

XIV. *A Revision of the British Species of Homalota.* By
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HAVING undertaken the revision of the British species of the genus *Homalota*, with a view to the completion, as far as possible, of a list of the native species, I now offer the results of my study in the form of detailed descriptions of all our species. I hope thus to enable such as are willing to give the necessary care to the task to determine their specimens of this most difficult genus.

Mr. Waterhouse's last catalogue contains eighty-nine species of *Homalota*; of these, two find no place in my paper, viz., *H. debilicornis* (to which a ? is attached by Mr. Waterhouse), because I have found no specimen of it extant; and *H. parvula*, which has already been declared by Mr. Waterhouse to be a synonym of another of the species of his catalogue. The present paper contains descriptions of 157 species, of which twenty-nine are considered as previously undescribed.

The length of the descriptive part of this paper is so great, that I must refer the student to the works of Erichson and Kraatz for all generalities with regard to the genus; for a like reason I have limited the synonymy to the quotation of the original description, and to references to Erichson's "Genera et Species Staphylinorum," to Kraatz's 2nd vol. of the "Insecten Deutschland's," to Thomson's "Skandinavien's Coleoptera," and to Mr. Waterhouse's catalogue.

I must, however, say a few words as to the arrangement I have adopted.

In a genus containing such an inordinate number of species as does the present one,* an arrangement by which it shall be possible to discover the position of a species without wading through an enormous number of unclassified diagnoses, becomes absolutely necessary. Thomson in his Skand. Col. has endeavoured to accomplish this by the division of the genus, as understood by Erichson, by Kraatz, and by Lacordaire, into no less than thirty distinct genera; but the result of his attempt is to much increase, instead of to diminish, the difficulty

* Harold's catalogue gives 412 as the number of described species of the genus, and Stein's recent catalogue of the European species makes their number 230.

of determination of the species. Moreover, the undoubted fact, that the species of the genus are, as a whole, closely allied to one another, is disregarded by his having interposed amongst these divisions a very considerable number of quite alien genera; as an instance of this, *H. incana* is separated from the pretty closely allied *H. nigella* by a crowd of *Fulagriæ*, *Calodera*, *Tachyusæ*, *Oxyopodæ*, and even *Myllæne*. I have found myself quite unable to take advantage of Thomson's divisions in any way; but I cannot notice his work, without bearing testimony to the originality, acumen, and zeal, of which it displays abundant marks.

Kraatz has, in the *Insecten Deutschlands*, proposed a system of arrangement which has been found to be, on the whole, a very serviceable one. I have, therefore, adhered to this in the main; though, as it has seemed to me capable of simplification in some respects, I have introduced considerable modifications. Kraatz's division of the genus into two main groups,—I, with elytra longer than the thorax;—II, with elytra not longer than the thorax—is altogether artificial, and of but little actual use, as the first division contains 136 species, the second only six. I have, therefore, put it entirely on one side, and placed the few species with short elytra in immediate proximity with their respective allies.

Kraatz gives altogether thirteen groups. I propose to amalgamate some of these, and reduce the number of sections to eight, as given hereafter; and, moreover, to arrange the species, in each section, in natural groups, in such cases as I am able to find characters for these. It must be understood, however, that the sections and groups are often apparently but little natural, or characteristic, as regards certain individual species; and that the device is adopted as a mere artificial assistance to study, no actual lines of separation existing in nature between the various groups and sections.

I may add, that I am proposing to attempt something towards the completion of the knowledge of the European species of the genus, if I can obtain the necessary material, and shall feel much obliged to those who will assist me by the communication of specimens.

I have already received the kindest assistance from most of our British entomologists who have collections

of this genus, notably from Messieurs Crotch, Power, Rye, and Waterhouse: while M. Ch. Brisout de Barneville has, by the loan of his types of species recently described by him, rendered me an assistance for which I return him my most sincere thanks: from Messieurs Scriba, Fauvel, Thomson, and others, I have also received important communications, and specimens; and I most cordially thank my friend Mr. G. R. Crotch, of Cambridge, for the zealous assistance he has been able and willing to render me, by means of his extensive relations with European Coleopterists.

I adopt, then, eight sections.

- A. ABDOMEN PARALLEL; THORAX QUADRATE (ABOUT AS BROAD AS LONG); THE SIX PENULTIMATE JOINTS OF THE ANTENNÆ LONGER THAN BROAD, OR NEARLY AS LONG AS BROAD.

(Contains groups I.—V. Species 1—35).

- B. ABDOMEN PARALLEL; THORAX QUADRATE, OR SUBQUADRATE; SIX PENULTIMATE JOINTS OF THE ANTENNÆ TRANSVERSE, BUT NOT VERY STRONGLY SO.

