

New and Rare British Spiders.

BY THE REV. J. E. HULL, M.A.

(With Plate II.)

The notes now given cover my systematic collecting in West Allendale from May, 1910, to November, 1911, together with the more noteworthy results of four days' collecting at Forres, N.B., in August, 1910; a day at Ullswater in June, 1910; eight days in the neighbourhood of Beal, Northumberland, in May and June, 1911. A few notes refer to specimens submitted to me by correspondents.

The new spiders noted below are *Hilaira nubigena* ♂ ♀; *Agyneta mystica* Cb. ♂; *Scleroschema reginaldi* ♀; *Cnephalocotes ambiguus* Cb. ♀; and *Cnephalocotes incurvatus* Cb. ♀. *Lycosa agricola* Bl., var. *maritima* is a known variety which seemed to require a varietal name, here supplied. *Prothesima apricorum* L. K., *Tarentula barbipes* Sund., and *Hilaira frigida* Thor., are names which I think should be substituted for others current in British lists, for reasons given below. It seems necessary also that a new status should be ascribed to *Caledonia evansii* Cb., to indicate its substantial identity with *C. aliena* Kulcz., a Kamtschatkan spider.

The list includes thirteen new records for Northumberland (marked with an asterisk)—ten species and three well-known varieties.

Prothesima apricorum L. K.—*P. petiverii* Scop. : Cb. Brit. and Irish List, 1900.—An adult male, Staward Peel, June; adult females, Glenridding, Westmoreland. These were submitted to Dr. Kulczynski, who pronounced them identical with the spider called by him *P. apricorum* L. K. Following Simon (Arachn. de France, iv., p. 63) we have dropped *atra* Latr. in favour of *latreillei* Sim. To be consistent we must also abandon *petiverii* Scop., which is no more authentic than *atra* Latr. If retained, it belongs rightfully to *P. subterranea* C. L. K., which is very nearly allied to *apricorum* L. K., and of longer standing. Dr.

Kulczynski's allocation of these two names is now well established; and as the original types are apparently not available, it is inevitable that we should conform with Continental usage.

Zora nemoralis Bl. Both sexes occurred plentifully among heather in a birch wood on the southern margin of the Culbin sands, Forres. So far as I know this is the most northern record of this species.

Scotina gracilipes Bl. An adult female was taken at the same time and place as the preceding.

Clubiona neglecta Cb. Adult females, Culbin sands, August; Warkworth, September.

Clubiona grisea L. K. Adult females, Culbin sands; with *neglecta*—probably the most northerly record for Britain of both species.

Xysticus sabulosus Hahn. A single adult female on the seaward side of the Culbin sands.

Tibellus oblongus Walck. Very abundant on the sandhills of the Northumbrian coast, but apparently much less so in the same situation in Elginshire. Dr. Kulczynski has recently pointed out that under this name two species—the true *T. oblongus* Walck. and *T. maritimus* Menge—have been confounded by British arachnologists and others. All the examples I have seen from the northern coast sandhills appear to be *T. oblongus* Walck.

Attus cariois Westr. An adult pair was taken in June at Newton Moss, Penrith, where it was first taken by Mr. F. O. Pickard-Cambridge and recorded under the name of *Dendryphantes hastatus*. This mistake, I understand, is being rectified by the Rev. O. Pickard-Cambridge in a forthcoming paper. I know of no British figures of this species and therefore take this opportunity of supplying them.

**Heliophanus cupreus* Walck. A female was taken at Staward in June—the first record for Northumberland. It

is singular that Dr. Jackson did not find this spider at Hexham. It ought to be found in most parts of the county, as it is not rare in Cumberland and the south of Scotland.

Euophrys erratica Bl. Both sexes, Kyloe Crag, May.

Hahnia nava Bl. Goswick links, June.

Trochosa cinerea Fabr. During the past summer I have had from time to time fine specimens of this spider from the workmen engaged in carting stones from the bed of the West Allen at Ninebanks. No doubt it is to be found throughout Northumberland and Durham in similar places. A female was sent to me recently by Mr. W. L. Turner from the neighbourhood of Blanchland. It was, however, taken on the Northumberland side of the Derwent.

