small in both, genital segments swarming with nemato[illegible] *Aphodius fossor* (L.), male and female dissected 9.viii.51 (both carried thousands of nematodes under the elytra, but none found in the genital segments or general body cavity; no gregarines in gut). *A. haemorrhoidalis* (L.), viii, x, females dissected 11.viii.51 (very small ovaries; no gregarines in gut; no nematodes found). *A. rufipes* (L.), female dissected 9.viii.51 (thousands of nematodes under the elytra; no gregarines in gut). *A. contaminatus* (Hbst.), viii. *A. prodromus* (Brahm), iii, ix. *A. sphacelatus* (Pz.), iii, iv, ix, xii. *A. merdarius* (F.), v. *A. fimetarius* (L.), iv. viii, xii; female dissected 9.viii.51 (very small ovaries, no nematodes under the elytra, but about 20 large ones in the general body cavity), male dissected on same date contained no nematodes. *A. ater* Deg., iv.

The nematodes found in Scarabaeid beetles have received a great deal of attention in Germany cf. Volk, 1950 and Sachs, 1950) and France (cf. Théodoridès, 1949, 1951). Although the nematodes found in Cheshire were not studied in detail it seems probable from the work of the above authors that they belong to the genera *Rhabditis* and *Diplogaster*. The species found in the body cavity of *Aphodius fimetarius* is almost certainly *Diplogaster aphodii* Bovien.

## In the Farm Buildings

Most of the beetles found in the buildings seem to have been brought in on the haycart, certain of these are recognised food store pests (cf. Hinton, 1945). The following is a list of the species found; where no data other than the dates are given the specimens were found on the shippon walls.

DERMESTIDAE.—*Attagenus pellio* (L.), several dead in spider webs, vii.50. *Anthrenus fuscus* Oliv., vii.50.

LATHRIDIIDAE.—*Lathridius lardarius* (Deg.). v, vi. *Enicmus minutus* (L.), vii.51.

MYCETOPHAGIDAE.—*Typhaea stercorea* (L.), vii, viii.

ENDOMYCHIDAE.—*Mycetaea hirta* (Marsh.), 1.iv.49.

ANOBIIDAE.—*Anobium punctatum* (Deg.) in large numbers in the woodwork.

TENEBRIONIDAE.—*Tenebrio molitor* L., remains found in spider webs.

CURCULIONIDAE.—The following species were found during July, 1951, soon after the hay had been carried to the lofts. *Apion violaceum* Kby., *A. dichroum* Bedel, *A. aestivum* Germ. and *Phytonomus nigrirostris* (F.).

## Discussion

The farm has never, as far as can be ascertained, suffered any economic loss due to the activities of beetles. It is evident, even from the short lists given here, that there are several species present on the farm that could, if their numbers were suddenly to increase, become a considerable nuisance. Such forms are found particularly among the beetles brought in on the haycart and those occurring in the buildings. The interactions of the various animals on the farm appear to be such that any one species of beetle is prevented from becoming too numerous. The situation is not however a static one, constant changes are in progress. *Apion rubens* Steph. was found in large numbers on the haycart in 1948, it has not been seen since, whilst *Enicmus histrio* Joy was not found before 1951, but then it occurred frequently.

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# DIPTERA FOUND INDOORS, WINTER SEASON 1951-52

BY HUGH SCOTT, SC.D., F.R.S.

Some months ago an article by me appeared (1951, *Ent. mon. Mag.*, **87**:269-70) on the swarming of a Phorid, *Megaselia meconicera* Speiser, in my own house and another house nearby from October, 1950, to January, 1951 (the samples taken on several dates consisting exclusively of females). The first purpose of the present article is to record a negative, i.e. there was no repetition of the swarm in either house during the autumn of 1951 and winter 1951-52. Moreover, though I have not analysed weather records in detail yet, broadly speaking, I cannot relate the congregating of these Phorids or their absence to the nature of the season. At the larger house the swarms appeared at least two winters in succession; in 1949-50 swarming occurred after a very hot dry summer; but in 1950-51 the swarms in both houses congregated after a broken, largely wet, summer; so that, as the summer of 1951 was of the same general type as that of 1950, the Phorids might have been expected to congregate in the houses again during the autumn of 1951 and winter 1951-52. Such, however, has not been the case; Phorid flies have only appeared on the windows sporadically, in very small numbers. Other factors besides weather are doubtless involved.