(Groups VI. and VII. Species 36—54).

- C. ABDOMEN PARALLEL; THORAX QUADRATE, OR SUBQUADRATE; SIX PENULTIMATE JOINTS OF THE ANTENNÆ STRONGLY TRANSVERSE.

(Groups VIII. and IX. Species 55—63).

- D. ABDOMEN PARALLEL; THORAX MODERATELY TRANSVERSE, ITS SIDES EVENLY ROUNDED.

(Groups X.—XII. Species 64—78).

- E. ABDOMEN PARALLEL; THORAX DISTINCTLY OR STRONGLY TRANSVERSE; PENULTIMATE JOINTS OF THE ANTENNÆ NOT, OR BUT MODERATELY, TRANSVERSE.

(Groups XIII.—XV. Species 79—107).

- F. ABDOMEN PARALLEL; THORAX STRONGLY TRANSVERSE; PENULTIMATE JOINTS OF THE ANTENNÆ STRONGLY TRANSVERSE.

(Groups XVI and XVII. Species 108—122).

- G. ABDOMEN A LITTLE NARROWED TO THE APEX; THE HINDER ANGLES OF THE THORAX WELL MARKED: LIVE IN ANTS NESTS.

(Group XVIII. Species 123—125).

H. ABDOMEN MORE OR LESS DISTINCTLY NARROWED; HINDER ANGLES OF THE THORAX ROUNDED.

(Groups XIX.—XXII. Species 126—157).

SECTION A.

Group I. *Abdomen with the sixth segment nearly impunctate. Male with a tubercle or keel on the upper side of the sixth abdominal segment.* (Species 1—7).

The seven species contained in this group form a really natural and well-defined cluster. *H. languida* is found in marshes, as is also sometimes *H. pavens*; the others occur only on the banks of rivers and lochs.

1. *Homalota currax*.

Depressa, sat lata, nigro-fusca, subtiliter punctata, pedibus obscure testaceis, antennis tenuibus, apicem versus haud incrassatis; thorace basin versus angustato; elytris thorace longioribus; abdomine supra segmentis 2-5 sat dense punctatis, segmento sexto lævigato. Long. 2 lin.

Mas; abdomine segmento sexto dorsali medio ante apicem tuberculo acuto, 7° apice denticulis 4 instructo; segmento 7° ventrali producto.

H. currax, Kr. Ins. Deutsch. ii. 198; Wat. Cat. Brit. Col.

A large, dark species, with slender legs and antennæ, and close and fine punctuation. The antennæ are as long as the head, thorax, and half the elytra, pitchy-black, the basal joints pitchy, slender, not thickened towards the apex, each joint considerably longer than broad, the second and third of about equal length; from the fourth to the tenth each joint slightly shorter than the preceding one; the eleventh joint about half as long again as the tenth, about the length of the first joint. Head black, broad, but evidently narrower than the thorax, with a distinct longitudinal impression on the upper surface; very finely punctured, the palpi pitchy-testaceous. Thorax narrower than the elytra, about as broad as long, the sides rounded in front, then evidently narrowed behind the middle; the base a good deal rounded, so that the posterior angles are very obtuse;

very finely and closely punctured with a central longitudinal channel, beginning at an obscure impression in front of the scutellum, and not reaching to the front of the thorax. Elytra one-third longer, and nearly one-third broader than the thorax, their length about equal to their breadth, closely and very finely punctured. Abdomen with segments 2-5 above distinctly and tolerably densely punctured, sixth smooth and shining. Legs dirty yellow.

The male has on the upper surface of the sixth segment of the abdomen, a large, pointed, keel-like, tubercle before the apex; the hind margin of the seventh segment is furnished with four, small, distinct teeth, two placed very near one another in the middle, and one at each side; between the middle ones and the external ones the margin is very obsoletely crenulate; the under plate of the seventh segment is also narrower, and more prolonged behind than in the female.

A fine and very distinct species, not likely to be confounded with any other. *H. hygrotopora* is somewhat similar in appearance, but has shorter and stouter antennæ, and the thorax scarcely narrowed behind.

Found not uncommonly on the banks of rivers and streams in the North of England and Scotland.

There are specimens of *H. currax* in the British Museum, sent by Dr. Kraatz; they agree entirely with our British ones.

2. *Homalota languida*.

Subdepressa, nigro-fusca, dense subtilissime punctata, antennis abdominisque segmentorum marginibus rufo-fuscis, antennarum basi pedibusque flavis; antennis elongatis, apicem versus lenissime incrassatis; thorace subquadrato, basin versus vix angustato; elytris hoc longioribus; abdomine supra segmentis 2-5 subtiliter confertissime punctatis, sexto læviusculo. Long. $1\frac{3}{4}$ -2 lin.