Tarentula barbipes Sund.—*T. andrenivora* Walck. of British authors.—As far as I know, the typical male of *Tarentula andrenivora* Walck. has never occurred in Britain, all the records, as I understand, referring to *T. barbipes*—which if not a true species, is at any rate so constant and distinct a form that it ought to be recorded under this name. I have had it recently from Kyloe (Northumberland), Cleveland, and Elginshire. The Cleveland example was named for me by Dr. Kulczynski.

Lycosa postuma Cb.—*Trochosa postuma* Cb., Proc. Dorset Field Club.—August is a bad month for *Lycosæ*, so that I was very fortunate in obtaining a fine adult female of this spider on the Culbin sands. Mr. Pickard-Cambridge confirms my identification. This is the second occurrence, the type specimen, also a female, having been taken near Balmoral many years ago. As this was in bad condition I have handed over the Culbin specimen to Mr. Pickard-Cambridge, who will give a supplementary description in a forthcoming paper. Here I need only add that it is undoubtedly a *Lycosa*, nearly allied to *L. amentata* Sund.

**Lycosa purbeckensis* F. Cb. Both sexes, abundant among the grass just above high water mark at Fenham. Like other northern examples of this species they were all of the var. *minor*.

**Lycosa agricola* Bl., nov. var. *maritima*. Very plentiful on the shingle at high watermark near Ross links. These were all of the maritime form, which, so far as I can make out at present, differs from the inland form in colour only. The general hue is reddish brown instead of hoary grey, and the median band of the thorax is usually without the characteristic constriction. This spider, which I have met with before in Galloway and on the Moray Firth and mistook for *L. arenicola* Cb., should I think receive the varietal name of *maritima*.

Dictyna arenicola Cb. A single immature female which may certainly be referred to this species occurred on the links at Findhorn.

Meta menardi Latr. A numerous colony was recently discovered by Mr. J. Walton Lee in a cellar under Dilston Castle. Several examples of both sexes, taken in the Isle of Wight, have also been submitted to me by Mr. H. W. White of Harrow.

**Ero cambridgii* Kulcz. I have had the female of this species (lately separated from *furcata* Vill. by Prof. Kulczynski) under observation for three years but failed to get a recognisable male. I have females from Ross links, North Sunderland, Cresswell, Newbiggin, and Ninebanks.

Asagena phalerata Panz. Adult females, under stones, Ninebanks.

Robertus neglectus Cb. Adult females (with eggs) Glenridding, June; Kylee Crag, June.

Robertus arundineti Cb. Adult male, Culbin sands. Both sexes, Glenridding.

**Agyneta mystica* Cb. Adult male and three females, Ninebanks, May and June; an adult female, Findhorn links. Previously the type specimen, a female from Balmoral, had long remained unique. The male, therefore, is new, and will be described by Mr. Pickard-Cambridge.

Agyneta passiva Cb. Both sexes, Fenham, May.

Agyneta cauta Cb. A single adult female, Culbin sands. Second record from Scotland.

Agyneta—*Micryphantes*—*Microneta*—*Syedra*. In a previous paper I ventured to propose the new genus *Agyneta*, giving a brief diagnosis, with the intention of going through the four above-named genera more carefully in a subsequent paper. Dr. Jackson has, however, undertaken the very necessary task. At present, therefore, I must content myself with rectifying my statements concerning the genus *Agyneta* in two particulars. First, it was a mistake, as Dr. Jackson has since pointed out to me, to say that fang-teeth were totally absent: there is a single central outer tooth, and perhaps another, exceedingly small, at the extremity of the fang-groove. Secondly, *conigera* Cb. was inadvertently omitted from the list of species.

Porrhomma microphthalmum Cb. An adult male at 2,000 feet on Killhope Law. An adult female at Ninebanks at about 1,100 feet.

Pœciloneta variegata Bl. Findhorn links and Altyre woods, Forres. These individuals were very dark coloured, the abdomen being almost entirely black. This species, commonly associated with *Bathyphantes*, has very little in common with that genus, from which it differs in the armature of the legs, in the dentition of the falces, and most significantly in the genitalia. Its nearest ally seems to be *Drapetisca*.

