

Dead Bird

Primaries; numbered outwards from secondaries.
 No. 1/45 mm of white; 2/45 mm; 3/57 mm;
 4/67 mm; 5/75 mm; 6/70 mm; 7/57 mm;
 8/54 mm; 9/40 mm; 10/8 mm of white.
 Secondaries; numbered inwards from primaries.
 No. 1/43 mm of white; 2/42 mm; 3/38 mm;
 4/33 mm; 5/28 mm; 6/23 mm; 7/18 mm;
 8/14 mm; 9/5 mm; 10 no white.

References

Mathews, G. M. (1922), "The Birds of Australia", 10: 407.

North, A. J. (1901), "Nests and Eggs of Birds Found Breeding in Australia", 1:8.
 Royal Australasian Ornithologists Union (1947), "Birds of the 1947 Queensland Camp-out at Binna Burra, Qld.", *Emu*, 47: 373.
 Robertson, J. S. (1964), "Feeding Honeyeaters", *Aust. Bird Bander*, 2: 107-109.
 Robertson, J. S. (1966), "Honeyeater Size Variation", *Aust. Bird Bander*, 4: 50-52.
 Snow, D. W. (1967), "A Guide to Moults in British Birds", British Trust for Ornithology, Field Guide, No. 11.

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Collecting Insects Ectoparasitic on Birds

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Banders have a unique opportunity to assist the work being carried out in the study of ectoparasites found on birds. These are parasites which inhabit the exterior of the host's body (endoparasites inhabit the interior) and the following are some of the groups which may be found on birds:

- Louse Flies (*Hippoboscidae*)
- Fleas (*Siphonaptera*)
- Ticks (*Ixodidae*)
- Bird Lice (*Mallophaga*)
- Leeches (*Hirundinidae*)

Louse Flies are the most commonly recognised group of avian ectoparasites. Julian Ford (1966) indicated some of the host species of these flies. Those listed by him were Galah (*Kakatoe roseicapilla*), Tawny Frogmouth (*Podargus strigoides*), Owllet-Nightjar (*Aegotheles cristata*), Kookaburra (*Dacelo gigas*), White-backed Swallow (*Cheramoecca leucosterna*), Fairy Martin (*Hylochelidon ariel*), Southern Emu-Wren (*Stipiturus malachurus*), and Yellow-plumed Honeyeater (*Meliphaga ornata*).

S. J. Paramonov (1951) stated that the family Hippoboscidae was poorly represented in Australian collections. At that time, very little bird banding was being carried out in Australia except waterfowl and shearwaters. Even since the advent of the Australian Bird-banding Scheme in 1953, relatively few specimens have been collected and much of the information has not been recorded, mainly due to the difficulty of catching these insects and consequently considerable data has been lost.

In addition to those listed by Ford, I have found Louse Flies on the following species:

- * Rufous Fantail (*Rhipidura rufifrons*)
- Southern Yellow Robin (*Eopsaltria australis*)
- Rufous Whistler (*Pachycephala rufiventris*)
- * Olive Whistler (*P. olivacea*)
- Grey Shrike-Thrush (*Colluricincla harmonica*)
- * Magpie-Lark (*Grallina cyanoleuca*)
- * White-browed Scrub-Wren (*Sericornis frontalis*)
- Striated Thornbill (*Acanthiza lineata*)
- Brown Thornbill (*A. pusilla*)
- Speckled Warbler (*Chthonicola sagittata*)
- Blue Wren (*Malurus cyaneus*)
- Variiegated Wren (*M. lamberti*)
- * Eastern Silcreyc (*Zosterops lateralis*)
- Eastern Spinebill (*Acanthorhynchus tenuirostris*)
- Fuscous Honeyeater (*Meliphaga fusca*)
- Yellow-faced Honeyeater (*M. chrysops*)
- Yellow-tufted Honeyeater (*M. melanops*)
- * New Holland Honeyeater (*Meliornis novaehollandiae*)
- Bell Miner (*Manorina melanophrys*)
- Beautiful Firetail (*Zonaeginthus bellus*)
- Red-browed Finch (*Aegintha temporalis*)
- Black-backed Magpie (*Gymnorhina tibicen*)

*Specimens forwarded to the Australian Museum.