Mas; abdomine segmento sexto supra in medio tuberculo acuto, 7° apice denticulis 6, 4 intermediis approximatis, instructo; segmento 7° ventrali apice medio obtuse angulato.

H. languida, Er. Käf. Brand. i. 318; Gen. et Spec. Staph. 86; Kr. Ins. Deutsch. ii. 213; *Disopora languida*, Th. Sk. Col. iii. 58.

Var.—Minor. (long. $1\frac{1}{2}$ lin.)

H. longicollis, Muls. Op. i. 18; Scriba, Berl. Ent. Zeit. 1866, p. 379.

Variat, colore fere toto testaceo, plus minusve infusato.

A tolerably large, but rather narrow, species; the antennæ are long, scarcely thickened towards the apex, first, second, and third joints elongate, and of about equal length, the third about half as long again as the fourth: from the fourth to the tenth each joint is a little shorter than the preceding one; the length of each joint is greater than its breadth, eleventh joint about half as long again as the tenth. Head a little narrower than the thorax, with a distinct channel in front (often absent in the small var.); together with the thorax finely punctured and pubescent. Thorax narrower than the elytra, about as long as broad, the sides nearly straight, scarcely at all narrowed behind, thickly and finely punctured, with an obsolete fovea in the middle at the base. Elytra a little longer than the thorax, and redder in colour than it, about as long as broad, thickly and finely punctured. Abdomen with the hind margins of the segments paler; segments 2-5 very densely and finely punctured, the sixth nearly impunctate. Legs yellow.

The male has a distinct tubercle in the middle of the sixth abdominal segment, and the hind margin of the seventh is furnished with six small, but distinct teeth, four placed rather near one another in the middle, and one at each outside; the seventh segment underneath is not rounded at the apex, but pointed, the point being, however, only a very obtuse angle.

This is a very distinct species, and differs from the following by its thorax not narrowed behind, and its very densely punctured abdomen, as also by its different colour, antennæ, &c.

Very rare. I have taken a male specimen at Hammer-smith Marshes, and have seen a few others from the neighbourhood of London.

The small var. *longicollis* is also very rare, but has been several times taken near London; Scriba has followed Mulsant in regarding it as specifically distinct; but he has considered the next following species as *H. languida* (I am indebted to him for the inspection of his types); so that his opinion must be put aside.

Specimens of *H. languida*, sent by Kraatz to the British Museum, agree entirely with our British ones.

3. *Homalota insecta*.

Fusco-picea, subdepressa, subnitida, subtiliter punctata, antennarum basi pedibusque testaceis, elytris fuscis; thorace basin versus angustato, medio canaliculato; abdomine supra segmentis 2-5 dense subtiliter punctatis. Long. 2 lin.

Mas; abdomine segmento sexto medio tuberculo acuto, 7° apice denticulis 4 instructo.

H. insecta, Th. Öfv. Vet. Ac. Forh. 1856, p. 93; *Alconota insecta*, Th. Sk. Col. iii. 8. *H. languida*, Scriba, Berl. Ent. Zeit. 1866, p. 379.

A species nearly as large as *H. currax*, but narrower in proportion to its length than that species. Antennæ pitchy-testaceous, with the base paler; moderately stout, and evidently, though not strongly, thickened towards the apex: first, second, and third joints elongate, of about equal length; fourth to ninth each of about equal length, but each one a little thicker than the preceding, so that though the length of the fourth joint is much greater than its width, the ninth is about as broad as long; tenth scarcely transverse; eleventh oblong-ovate, nearly twice as long as the tenth. Palpi testaceous. Head a little narrower than the thorax, much narrower than the elytra, with a distinct longitudinal impression on the upper surface; finely punctured. Thorax narrower than the elytra, its length about equal to its breadth, the sides rounded in front, then distinctly narrowed from the middle towards the base, thickly and finely punctured, and with a distinct channel along the middle. Elytra narrower at the shoulders than at the apex, a little longer than the thorax, lighter in colour than the head and thorax, thickly and finely punctured. Abdomen with segments 2-5 evenly, and rather densely, and finely, punctured; sixth shining and nearly impunctate, extremity of seventh a little paler. Legs yellow.

The male has a distinct tubercle in the middle of the sixth segment above, and the apex of the seventh segment furnished with four small indistinct teeth, varying in the extent of their development, and sometimes very obsolete.

This species is closely allied to *H. pavens*, Er. It is on the average a little larger, has the head and the thorax more shining and more sparingly punctured, the antennæ not so much thickened towards the apex, and

with the joints longer than in *pavens*. The head and thorax are more distinctly channelled, the thorax rather longer in proportion to its width, and more narrowed behind than in *H. pavens*. I have seen it placed in collections both as *H. languida* and *H. pavens*. It is readily distinguished from *languida* by the thicker joints of the antennæ, the thorax narrowed behind, and the abdomen not so densely punctured.