Bolyphantes expunctus Cb. Three years ago I recorded this species from the neighbourhood of Forres, where it was taken by Mr. J. W. H. Harrison, but the exact habitat was not known. To re-discover it and learn something of its life-history was the main reason why he and I visited that district in August, 1910. We succeeded in locating it in the Altyre pinewoods (famous among lepidopterists as a breeding place of *Eupithecia togata*, and with botanists as one of the few habitats of *Goodyera repens*) where it swarmed on the lichen-covered conifers. On the clean conifers comparatively few were found, and on other trees only stray examples. As far as I could discover it makes no snare of any kind and evidently subsists chiefly on the pine aphid. It comes to maturity about the middle of August, a good many examples being still immature on the 17th. Very nearly 300 adult specimens were taken in a very few minutes. Since then I have learnt from Mr. W. Evans of Edinburgh that he has taken it plentifully on juniper at Aviemore, where it was associated with *Dictyna arenicola* Cb.

Oreonetides adipatus C. L. K. Adult female, Killhope Law, August, 1911.

Oreonetides firmus Cb. A single adult female occurred in the birch wood on the southern border of Culbin sands. First record for Scotland.

Hilaira frigida Thor.—*H. montigena* L. K. of British authors. By the kindness of Dr. de Lessert of Geneva, I have a pair of Swiss examples of *H. montigena* L. K., which is quite different from our British spider. After some correspondence with Dr. Kulczynski and Mr. Cambridge I have come to the conclusion that our British spider should be called *H. frigida* Thor. A single adult female was taken at Lochan Dorb, Inverness-shire, in August.

***Hilaira nubigena** sp. n. Killhope Law. Description, etc., below.

Sintula cornigera Bl. An adult female was captured on the bank of the Findhorn River near Forres.

Phaulothrix Bertkau. So long as *luthwaitii* Cb. and *hardii* Bl. are regarded as congeneric, their common generic name should be *Phaulothrix* Bertk. not *Leptorhoptrum* Kulcz. as given in my last paper—that is, assuming that *Leptothrix* Menge is really preoccupied, as Simon says it is; but the only previous use I can trace is for a botanical genus.

Phaulothrix hardii Bl. Abundant on the Culbin sands in August on the part nearest the sea. Also on the Findhorn sandhills. All the examples taken were immature, lacking their final moult.

**Coryphæus simplex* F. Cb. Adult female from Cresswell sandhills, sent to me by Mr. W. Flowers.

**Erigone atra* Bl.—var. *lantosquensis* Sim. According to Dr. Kulczynski, the form of *E. atra* Bl. with a rudimentary denticule on the lower face of the palpal tibia of the male is *E. lantosquensis* Sim. I do not remember ever taking it along with the typical form (which is sometimes very abundant on wire fences on the Allendale moors up to 1,800 feet or thereabouts), and all the specimens I at present possess are from maritime localities. During 1910 I took it at Findhorn Bay (August) and Warkworth (September).

**Erigone arctica* White—var. *maritima* Kulcz. Dr. Jackson has pointed out to me that this particular form of *arctica* White has not been definitely recorded for Northumberland. Nevertheless, it is fairly plentiful on the Northumberland coast, though not in my experience so abundant as the typical form.

Lophomma herbigradum Bl. A fine gynandrous example of this common species was taken by me at Ninebanks in the spring of 1910. For the most part this specimen exhibits the usual phenomena of bisexuality; that is, one

side is male and the other female, with no atrophy or distortion of parts except where mutual accommodation is necessary on the median line. Naturally this disturbance of structure shows itself chiefly in the sexual region of the epigaster. In the present instance the female side of the external genitalia suffers less modification than the male side (pl. ii., figs. 8, 9). In one particular, however, this individual differs from all other bisexual spiders I have ever seen or heard of; for while the right side of the cephalothorax is male and the left female, in the case of the abdomen the sexes are reversed—the right side being female and the left male.

Lophomma subæquale Westr. An adult female, Goswick links, June.

Entelecara thorellii. Both sexes plentiful, Fenham and Ross links, May and June.

