

NOTES ON A FIELD TRIP TO FIJI

By BETH BROWN and PETER CHILD

ABSTRACT

A field study of birds was made by some members of the Ornithological Society of New Zealand in two areas of the Fiji Group, the Nausori Highlands of Viti Levu and the isolated island of Vatulele, in August-September 1972. A table shows numbers of each species recorded in a particular piece of cut-over forest in the Highlands together with estimated density and habitat utilization. Land birds, seabirds and migratory waders were recorded at Vatulele Island and a list of species recorded, with relevant observations, is given. One species new to Fiji, the Spine-tailed Swift (*Chaetura caudacuta*), is recorded.

INTRODUCTION

Following the Ornithological Society's field survey of August 1970 to several places in the Fijian Islands (Blackburn 1971), a group of members formed a party to make a further study of birds in the Nausori Highlands and to visit Vatulele Island. This island, lying 32 km south of Korolevu, a well-known resort on the southern coast of Viti Levu (see map in Morgan & Morgan 1965: 159), is to be developed for tourism shortly.

The organization was undertaken by J. A. Brown* and Mrs Beth Brown*. Other participants were H. F. Alloway, Mrs M. Alloway, M. Alloway, Mrs B. A. E. Baker, Mrs G. Bennie, H. M. Brown, W. F. Cash*, P. Child, P. T. Crombie*, Mrs G. Eller, D. Hickman, Miss A. Hutson*, Dr P. V. Jenkins, Mrs P. Jenkins*, E. Kelly and D. Metherell [* denotes members of the 1970 party]. Peter Child compiled the field records and chart.

The Nausori Highlands camp was set up on the site occupied by C party in 1970. This lies just off the main road running from Nadi to Bukuyu village at a point 24 km past the Pacific Lumber Company's mill. Forest here was being milled in 1970 and birds appeared to be less plentiful in 1972. In an adjacent area, birds now uncommon in the cut-over section were readily seen from new roads into the as yet unmilled forest. The party was not able to investigate this area in depth owing to lack of transport and the distance from camp.

During the period spent in the Highlands overcast skies with light showers and long fair intervals were experienced. The wind was a moderate south-easterly with calm spells in the early mornings and evenings.

The party carried out observations from 30 August to 4 September 1972 inclusive, in an area within approximately a 1½ km radius of camp in the cut-over forest. Findings, which apply to this area only, appear in the following table. Daily tallies were made of numbers actually identified and seen.

It should be noted that:

1. Birds were recorded by a limited few competent observers, generally not more than six persons on any one day.
2. Numbers of birds recorded tended to increase as observers became more proficient at identification and seeking appropriate habitats.
3. Some wide-ranging species could be counted by more than one observer on a particular day, e.g. Peale's Pigeon.
4. The estimated abundance recorded for some species is affected by their degree of timidity and wariness, and confinement to dark understorey, e.g. Golden Whistler, which by call appears to be more common than these records suggest. Giant Honeyeaters are easy to hear but difficult to see. Conversely Peale's Pigeon is conspicuous by call, size and ease of sighting. The Fiji Warbler was not seen at all until BB taped the call via a parabolic reflector and played it back, whence the bird emerged from very low dense undergrowth and was keenly and critically examined by all members of the party.

ADDITIONAL NOTES ON SOME SPECIES — NAUSORI HIGHLANDS

SWAMP HARRIER (*Circus approximans*)

Probably only older birds were recorded for those seen were greyish above and pale creamish below. This bird was more an active hunter and less of a scavenger than the New Zealand bird and was seen on more than one occasion to be hunting through the forest at mid heights.

PEREGRINE FALCON (*Falco peregrinus*)

Seen over a roadway by PVJ and PJ on 3 September at 1000 hours, flying with a rapid wingbeat and identity confirmed by a local Fijian man. Members of the party did not have the opportunity of visiting the tantalizingly attractive volcanic cliffs and outcrops visible in many directions in the distance, and where falcons are said to be more generally found, as indicated by Clunie (1972).

FAN-TAILED CUCKOO (*Cacomantis pyrrhophanus*)

One was seen briefly in excellent light about 6m up on a limb by PC on 3 September.

WHITE-RUMPED SWIFTLET (*Collocalia spodiopygia*)

No tallies were kept, but this was found to be an extremely common bird all over forest, grassy clearings and roadways during the heat of the day, darting in all directions incessantly until sunset.