I have seen no specimen named by Thomson, and have identified the species only by his description. He says (Sk. Col. iii. 9), that the male characters are different from *H. lissonura* (*pavens*, Er.), but as he makes no mention whatever of what these characters are, I fancy the male of *H. insecta* was unknown to him, especially as it is much rarer than the female.

Generally distributed, but uncommon. London, Scotland, Carnarvon.

I possess thirty-two specimens of this species, of which only three are males.

4. *Homalota pavens*.

Linearis, sub-opaca, dense subtiliter punctata, elytris antennisque fuscis, harum basi pedibusque testaceis; thorace subquadrato, basin versus subangustato, obsolete canaliculato; abdomine supra segmentis 2-5 sat dense subtiliter punctatis, 6° lævigato. Long. $1\frac{3}{4}$ lin.

Mas; abdomine segmento sexto medio carinula longitudinali elevata, segmenti apicem fere attingente, segmento 7° apice denticulis 4 instructo.

H. pavens, Er. Käf. Brand. i. 689; Gen. et Spec. Staph. 85; Kr. Ins. Deutsch. ii. 214. *H. quisquiliarum*, Er. Käf. Brand. i. 317; Heer, Faun. Col. Helv. 337. *Aloconota lissonura*, Th. Sk. Col. iii. 9. *H. sulcifrons*, Wat. Cat.

Var.—Elytris thorace fere brevioribus.

Larger than *H. elongatula*, and not so flat and depressed. The antennæ are pitchy testaceous, with the base a little paler, moderately long and stout, a little thickened towards the apex; 1st, 2nd, and 3rd joints moderately long, of about equal length, the fourth joint not much more than one half the length of the third, from the 4th to the 10th each joint is shorter and a little stouter than its predecessor, 4th and 5th longer than

broad, 6-8 about as long as broad, 9 and 10 a little transverse, 11th ovate, acuminate, about twice as long as the tenth. Palpi testaceous. Head a little narrower than the thorax, thickly and finely punctured, with an obsolete fovea in front. Thorax narrower than the elytra, its length about equal to its breadth, the sides a little rounded in front, then slightly narrowed towards the base, densely and finely punctured, with a not very distinct channel. Elytra fuscous, scarcely longer than the thorax, not so long as broad, finely and tolerably densely punctured, the punctuation not so dense as on the thorax. Abdomen with segments 2-5 thickly and finely punctured, 6th nearly impunctate. Legs yellow.

The male has an elongate raised tubercle on the upper side of the sixth abdominal segment, which reaches nearly to the apex, and the hind margin of the seventh segment is armed with four indistinct teeth.

Not common. Nithsdale, Rannoch, Edinburgh, Brighton. The male is much rarer than the female.

I have a small variety found in Nithsdale, in which the elytra are not quite so long as the thorax.

Obs.—In the Brit. Mus. are four specimens of *H. pavens* sent by Dr. Kraatz; these agree with the examples just described. It is, I believe, the *H. sulcifrons* of Mr. Waterhouse's Catalogue, but I cannot say with certainty whether it is Stephens' *Aleochara sulcifrons*. His name would appear to point rather to *H. insecta*.

5. *Homalota Eichoffi*.

Depressa, nitidiuscula, nigro-fusca, antennis elytrisq; fuscis, pedibus testaceis, subtiliter haud confertim punctata; capite subtriangulari, antennis tenuibus, apicem versus vix incrassatis; thorace subquadrato, postice subangustato; elytris hoc paullo longioribus; abdomine supra segmentis 2-5 subtiliter minus crebre punctatis, segmento sexto fere lævigato. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento sexto supra medio tuberculo acuto; 7° apice medio denticulis 2, lateribus utrinque denticulo singulo obsoleto, instructo.

H. Eichoffi, Scriba, Berl. Ent. Zeit. 1867, p. 390.

A delicate fragile species allied to *H. cambrica*, (*velox*, Kr.). Pitchy, shining, the antennæ, legs, and elytra

paler; antennæ rather long and slender, a little thickened towards the apex, third joint not quite so long as the second, about twice as long as the fourth, fourth not so long as fifth, 5-10 differing little in length, the 5th distinctly, the 10th scarcely, longer than broad, eleventh oval, half as long again as the tenth. Head large, a little narrower than the thorax; shining, narrowed in front, with an indistinct impression between the eyes, very finely punctured. Thorax but little narrower than the base of the elytra, its length about equal to its breadth, the sides a little narrowed towards the base; very finely and pretty densely punctured, with a short channel or impression, in front of the scutellum. Elytra scarcely longer than the thorax, narrower at the base than at the apex, their length not quite so great as their width; their punctuation not quite so fine as that of the thorax. Abdomen somewhat narrowed towards the apex, segments 2-4 above finely and rather sparingly punctured, the fifth segment not quite so thickly punctured, 6th almost impunctate. Legs yellow.