Entelecara trifrons Cb. Both sexes, Fenham, May.

**Entelecara omissa* Cb. An adult female was taken at Ninebanks, in November, at a depth of five or six feet in a "dead-heap"—that is, a heap of limestone boulders, the refuse of an old lead mine.

Notioscopus sarcinatus Cb. Mr. Harrison has again procured this species pretty freely at the original spot on Eston Moor, Cleveland, but as far as I know it has failed to turn up elsewhere. Simon (Hist. Nat. d. Araignées, 2nd ed., i., 667) rightly recognises the relationship between this genus and *Oedothorax* Bertk., from which it may be distinguished by the recurved line of the front eyes and the five inner fang-teeth.

Caledonia aliena Kulcz.—sub-sp. *evansii* Cb. *Caledonia evansii* Cb. of British authors.

Dr. Kulczynski's excellent figures and description of his *Erigone aliena* (Aran. in Camtsh. Coll., 1885) long ago suggested to me that this spider was identical with the species known in Britain as *Caledonia evansii* Cb. During

the past summer I submitted British examples to him for comparison with his type specimen. Having compared the two, he says that they are identical save for a slight difference in the copulatory organs, such as frequently appears in spiders of the same species widely separated geographically. He is therefore inclined to regard *evansii* Cb. as a sub-species of *aliena* Kulcz., and perhaps that is the simplest method of recognizing both the agreement and the difference. The difference in this case is solely in the position of a minute spine on the middle coil of the central spiral vessel of the copulatory apparatus of the male. It is on the anterior face in British examples, on the posterior in the Kamschatkan type (pl. ii., figs. 14, 15). It may be observed that this genus also has affinities with the *Oedothorax* group, but in a systematic arrangement it ought probably to stand nearer to *Dicymbium* and *Tiso*.

Troxochrus scabriculus Westr. Mr. F. P. Smith suggested to me some time ago that a new genus was required for this species. That, as it happens, is impossible; for Simon makes it the *typus* of *Troxochrus*. Nevertheless it is true that it ought not to be considered congeneric with *hiemalis* Bl. and *ignobilis* Cb. On the other hand it appears to me to agree in all essential generic characters with *Tapinocyba*, differing in nothing but what is incidental to its somewhat larger size. In fact the agreement is so absolute that I see no valid reason for maintaining two separate genera for these spiders. An appeal to the dentition of the fang-groove confirms this view. In the alliance to which these spiders belong, the number of inner teeth may be 3, 4 or 5, and the number 4 occurs only in the spiders now under consideration. I am therefore of the opinion that *Tapinocyba* should be dropped as a synonym of *Troxochrus*. As a new genus must be established for *hiemalis* Bl. and *ignobilis* Cb. I propose the name *Scleroschema* and append a brief diagnosis.

Scleroschema gen. nov.

General form of *Aræoncus* (with which it also agrees in type of genitalia) but the legs of both sexes are normal in form and clothing, with the tarsi as long or nearly as long as the metatarsi; the cuticle is more coriaceous; the curvature of the front line of eyes is much less. From *Troxochrus* it differs in the narrow caput, which is without postocular furrows in the male, and in the genitalia, which are of quite a different type. From all its nearer allies it differs in having only three teeth on the inner margin of the fang-groove.

British species: *hiemale* Bl. (type); *ignobile* Cb.

Troxochrus scabriculus Westr., with which these spiders have been associated, is a summer spider, while these two species mature much later in the year.

**Scleroschema reginaldi* n. sp. An adult female, Fenham, Northumberland. Description and figures below.

Troxochrus exilis Bl.—*Tapinocyba pallens* Cb. Auctt.

Blackwall's description (Spiders G. B. & I., p. 305) of his *Walckenaera exilis* and of its habitat fit *pallens* Cb. so exactly, to the exclusion of every other species known to me, that comparison of types could hardly make the synonymy more certain; therefore, though the types of *exilis* Bl. are lost, I have no hesitation in applying Blackwall's name to the spider commonly called *Tapinocyba pallens* Cb.