Nausori Highlands: Grid. Ref: 57E, 803S. c. 177°40'E, 17°47'S. 30.8.72 to 4.9.72 (inc.) Alt: c. 1700' Species: (Order as listed in Mayr)	Numbers/Density			Habitat Utilisation						
	Greatest Daily Tally:	Typical group size	Comparative abundance: Scale 1→5 1 = rare 5 = abundant	Low dense undergrowth	Medium height understorey	Sub-canopy	Canopy	Bush clearings & roadways	Open Country	5' above trees
Fiji Goshawk	2	1	2							
Swamp Harrier	4	1	2							
Peregrine Falcon	1	1	1							
Many-coloured Fruit Dove	20	2 - 5	4							
Golden Dove	6	1 - 2	2							
Peale's Pigeon	49	1 - 3	5							
White-throated Pigeon	10	1 - 2	3							
Collared Lory	11	2	3							
Yellow-breasted M. Parrot	53	1 - 5	4							
Fan-tailed Cuckoo	1	1	1							
White-rumped Swiftlet	100+	6 - 12	5							
Kingfisher	18	1 - 4	3							
White-breasted W. Swallow	7	1 - 2	2							
Polynesian Triller	36	1 - 3	4							
Red-vented Bulbul	20	1 - 3	3							
Island Thrush	9	1	2							
Polynesian Starling	33	1 - 4	3							
Indian Myna	12	1 - 4	2							
Jungle Myna	7	1 - 3	2							
Fiji Warbler	6+	1	3							
Spotted Fantail	31	1 - 2	3							
Slaty Flycatcher	14	1 - 2	2							
Fiji Shrikebill	1	1	1							
Vanikoro Broadbill	10	1 - 2	2							
Blue-crested Broadbill	5	1	1							
Scarlet Robin	14	1 - 2	3							
Golden Whistler	6	1 - 2	2							
Orange-br. Honeyeater	21	1 - 2	3							
Wattled Honeyeater	20	1 - 2	4							
Giant Forest Honeyeater	11	1 - 2	4							
Layard's White-eye	79	4 - 5	5							
Grey-backed White-eye	8+	4 - 5	2							
Red-headed Parrot Finch	13	1 - 5	2							
Strawberry Finch	18	2 - 6	3							

Flocks of six to twelve were common in any one area, also seen occasionally quite high above the canopy. The snapping of the bill as insects were taken was tape-recorded with birds about 15m away.

WHITE-COLLARED KINGFISHER (*Halcyon chloris*)

One to four were seen almost every day on the edge of forest clearings or near streams, usually perched high on an exposed limb.

RED-VENTED BULBUL (*Pycnonotus cafer*)

A few were seen nearly every day. This bird has invaded the highland forest.

ISLAND THRUSH (*Turdus poliocephalus*)

More often heard than seen, but not especially common in the areas near camp.

POLYNESIAN STARLING (*Aplonis tabuensis*)

One was seen carrying nesting material, and another went in and out of a broken tree-trunk about 4.5m high, opposite camp, as if investigating a nest site. This same site was in use in 1970, when C party members watched starlings carrying food to the nest-hole. A high-pitched two-note whistle is frequently heard.

JUNGLE MYNA (*Acridotheres fuscus*)

Small numbers were recorded. PJ saw three hunting for food on a horse in a forest clearing. A colour-slide taken at the time shows the horse feeding head down, with one myna on the back while a second clings to the side of the horse's neck with its beak to the ear, apparently pecking. The ear is a common site for ticks to be found on various animals.

FIJI WARBLER (*Vitia ruficapilla*)

Although described by Mercer (1966) as uncommon, this little secretive bird was reasonably common in all directions from the camp. On some occasions at least three or four separate territories could be delineated by calls simply by listening carefully from one spot. Evidently the most shy bird of the forest, its identity could not be definitely established by a sighting until it was enticed from the dark undergrowth by taped calls. In short flights of 12 to 15m between vantage spots, which more than once formed a rough triangle, its course was straight, level and movement so rapid that colour could not be distinguished. This mode of flight is contrary to B party's observations in the Highlands in 1970 but the effect on the bird of hearing its own call must be taken into account. Seen perched at a low level in sunshine the Viti Levu subspecies *V. r. badiceps* was noted by BB as: crown, a shining rufous cap; upper surfaces, glossy olive, becoming greener towards tail; under surfaces, medium to light grey; superciliary, cream; legs, clear pink; black line through eye; light line on wing (seen folded). Surprisingly the distinctive call of this bird was heard coming from a scrubby gully below the lookout on the road between the Nausori Highlands and Nadi. This position was near a high rocky escarpment in steep dry grassland at least 3km from the forest.

