

(there are fewer people collecting butterflies in relation to the number of butterflies in flight) and we cannot hope to mark as high a proportion of the population as in birds.

Marking, however, is still well worth while as an indicator of distance, direction travelled and time of movement; it is, of course, used in conjunction with other methods of collecting data and not alone.

Butterfly migration is a very complex matter; the return flight (in those species in which it has been observed) is often made by individuals which may be one or several generations removed from those which previously made the journey. Quite often hibernation or aestivation (partial or complete) is included in the cycle.

We know of about 30 species of insects which migrate in Australia but this number is clearly only a tiny fraction of those which do undertake periodic movement. In its native country, America, the Wanderer undertakes journeys of up to 1800 miles; the indigenous Australian Caper White probably migrates for hundreds of miles. Marking and observation by observers over a wide area, co-operating in a single scheme, will, we hope, eventually tell us something of the tremendous population movements which take place in insects. Of about 9000 Wanderers marked so far, we have heard of about 90, which is not unsatisfactory in a scheme which has been running for less than a year.

It would be greatly appreciated if anyone capturing a marked butterfly could return it to me, at the Australian Museum, College Street, Sydney, with details of the place, date of capture and name of captor.

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#### TETHERING OF MIST NETS.

S.J.Wilson, Canberra. A.C.T.

Experienced mist netters have recently been trying out a trial shipment of tethered nets. Blowing of nets has long been a problem and this method of tethering, originated by the British Trust for Ornithology, appealed as being an answer to the problem insofar as it is possible to find an answer. It must be realised of course that a strong wind blowing on a net (tethered or otherwise) will render it inoperative.

Tests with the tethered nets indicate that in some conditions where netting with normal nets is quite impossible

they will continue to be operative. This is particularly so in places where there is some low scrub, or other partial shelter, at the netting site.

Tethering then is considered advisable and desirable.

The "Standard Mist Net" specially imported for use by members of the Australian Bird Banding Scheme is considered to be as near perfect as possible. This does not mean that there are no minor problems associated with its use. One problem is that, in a wind, the somewhat heavy thread of this net provides a barrier to the wind and the blown net tends to impose a heavy strain at the windward end, at the four points where the shelf strings join the vertical end string. If exposed to constant winds tearing of the net at these four points will result.

Medium to large birds which have a capacity to move along a net can drop through such holes so it is advisable to keep these repaired if they develop.

The method of tethering used on these nets is to run a second shelf string along the top, making a double tie every four to six inches. Ordinary double knots are used and the tethering cord is securely knotted to the pole loop on either end. The tethering is quite easily done by any mist netter and shelf string cord and netting needles are available from the Association's Mist Net Service (see Notices, p.145). The net must be erected while the tethering is done to get the correct tension on the tethering cord.

Tethering, because it takes the wind pressure at each tie point, reduces the strain on the ends of the net and will do a lot to overcome the tearing at the shelf string ends referred to above.

Other methods of tethering, e.g., at wide intervals along the cord will work for a time but are not recommended. The greater the space between the tethering knots the greater the strain on the net at that point so the tethering knots should be not more than six inches apart. Wide spacing of the knots will cause the net to tear at these points.

Having decided that tethered nets are more efficient than normal nets, one problem remains for the Association's Mist Net Service. Should we import only tethered nets, or say 50/50, leaving it to the individual to tether his own? For the very small additional charge it is probably best to import only tethered nets but for the moment a half and half policy will be followed and both types will be available.

The Mist Net Service requests the views of individuals

on all aspects of the question of tethering.

One last point. In very windy areas or areas where there is little cover for the nets, it may be desirable to tether both top and bottom of each net. The second tethering will be a matter for the individual.

### RECOVERY ROUND-UP

1. Short-tailed Shearwater (Puffinus tenuirostris)  
160-57425. Banded by G.M.Bowker on Griffith Island, Vic. as "non-flying young", on 26.4.63. Recovered off Tokoro, Japan on 7.7.63, 5,700 miles from banding place. Band returned.
2. Fleshy-footed Shearwater (Puffinus carneipes)
  - (a) 160-08756; banded as adult by J.L.McKean at Lord Howe Is. on 26.11.59. Caught on fishing line off Mishima Island, Japan, on 2.6.63. 4,950 miles from banding place.
  - (b) 160-46577, banded as adult by J.L.McKean at Lord Howe Is. on 21.11.62. Recovered off Mukhojin-mi, Korea, on 21.6.63. 5,100 miles from banding place.
  - (c) 160-47566, banded as adult by D.Moroney at Lord Howe Is. on 23.11.62. Recovered 110 miles east of Pusan, Korea, on 27.5.63. 5,000 miles from banding place.
  - (d) 160-47827, banded as adult by D.Moroney at Lord Howe Is. on 24.11.62. Caught in fishing net 130 miles east of Ulchin, Korea, on 14.6.63. 5,050 miles from banding place.
  - (e) 160-47960, banded as adult by D.Moroney at Lord Howe Is. on 25.11.62. Recovered off Mishima Is., Japan, on 2.6.63, 4,950 miles from banding place.
3. Little Egret (Egretta garzetta), 100-23174. Banded by N.J.Favaloro at Balranald, NSW, as nestling on 15.12.62. Found dead and band returned at Talasea, New Britain on 6.6.63, 2,050 miles from banding place.
4. Eastern Silvereye (Zosterops lateralis),
  - (a) 010-43713 banded by J.Rogan at Maryborough, Vic., as adult on 23.6.62. Caught by Mrs.J.A.Denney at Hordern Vale, Vic., on 15.10.62, 110 miles S. from banding place. Alive and healthy, released with band.
  - (b) 010-67681, banded by J.Liddy as adult at Riverside, Tas., on 31.3.63. Retrapped by D.Walker at Turrumurra, N.S.W., on 10.8.63. 570 miles from banding place. Released with band.