Other banders will be able to add to this list. W. K. (Bill) Dowling (per com.) has recorded another five species: Peaceful Dove (*Geopelia placida*), Brown Goshawk (*Accipiter fasciatus*), Lewin Honeyeater (*Meliphaga lewini*), Double-bar Finch (*Steganopleura bichenovii*), and Pied Butcher-bird (*Cracticus nigrogularis*). It is certain that the species listed represent only a small fraction of those that are host to *Hippoboscidae*.

Method of Collection

To assist banders who are interested in collecting ectoparasites, the following is reprinted from *An Asian Bird Bander's Manual* (H. Elliott McClure 1966):

There are many ways to collect parasites from birds and the one recommended here may not be the best, but it is effective and quick and takes samples of the creatures that may be living on a bird.

The insecticide silicon-dioxide, known as Dri-Die 67, has been developed from a paint ingredient and basic work concerning its use and effect was done by Dr Barry Tarshis on the valuable birds of the San Diego Zoo. It is an exceedingly fine flocculent powder which is "oil hungry". When particles of this chemical come in contact with the integument of tiny insects they absorb the oil of the surface, breaking its resistance to water evaporation. The insect loses water rapidly and becomes highly irritated. If enough particles strike it, it soon dies of desiccation. Since this is a reaction specific to the insect, there is no harm done to the bird or operator. The only precaution is to avoid breathing the fine dust or getting it in the nostrils of the birds.

When a bird is taken from a net or trap and put in a cloth bag, it may lose some of its parasites in the bag. For this reason the bag should be reversed each time a new bird is placed in it. The parasites are collected by the Dri-Die method as follows: As soon as the bird is removed from a bag, or holding cage, it should be dusted lightly with Dri-Die about the vent and rump, under the wings, between the wings, on the head and the chin especially. With a small plastic dispenser the dust can be forced among the feathers. Having dusted the bird you can now do the other things that you intend to, such as weigh, measure, take a blood smear, record moult, band, etc. The Dri-Die must remain on the bird from **5 to 10 minutes**. It is best to have a helper now take the bird while you turn to another. He in turn holds the bird over a white pan or paper, **where there is no wind**, and ruffles the feathers. The stupefied parasites

will fall out. They can be scraped up with a forceps dampened with alcohol and washed off in a vial of 70% alcohol. The bird is released and the vial properly labelled with bird species, band number, date, place, and age of bird.

Since this all takes time and you may have a lot of birds to band, an assistant can collect from a sample of birds while the rest of the team is banding. Later at your office the vial (or procaine tube) can be examined under a microscope or hand lens and the groups of parasites present can be checked.

A commercial aerosol spray of Dri-Die 67 has been put on the market. It should not be used for it coats the bird with crystals. It is the fine dust that is effective.

Other methods of collecting ectoparasites: If a bird is dead it may be dusted with Dri-Die 67 and placed in a paper cone. Later, when time is available, the specimen can be thoroughly shaken and combed and almost all of the ectoparasites collected. A dead specimen can also be placed in a jar or cylinder and the parasites killed by chloroform or ether. Again the bird must be combed or shaken to free the insects.

Some workers recommend placing birds in a tight plastic bag tied about the neck. Chloroform on cotton in the bag will kill the insects. This method must be used with care or the bird will be injured.

(The use of chloroform and a plastic bag is not recommended unless the bird is dead; it is useful with fresh road casualties.)

Mr M. D. Murray is presently interested in obtaining ectoparasites from any Australian birds and will supply collecting bottles on request. His address is — CSIRO, McMaster Laboratory, Private Bag No. 1, Glebe, N.S.W., 2037, or as shown on the back cover. If further details or additional information are required, please write to Mr Murray at either address.

References

- Ford, J. (1966). "Louse Flies Parasitizing Birds", *Emu*, 65: 221.
 McClure, H. E. (1966). "An Asian Bird-Bander's Manual", pp. 93-95 (Migratory Animal Pathological Survey, Hong Kong).
 Paramonov, S. J. (1951). "Birds and Louse Flies", *Emu*, 50: 211-212.

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Change of Status

The following member, having become a licensed bander, has been advanced to Full Membership.
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