SCARLET ROBIN (*Petroica multicolor*)

On more than one occasion the usually black regions of the typical adult were found to be medium greyish, with black eye-patches. These were considered probably to be immature birds.

WATTLED HONEYEATER (*Foulehaio carunculata*)

One bird was identified as a young of this species.

LAYARD'S WHITE-EYE (*Zosterops explorer*) and**GREY-BACKED WHITE-EYE** (*Zosterops lateralis*)

The grey-backed was definitely present in the Highlands but not to the same extent as Layard's, which is one of the commonest birds of the understorey. On one particular count PC recorded 8 grey-backs for certain, and 40 Layard's for certain in the same period of time. Grey-backs are more difficult to identify quickly.

Notable omissions from the Highlands sightings were Long-tailed Cuckoo (*Eudynamis taitensis*), Black-faced Shrikebill (*Clytornachus nigrogularis*) and Red-throated Lorikeet (*Vini amabilis*). After returning to New Zealand BB found on carefully checking tape-recordings that the mournful voice of the Black-faced Shrikebill was audible on a tape made on 2 September. Comparison was possible with duplicates of recordings made by GPR, assisted by LEH (both of B party) at Kadavu in 1970, with the bird in view. The 1972 recording was made in the same clearing where a pair of Black-faced Shrikebills was observed on 10 September 1970, feeding at the edge of heavy forest in the Highlands by BB, RVC and RBS.

VATULELE ISLAND

The party crossed from Korolevu Beach Hotel to the landing jetty at Ekubu on the morning of 6 September. The crossing of 32 km took 2½ hours in rough seas. Camp was established at the northern end of the island at a sandy flat known as Mataikoro, where a sheltered site was put at our disposal by our Fijian hosts. Saltbushes provided a windbreak and the sandy beach nearby proved to be an asset for birding and bathing. There are no streams on Vatulele and brackish ground water is the only supply other than a limited amount of rain water. Both were brought from Taunovo in drums and rationing became necessary. The party remained here until 11 September.

Continuous strong south-easterly winds of 25 to 30 knots day and night made viewing difficult and birds hard to find. Wind also prevented a trip to offshore islets. Weather remained partly cloudy to overcast and dull with occasional very light showers. Temperatures were warm throughout. It was necessary for members to walk considerable distances daily, often over difficult terrain in order to cover the island as fully as possible.

The island of Vatulele is 13 km long and 5 km across at its widest point near the northern end and lies in approximately a north-south direction. It is low-lying with a cultivated and inhabited coastal strip on the eastern side which occupies about one quarter of the