On the other hand, sporadic occurrences in the house of Diptera of many genera and families seem to have been more frequent than usual. Some of these species, *e.g.* the cluster-fly, *Pollenia rudis* F., normally congregate in swarms, though during the past winter they never numbered more than a few individuals. Others, such as the blowfly, *Calliphora erythrocephala* Meig., normally occur indoors, but not in swarms. Yet others, such as the representatives of *Dryomyza* and *Heteromyza* listed below, evidently entered the house accidentally, single examples being found on windows; some of these species are not very common. Several of the larger flies, e.g. *Eristalis tenax* L., *Calliphora erythrocephala* Meig., *Polietes lardarius* F., and *Protocalliphora sordida* Zett., evinced the habit of getting inside the shades of electric lights, where they buzzed persistently to and fro, proving difficult to capture. The following is a complete list of the specimens taken:

CULICIDAE: besides the hibernation of gnats in parts of the ground floor, as in other winters, an example of the large *Theobaldia annulata* Schrank bit me one day in January; the irritation from the bite lasted several days, as is normal; what seemed unusual was the date, for I have generally been attacked by *Theobaldia* in late autumn, not previously (as far as I recall) in January.

MYCETOPHILIDAE: *Mycetophila ocellus* Walk., 1 ♀ on a window, 30-31.xii.1951; a casual entrant into the house.

SYRPHIDAE: *Eristalis tenax* L., at various dates in late autumn, as in other years.

MILICHIIDAE: *Madiza glabra* Fall., specimens occurred at various times; five were taken on windows, 30-31.xii.1951 (this species occurred more plentifully in the preceding winter, in company with the swarm of *Megaselia meconicera* Speiser).

PHORIDAE: the examples seen in very small numbers, and at intervals, were unfortunately not kept.

BORBORIDAE: *Copromyza similis* Collin, 1 ♀ taken on the side of a bath, 1.iii.1952.

(CHLOROPIDAE: the absence of *Thaumatomyia notata* Meig. (*Chloropisca notata*), so frequently a component of swarms, is noteworthy.)

DRYOMYZIDAE: *Dryomyza flaveola* F., 1 specimen of a dark form, taken on a window 3.ii.1952; *Dryomyza* sp., a small specimen, not identifiable with certainty, was taken on a ground-floor north window, 1.i.1952. Both these are casual entrants into the house.

HELOMYZIDAE: *Heteromyza rotundicornis* Zett., 1 ♀ taken on a window 2.iii.1952. Mr. Collin (1943, The British species of Helomyzidae, *Ent. mon. Mag.*, **79**:234-51) calls this 'a somewhat uncommon species'; a casual visitor in the house.

MUSCIDAE, Muscinae: *Dasyphora cyanella* Meig., 1 ♂ on a window, 17.xii.1951; *Polietes lardarius* F., 1 ♀ early in December, 1951; Phaoniinae: *Phaonia signata* (Meig.), 1 ♀ on a window, 30-31.xii.1951; Anthomyiinae: *Hylemyia strigosa* (F.), 1 specimen on a window, 30-31.xii.1951.

CALLIPHORIDAE: *Calliphora erythrocephala* Meig., 1 ♀ was taken 16.xii.1951 (but blowflies appeared many times singly or in small numbers); *Protocalliphora sordida* Zett., [illegible] specimens (2 ♂♂, 2 ♀♀) were taken one after the other inside a big electric light shade

on the evening of 15.xii.1951; they appeared in rapid succession, causing me to wonder whether they had emerged from pupae in litter of birds' nests up the wide ancient brick chimney, as the larvae of this species are ectoparasites on nestling birds (starlings nest each spring in part of the roof, and other birds in the garden); *Pollenia rudis* F., in small numbers at various times (a specimen of form *angustigena* Wainwright on a window, 30-31.xii.1951).

