Wednesday, March 3rd, 1920.—The President in the Chair.

Messrs. E. H. Blackmore, President of the British Columbia Entomological Society, P.O. Box 221, Victoria, B.C.; Ernest Hargreaves, Zoological Dept., Imperial College of Science, South Kensington, S.W. 7; Arthur Loveridge, Nairobi, British East Africa; and John George Rhynehart, Harristown, Taghmon, Co. Wexford, were elected Fellows of the Society.

It was announced that a Special Meeting would be called to consider alterations in the Bye-laws proposed by the Council, and these were then read for the first time.

The President announced the death of Dr. Gordon Hewitt.

Dr. F. A. Dixey exhibited and remarked on some outline drawings showing variation in form between the scent-scales of the spring and summer forms of certain Pierine butterflies. Mr. H. J. Turner, many butterflies from Cyprus, with which his paper (read later in the evening) was concerned, and explained their characteristic features. Capt. J. Waterston exhibited, and remarked on, a set of Macedonian Odonata. Mr. Riley, a number of species of Lycaenids from Ceylon, on behalf of Mr. W. Ormiston, of Kalupahani. Mr. Talbot, on behalf of Mr. Joicey, a number of new and little known forms of Rhopalocera from Central Ceram. Mr. G. J. Arrow showed a series of lantern-slides to illustrate different types of armature occurring in Lamellicorn Beetles, and made remarks thereon. Prof. Poulton brought forward the evidence that the *viola* Butl., female mimic of *Charaxes etheocles* Cr., flies with its model, *C. epijasius* Reiche. Prof. Poulton also exhibited and illustrated by a lantern-slide the examples enclosed in a letter from Mr. W. A. Lamborn, showing the result of the attacks of birds on butterflies witnessed by him in Nyasaland, the marks of a bird's beak being recognisable on rejected wings. He also read some interesting notes by Mr. Lamborn on the enemies of the larvae of the Pierine butterfly, *Catopsilia florella*, in East Africa.

The following papers were read:—"Butterflies of Cyprus," by H. J. Turner, F.E.S.; "An undescribed Lycaenid from Cyprus, *Glaucopsyche paphos*, n. sp.," by T. A. Chapman, M.D., F.R.S., etc.

Wednesday, March 17th, 1920.—The President in the Chair.

Messrs. Christopher Arthington Cheetham, Wheatfield, Old Farnley, Leeds; G. S. Cotterell, Newlyn, Gerrard's Cross; Harry Leon Gauntlett, F.Z.S., M.R.C.S., L.R.C.P., A.K.C., 45 Hotham Road, Putney, S.W. 15; Thomas Frederic Marriner, 2 Brunswick Street, Carlisle; C. Smee, 6 Wildwood Road, Golders Green, N.W. 4; and Dr. B. Uvaroff, The Georgian Museum, Tiflis, Transcaucasia, were elected Fellows of the Society.

The proposed alterations in the Bye-laws were read for the second time.

Prof. Poulton exhibited, on behalf of Mr. F. C. Woodforde, the following varieties from the collection of British insects in the Hope Department at Oxford: 1. *Chrysophanus phlaeas* L., ab. *schmidtii* Gerh., Burnt Woods, Market Drayton (*F. C. Woodforde*); 2. a variety of the same species with the coppery area of the fore wing replaced by smoky ochreous, from the same locality (*H. F. Onions*); 3. the var. *eleus* F. of the same species, Milford, Surrey (*from the collection of the late Lt. R. J. Champion*); 4. *Cyaniris argiolus* L., var. with radiate spots on the hind wing underside, the fore wing spotless, New Forest (*F. C. Woodforde*): this variety approaches the ab. *subtus-radiata* Oberth., taken at Rennes and figured by M. Charles Oberthür ("Études d'Entomologie," xx, pl. iii, fig. 24); 5. *Catocala nupta* L., var. with the red of the hind wings replaced by a dark maroon colour, taken at light, Guildford, Sept. 2nd, 1907 (*from coll. R. J. Champion*). Prof. Poulton also exhibited a series of six examples of *Beris vallata* Forst., captured with the following *Tenthredinidae*: 2 ♀ *Dolerus aericeps* Th., 1 ♂ *Selandria serva* F., 4 ♂ *Athalia lineolata* Lep., by Mr. A. H. Hamm, on July 13th, 1907; all 13 insects were taken from flowers, chiefly Umbelliferae, growing over a small area of Hogley Bog, Cowley, near Oxford; the first-named sawfly was far less perfect as a model than the other two, the last-named being the most perfect. Major H. E. Gunton, a diagram referring to Macrolepidoptera of the 1919 season in order to suggest a graphical method of recording observations of the appearance and habits of insects in relation to weather conditions (a copy of the diagram can be seen at the Society's Library). Dr. G. D. H. Carpenter said that since many naturalists believe that birds do not eat butterflies no case of such an occurrence should be left unrecorded; on Feb. 15th of this year about mid-day he saw a male Brimstone Butterfly fly through a garden at Oxford, and three sparrows that were on the ground leapt into the air and attempted to catch it; the butterfly easily evaded the birds. Mr. H. Main exhibited lantern-slides illustrating the life-history of the beetles *Copris lunaris*, *Onthophagus vacca*, and *Necrophorus humator*.