This species occurred in the pine woods of Altyre, near Forres, among pine needles, along with *Oonops pulcher* Templ. and other commoner species.

Troxochrus præcox Cb. Both sexes, Fenham, May.

Gongylidiellum vivum Cb. An adult female, Culbin sands. First record for Scotland.

Diplocephalus castaneipes Sim. An adult female, Lochan Dorb, Inverness. This is the first record for

Scotland, but no doubt it occurs commonly on the mountains. The present specimen occurred at about 1,800 feet.

**Cnephalocotes curtus* Sim. An adult female, Findhorn links. Both sexes on the coast at Fenham, Northumberland.

Cnephalocotes ambiguus Cb. Plentiful on the mud-flats on the southern shore of Findhorn Bay. The only previous record is of the type specimen (a male) which was taken in the Isle of Arran by Mr. W. Evans. The female is therefore new. Mr. Pickard-Cambridge has undertaken to describe and figure it.

Cnephalocotes incurvatus Cb. Northumbrian coast, near Cresswell; Findhorn links: an adult female in each place. This sex was previously unknown (see description below, and plate ii., fig. 20).

**Cnephalocotes interjectus* Cb. Northumbrian coast, Beadnell; plentiful.

Lophocarenum parallelum Bl. Both sexes, Ross links, June.

Hilaira nubigena n. sp.

Plate II., figs. 1, 4, 5, 6, 7, 13.

Male.—Cephalothorax 2.10 mm. long, greatest width 1.52 mm. Frons flattened, nearly horizontal, sparsely sprinkled with bristles, the longest of them being in the median line. Occipital tuber dome-shaped, sloping more steeply in front than behind, traversed by a median line of longish bristles.

EYES comparatively small. Upper row strongly procurved; the middle interval about two-thirds of the lateral, slightly concave. Lateral eyes on prominent tubercles, the anterior occupying the summit and its fellow the posterior slope, the former being the longest of the eight. Clypeus vertical, rather higher than the ocular quadrangle is long.

FALCES normal; outer teeth 5, inner 3 (the distal two small and obtuse, the third larger and acute).

PALPI.—Femur .65 mm. long; patella .16 mm. long, .21 mm. wide, convex above, concave below (viewed laterally); tibia only .17 mm. long below but very convex above and produced to a length of .65 mm., its greatest width being .44 mm. The upper surface is uniformly convex on the outer side, but the anterior part of the inner side is very dark coloured and slightly concave, so that there is a median ridge terminating at the middle projecting point of the fore margin, which point is obtuse and a little curved downward. On either side of it the margin forms a fairly deep sinus, the outer longer than the inner and divided almost equally by a broad rounded point which projects forward. On the under surface of the main central projection there is a dark transverse ridge which does not reach either margin. Tarsus .78 mm. long. The copulatory organs follow the normal plan of the group to which this species belongs, nevertheless the terminal lobe is very distinctive in structure. When the tarsus is viewed from below the lobe occupies the outer half of the distal end, and presents a quadrate membranous surface encircled by a narrow chitinous rim. This rim is sinuous, and at the outer side (where it is turned up sharply almost at right angles to its normal plane) it is faced by a dark rounded projection hollowed on the inner side. Behind this terminal lobe the spathulate tip of the embolus is just visible. Basal part of the paracymbium comparatively small, flat, with a tuft of bristles; the free recurved half very strongly carinate, the ridge rising sharply from the middle of the limb and continuing nearly parallel to the outer edge.

LEGS comparatively short and slender. Patellar and tibial spines normal; trichobothrium of metatarsus iv. exactly at the middle of the distal half. Metatarsus i. bowed at the base, with the basal half of the remainder fusiform, the distal half nearly cylindrical and slender. Above and on either side of the swollen part are grouped a score of stout black

spines of various sizes. Four of these approach the median line of the upper side, three in front and one behind; below these eight on either side. Beyond these are two more on the front side.

Female.—Cephalothorax 2·10 mm. long, 1·50 mm. wide at the broadest part, 1 mm. wide at the clypeus. Caput convex, perceptibly raised behind the eyes. All the thoracic furrows strongly marked.