In the male the 6th abdominal segment is furnished above with a distinct pointed tubercle, and the posterior margin of the seventh with four teeth, two distinct ones placed close together in the middle, and an obsolete one on each side.

Distinguished from *H. cambrica*, by being rather larger, more shining, with a differently shaped head, by its rather stouter antennæ, and by its shorter and paler elytra.

Found by Mr. Crotch and myself on the borders of Loch Rannoch in Perthshire, May, 1866.

Obs.—Judging from description only, this species must be allied to *H. debilicornis*, Er., Kr., which species is placed as British in Mr. Waterhouse's Catalogue, but as I have never seen a British specimen, and there was probably a mistake in the determination, the name must be erased from our Catalogue.

6. *Homalota cambrica*.

Depressa, vix nitida, dense subtilissime punctata, antennis elytrisque fuscis, pedibus testaceis; antennis tenuibus; thorace subquadrato, postice vix angustato; elytris hoc fere sesqui longioribus; abdomine supra segmentis 2-5 subtiliter sat crebre punctatis, segmento sexto lævigato. Long. $1\frac{1}{3}$ lin.

Mas; abdomine segmento sexto supra medio tuberculo acuto; segmento 7° margine posteriore medio denticulis 2, utrinque denticulo obsoleto instructo.

H. cambrica, Wollaston, Zoologist, 1855, App. p. ccv.
H. velox, Kr. Ins. Deutsch. ii. 201.

Var.—Capite antice foveolato.

A delicately formed species, somewhat like *H. gregaria*, but much smaller and more fragile. Antennæ slender, longer than the head and thorax, scarcely at all thickened towards the apex, pitchy or pitchy testaceous, joints 1, 2, 3 moderately long, of about equal length, the 3rd about half as long again as the fourth, 4-10 differing but little in length, each longer than broad, eleventh oblong, about half as long again as the tenth. Head subquadrate, a little narrower than the thorax, finely punctured. Thorax about as long as broad, scarcely narrowed behind, a little narrower than the elytra, thickly and very finely punctured. Elytra a little paler in colour than the head and thorax, longer by a half than the latter, their length greater than their width, very thickly and finely punctured. Abdomen with segments 2-5 finely, but not very densely punctured, the sixth nearly impunctate. Legs slender, yellow.

In some examples the head has a fovea in front, and the thorax is more or less distinctly channelled. Also in some specimens, each elytron has a distinct impression near the apex; the antennæ also are a little more thickened towards the apex in some specimens, than in others.

The male has a large raised tubercle on the middle of the upper surface of the sixth segment of the abdomen, and the apex of the seventh segment is furnished with four teeth, two small distinct ones placed together in the middle, and a scarcely visible one on each side; moreover the hind margin of the seventh segment underneath takes the form of an obtuse angle in the male, while it is gently rounded in the female.

Common amongst the shingle on the banks of the Scotch rivers, also in Wales.

Obs. I.—In the British Museum are specimens of *H. velox* sent by Dr. Kraatz; these agree with the species I am at present considering.

Obs. II.—Mr. Wollaston's description of *H. cambrica*, (*loc. cit.*) evidently refers to an immature form of this species; one of the examples there described is now in

Mr. Crotch's collection, and is undoubtedly an immature female of *H. velox*, Kr. Moreover the locality where it was taken (Bettws-y-coed) has since produced *H. velox* commonly, and no other species to which Mr. Wollaston's description could be applied. Hence, as the name *H. cambrica* is anterior to Kraatz's by two years, I have adopted it.

7. *Homalota planifrons*.

Subdepressa, subnitida, nigro-fusca, antennis elytrisque fuscis, pedibus testaceis; subtiliter haud confertim punctata; antennis apicem versus paullo incrassatis, articulis penultimis subtransversis, capite subtriangulari; thorace subquadrato, postice subangustato; elytris hoc paullo longioribus; abdomine supra segmentis 2-4 subtiliter, haud crebre punctatis, segmento quinto parcius punctato. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento sexto supra medio tuberculo acuto, 7° apice denticulis quatuor, instructo.