The following papers were read:—"A contribution to our knowledge of the Life-history of the Stick Insect, *Carausius morosus* Br.," by George Talbot, F.E.S.; "A Record of Insect Migration in Tropical America," by C. B. Williams, M.A., F.E.S.; "The Geographical Factor in Mimicry," by F. A. Dixey, M.A., M.D., F.R.S., etc.—Geo. Wheeler, *Hon. Secretary*.

NEW SPECIES OF *STAPHYLINIDAE* FROM INDIA (1).

BY MALCOLM CAMERON, M.B., R.N., F.E.S.

The following species or varieties are described in this contribution. The types are in the Natural History Museum, S. Kensington, except where otherwise stated.

Priochirus (*Triacanthus*) *fletcheri*.
,, ,, ,, var. *analis*.
,, (*Cephalomerus*) *major*.
,, ,, *rufus*.
Planeustomus pusae.
Apocellagria (n. gen.) *indica*.
Bledius (*Elbidus*) *taruensis*.
Osorius robustus.
Dianous championi.
Astenus maculatus.
Gauropterus nigroaeneus.
Metolinus (n. gen.) *basalis*.
Mitomorphus ovaliceps.
Actobius humeralis.
Philonthus andrewesi.
,, *nilgiriensis*.
,, *geminus* Kr. var. *inornatus*.
,, *sericoilius*.
,, *indicus*.
,, *maculatus*.
Staphylinus purpurascens
Amichrotus elegans.
Acylophorus bipunctatus.
Quedius (*Quedionuchus*) *nilgiriensis*.

Priochirus (*Triacanthus*) *fletcheri*, n. sp.

Black, shining, tarsi rufescent; head with frontal teeth very short, equal; thorax bipunctate on either side of the middle line; elytra with a humeral row of six distinct punctures. Length 12 mm. Rather smaller than the average *P. unicolor* Cast. and distinctly narrower and more convex; the frontal teeth less developed, the lateral stouter and blunter than in that species; the antennae are longer and more slender, the 5th to the 7th joints being longer than broad; the head posteriorly near the eyes more distinctly punctured; the thorax presents on either side of the median furrow two distinct and moderately large punctures, and the punctures at the base are more numerous and distinct; the elytra are furnished with a row of six punctures, which extends from the shoulder to near the posterior margin on the disc; the rest of the surface finely and very sparingly punctured.

Hab. Iyerpadi, S. India.

Priorchirus (*Triacanthus*) *fletcheri* v. *analis*, n. var.

Tibiae pitchy-testaceous, apex of abdomen rufescent.

Hab. Kodaikanal, S. India (*Campbell*).

Priochirus (*Cephalomerus*) *major*, n. sp.