EYES pretty closely grouped, covering a space ·70 mm. wide. Upper medians and fore laterals equal in size, the diameter being one-third longer than that of the fore medians. The latter are nearly in contact. Middle interval of the upper row considerably less than the lateral.

FALCES normal, except that the inner teeth seem to be rather larger than usual in *Hilaira*, though not so strong as in *Phaulothrix*.

LEGS.—Tibiæ i. and ii. cylindrical, their diameter $2\frac{1}{2}$ times that of the metatarsi. Tibia iv. subclavate; diameter at the distal end ·27 mm., at the base ·19 mm. Spines normal but comparatively weak, especially the distal spine of tibia iv. Hairs coarse and bristly. Lengths of joints of first pair—tibia 1·22 mm., metatarsus 1·00 mm., tarsus ·55 mm.; of the fourth—tibia 1·20 mm., metatarsus 1·22 mm., tarsus ·77 mm.

EPIGYNE unusually large, its width being ·64 mm. It is raised into a transverse ridge some ·37 mm. above the level of the epigaster at its highest point. The backward slope is very steep and almost wholly occupied by the vulvar fovea. The sculpture of the vulva is more elaborate than in any of the allied species, and will be best understood by a reference to the figures.

COLORATION normal of the genus, with the thorax darker than usual and the furrows more strongly marked. In the case of the male the contrast between the dark thorax and the pallid dome of the cephalic tuber is heightened by the difference in the surface of the cuticle, the thorax being thickly

pitted with minute impressions. Generally the two sexes agree in colour, but some males have the thorax nearly dead black.

Killhope Law, July, 1910, 1 female; October 5th, 1910, several females; July, 1911, half-a-dozen females; August 15th, 1911, 1 male, 1 female; September 7th, 1911, 11 males and about 40 females. All these were taken in the same swampy patch just above the old mines on the western side of the watershed between East and West Allen, and nearly all of them within a very restricted area on the western edge of this swamp. On the last date named, the rushes on this very spot had been mown and lay in two heaps. One of these yielded a male and a female. After trying all over the swamps (unusually dry after the long drought) and obtaining four females only, I returned to this spot, and in half an hour obtained the total number recorded above. The male would seem to attain maturity about the middle of August, so that its adult period probably coincides with that of *H. excisa* Cb. The present species, however, belongs to the Arctic group, distinguished by the peculiar metatarsus of the first pair of legs (in the male), which includes *glacialis* Thor., *incondita* L. K., *consimilis* Cb., and *mirabilis* C. L. K., all of which it considerably exceeds in size. In this respect the two sexes are about equal, the total length ranging from 4 mm. to 4.4 mm.

Scleroschema reginaldi n. sp.

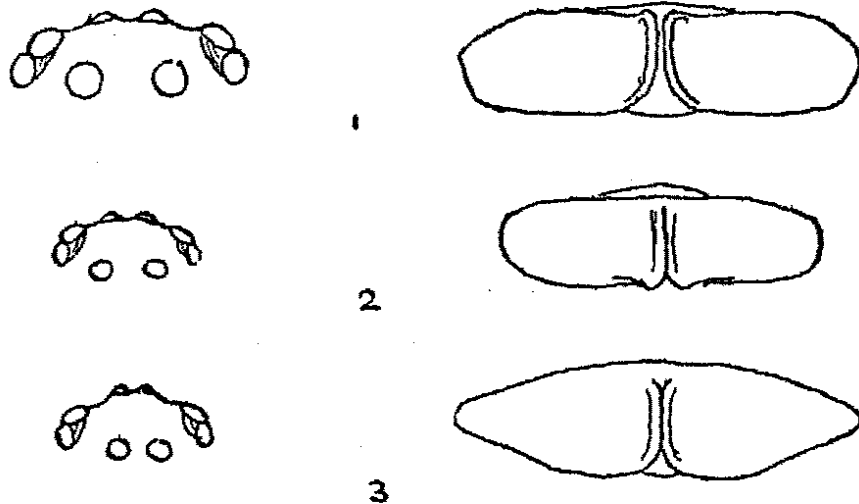
Adult female. Total length 1.6 mm.

