



THE PARASITES OF BRITISH BIRDS AND MAMMALS. XX. THE  
ECTOPARASITES OF THE HOUSE-MARTIN, SWIFT, SWALLOW  
AND SAND-MARTIN.

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*Reprinted from 'The Entomologist's Monthly Magazine,' Vol. lxxiv.*

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In the past considerable confusion has existed in this country concerning the ectoparasites of the following four birds: *Hirundo r. rustica* L. (Swallow), *Delichon u. urbica* (L.) (House-Martin), *Riparia r. riparia* (L.) (Sand-Martin) and *Micropus a. apus* (L.) (Swift). With a view to settling the question, I am presenting below an analytical table of the various ectoparasites which have been recorded from these four birds, together with some notes.

		ECTOPARASITES.			
NAME OF BIRD.	<i>Mallophaga</i> or biting-lice.	<i>Siphonaptera</i> or Fleas.	<i>Acarina, Ixodoidea</i> , etc. Ticks, mites, etc.	<i>Cimicidae</i> or Bugs.	<i>Diptera-Hippoboscidae</i> or bird-flies.
HIRUNDO R. RUSTICA L. (Swallow).	<i>Myrsidea rustica</i> (Nitzsch). <i>Hirundoecus malleus</i> (Nitzsch). <i>Philopterus excisus</i> (Nitzsch). <i>Degeeriella gracilis</i> (Nitzsch). <i>Philopterus excisus</i> (Nitzsch). <i>Philopterus quinque- maculatus</i> (Piaget). <i>Degeeriella gracilis</i> (Nitzsch).	<i>Ceratophyllus gallinae</i> Schrank.	<i>Dermanyssus gallinae</i> (Redi).	—	—
DELICHON V. URBICA (L.) (House-Martin).	<i>Philopterus quinque- maculatus</i> (Piaget). <i>Degeeriella gracilis</i> (Nitzsch).	<i>Ceratophyllus farreni</i> Roths. <i>C. hirundinis</i> Curtis. <i>C. rusticus</i> Wagner. <i>C. waterstoni</i> Jordan.	<i>Dermanyssus gallinae</i> (Redi).	<i>Oeciacus hirundinis</i> (Jenyns).	<i>Stenopteryx hirundinis</i> (Linn.).
RIPARIA R. RIPARIA (L.) (Sand-Martin).	<i>Myrsidea rustica</i> (Nitzsch). <i>Degeeriella tenuis</i> (Nitzsch).	<i>Ceratophyllus styx</i> Roths.	<i>Ixodes canisuga</i> Johnston.	—	—
MICROPUS A. APUS (L.) (Swift).	<i>Menopon parvulum</i> Piaget. <i>Demmyus truncatus</i> (Olfers). <i>Eurcum cimicoides</i> Nitzsch.	<i>Ceratophyllus gallinae</i> Schrank.	—	—	<i>Crataerina pallida</i> (Latr.).

## MALLOPHAGA.

Of the nine species of biting-lice which have been recorded from these four birds only four are in my experience frequently found. *Philopterus excisus* (Nitzsch) and *Degeeriella gracilis* (Nitzsch) seem to be the commonest. The former is a short, active little species, whereas the latter is an elongate, slender and less active species. *Myrsidea rustica* (Nitzsch) is also rather an active species, being small and somewhat rectangular, as contrasted with the roundness of *P. excisus* (Nitzsch). It is interesting to note that *M. rustica* (Nitzsch) has been recorded from both the Swallow and the Sand-Martin, and *D. gracilis* (Nitzsch) and *P. excisus* (Nitzsch) both occur on the Swallow and the House-Martin. Since these three species of birds are relatively close to one another in the present classification of the birds, it lends support to the phylogeny of the hosts. The species of the genera *Eurcum* and *Hirundoecus* are extremely interesting lice, being comparatively large, golden brown and rather bug-like in appearance — hence the name *cimicoides*. Specimens of these parasites are extremely rare and seem to occur either singly or as two or three at the most on any one bird. I do not think it would be an exaggeration to say that the number of known *specimens* of these species represented in collections would not amount to very many. I have never seen the males. *Dennyus truncatus* (Olfers) is a specific parasite of the Swift in this country. All the species of the genus *Dennyus* known to date are parasitic on Swifts and their very near allies. This fairly large species is dark brown in colour and seems to occur in small numbers on most specimens of its host. The remainder of the species of lice not mentioned here are at present unknown to me from actual specimens.