Black, shining, tarsi reddish; front of the head produced into two bidentate lobes, the anterior margin between these narrow and truncate; disc deeply grooved, the groove widened in front; in front of the base with a large fovea on either side, and two punctures between this and the median groove. Antennae with the 1st joint notched at the apex, all the joints longer than broad. Length 16 mm. Very similar in the build of the head to *P. pygmaeus* Kr., the lateral teeth of the frontal lobes are, however, more prominent and are separated from the median by an impression; mandibles elongate, the upper margin with a short tooth a little behind the apex; puncturation exceedingly fine and not close. Antennae reaching as far as the middle of the elytra, all the joints longer than broad and thickly clothed with long yellow pubescence. Thorax half as broad again as long, deeply sulcate in the middle line, the reflexed sides with two rows of somewhat irregular and moderately large punctures. Elytra nearly half as long again as but narrower than the thorax, longer than broad. Abdomen nearly impunctate.

Hab. Pulney Hills, S. India (*L. V. Newton*).

Priochirus (*Cephalomerus*) *rufus*, n. sp.

Entirely red, shining; antennae pitchy-black, the 1st joint sulcate throughout; legs reddish-testaceous. Head with two punctures on either side of the median groove; thorax bifoveolate on either side, one at the anterior border, the other on the middle, reflexed sides with two rows of punctures of which the marginal are the smaller. Length 9 mm. Very closely allied to *P. sanguinosus* Motsch. and *P. combustus* Fauv., from both of which it is at once distinguished by the quadrifoveolate thorax. Head as in

P. sanguinosus Motsch., but with two large punctures on either side of the median groove; the mandibles are more prominent, and the antennae longer and stouter, the 1st joint very narrowly sulcate at the base, the 3rd to the 6th joints longer than broad, gradually decreasing in length, the 7th as long as broad, the 8th to the 10th slightly transverse. Thorax a little wider than in *sanguinosus*, deeply grooved in the middle line and with four foveae as described above. Elytra narrower and longer than the thorax, longer than broad.

Hab. Santikoppa, North Coorg.

Planeustomus pusae, n. sp.

Narrow, elongate, parallel rufo-testaceous, shining. Antennae and legs testaceous. Length 3·5 mm. Very similar to *P. longiceps* Champ., but smaller, the thorax narrower and less contracted behind, and the head with more numerous punctures. Head large, before the constriction of the neck transversely subquadrate, being a little shorter than broad measured from the anterior border to this constriction; eyes flat, scarcely as long as the temples, which are very slightly rounded and convergent behind; disc before the neck with a short row of punctures on either side converging in front, coarsely punctured between the posterior borders of the eyes and the base, impunctate in front except for a few moderate sized punctures behind the anterior margin. Antennae with the 3rd joint shorter and smaller than the 2nd, 4th to the 6th small, transverse, 7th to the 11th larger, tranverse, the 8th shorter than the 7th and 9th. Thorax narrower than the head, subcylindrical, the sides but slightly narrowed from the anterior angles to the base; sculpture consisting of a row of about 12 rather large punctures on either side of the middle line and a single median puncture on the anterior border; the sides with a few irregular punctures. Elytra broader and a little longer than the thorax, longer than broad, rather coarsely punctate-striate except at the apex where the sculpture becomes irregular. Abdomen coriaceous, with a few fine punctures.

Hab. Pusa (*T. B. Fletcher*).

APOCELLAGRIA, n. gen.

Labrum transverse, the sides rounded, the anterior margin truncate, with a stout seta on either side of the middle. Mandibles stout, the apex bifid, and with two stout teeth immediately behind. Maxillary palpi 4-jointed, the 1st joint very small, the 2nd narrow at the base, gradually thickened towards the apex and lightly curved, the 3rd long, oval, as long as but stouter than the preceding, the 4th minute, subulate. Inner lobe of the maxilla triangular, the inner margin furnished with slender pectinations, decreasing in length posteriorly; outer lobe densely ciliate. Tongue broad at the base, triangular, the apex bluntly pointed. Paraglossae distinct, as long as the tongue and furnished with long, fine ciliae. Labial palpi 3-jointed, the 1st joint very short, broader than long, the 2nd moderately long and stout, the 3rd small, much narrower, and about one-fourth the length of the preceding. Gular sutures fused except posteriorly. Head constricted behind, the neck broad. Thorax rather strongly contracted behind. Prosternum produced into a short

sharp process in the middle, emarginate on either side. Structure of the meso- and metasterna as in *Trogophloeus*. Legs long and slender, the tarsi very short, 3-jointed, the first two joints very short, subequal, the 3rd much longer than the first two together; claws long and slender; tibiae ciliate. Abdomen not keeled at the base below.