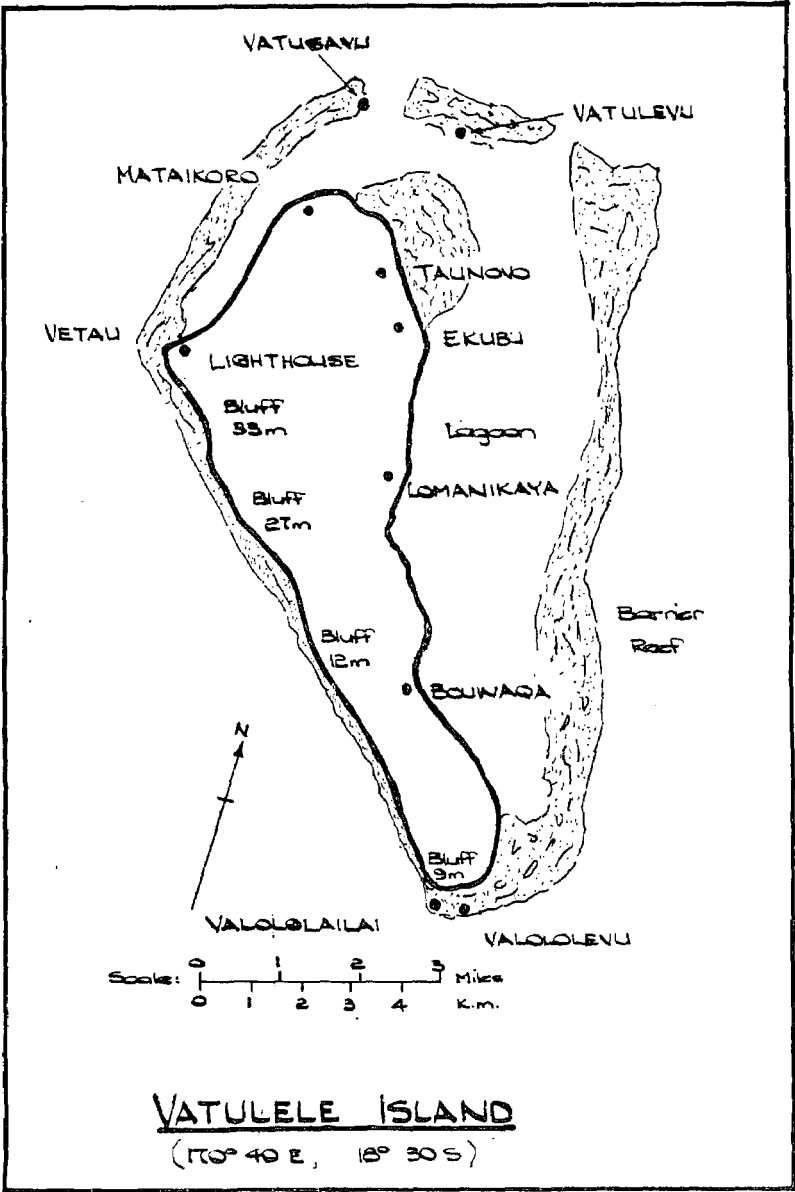


FIGURE 1 — Map of Vatulele Island, Fiji.

area. The four villages from north to south are Taunovo, Ekubu, Lomanikaya and Bouwaqa, with a total population of close to 1,000 inhabitants. Groves of coconuts, breadfruit, and carefully tended gardens of bananas, pawpaws, cassava, yams, kumaras and taro are situated on the coastal strip. Villages are linked by a narrow roadway running to within one kilometre of the southern end and used by the only motor vehicle, a tractor. The remaining land is undulating with a surface of very sharp rough broken coral and rises gently to the west coast, where four stretches of vertical cliffs stand. Cover consists of varied bush interspersed with some taller trees and isolated groves of coconut palms towards the west coast. In the northern region a combination of jagged coral covered with undergrowth and a thorny vine frequently made progress through the forest difficult to impossible. The encircling coral reef lies about a kilometre offshore except along the south-western side where it reaches to within 100 to 200 metres of the land. A lighthouse stands near the northern end of the island. Two tiny islets off the southern tip covered with wind-blown scrub, Valololevu and Valololailai, showed no evidence of being used as rookeries. Another group of rocky islands called Vatusavu, $\frac{1}{2}$ km north-east of Mataikoro, was not visited. The largest supported about ten coconut palms and smaller rocks here may be a suitable roosting or breeding site for Common Noddies. Half a kilometre to the east of these rocks is a larger group, Vatulevu, with two sizeable islets. The larger of these was visited briefly during the return crossing to Korolevu and has a small sandy beach and a coconut grove. It was said to be a breeding site for terns but only boobies were found there on 11 September.

A means of increasing the village food supply was brought to our notice when two young boys called at camp on their way to hunt for jungle fowl, with the elder carrying a domestic pair, one under each arm. The method is to place a tamed hen as a decoy in a likely spot, and when a feral cock appears to claim her the tamed cock is released on a long cord. In the ensuing fight both birds become entangled and the wild one is readily captured.

There are no free-ranging domestic mammals on Vatulele. A very few cattle and two or three horses are kept tethered and pigs are penned.

Islanders were seen crushing roots from a shrub as a preliminary to fishing. These are then placed in a bag and hung from a boat. The juice exuded stuns fish. Parham (1964): 73) says that the roots of *Derris trifoliata* were used for this purpose but that their use was now unlawful. He also mentions (p. 43) that the seeds of *Barringtonia asiatica* (Vuturakaraka), a large tree, have a similar effect. No land snakes were encountered, although a thin whistle heard at the base of a tall tree on which Pacific Pigeons roosted was attributed by native boys to a poisonous snake. One ringed sea snake was found ashore where it had possibly come to breed. These are venomous but are not considered dangerous because they have extremely small mouths.