H. planifrons, Wat. Proc. Ent. Soc. Lond. 1863, p. 150. (*H. platycephala*, errore).

About the size and appearance of *H. gregaria*, but more shining and more sparingly punctured. Antennæ of moderate stoutness, but little thickened towards the apex; joints 1-3 of about equal length, 4 shorter than 5, only about half as long as 3, 5-10 differing little in length, the first of them a little longer, the last of them a little shorter than broad, eleventh joint ovate, half as long again as the tenth. Head a little narrower than the thorax, subtriangular, narrowed in front, with a distinct channel on the upper side; sparingly and finely punctured. Thorax narrower than the elytra, about as long as broad, a little narrowed behind, pretty densely and finely punctured, with a distinct channel or impression along the middle. Elytra paler in colour than the head and thorax; a little longer than the latter, finely and somewhat sparingly punctured. Abdomen with segments 2-4 finely but not densely punctured; fifth segment rather more sparingly punctured than the fourth, sixth nearly smooth. Legs testaceous.

The male has the sixth segment of the abdomen furnished on the upper side, in the middle, with a distinct acute tubercle, and the posterior margin of the seventh

segment with four teeth; two placed close together in the middle, and one at the outside of the segment on each side.

This species resembles *H. Eichoffi* in the shape of the head, but is less depressed, and more robust than that species; the antennæ are not so slender, and are more thickened towards the apex, and the punctuation is more sparing. From *H. gregaria*, which it resembles in size and appearance, *H. planifrons* may be distinguished by its head narrowed in front, its more sparingly punctured upper surface, and the male characters. It also resembles *H. elongatula* somewhat, but has a differently shaped head, the thorax narrowed behind, and different male characters.

Found in the neighbourhood of London, but apparently very rare. I have seen only five specimens of it, and of these but one is a male.

Group II. *Small, delicate species, with all the segments of the abdomen punctured; antennæ not at all thickened towards the apex.* (Species 8—12).

The five species of this group are all found under stones on the banks of rivers, and nowhere else; they form a well-defined and natural group, with the exception that in *H. subtilissima* the structure of the antennæ is somewhat different from that of the other species.

8. *Homalota eximia*.

Depressa, nigro-fusca, elytris fuscis, ore, antennis, pedibus, anoque testaceis, dense subtilissime punctata; antennis gracillimis, apicem versus haud incrassatis; capite thoraceque canaliculatis, hoc subquadrato, basin versus paulo angustato; elytris thorace longioribus; abdomine supra crebre æqualiter punctato. Long. 1 lin.

Mas; antennis paulo longioribus, abdomine segmento 7° ventrali longe producto.

Fem.; abdomine segmento 7° ventrali apice medio leviter emarginato.

H. fragilicornis, Wat. Cat. (Kr. ? ?).

About the size and build of *H. fragilis*, Kr. Antennæ slender, elongate, entirely yellow, not at all thickened

towards the apex, each joint with the length very distinctly greater than the breadth; joint three a little shorter than two; four about half as long as two; five half as long again as four; five to eleven differing but little in length and breadth, the eleventh being only a little longer than the tenth. Palpi and mouth yellow. Head scarcely narrower than the thorax, slightly narrowed in front, with a distinct channel, closely and very finely punctured. Thorax a little narrower than the elytra, its length almost as great as its width, gently narrowed behind, closely and finely punctured, with a distinct longitudinal channel. Elytra fuscous, paler towards the apex, about one-third longer than the thorax, closely and very finely punctured. Abdomen blackish, with the extremity yellowish, its punctuation not so fine and dense as that of the thorax and elytra, but the segments above are finely and pretty closely punctured, the punctuation on the sixth segment being a little more sparing than on the others. Legs testaceous, with the tarsi comparatively short and stout.

In the male, the joints of the antennæ are a little longer than in the female; and the ventral plate of the seventh segment of the abdomen is very much produced, it is also very broad, and not narrowed towards the apex, which is truncate, with the apical angles rounded.

This species is allied to *H. fragilis*, but is lighter in colour, with longer joints to the antennæ, the head a little broader behind the eyes, &c. It is the *fragilicornis* of Mr. Waterhouse's catalogue, but I cannot make up my mind that it agrees sufficiently with Kraatz's description of that species.

On the banks of the Scotch rivers, but very rare. Found at Peebles, the Nith at Thornhill and Dumfries, the Almond near Edinburgh.

9. *Homalota fragilis*.

Depressa, nigra, confertim subtilissime punctata, antennis elytrisque fuscis, pedibus testaceis; antennis apicem versus haud incrassatis, capite fere quadrato, foveolato; thorace subquadrato, elytris paulo angustiore, leviter canaliculato; elytris hoc tertia parte longioribus; abdomine supra segmentis 5 anterioribus crebre subtiliter punctatis, sexto sparsius punctato. Long. 1 lin.

Mas; abdomine segmento 7° ventrali paulo elongato, apice rotundato.

Fem.; abdomine segmento 7° ventrali apice medio leviter emarginato.