## SIPHONAPTERA.

In my own experience, and taking into consideration published accounts of the fleas occurring in the nests of these four birds, the Swallow and Swift are almost free. Occasionally an odd specimen or two of the common Ceratophyllid, *C. gallinae* Schrank, may be bred from their nests. The House-Martin and the Sand-Martin, on the other hand, are definitely parasitised by fleas. The Sand-Martin possesses a flea specific to itself, and the species (*C. styx* Roths.) may be found in large numbers in their burrows or even swarming at the mouth of the burrows. Four species of fleas have been recorded from House-Martins' nests and are specific to this host. The two commonest species are *C. hirundinis* Curtis and *C.*

*rusticus* Wagner. *C. farreni* Roths. has been recorded on a few occasions, whereas *C. waterstoni* (Jord.) is rare and known only from Scotland. It is quite normal to find at least two species of fleas in a House-Martin's nest, and occasionally a third occurs. The structure of the House-Martin's nest is such that it affords an excellent medium for fleas to breed in. It is quite evident that a large percentage of fleas occurring in the nests of the House-Martin and the Sand-Martin overwinter in the pupal state and emerge the following spring when the birds return to their old nesting sites.

#### ACARINA.

In listing these I have not included the numerous species of mites which are known to live on the birds themselves. *Dermanyssus gallinae* (Redi), the red mite of poultry, is invariably present in very considerable numbers in Swallows' nests. It occurs occasionally in House-Martins' nests but only in small numbers. I am not aware as to whether it occurs in the nests of the other two birds. *Dermanyssus gallinae* (Redi) feeds exclusively on the blood of its host. With regard to the Ixodoidea, or ticks, I do not think they have been recorded from the nests or the hosts under consideration except in the case of the Sand-Martin. *Ixodes canisuga* Johnston has been recorded on numerous occasions from Sand-Martins' nests.

#### CIMICIDAE.

The House-Martin is the only species parasitised under normal conditions by anything in the nature of a 'bed-bug.' The species known as *Oeciacus hirundinis* (Jenyns) lives in the nest of the House-Martin and should not be confused in any way with the common bed-bug *Cimex lectularius* Linn. from which it differs in being very much more hairy and smaller. Unfortunately, to the untrained eye these two bugs might conceivably be regarded as one and the same species, with the result that House-Martins' nests are frequently ruthlessly destroyed as suspicious depôts of the bed-bug. The House-Martin's bug will feed on man but under ordinary circumstances remains in the nest of its true host, in which it frequently occurs in very large numbers. *O. hirundinis* (Jenyns) has been recorded from the Swallow on very rare occasions, but these records are to be regarded with suspicion. It is extremely probable that the recorder and/or the person who found

the bug did not know the species of bird he was dealing with, as it will be agreed upon that the four species of birds under discussion might easily be misidentified.

#### HIPPOBOSCIDAE.

In the British Isles and under normal circumstances the House-Martin and the Swift are the only two species parasitised by this group of dipterous parasites. Each has a bird-fly specific to it. As a result of the specialised specificity of these two species, their wings have become reduced to such an extent as to be quite useless for flying. The two species, namely *Stenopteryx hirundinis* (Linn.) and *Crataerina pallida* (Latr.), parasitise the House-Martin and the Swift respectively and are perhaps better known than any of the other species of Hippoboscidae occurring in our islands. It seems that *C. pallida* (Latr.) is frequently carried by the birds when in flight, whereas *S. hirundinis* (Linn.) does not occur commonly on its host. They both spend the greater part of their lives in the nests of their hosts sucking blood at intervals. These flies deposit puparia, which may be found in the nests. Considering that neither species has been recorded, as far as I am aware, from the part of the world from which their hosts migrate to this country, it would appear that they are not carried successfully by their hosts on migration. Actually the greater number of them overwinter in the pupal state and emerge the following spring, *i.e.* about the time the birds return to this country.

It is interesting to note in regard to the Hippoboscidae that on the Continent the Swallow has a species, *Ornithomyia biloba* Dufour, as a specific parasite. This is a fully winged species rather like *Ornithomyia avicularia* Linn. It seems extraordinary that this parasite has never been found in the British Isles.

In conclusion, I should like to point out that of the parasites listed all save the Mallophaga, which feed on epidermal debris, etc., are blood-suckers and occur for the most part in the nests. The young of the House-Martin, Sand-Martin and Swift must therefore have a very bad time of it.

For further information regarding the parasites living in the nests of House-Martins, see my paper No. III of this series (Ent. mon. Mag., 1935, LXXI, pp. 46-50.

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May 17th, 1938.