The genus appears to be closely related to *Apocellus* Er. and *Thinodromus* Kr., from both of which it is separated by the structure of the mouth-parts.

Apocellagria indica, n. sp.

Pitchy-black, shining, the base of the thorax narrowly, the first and the anterior part or whole of the second (visible) abdominal segments, reddish-testaceous. First three joints of the antennae testaceous; legs pitchy, the base of the femora and apex of the tibiae testaceous. Length 3·5 mm. Head large, transverse, subpentagonal; the eyes prominent, their diameter equal to the length of the temples, which converge posteriorly to the constriction of the neck; puncturation rather coarse and very close, the front between the antennal tubercles almost impunctate. Antennae moderately long, the 2nd joint distinctly shorter than the 1st and 3rd, the 3rd to the 10th all distinctly longer than broad, gradually decreasing in length, the 11th as long as the 10th. Thorax scarcely wider than the head (with the eyes), slightly transverse, widest at the middle, the sides contracted in the posterior fourth, evenly rounded and dilated in front of this, the constricted portion reddish-testaceous; the base transversely impressed before the scutellum; puncturation finer than on the head, but much closer in the basal impression and much more fine and sparing on the sides in front of the constriction. Scutellum reddish, impunctate. Elytra ample, much broader and longer than the thorax, as long as broad, broadly impressed on either side of the suture in front, finely and not very closely punctured and pubescent. Abdomen slightly contracted at the base, the first two segments with somewhat obsolete keel in the middle of the base, very finely and moderately closely punctured and pubescent.

Hab. Nilgiri Hills (*H. L. Andrewes*). Type in my own collection.

Bledius (*Elbidus*) *taruensis*, n. sp.

Pitchy-red, elytra brownish-yellow, moderately shining; thorax and elytra moderately strongly and moderately closely punctured. Antennae reddish, the first joint and the legs testaceous. Length 4 mm. In coloration similar to *B. vitulus* Er., but of smaller size, with less transverse and much more closely punctured thorax, and more distinctly punctured elytra.

♀. Head pitchy-red, blackish posteriorly, on either side above the insertion of the antennae with a laterally compressed erect plate; the front with transverse impressed line, the vertex broadly impressed; sculpture coriaceous, without visible puncturation. Antennae with the 1st joint moderate, 2nd and 3rd subequal, the 4th a little longer than broad, the 5th to the 10th transverse, gradually increasing in breadth. Thorax slightly transverse, widest in front, slightly contracted in nearly a straight line to the broadly rounded posterior

les; disc in the middle with a fine impressed longitudinal line; finely aceous, moderately shining, and with moderately large and not very close ctures. Elytra brownish-yellow, a little darker at the scutellum, mode- ly strongly and moderately closely punctured, sparingly pubescent. domen black, shining, the last segment pitchy-red, coriaceous, almost punctate, pubescence moderately long, sparing, and yellow.

Hab. Peshawar, Taru (*T. B. Fletcher*).

Osorius robustus, n. sp.

Black, shining, the head rather coarsely and irregularly punctured in nt, between the eyes coarsely and longitudinally strigose, the base finely ctured, the vertex in the middle smooth. Thorax sulcate on either side of smooth median space, the sides with coarse and more or less confluent ctures. Elytra sparingly and moderately finely punctured. Antennae der, brown. Legs pitchy-brown. Length 10 mm. This species in build ery similar to *O. rugicollis* Kr. (the thorax in this respect being exactly ilar), but it is larger and much more robust, the antero-external angles of front are much less produced, the head much more coarsely strigose, the rax scarcely strigose, and the abdomen more sparingly punctured. Head her coarsely punctured behind the anterior margin, on the slightly pro- ed antero-external angles, and in front of the antennal tubercles, the rest the front and a median space on the vertex smooth; coarsely strigose rnal to the eyes, the base finely and closely punctured. Antennae slender, 2nd joint shorter than the 3rd, the 3rd to the 10th all longer than broad, dually decreasing in length so that the 9th and 10th are but little longer n broad, the 11th as long as the preceding. Thorax a little broader than g, the sides gradually convergent behind, the posterior angles obtuse but minent, the disc on either side of the middle with a narrow irregular sulcus roughout nearly the whole length, externally with coarse confluent punc- ation, the region of the posterior angles smooth, as in the middle of the c. Elytra a little longer and broader than the thorax, sparingly and mode- ely finely punctured. Abdomen coriaceous, finely and rather sparingly ctured; pubescence sparing, yellow.