The islanders said that large inland caves, formerly a haven for the people in times of unrest, are a roosting place for fruit bats. We found these caves empty but a musty ammoniacal odour lent credence to the information. It was possible to climb up through a large cave to a rock above and gain a vantage point.

LAND BIRDS —

REEF HERON (*Demigretta sacra*)

In a total of 21 birds seen no mottled-phase birds were recorded. The ratio of all-grey to all-white birds was a clearcut 2 to 1. The most seen were 6 grey and 3 white in 13km of east coast on 7 September (PC, DH). Smaller numbers seen on other days were in the same ratio and Vatulele birds would seem to be at variance with relative percentages elsewhere in Fiji (Blackburn 1971), though no conclusions are possible with the small total of 21.

GREY DUCK (*Anas superciliosa*)

Present, but not abundant, with 2 separate pairs seen on the east coast and 4 near Taunovo village.

SWAMP HARRIER (*Circus approximans*)

Windy conditions kept this bird low over bush and gardens and no more than 2 or 3 were seen daily. These were noticeably grey above and pale below. One was seen over the reef and another, surprisingly, chased pigeons through a coconut grove.

FERAL FOWL (*Gallus gallus*)

One colourful rooster was seen by MA in the western bush and a semi-domesticated rooster was shown to us in Taunovo village. This had brilliant plumage. They are said to be fairly common.

BANDED RAIL (*Rallus philippensis*)

Single birds were noted on several occasions near villages and gardens and WFC saw 2 together on the eastern beach. None was encountered in marshy areas or heavy bush.

MANY-COLOURED FRUIT DOVE (*Ptilinopus perousii*)

Uncommon on Vatulele; only one was seen, inland on 9 September.

MALAY TURTLE DOVE (*Streptopelia chinensis*)

Found commonly all over the island, and especially in and around villages, this dove was even seen right down to the tide-line. An easy living was available for it wherever coconuts were being split for copra or other purposes.

PACIFIC PIGEON (*Ducula pacifica*)

This large pigeon was reasonably common, especially inland where it was seen in groups of large spreading trees which were fruiting. 11 were recorded on a track to the caves on 9 September.

WHITE-THROATED PIGEON (*Columba vitiensis*)

Not very common and found mainly in ones and twos in coconut trees, but on one occasion BB surprised 6 feeding on the ground on broken nuts.

COLLARED LORY (*Phigys solitarius*)

Fairly common, especially towards the southern end. They were generally in pairs feeding on the flowers of coconut palms.

BARN OWL (*Tyto alba*)

Villagers told us that this is present in small numbers and hides in hollow trees. Three of the party saw one, which WFC photographed at 1130 hours in bright light on a palm frond. A screech, probably this bird's hunting call, was heard from camp at 2015 hours one evening.

WHITE-RUMPED SWIFTLET (*Collocalia spodiopygia*)

Very commonly seen in open places, these were also observed hawking above the forest and cliffs on the western side. PTC saw them flying in and out of cliff crevices near Vetau beach and considered that they were possibly nesting there. This beach lies on the northern side near the lighthouse.

WHITE-COLLARED KINGFISHER (*Halcyon chloris*)

Some birds seen showed buffish below. No more than one was seen on any one day.

PACIFIC SWALLOW (*Hirundo tahitica*)

Sightings of 2, 1 and 4 were made on consecutive days at a northern cliff ledge. Nesting was suspected when one was seen carrying straw.

POLYNESIAN STARLING (*Aplonis tabuensis*)

A few were seen in larger forest trees, with 5 in a flock on 10 September. One was seen in a coconut palm on the same day carrying nesting material.

INDIAN MYNA (*Acridotheres tristis*)

A few were noticed in Ekubu on our arrival but were uncommon elsewhere.

SLATY FLYCATCHER (*Mayornis lessoni*)

On 9 September GE and WFC reported 2 seen in tall forest canopy. There were no further sightings.

VANIKORO BROADBILL (*Myiagra vanikorensis*)

Uncommon, but distributed in varied habitats from scrub at the eastern beach to dense bush in the west and south.

WATTLED HONEYEATER (*Foulehaio carunculata*)

A common bird throughout, with GE noting 27 in 5km of main road on 10 September, it may differ from the Viti Levu subspecies *F. c. procerior*. Vatulele birds seemed noticeably smaller and very pale on the undersurfaces in comparison, especially on the underbelly and tail. The well-formed wattles were a definite yellow. Calls were different with a complete absence of the usual repetitive 'kikau.' Three old nests were found at low levels in exposed situations suspended more or less hammock fashion at 1 to 2½m above the ground. These were built of loosely coiled rootlets. Fledglings were calling and being

fed. The islanders said that these birds have a clutch of 2 to 3 eggs, white with dark spots at one end.