H. fragilis, Kr. Stet. Ent. Zeit. xv. 125; Ins. Deutsch. ii. 223; Wat. Cat.

Var.—Thorace medio late impresso.

Black, with the elytra pitchy-black, and the legs testaceous; antennæ pitchy, slender, not thickened towards the apex, the length of each joint greater than its breadth; second and third joints of about equal length; four to ten differing but little from one another in length, eleventh about a third longer than the tenth. The head is a little narrower than the thorax, nearly square, with a distinct channel, or fovea; thickly and finely punctured. Thorax somewhat narrower than the elytra, its length nearly as great as its breadth, a little narrowed behind, thickly and very finely punctured, with a channel along the middle, beginning from an obscure impression behind. The elytra are slightly paler in colour than the head and thorax, fully one-third longer than the latter, densely and very finely punctured. The abdomen is black, its punctuation not so fine or dense as that of the fore parts; segments two to five are thickly and finely punctured; sixth segment more sparingly punctured than the fifth.

In the male, the under plate of the seventh abdominal segment is a little more produced than the upper plate, and has its posterior margin rounded. In the female, the seventh under plate is gently emarginate in the middle.

This species is very abundant on the banks of the rivers and streams everywhere in Scotland.

A variety occurs in which the thorax has a broad longitudinal impression along the middle; some examples are also darker in colour than the type, and have the legs nearly black.

10. *Homalota longula*.

Depressa, nigra, confertissime subtilissimeque punctata, antennis tenuibus, apicem versus haud incrassatis, fuscis, pedibus piceo-testaceis; capite quadrato, obsolete impresso; thorace subquadrato, canaliculato, basin versus

vix angustato; elytris thorace tertia parte longioribus; abdomine supra toto confertissime subtilissimeque punctato. Long. 1 lin.

Mas; abdomine segmento 7° ventrali paululum producto apice rotundato.

Fem.; segmento 7° ventrali apice rotundato.

H. longula, Heer, Faun. Col. Helv. 334. *Hydrosmeeta longula*, Th. Sk. Col. iii. 13.

Size and form of *H. fragilis*. Antennæ pitchy, slender, not thickened towards the apex, each joint longer than broad, joint two longer than three, four shorter than three, five to ten differing but little in length, eleventh rather longer than the tenth. Head a little narrower than the thorax; nearly square, not narrowed in front; thickly and very finely punctured, with a more or less obsolete impression on the middle. Thorax a little narrower than the elytra, its length about equal to its breadth, scarcely narrowed behind; with a not very distinct longitudinal channel; closely and very finely punctured. The elytra are fully one third longer than the thorax, and are also very densely and very finely punctured. The whole of the upper surface of the abdomen is very densely and finely punctured.

The male is not easy to distinguish from the female, the only difference being that the ventral plate of the seventh segment of the abdomen is a little narrowed, and more produced than in the female.

Rare. I have found it on the banks of a tributary of the Nith, near Dumfries, and also on the banks of the Bowmont at Yetholm; a few specimens were also formerly taken by Mr. Wollaston at Slapton Ley.

This species is very like *H. fragilis*, but is easily distinguished by its much more densely and finely punctured abdomen, and its darker colour.

Obs.—This species accords sufficiently well with Heer's description of *H. longula*. Kraatz's *thinobioides* is generally supposed to be synonymous with *H. longula*, Heer, but I cannot find that Kraatz's description agrees accurately with my specimens; moreover two examples of *H. thinobioides* sent by Kraatz to the British Museum, are specifically distinct from the present species. Mr. Wollaston's *H. thinobioides* from Madeira, is also a different species from the present one, having its head nar-

rowed in front, and paler legs, &c. I cannot say, however, that the insect from Madeira agrees with the specimens of *thinobioides* from Kraatz in the British Museum, not having had an opportunity of comparing them.

11. *Homalota delicatula*.

Linearis, depressa, fusca, elytris dilutioribus, antennis pedibusque testaceis, supra dense subtilissime punctata; antennis elongatis, apicem versus haud incrassatis; abdomine supra dense subtilissime æqualiter punctato. Long. $\frac{3}{4}$ lin.

Very much of the size and appearance of *H. subtilissima*, but really allied to *H. longula*, of which, however, it is only one-half the size. Fuscous, with the elytra paler, the antennæ and legs testaceous. Antennæ nearly as long as the head, thorax, and elytra; not thickened towards the apex, the length of each joint greater than the breadth, joint two longer than three, four shorter than three, five to ten differing little in length, the eleventh oblong, about one-third longer than the tenth. Head subquadrate, scarcely narrower than the thorax, very little narrowed in front, densely but very finely punctured. Thorax scarcely narrower than the elytra, its length about equal to its breadth, a little narrowed behind, densely and very obsoletely punctured. Elytra paler than the head and thorax, one-third longer than the latter, very densely and finely punctured. Abdomen with all the segments above equally densely and very finely punctured. Legs pale testaceous.