Hab. Sidapur, Coorg (*Y. R. Rao*).

Dianous championi, n. sp.

♀. Deep black, shining, the head moderately coarsely and not very closely ctured. Thorax uneven, coarsely and rather closely punctured, irregularly lptured at the base. Elytra with coarse, confluent sculpture, vorticose ind the middle. Abdomen with the anterior segments impressed at the e, pretty closely and moderately finely punctured, more finely and obsoletely ind. Fourth joint of all the tarsi moderately bilobed. First joint of the xillary palpi reddish-testaceous. Length 5·2 mm. Very near *D. radiatus* mp., but smaller and narrower, the thorax less uneven, the median sulcus extending backwards beyond the middle, and the elytra less rugose in nt. Head narrower than the elytra, rather deeply bisulcate, moderately rsely and not very closely punctured throughout. Antennae rather long

and slender, the 3rd joint very long, the 4th to the 8th all longer than broad, gradually decreasing in length and of equal breadth, the 9th to the 11th broader, the first two of them subequal, the last a little longer than the preceding. Thorax narrow, a little longer than broad, the sides parallel behind, a little dilated and rounded in front, transversely impressed behind the anterior border, the anterior half sulcate in the middle, the base before the scutellum with an indeterminate impression, the sides with a moderately large impression, coarsely and rather closely punctured, irregularly sculptured at the base. Elytra a little longer and much broader than the thorax, about as long as broad, the sides rounded, impressed on either side of the suture in front and internal to the shoulders; sculpture in front consisting of very large confluent punctures mixed with smaller ones, posteriorly consisting of coarse vorticose rugae and coarse confluent punctures. Abdomen narrowed behind the anterior segments, deeply impressed at the base, exceedingly finely and rather closely punctured, pubescence white, scanty, thicker at the sides; ventral surface uniformly and closely punctured.

Hab. Lebong,* alt. 5000 feet (*H. M. Lefroy*).

Astenus maculatus, n. sp.

♀. Elongate, rufo-testaceous; elytra with a large oval black spot occupying the greater part of the reflexed margin and adjacent area of the dorsal surface. Abdomen with the 6th dorsal segment and the base of the 7th black. Antennae and legs pale testaceous. Length 4 mm.

Var. Head blackish, the anterior part more or less reddish. Build and coloration of *A. maculipennis* Kr., but more robust and with the elytral spot extended over the reflexed margin, the puncturation generally considerably less coarse and with stouter antennae, all the joints of which, however, are considerably longer than broad.

Hab. Nilgiri Hills (*H. L. Andrewes*), Dacca. Type in my own collection.

Gauropterus nigroaeneus, n. sp.

Black, shining, with slight metallic green and coppery reflex; the first two joints of the antennae and femora reddish-brown; tarsi pitchy; palpi reddish-testaceous; posterior margins of the abdominal segments narrowly and obscurely pitchy. Length 9·2 mm. Except for the elytra being shorter this species is exactly similar in build to *G. fulgidus* F., and (apart from the colour) differs only in the following respects:—The median frontal furrows are narrower and less deep, the puncturation is less coarse but of similar character, the antennae are of the same build; the sculpture of the thorax is similar; the elytra are shorter than the thorax, scarcely longer than broad, more finely and obsoletely punctured; the abdomen is much more finely and much more sparingly punctured.

Hab. Pusa (*T. B. Fletcher*).

* This locality, written Leebong by Hooker, about 1000 feet below Darjiling, is in Bengal and not in Sikkim as stated by me, Ent. Mo. Mag. 1919, pp. 43, 50.—G. C. C.