On the strength of the following generic characters I assign this spider to the genus *Scleroschema* :—

Sternum broad, with a wide termination behind; cuticle of the abdomen coriaceous; inner teeth three; hairs of the legs long and tibial setæ pretty strong, longer than the diameter of the joint; tarsi and metatarsi of the first pair of legs equal; the spiracular fold just reaching the margin of the mamillary cavity; front line of eyes recurved; epigyne more than twice as broad as its median length.

SPECIFIC CHARACTERS. — Cephalothorax comparatively broad, its width along the line of the upper eyes .35 mm. Its cuticle is quite smooth. Eyes comparatively large, but their position normal of the genus: clypeus vertical, not in the least protuberant. Sternum nearly smooth, without wrinkles or pits.

Abdomen rather broad. Epigyne three times as wide as long; front and back margins parallel. The epigynal plate, the surface of which is wrinkled all over, is cleft along the median line. The margins of the two valves are raised into a rim along the borders of this cleft, and are nearly in contact in front but divergent in the posterior half, so as to expose a paler triangular piece below.



1. *Scleroschema reginaldi* sp. n. 2. *S. hiemale* Bl.
3. *S. ignobile* Cb.

[Eyes from above; epigyne from below].

Cephalothorax brown with a dusky indefinite patch in the middle and a dark margin; all its appendages clear yellow, but there are very narrow rings of clear black at the extremities of coxæ, trochanters, femora and tibiæ, and at the base of the femora. Sternum (and also the epigynal plate) rich dark brown. Abdomen wholly black.

The smooth and glossy cephalothorax and sternum, without rugosity or impressions of any kind, will distinguish it from either of its congeners.

A single adult female was taken by my son, Mark Reginald, at Fenham, Northumberland, in May, 1911.

Cnephalocotes incurvatus Cb. (?)

Plate II., fig. 10.

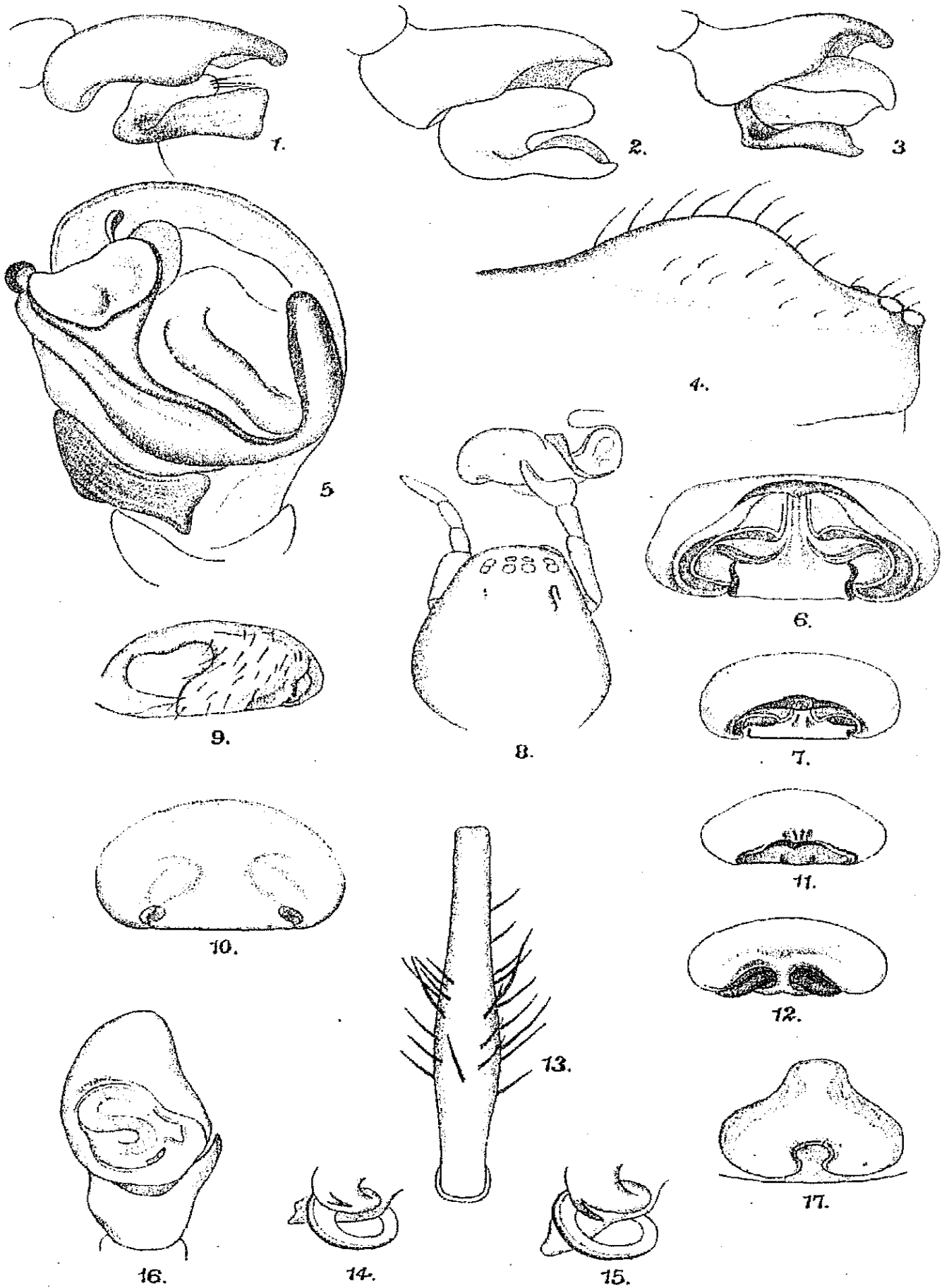
Female.—Total length, 1.86 mm. Abdomen greenish black, broad oval, with the usual four impressed reddish spots on the anterior half. Underside a trifle paler, with two parallel longitudinal rows of pale spots. The rust-coloured indurations are present only in front of the spinners and on either side of the genitalia. The general characters are those of *Cnephalocotes*, and the only tangible specific character is the structure of the epigyne. In this it approaches most nearly to *C. pusillus*, and the general form—as will be seen from the figure—is suggestive of *Lophocarenum* rather than of *Cnephalocotes*. The most distinctive features are a pair of tiny reniform openings towards the posterior margin and very wide apart.

