

breed in the winter in the Antipodes Islands, as they do further north, it may also be worth pointing out that M. J. Imber has recently found eggs in November on Gough Island. Few of the specimens from the subantarctic islands of New Zealand shed much light on the breeding dates there, except that nearly all the specimens from the Chatham Islands appear to be fledging juveniles with incompletely grown flight-feathers, and the two in the Canterbury Museum that have dates were collected by Hawkins on South East Island in May 1892 and on 13 October 1893. This suggests a prolonged breeding-season with at least some birds nesting in the summer there.

## LITERATURE CITED

- BOURNE, W. R. P. 1967. Subfossil petrel bones from the Chatham Islands. *Ibis* 109: 1-7.  
 DESPIN, B.; MOUGIN, J. L.; SEGONZAC, M. 1972. Oiseaux et mammiferes de l'île de l'est, Archipel Crozet. *Com. nat. fr. Rech. Ant.* 31: 1-106.  
 MURPHY, R. C. 1927. On certain forms of *Puffinus assimilis* and its allies. *Am. Mus. Nov.* 276: 1-15.  
 WARHAM, J.; BELL, B. D. 1979. The birds of Antipodes Island, New Zealand. *Notornis* 26: 121-169.  
 WARHAM, J.; JOHNS, P. M. 1975. The University of Canterbury Antipodes Island Expedition 1969. *Jour. Roy. Soc. NZ* 5: 103-131.

W. R. P. BOURNE, *Zoology Department, Aberdeen University, Tillydrone Avenue, Aberdeen.*



## COMMUNAL ROOSTING IN THE FANTAIL

In September 1978 Mr I. C. Duxbury, a farmer from Pigeon Bay, Banks Peninsula, described to me some observations he made there on the winter roosting behaviour of South Island Fantails (*Rhipidura fuliginosa fuliginosa*).

On cold 1970 winter evenings he observed Fantails entering the northern doorway of a shed. Because of the scarcity of shelter on his property he assumed that the birds were seeking shelter. One blustery night he found at least seven Fantails huddled together inside a 125 mm diameter loop of 14-gauge wire. The loop was strung from a roof support about 2 m above the floor. The postures of the Fantails were consistent with those adopted by birds exposed to the cold: withdrawn heads, fluffed-out plumage, and crouched low so that the legs were concealed by the under-body feathers.

The huddling together of the Fantails would further reduce heat loss, a function which has been ascribed to this behaviour in other species (see Landsborough Thomson, 1964, *A New Dictionary of Birds*, p. 710).

The configuration of the loop provided limited horizontal roosting space. Most Fantails, therefore, were forced to spread themselves up the sides of the loop, and so their distribution on the wire resembled a "U".

One possible advantage of this communal pattern of roosting is the support the uppermost birds would get from those beneath. Fantails perched on the sides of the loop, in particular, therefore, would need less energy to maintain their grip than if they had roosted alone

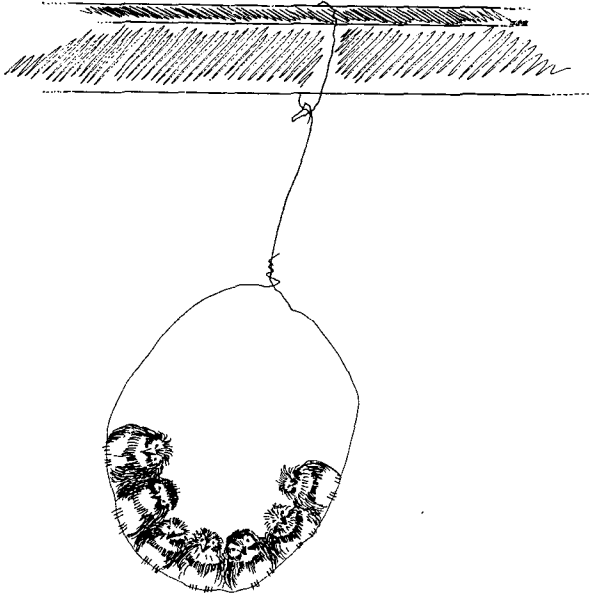


FIGURE 1 — An artist's impression of the wire loop used by Fantails as a communal roost. Sketch: J. Bruce

on a vertical perch. The amount of energy conserved by this mode of roosting could be significant throughout a winter's night.

In a more exposed situation, the duplication of this pattern of roosting would give stability to birds on a perch subject to buffeting by the wind. The interlocking of the fluffed feathers between huddled neighbours, the increased strength provided by the compounded grip arising from the communal roosting, and the weight distribution of the birds would produce an overall consolidating effect. These factors combined, therefore, would protect the birds from being jolted or blown off their perch.

The consistent pattern in which the Fantails distributed themselves on the wire loop and the blustery conditions which apparently elicited this behaviour suggest that their mode of roosting may be more than just an atypical response to an unusual situation.

If other observers locate Fantails on communal winter roosts such as the one described here, it would be interesting to know whether my provisional interpretation of Mr Duxbury's observations is valid because, as far as I am aware, this roosting behaviour has not previously been reported in Fantails.

G. A. TUNNICLIFFE, *Canterbury Museum, Rolleston Avenue, Christchurch.*