Metolinus, n. gen.

Labrum small, setose, emarginate. Maxillary palpi 4-jointed, the 1st joint small, the 2nd rather short, curved, thickened towards the apex, the 3rd considerably longer than the 2nd, the 4th much narrower and about half as long as the preceding, subulate. Mandibles both strongly toothed. Labial palpi 3-jointed, the 1st joint short, the 2nd much longer, the 3rd more slender and about half as long as the preceding. Tongue broad, rounded in front. Frontal furrows very short, deep, and rather widely separated. Antennae short, the 4th joint transverse, Tarsal formula 5, 5, 5: the first four joints of the anterior pair dilated. Anterior and posterior tibiae not spinose, the intermediate feebly spinose. Intermediate coxae rather widely separated. Elytral suture imbricate.

To this genus belongs *Metoponcus leucocnemis* Kr., which in Bernhauer's Catalogue of *Staphylinidae*, iv, 1914, p. 291, is placed in Casey's *Oligolinus*; the latter, however, has the anterior tarsi undilated and the intermediate coxae contiguous, characters applying to Kraatz's species. *Metolinus* is doubtless related to *Leptacinus* and *Oligolinus*.

Metolinus basalis, n. sp.

Black, shining, the elytra with purple metallic reflex, the base reddish-testaceous; first three visible abdominal segments pitchy, more or less broadly testaceous posteriorly. Antennae reddish; legs testaceous. Length 5·5 mm. Exactly of the build of *Metoponcus leucocnemis* Kr., but quite differently coloured, the antennae longer, and the head less sparingly punctured. Head subquadrate, a little longer than broad, the base truncate, the posterior angles rounded; frontal furrows very short and deep, the lateral longer and much narrower, rather finely and sparingly punctured; ground sculpture fine, transversely strigose. Antennae with the 4th to the 10th joints transverse, the penultimate strongly so. Thorax half as long again as broad, the sides converging behind, the posterior angles rounded, the apex obliquely truncate; the disc on either side with an irregular row of 7 or 8 fine punctures, the sides anteriorly with larger, irregular punctures. Scutellum black, quadripunctate, transversely strigose. Elytra as long as the thorax, longer than broad, the anterior fifth testaceous, the rest metallic black, purpurascent, exceedingly finely and sparingly punctured. Abdomen with the first three visible segments pitchy, their posterior margins more or less broadly testaceous, the rest black, with the posterior margins narrowly and obscurely testaceous, finely and sparingly punctured and pubescent.

Hab. Anamalai Hills, alt. 5500 feet (*T. B. Fletcher*).

Mitomorphus ovaliceps, n. sp.

Narrow, elongate, black, shining. Head elongate, oval; thorax with dorsal row of six punctures. Antennae reddish; legs fusco-testaceous. Length 5 mm. Considerably narrower than *M. obsoletus* Fauv. and without trace of metallic reflex. Head (including the closed mandibles) long oval, as

long as and wider than the thorax, the frontal furrows short and obsolete, the lateral furrows wanting; sculpture consisting of a row of three punctures behind the insertion of the antennae on either side and a very few small scattered ones before the base and at the sides. Antennae stout, the 3rd joint a little shorter than the 2nd, the 4th to the 10th strongly transverse, gradually increasing in breadth. Thorax twice as long as broad, narrowed behind, on either side of the middle with six moderate punctures, the sides in front with three or four more. Scutellum impunctate. Elytra scarcely as long as, but a little broader than, the thorax, longer than broad, with a row of 6 or 7 very obsolete punctures extending backwards from the shoulders on either side of the disc, otherwise impunctate and without ground-sculpture. Abdomen with a few asperate punctures on the 6th and 7th segments, otherwise practically impunctate.

Hab. Nilgiri Hills (*H. L. Andrewes*). Type in my own collection.

(To be continued.)

NOTES ON (I) THE PARASITIC STAPHYLINID *ALEOCHARA ALGARUM* FAUVEL, AND ITS HOSTS, THE PHYCODROMID FLIES; (II) A CASE OF SUPPOSED PARASITISM IN THE GENUS *HOMALOTA*.

