

"falooka"), with its three-cornered sail carried on a 40-foot sky-scraping spar, the native crew of six or seven, and the mixed catch of all sorts of marine wonders. Between the trips I wandered along the beach or among the salt marshes, in search of bird-life. No birds appear to be nesting now.

How jolly it will be to get back to civilization again—to clean sheets and decent living! Not that I regret coming; I do not—far from it. I should have regretted in years to come not having done so. My experiences and the things I have seen have amply repaid me.

I hope my letter has better luck than C. Barrett's, in which, you will remember, the censor deleted all the scientific names of the birds he mentioned!

A Dipterous Parasite of Nestling Birds.

By P. A. GILBERT, R.A.O.U., LAKEMBA, N.S.W.

OUR hon. librarian, Mr. W. B. Alexander, in his review of recent acquisitions to the R.A.O.U. library, mentions on page 321 of vol. xviii. (April, 1919) the receipt of a paper entitled "Parasitism of Nestling Birds by Fly Larvæ," O. E. Plath, *Condor*, vol. xxi., page 30, with the following comments:—"The author finds that in America a considerable proportion of Passerine birds are subject as nestlings to the attacks of larvæ of a fly, which suck their blood. . . . The attacks of the fly larvæ result in a considerable mortality amongst the nestlings. Do Australian birds suffer in this way?"

I have been collecting data on a fly parasite for several years past, but, as the hosts located have been few and far between, my progress has necessarily been very slow; but since the question has been put by Mr. Alexander I thought an effort to answer his query would not be out of place.

My field observations have been intermittent, a week or a fortnight clapsing between visits to any hosts that I had found; hence a good deal of information was lost in not being able to make daily investigations. However, as a first instalment, subject to modification with more extensive inquiry, I herewith give my researches to date.

From four species of our birds I have collected maggots, and bred them out, which all proved to be identical. The birds thus attacked were:—

Lyre-Bird (*Menura superba*), 13/8/1911.—One young bird, about two weeks old, with 17 maggots studded over the lateral and ventral portions of the body.

White-cheeked Honey-eater (*Meliornis sericea*), 14/3/13.—Two young, about a week old, one with three and one with two maggots; both had them on the ventral surface of the body.

Tawny-crowned Honey-eater (*Glyciphila fulvifrons*). — Two young, about a week old, with three and one larvæ respectively.

White-bearded Honey-eater (*Meliornis novæ-hollandiæ*). — From 19/4/14 to 7/6/14 I found five broods infected; these were from upwards of twenty nests which I located during that period, it being a favourable time for autumn breeders. I specially mention the dates because at present I feel convinced that their attacks are carried out during the autumn and winter months. I have examined numerous young of many species during spring and summer months in search of these parasites, but so far have been unsuccessful.

Of the five broods of *M. novæ-hollandiæ*, the following larvæ were counted on them:—

1st brood	—1	with 11	and 1	with 7.
2nd	„	—1	„ 8	„ 1 „ 5.
3rd	„	—1	„ 4	„ 1 „ 4.
4th	„	—1	„ 5	„ 1 „ 2.
5th	„	—1	„ 4	„ 1 „ 3.

All were on lateral and ventral surfaces of bodies.

As soon as the young birds are hatched it seems that the fly seizes the first opportunity to deposit her eggs, which are usually placed under the wing of the young bird, where they immediately hatch, and from there disperse irregularly over the lateral and abdominal parts of the body, keeping clear of the various feather tracts (pterylæ). They then pierce the epidermis or outer skin, and instantly proceed to suck up the blood. Their growth is remarkably rapid, the maggot taking about six days to mature, leaving the body before the young are anything like fledged. As they develop they work their way further into the young bird, keeping their anal segment slightly projecting from the epidermis, so that their excreta in no way obstructs their development nor interferes with the function of the tracheal system. When the maggot reaches maturity it leaves its host, and, falling to the bottom of the nest, it works its way into the lining and there pupates. With the Honey-eaters mentioned the lining is usually composed of the velvety fluff gathered from *Banksia* cones. I had no success with pupæ brought home in nests, but those bred from larvæ collected took thirteen days or more to emerge. The fly is a member of the well-known family *Muscidæ*, which includes house and blow-flies. It is a short, stout fly measuring $\frac{1}{4}$ -inch; the arista is clothed with long hairs, more so at base, and the wing venation resembles that of the blow-fly (*Calliphora oceanicæ*).

I hope to treat this subject more fully when sufficient material comes to hand. So far, I would say that the depredations of this fly among our birds are insignificant, although some of the young were extremely emaciated, but managed to leave the nest fully fledged.