This spider is identified with *C. incurvatus* only conjecturally. It corresponds with the male sufficiently well and seems to occupy the same geographical area. Two specimens were taken in 1910—one by Mr. W. Flowers on the coast sandhills near Cresswell, Northumberland, in June; the other by myself on the sandhills at Findhorn in August. The latter is now in the possession of the Rev. O. Pickard-Cambridge, who agrees with me in thinking that it is probably the missing female of *C. incurvatus* Cb.

REFERENCES TO PLATE II.

(All the figures are drawn from specimens immersed in spirit).

1. *Hilaira nubigena* ♂ : tibia and paracymbium of right palpus, outside.
 2. „ *montigena* L. K. ♂ : „ „ „
 3. „ *frigida* Thor. ♂ : „ „ „
 4. „ *nubigena* ♂ : caput viewed laterally.
 5. „ „ ♂ : tarsus of right palpus from below and a little in front.
 6. „ „ ♀ : epigyne from behind.
 7. „ „ ♀ : epigyne from below.
 8. *Lophomma herbigradum* Bl. (gynandrous) ; cephalothorax and palpi.
 9. „ „ genital region of epigaster.
 10. *Cnephalocotes incurvatus* Cb. (?) ♀ : epigyne.
 11. *Hilaira frigida* Thor. Epigyne, from below.
 12. „ *montigena* L. K. Epigyne, from below.
 13. „ *nubigena* sp. n. ♂. Metatarsus of first pair, from above.
 14. *Caledonia aliena* Kulcz. ♂ : apical part of copulatory organ.
 15. „ *evansii* Cb. ♂ : „ „ „
 16. *Attus caricis* Westr. ♂ : Tibia and tarsus of left palpus from below.
 17. „ „ „ ♀ : epigyne.
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J. E. Hull, del.
W. West, lith.

E. Wilson, Cambridge.