

SOME OBSERVATIONS OF FEEDING STATIONS, FOOD AND BEHAVIOUR OF THE NORTH ISLAND SADDLEBACK ON HEN ISLAND IN JANUARY

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INTRODUCTION

A study of Saddleback (*Philesturns carunculatus rufusater*) on Hen Island begun in August 1963 (see studies by Atkinson, Blackburn, Kendrick and Skegg 1964) was continued in January 1964, in conjunction with the Wildlife Branch, Department of Internal Affairs, Saddleback trapping operations mentioned elsewhere (Merton 1965).

This paper records the observations made by the team of Ornithological Society members that assisted the Wildlife Branch to trap and transfer Saddlebacks, i.e. A. and G. Baskett, D. J. Campbell, D. R. Ellis, J. Ewen, G. and M. J. Hogg, J. L. Kendrick, J. Kerr, N. J. Ledgard, M. G. MacDonald, G. J. H. Moon, L. C. Shailer, R. H. Sibson, P. D. G. Skegg, D. M. Walters and the writer, who led the party. It is the result of a team effort by all concerned.

FEEDING STATIONS

A total of 88 feeding observations was made, 42 of which were timed and involved 374 minutes (see Tables I and II). These observations are open to the criticism that, due to disturbance created by trapping, birds may not have been behaving normally. However, care was taken to make notes only of birds which were apparently unperturbed and some hundreds of yards from trapping sites. In timed observations some bias in favour of birds feeding on or near the ground may have occurred, as these are presumably more easily observed. We consider it worthwhile to publish this data since at present little information is available on the January feeding behaviour of the species. Further study will verify the validity of these observations.

**TABLE I — FEEDING STATIONS OF THE NORTH ISLAND
SADDLEBACK ON HEN ISLAND — JANUARY 1964**

Feeding Stations	No. of Observations	% of Total
Aerial Feeding 3+ feet above ground	0	0
Aerial feeding within 3 feet of ground	0	0
Canopy foliage (excluding tufted crowns)	23	26
Foliage of cabbage tree, nikau, astelias, etc.	3	4
Understorey foliage	4	5
Dead foliage	4	5
Fruit	13	14
Bark of upper branches, and twigs	16	18
Branch axils	2	2
Dead branches	2	2
Holes	1	1
Boles	4	5
Ground	16	18
TOTAL	88	100

A possible change of feeding stations seemed to have occurred since August, with 26% of observations being in canopy foliage (9% in August). Birds observed feeding on the ground, however, remained at this feeding station for much longer periods than in August. Of timed observations, 47% of the time was spent on the ground (33% in August), 17% in canopy foliage (24% in August) and 36% on boles and branches (43% in August).

TABLE II — TIMES SPENT BY SADDLEBACKS IN THREE GROUPS OF FEEDING STATIONS ON HEN ISLAND — JANUARY 1964

Feeding Stations	No. of birds observed	Total time of observations (Minutes)	% of Total
In foliage	15	63	17
Branches/boles	15	134	36
On ground	12	177	47
TOTAL	42	374	100

FOODS

The apparent movement to canopy foliage could possibly be explained by the abundance of fruits and berries at this station during January, which were not available in August. Table III shows that a large proportion of berries was taken in January. There is no reason to suppose that disturbance of birds would have affected foods taken.

Twenty observations were made in which food was identified.

TABLE III — FOODS OF SADDLEBACKS ON HEN ISLAND — JANUARY 1964

Food	No. of observations
Caterpillars	8
Spiders and centipedes	2
Wetas	1
Berries of five finger (<i>Neopanax arboreum</i>)	4
Berries of karaka (<i>Corynocarpus laevigata</i>)	2
Green berries of taupata (<i>Coprosma repens</i>)	1
Berries of <i>Coprosma macrocarpa</i>	1
Fruit of Hangehange (<i>Geniostoma ligustrifolium</i>)	1
TOTAL	20

One female Saddleback was seen on 31/1/64 by D.V.M. in sustained level flight for a distance of approximately twenty feet, as it flew from a karaka tree to a fivefinger carrying a ripe karaka berry in its bill. It perched on a limb fifteen feet above the observer and at once took the berry in the claws of one foot, "parrot fashion." Pieces of flesh were then torn off the berry as it was held firmly against the limb with one foot. After about thirty seconds of feeding in this manner, the stone, with fragments of flesh still attached, was dropped to the ground. A second feeding observation on ripe karaka berries recorded by M.J.H. was of a similar pattern.