Among other orders of insects, several species which normally hibernate indoors occurred in my house, but those liable to congregate in swarms were only present in small numbers, e.g.:

NEUROPTERA, *Chrysopa* sp., sporadically, single examples or very few appearing at a time; HYMENOPTERA, CHALCIDIDAE: *Stenomalus muscarum* L., 2 ♀ and *Necremnus leucostoma* Nees, 1 ♀, together on a window 30-31.xii.1951; LEPIDOPTERA, *Vanessa io* L., several specimens awoke and flew away in April 1952; COLEOPTERA: *Adalia bipunctata* L. considerable numbers (mostly of the typical form, but including some varieties) appeared on windows in April, 1952. I may add a representative of HOMOPTERA (TYPHLOCYBIDAE), *Empoasca flavescens* F., of which one was found on a first-floor east window, 30-31.xii.1951; as Dr. China tells me that this species passes the winter in the adult stage among foliage, this specimen may have been attracted into the room by electric light from a *Pyracantha* against the outside of the wall.

These records, showing how insects representing a number of families, genera and species were found in the house, but without any definite swarming, could not have been compiled without the kind help of Messrs. H. Oldroyd, R. L. Coe and J. F. Perkins, and of Dr. F. van Emden in determining specimens.

Ancastle Cottage, Gravel Hill, Henley-on-Thames.
*June 11th*, 1952.

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*Notes on Arachnida*, 19*.—*Biological observations, etc.*—The giant crab-spider *Heteropoda venatoria* (L.) (Sparassidae), sometimes called the 'huntsman spider' can run with great speed. It probably originated on the Asiatic mainland whence it has become widely distributed in tropical regions. It is not infrequently brought to this country in crates of bananas, etc. The spider does not attempt to bite when captured, and its bite is said to be painful, but not dangerous. An immature male found on Cambridge railway station in 1949, moulted on November 12th, and again on February 16th, 1950, without reaching maturity. It escaped in March. The egg-capsules are flattened in shape, and the female carries them under her sternum. One from a female obtained at the same time contained approximately 250 eggs. An adult male sent to me from Liverpool docks in January, 1950 (E. Hardy coll.) lived in captivity until its death on March 5th, 1950. These animals were fed on cockroaches, probably a major element of their food in nature.

*Atypus affinis* Eichw.—To my surprise I found a three-quarters grown specimen crawling on a sunny chalk slope near Box Hill, Surrey, on June 14th, 1951. This spider was kept with another of the same species for some months in a narrow cage with glass sides, so that observations could be made on the construction of its silk tube. First a small cocoon measuring some 2 cm. in length and very similar to that of a jumping spider was constructed on the surface of the soil. The following night the tube was extended downwards for 2 cm. Five days later a depth of about 6 cm. had been reached, but the spider spent most of its time in an expanded region just below ground level. The bottom of the tube seemed somewhat compressed. The following night the portion of tube above the surface of the soil was extended by some 3 cm. and the bottom part was expanded so that the total length was now over 10 cm. in length. The spider still spent the daytime sitting in the bulge of its tube, but must have left the tube completely at night else it could not have attached the upper portion to the glass side of the cage or have heaped up soil on one side of it. It moulted on August 27th, 1951, and the cast skin, the remains of the insects on which it fed, was ejected from the tube within a few hours. Probably the tube represents an elaboration of the primitive ancestral cocoon. This and other specimens confirmed that these spiders will return to their tubes after quite long periods. It is surprising that instinctive behaviour can be so plastic, but this is probably correlated with the time and silk expended in the construction of each tube (*vide* Sankey, J. H. P., 1951, *Ent. mon. Mag.*, **87**:275; Cloudsley-Thompson, J. L., 1951, *Proc. R. Soc.* (C) **16**:39).

*Zelotes latreillei* (Simon).—This black, nocturnal species is usually found under stones and logs during the day, but I saw an adult male crossing a sunlit road in Esher, Surrey, on May 18th, 1951.

*Sitticus pubescens* (F.).—An adult male (det. Dr. A. F. Millidge) crawled up the side wall of a restaurant in Tottenham Court Road, London, where I was dining, August 29th, 1949.





*Evarcha arcuata* (Clerck).—I took a pair *in cop.* in my sweep-net on Littleworth Common, Esher, on June 27th, 1952, at 5.45 p.m. They were still copulating three hours later, so I separated them for the night. They were re-introduced at 10.20 a.m. the following morning, but ignored each other. That evening the male died. The female was placed in a stoppered jar. Although offered insects, she did not appear to feed. A drop of water was offered on June 30th; she plunged her mouth into it as though drinking for forty-two seconds. After this water was supplied regularly. A cocoon containing twenty-five bright yellow eggs was constructed on July 6th; unfortunately these did not hatch. The female, unlike *Hasarius adansoni* (Aud.) (Cloudsley-Thompson, J. L., 1949, *Ent. mon. Mag.*, **85**:261-2) did not remain within her cocoon. She died on August 9th.

