birding companion Allan Sefton. I well remember receiving a telephone call from Keith Hindwood shortly after its publication, enquiring whether I knew these two "recruits to ornithological literature" living at Thirroul. In those days most NSW bird enthusiasts were personally known to each other, so when the names of J. Douglas Gibson and Allan Sefton came to our notice we naturally hoped for a meeting. This eventuated not long afterwards when Jack Jones of Melbourne paid a short visit to Sydney. Keith had shortly before received a report of the Rock Warbler, a bird of special interest to him, at Pigeon House Mountain near Ulladulla. This was a significant extension of the known distribution of the species, and to give our Melbourne friend a brief tour of this State we planned a long weekend trip to Ulladulla to check the report. With the assistance of local birding enthusiasts Chris Humphries and Keith Egan, together with Dave Leithhead who arrived separately, we scaled the Pigeon House and confirmed the record. The trip also provided the opportunity of a personal meeting with Doug and Allan when we passed through Thirroul, and a very happy hour or so was spent with them. For me that was the commencement of a close friendship of over thirty years.

Even though Doug and Allan's first Emu article concerned nest-desertion by fantail-warblers, almost all contributions afterwards involved seabirds. These oceanic wanderers were their first love. In all, 27 articles by Doug appeared in that journal over the following fifteen years, many of them in collaboration with Allan. This was a partnership that yielded early records of little-known species for New South Wales, such as the White-headed, Providence (Brown-headed), White-chinned and White-winged (Gould's) Petrels, Sooty and Royal Albatrosses, Sooty Tern, various prion species and the Georgian Diving-petrel, to mention just a few. Around the same period I, with others, was patrolling the Bate Bay coastline for derelict seabirds, so naturally we were closely in touch. It was a memorable coincidence when Doug and Allan obtained the first Australian record of the Westland Petrel with a very battered "castaway" while a little later I chanced upon a very fresh specimen of the same species. The Thirroul duo reciprocated with a good specimen of the Blue-footed (Cook's) Petrel shortly after I, in company with Fred Johnston, obtained the first Australian record with a derelict dried specimen of this bird.

In April 1957 Doug sailed aboard the Shaw-Savill liner *Southern Cross* between Sydney and Cape Town, South Africa on a round-the-world voyage, returning the following November and December aboard the freighter *Tahitien* via the Panama Canal. He kept daily records of seabird observations throughout and a log of these two sections of his world trip was

subsequently published in *The Emu*. Such a voyage certainly gave him a wonderful opportunity of viewing much of the world's pelagic wildlife. He was also a member of the *Thala Dan* party in an expedition to Antarctic waters, spending some time on Macquarie Island. His film record of that trip I consider to be an epic of 8mm movie film, which I have viewed a number of times and which will ever remind me of Doug's love for oceanic birds and ornithology in general.

His work as an albatross bander, mostly with others of similar interest, has been well documented, with three important papers appearing in *The Emu* during 1959-1963 on behalf of the NSW Albatross Study Group. His final contribution to that journal was on the movements of the Wandering Albatross, in co-authorship with S.L.N. Tickell of the Royal Naval Birdwatching Society to which both Doug and I were appointed NSW representatives some years ago.

I recollect on at least one occasion I was among a small boat party banding albatrosses off the Wollongong coast and was fascinated by the method used to catch these great birds when enticed near the boat. Another trip we had together was from Bellambi Point to the Five Islands in a very crowded small boat, piloted by Arthur Mothersdill, which could have ended in disaster after we encountered a wild "black nor-easterly" on the return trip. After much strenuous bailing, six completely drenched occupants finally managed to reach Port Kembla harbour. Perhaps that is why I, a poor swimmer in such conditions, have not ventured seawards since! But to Doug such problems and mishaps were a part of his everyday life as a dedicated seabird bander.

Tribute must also be paid to his great skill at transforming badly-decomposed seabirds into excellent study specimens. I doubt whether any trained taxidermist could surpass him in this regard. In more recent years Doug gave a series of lectures on behalf of the Workers' Education Association, which were well-attended by Illawarra enthusiasts. Out of these very helpful discourses the Illawarra Bird Observers Club (IBOC) was formed, a vigorous organization which will remain a lasting tribute to Doug's keen ability and infectious personality. He was awarded life membership of that society in 1983. I was invited to officiate at the ceremony, and I journeyed to Wollongong for the regular monthly meeting on 9 May where, after congratulating him on his tremendous influence with the club and the high esteem in which he was held by the members, I pinned the medal on his lapel. I recollected that only a year or so previously he had paid me a similar honour.

The large number of ornithological identities among the gathering of friends and relatives present at his memorial service in the Bulli Uniting Church on 24 May was clearly indicative of the high esteem in which this well-loved personality was held in the community. Sincere sympathy is extended by the NSW Field Ornithologists Club to his widow, Betty, and two daughters, Jacqueline (Mrs Payne) and Terrie. He will be sadly missed by all who knew him.

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Arnold McGill

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Contributors are requested to observe the following points when submitting articles and notes for publication.

1. Species, names, and the order in which they occur are to be in accordance with "Handlist of Birds in New South Wales". A.K. Morris, A.R. McGill and G. Holmes 1981 Dubbo: NSWFOC.

2. Articles or notes should be typewritten if possible and submitted in duplicate. Double spacing is required.

3. Margins of not less than 25mm width at the left hand side and top, with similar or slightly smaller at the right hand side of pages.

4. No underlinings and no abbreviations except as shown in the examples.

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13. Acknowledgements to other individuals should include Christian names or initials.

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CONTENTS

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