As in August, litter invertebrate fauna was abundant and varied, but an examination of canopy branches and foliage by D.J.C. revealed that scale insects were now virtually absent, as were their egg cases,

found previously under bark. Although cockroaches were still numerous in a variety of situations, in particular under kanuka bark, their eggs were no longer found under bark as they had been in August.

DRINKING AND BATHING

Five drinking observations were obtained, four at the camp water hole (L.C.S.) and the other, after a shower on 11/1/64 when a bird was seen to turn almost upside down to reach drops of water on the undersides of *Coprosma macrocarpa* leaves (D.V.M.). The observations made at the water hole were all obtained on 8/1/64, an unusually warm day, when L.C.S. spent from 11 a.m. to 4 p.m. in a hide photographing birds seeking water. This water-hole was constantly attended by numbers of birds of several species and was apparently the only source of fresh water in the area.

During this period four single Saddlebacks appeared and drank. It is not known whether these were different individuals or not. The first was present for about two minutes, only five seconds of which were actually spent in drinking. The remaining three birds were present for only a few seconds each, when they drank. Subsequent observers from this hide failed to obtain further Saddleback drinking records, although a large number of hours were involved. Considering the intensity of local trapping operations this is not surprising.

Although many astelias and collospermums were found to contain water, no drinking observations were obtained from them. The importance of such epiphytes in providing water for birds during dry periods is not known.



[G. J. H. Moon

I — Male North Island Saddleback bathing on Hen Island.

Mr. G. J. H. Moon, who was present on Hen Island again for nine days during late December 1964, has kindly made available his notes on drinking and bathing of Saddlebacks. Over six days he spent a total of thirty hours in a hide near the camp water-hole but his observations are incomplete in that they cover periods from mid-day until early evening only, when the water-hole was in direct sunlight.

Saddlebacks were seen drinking on six occasions averaging about once every four hours during the heat of the day. Drinking usually lasted for about ten seconds but on two occasions, when birds remained to bathe, they were present for forty seconds. Both the acts of drinking and bathing were performed in a similar manner to that of most other passerines, in particular Tui (*Prosthemadura novaeseelandiae*), with much gusto and nervous energy expended. In the case of drinking the bill was plunged into the water and then elevated briefly to aid swallowing. When bathing the birds would squat down for brief periods in shallow water while they dipped their heads under to throw water over their backs and flapped their wings to send up showers of spray. Following this, the now bedraggled-looking Saddlebacks would adapt a more upright stance to assist drainage of their apparently sodden plumage. A hurried fluffing of the plumage completed the toilet, after which birds would immediately return to cover without preening.

COURTSHIP-FEEDING AND FANTAIL ASSOCIATION

Of the 88 recorded observations, 7 involved courtship feeding of the female by the male, and on 11 occasions Fantails (*R. fuliginosa placabilis*) were associating with feeding Saddlebacks. Of the latter observations, one was of 20 minutes duration, when a Fantail was in continuous attendance on a pair feeding on the ground (L.C.S.). A second was of a Fantail seen following a pair for 150 yards (G.J.H.M.). Both courtship feeding and Fantails associating with Saddlebacks were in evidence during the Hen Island expedition of August 1963 and have been discussed at length by Blackburn (1964).

CONCLUSIONS

1. In January most Saddleback family parties and pairs without young adhered strictly to a well defined territory which they defended.
2. Courtship feeding of the female by the male took place in January, although probably less frequently than it did in August prior to nesting.
3. In January, as in August, insects comprised the bulk of the diet, although some birds were found to feed to a greater extent on the wealth of berries available to them during summer.

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