*Hyctia nivoyi* (Lucas).—A female of this rare species not previously recorded from Surrey was found six feet above ground under the bark of a silver birch on Littleworth Common, Esher, July 30th, 1952. According to O. Pickard-Cambridge (1881, *The spiders of Dorset*, **2**:560-561), W. S. Bristowe (1939, *The Comity of Spiders*, **1**:112) and Locket, G. H. & Millidge, A. F. (1951, *British Spiders*, **1**:218-220) this species occurs in marshy areas and on sand-hills — it was originally described from Algeria. The area of Littleworth Common on which it was found is normally decidedly marshy.

*Oligolophus meadii* Cambr. and *Leiobunum rotundum* (Latr.).—On August 5th, 1952, I made a small collection of arachnids on Claremont Estate, Esher. The ground was extremely dry as a result of the long drought. The soil is acid, overgrown with rhododendrons and firs, and very sparsely populated. Harvestmen (*O. meadii*) were plentiful, however, among the fallen leaves and I found an aggregation of *L. rotundum* under the brick arches of a ruined building.

*Anelasmocephalus cambridgei* (Westw.) and *Homalenotus quadridentatus* (Cuv.).—Taken on chalk grass slopes, Box Hill, Surrey, May 14th, 1951, with J. H. P. Sankey.—J. L. CLOUDSLEY-THOMPSON, M.A., PH.D., F.L.S., Glendoone, 10 Lower Green Road, Esher, Surrey: *August 12th*, 1952.

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## Obituary

*Olive Florence Tassart.*—We regret to have to record the death on January 15th, 1952, of Olive Florence Tassart.

For about thirty years she worked in the British Museum (Natural History) illustrating in line or colour the papers and books of others. Her work has appeared thus in a great many of the biological and other learned periodicals and books of the inter-war period. Readers of our magazine will remember the very fine coloured plates of her work that have appeared from time to time in our pages, the one for example to illustrate the joint article on 'Some recent discoveries in the British Insect fauna' (1940, **76**, plate vi).

During the last ten years she has devoted most of her time to nursing an elder sister, and her visits to the Museum have been infrequent.—R.H.R.

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*Committee for the Protection of British Insects.*—At a recent meeting this Committee was glad to learn that Mr. Ellis, of the Castle Museum, Norwich, was taking over responsibility for Surlingham Broad, which, largely through his own generosity, had been acquired by the Norfolk Naturalists' Trust. It was here that an attempt was made, in 1949, to establish a colony of *Lycaena dispar* (Haworth) owing to doubts having arisen about the survival of the Wood Walton colony, because of the increasing dryness of the fen. Flooding, after the larvae had emerged from hibernation, proved a handicap, however, and it is doubtful if the insect could survive there. A search is being made for a more promising area. At the same meeting the Committee had before it an account of a very thoroughly organised attempt to rear *Maculinea arion* (L.) in captivity. Unfortunately the first attempt was not successful, but it is hoped that the experience gained may lead to better results at the next attempt.

At the same meeting reports concerning conditions in various woodlands of special interest to entomologists were considered. Some of these, as in fact often is the case, proved to be erroneous. The situation at Ham Street Woods, Blean Woods, Leigh Woods, and the Black Wood at Rannoch is reviewed constantly, and reports checked with the Forestry Commission, whose officers everywhere are, in the experience of the Committee, always most willing to co-operate, in so far as this does not bring them into conflict with the Commission's policy. There is good reason to hope that this co-operation may become even closer before long, and it is undoubtedly more fruitful, in the Committee's opinion, than hostile criticism of the Commission's activities.

At the public enquiry into the War Department's claim to the use of a large part of Braunton Burrows, the views of the Committee were represented, in the hope that the interests of entomologists in this area could be safeguarded. It is believed that as a result of the joint protests made by numerous interests, a large part of the southern area of the Burrows will be excluded from the operations of the War Department, who will then take all practicable measures to protect the dunes in the area of their operations.

These few examples of the recent activities of the Committee are referred to in this brief note to illustrate the various kinds of questions that come before it. It is always ready to help where it can, 'on information received.'—N. D. RILEY, Royal Entomological Society of London, 41 Queen's Gate, London, S.W.7: *February 11th*, 1952.