SPINE-TAILED SWIFT (*Chaetura caudacuta*)

On 8 September PC and PTC were below the lighthouse when two swifts were seen flying about the cliffs. PTC reports: "We were sitting on a rocky ledge watching a pair of tropic birds when two swifts appeared above and rapidly lost height until we were looking down on them. The upper surfaces were dark and the spines showed plainly on their tails. The pair circled into the cliffs and disappeared. They came back again in about five minutes and flew past us and out of sight round a bend. The birds were about 30m away and were watched through binoculars."

As far as can be ascertained the above is a first record for this species in Fiji. It is not listed by Mercer (1966). Mayr (1945: 77-78) says that *C. caudacuta*, which winters in Australia, may migrate through Micronesia and the Bismarck Archipelago but knew of no definite records. Fiji lies east of this possible migration route to breeding areas in eastern Asia and Japan. However, vagrants have appeared in New Zealand on a number of occasions and in 1942-3, November-March, there was a considerable invasion (Falla, Sibson & Turbott 1966: 187). Oliver (1955: 447) says that a few birds have been seen in August and September. Therefore, it is not surprising that these birds should occur in Fiji, lying as it does due north of New Zealand, for at the time that they were seen they could be expected to be on a southward migration.

SEABIRDS —

WHITE-TAILED TROPIC BIRD (*Phaethon lepturus*)

Four were seen on 7 September off cliffs near camp. A nest was found at the western end of the camp beach next day. This was in a rather dark pocket of the cliff about 3m above high water. An adult was brooding a small fluffy chick whose egg tooth was still showing. Both were still present the following morning.

BROWN BOOBY (*Sula leucogaster*)

Noted as uncommon with 3 or 4 being seen each day over the reef and beyond. Usually easily distinguished by the clear-cut demarcation between the brown and white on the breast, it was also noticed that the flight of this species is much closer to the water than the other two seen.

RED-FOOTED BOOBY (*Sula sula*)

An adult was identified from the launch on 6 September and others were seen in flight over the reef and beyond. Both adults and immatures were found in fair numbers roosting in trees on Vatulevu islet, visited on 11 September, and were characterised by the pinkish to reddish feet.

BLUE-FACED BOOBY (*Sula dactylatra*)

Small groups were seen fishing at sea during the crossing from Korolevu. The dark tail of this species was noted in birds passing

along the reef breakers from camp at about 0600 hours. When Vatulevu was visited on 11 September both adults and immatures in various plumages were roosting on the coral heads.

LESSER FRIGATE BIRD (*Fregetta ariel*)

Evidently present in very small numbers with one male flying low over palms near camp on 8 September, and 4 recorded by PJ next day, over cliffs to the north of camp.

CRESTED TERN (*Sterna bergii*)

Regarded as common with some tens inside the reef on any one day, and a few seen further at sea during the voyage across. A tally of 59, all apparently adults, was made in 13km of coast on 7 September. No sign of a nesting colony was seen on Vatulevu islet on 11 September, although one immature carcase was recovered from a low rock. As mentioned, rocks at Vatusavu seemed to offer a suitable site for breeding or roosting for this species.

COMMON NODDY (*Anous stolidus*)

The only noddy seen and present in small numbers. Usually 1 to 3 birds could be seen in the early morning or evening offshore from the camp. It seemed to be roosting, with a possibility of nesting, on the rocky pinnacles of Vatusavu when we passed nearby on 11 September.

WADERS —

PACIFIC GOLDEN PLOVER (*Pluvialis dominica*)

A total of 22 was recorded in 13km of east coast on 7 September. The largest flock was 13 seen with tattlers on 11 September.

WANDERING TATTLER (*Tringa incana*)

Found mainly on the eastern side, with the largest count 59 and best flock 14. Only two or three were found on the western beaches, for in general this side, with a lack of exposed tidal flats, was less suitable as a feeding ground for waders.

SIBERIAN TATTLER (*Tringa brevipes*)

Two, and a possible third were seen on 7 September. All were noticeably pale below. The double-syllable call was heard frequently and, less often, the slightly longer trill which is not to be confused with the rippling whistle of *T. incana*. Both species, with other waders, fed from the beach to the edge of the green growth and sheltered from the strong winds in the rocks above.