BY HUGH SCOTT, Sc.D., M.A.

I. *ALEOCHARA ALGARUM.*

In the "Entomologists' Monthly Magazine" for September 1916, p. 206, I published a brief note on the discovery by Mr. G. T. Lyle that *Aleochara algarum* is parasitic in the puparia of the Phycodromid fly, *Orygma luctuosum*. The purpose of the present paper is to record some subsequent observations made by myself in 1919, when I bred the beetle in large numbers from puparia of two other species of *Phycodromidae*. These notes are put on record now, as I am unlikely to have opportunity to investigate the life-cycle of the insect further.

PARASITISM IN *ALEOCHARINAE*.—It may be recalled that several species of Aleocharine beetles are known to be parasitic, and this mode of life may possibly be found to be common throughout the subfamily. Wadsworth * has fully worked out the life-history of *Aleochara bilineata* Gyll., parasitic on puparia of the cabbage-root fly, *Phorbia* (= *Chortophila*) *brassicae* Bouché, both in Europe and N. America. He gives a list of earlier works referring to the life-history of this beetle, and deals with its synonymy. A distinct species, *Baryodma ontarionis* Casey, is also said to parasitise the same host in Canada.†

* J. T. Wadsworth, "On the life-history of *Aleochara bilineata* Gyll., a Staphylinid parasite of *Chortophila brassicae* Bouché," Journ. Econ. Biol. x, 1915, pp. 1–27, pls. 1, 2. [Abstract in Ent. Mo. Mag. 1916, p. 161.]

† A. Gibson and R. C. Treherne, "The Cabbage Root Maggot and its control in Canada," Dominion of Canada Dep. Agr., Ent. Bull. 12, 1916, p. 52. [Mentioned, Ent. Mo. Mag. 1916, p. 163.]

larva of a third species, *Maseochara valida* Lec., has been seen to aw its way into the puparium of a Syrphid fly, *Copestylum margi-tum.** In each of these cases the host is Dipterous, but Wadsworth p. cit., p. 15) cites an instance in which there is strong presumptive idence that yet another species, *Aleochara lata*, was bred from a Hy-enopterous host: the beetles were found (in Canada) in a breeding-jar ntaining cocoons of sawflies, but, as parasitism was not then suspected, was not ascertained whether they had actually emerged from the coons.

In the only one of these species whose life-history has been com-etely studied—namely, *A. bilineata*—the larva is a true parasite, since is essential for its development that it should enter some kind of ipterous puparium. The eggs are deposited in the soil, and the young rva gnaws its way into a puparium, and remains during its develop-ent in the space between the puparium and the cuticle of the enclosed mph of the fly, on which latter it feeds. In its second and third ages the larva of the beetle differs widely from the active first-stage rva, and in its swollen shape, weaker cuticle, changed form of antennae d mouth-parts, and absence of tarsal claws and anal cerci the older rva presents features characteristic of a real parasite.

BREEDING OF *ALEOCHARA ALGARUM*.—The puparia of *Orygma ctuosum* Meigen, two of which were found by Mr. Lyle each to con-in a specimen of this beetle, were collected by him at Osmington ills, Dorset, on September 22nd, 1912, at the foot of the cliff, lying clayey mud among pebbles and covered by a shallow layer of seaweed.

On September 12th and 13th, 1919, at Durlston Bay, Swanage Dorset), I collected a large number of puparia of *Phycodromidae* in e hope of breeding the parasite from them. These days were very t, and many Phycodromids and other flies were flying over the rocks d the thick beds of decaying seaweed. From time to time, when I ted a big stone, great numbers of Phycodromids would come buzzing t from beneath, and some of them looked as though newly emerged om their puparia. Deep down—sometimes nearly a foot deep—under e seaweed, among large stones and decaying weed, were masses of the paria, frequently stuck fast together in groups or in neat little bundles about six to ten. Most of these puparia were empty, the flies having ready emerged; but I succeeded in collecting a considerable number om which the flies were not yet emerged, though these latter puparia ere more often found singly and not in the bundles, a state of things

* D. W. Coquillet, "Another parasitic Rove-beetle," Insect Life, iii, 1891, pp. 318–9.