TURNSTONE (*Arenaria interpres*)

The largest daily tally was 32 and the largest flock 18.

APPENDIX I

The following is a list of probable sightings:

Fiji Goshawk (*Accipiter rufitorques*)

Golden Dove (*Ptilinopus luteovirens*)

Polynesian Triller (*Lalage maculosa*)

Jungle Myna (*Acridotheres fuscus*)
Spotted Fantail (*Rhipidura spilodera*)
Golden Whistler (*Pachycephala pectoralis*)

APPENDIX II

Birds said to be present but not recorded:

Crimson-crowned Fruit Dove (*Ptilinopus porphyraceus*)
Fan-tailed Cuckoo (*Cacamantis pyrrhophanus*)
Grey-backed White-eye (*Zosterops lateralis*)
Black-naped Tern (*Sterna sumatrana*)
White Tern (*Gygis alba*)

DISCUSSION

With the exception of the Wattled Honeyeater and Polynesian Starling, the smaller forest passerines typical of the Nausori Highlands are relatively uncommon on Vatulele, and the handsome Pacific Pigeon is a notable addition to the avifauna. Further examination of the more densely vegetated parts of the island is warranted under better viewing conditions, perhaps during a less windy season. The northern offshore islets need further investigation for breeding seabird species.

Additional species of Arctic waders could be expected periodically on the eastern tidal flats of Vatulele. Also, with a view to gathering more information about migratory patterns of Arctic waders, it seems desirable to have further seasonal counts from various islands as has been done for Suva Point by the Morgans (1965: 161).

In the Highlands of Viti Levu further work is needed in at least three habitat types; high altitude ranges, unmilled forest and among the difficult terrain of volcanic outcrops and cliffs of exposed ridges.

The current position of sub-speciation on separate islands or groups is another field awaiting further documentation, although the joint National Museum of New Zealand and Fiji Museum general study of the Fiji avifauna being undertaken at present includes such studies.

It will be obvious from these comments that the diversity of habitat found in Fiji offers plenty of scope for both the amateur and specialist researcher.

ACKNOWLEDGEMENTS

Sincere thanks are extended to many people who helped make this field trip a success. Among those to whom we owe special thanks are Mr Fergus Clunie of the Fiji Museum, Suva, for helpful advice. In the Nausori Highlands the kind people of the Pacific Lumber Company and, in particular, Mr & Mrs G. Beckham and Mr & Mrs M. Thoms gave invaluable assistance with supplies.

We thank Mr Maurice Clark of Korolevu for help and advice. Mr Ifierimi Rotuira, Headman of Taunovo village, and his family were most hospitable and kind to all members of the party who greatly appreciated their welcome and help. Master Serai, senior teacher of

Vatulele, gave valued aid and his wide knowledge of Fijian lore was appreciated.

We would like to thank Mr A. Blackburn and Mr H. R. McKenzie who critically read the manuscript. Mrs D. A. Lawrie kindly drew the map of Vatulele Island.

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WILDLIFE AT WORK

Once again the very welcome annual summary of the activities of the Wildlife Service of the Department of Internal Affairs is at hand. *Wildlife — A Review* No. 5 (1974), edited by Peter Morrison, includes the following reports: Wetland conservation; The Mallard/Grey situation; Conservation of Brown Teal; Paradise Shelduck; Lead poisoning in waterfowl; Albatrosses of the Chatham Islands; The food of oceanic birds; Chatham Island Black Robin; Mangere Island; Raoul Island; the climate of a frog habitat; Are Tuataras dependent on petrels?; *Placostylus*; Forest Survey; Takahe; Mt Bruce Native Bird Reserve, and it concludes with a list of recent scientific publications.

Wildlife Branch is said to have acquitted itself nobly at the International Ornithological Congress at Canberra and a number of overseas participants have commented on the policies of conservation and island protection being carried out. The substance of this work is reported in *Wildlife — A Review* and will be interesting reading for all members of the OSNZ.



BEECH FORESTS

The Symposium on "Ecology and Management of South Island Beech Forests" held by the N.Z. Ecological Society in Invercargill during August 1973 has now been published in their *Proceedings*, No. 21, issued December 1974. It will be of considerable interest to all concerned with the scientific background to the Government's proposals for using these forests. The address of the N.Z. Ecological Society is: P.O. Box 1887, Wellington.