I have not been able clearly to distinguish the male from the female; probably the differences are the same as in *H. longula*. In some examples, the head and thorax are channelled, in others not.

Extremely rare. Found by me on the banks of the Nith, at Thornhill, and by Mr. Crotch, at Rannoch.

Obs.—This species can only be confounded with *H. subtilissima* or *H. longula*; from the former, its long antennæ and densely punctured abdomen readily distinguish it. It is only half the size of *H. longula*, is of a much paler colour, and the punctuation of the abdomen is not quite so dense and fine.

12. *Homalota subtilissima*.

Linearis, subdepressa, fusca, thorace elytrisque dilutioribus, antennis pedibus anoque testaceis; antennis apicem versus haud incrassatis; thorace subquadrato, canaliculato; elytris hoc longioribus; abdomine supra æqualiter subtiliter sat confertim punctato. Long. $\frac{3}{5}$ lin.

Mas; abdomine segmento 7° ventrali paululum producto.

H. subtilissima, Kr. Stet. Ent. Zeit. xv. 126; Ins. Deutsch. ii. 230.

Var.—Thorace haud vel vix canaliculato.

A very small species, of delicate formation and colouring. Antennæ testaceous, moderately stout, but not thickened towards the apex; joints one and two rather stout, and of moderate length; three not much more than half as long as two, much narrowed at the base; four shorter than three, subquadrate; five a little longer and stouter than four; five to nine differing little from one another in length and breadth, each one distinctly narrowed towards the base, the length of each very nearly as great as the breadth; ten rather longer than nine, the eleventh joint half as long again as the tenth. Head subquadrate, with a distinct impression above, very finely and pretty densely punctured. Thorax rather wider than the head, and a little narrower than the elytra; its length about equal to its breadth, a little narrowed behind, with a longitudinal channel in the middle, extremely finely and pretty closely punctured. Elytra lighter in colour than the head and thorax, and not so shining; fully one-third longer than the thorax, densely and very finely punctured, the punctuation denser than on the rest of the upper surface. Abdomen with all the segments on the upper side finely and tolerably closely punctured, the punctuation of the terminal segments being rather more sparing than that of the basal ones, its apex testaceous. Legs yellow.

In the male, the seventh abdominal segment underneath is rather more produced than in the female, and its hind margin is rather more rounded.

Common on the banks of the Scotch rivers; it is found in company with *Thinobius linearis*, which it resembles greatly in colour and appearance.

Obs.—This species has very much the structure of *H. elongatula* and its allies; but its very small size, and its facies, associate it rather with the foregoing species. My specimens agree entirely with examples of *H. subtilissima*, sent by Kraatz to the British Museum.

Group III. *Species of moderate size, with all the segments of the abdomen punctured, and the antennæ slightly thickened towards the apex.* (Species 13—19).

The species forming this group have much the habits of the members of the genus *Tachyusa*, and are to be found running about in company with them in muddy places, in marshes, on the banks of rivers, and on the coast. The species differ a good deal in appearance. *H. plumbea* has been described as an *Aleochara*; it has much the colour and appearance of *Aleochara grisea* and its allies, in company with which it is found. *H. fallax* approaches very closely to *Oxyptoda*.

13. *Homalota littorea*.

Nigra, antennis elytris anoque fuscis, pedibus fusco-testaceis; antennis apicem versus leviter incrassatis; capite subrotundato, thorace evidententer angustiore; thorace longitudine latitudine brevior; elytris hoc tertia parte longioribus, cum capite thoraceque subtiliter confertim punctatis; abdomine supra dense æqualiter minus subtiliter punctato. Long. $1\frac{1}{4}$ lin.

Mas; abdomine segmento 7° ventrali evidententer producto, angusto, apice rotundato.

Fem.; segmento 7° ventrali latiore, apice medio vix evidententer emarginato.

H. fluvialis, Wat. Cat. (Kr. ? ?).

A rather shining and but little depressed species. Antennæ pitchy, with the basal joint a little paler; longer than the head and thorax, moderately stout, a little thickened towards the apex; first and second joints moderately long and stout; third a little shorter than the second, narrowed towards the base; fourth shorter than third; four to ten differing but little from one another in length, the first of them distinctly longer than broad, the last of them about as long as broad; eleventh joint

ovate, nearly twice as long as the tenth. Head much smaller than the thorax, not much more than half the width of the elytra, obsoletely and not very closely punctured. Thorax distinctly narrower than the elytra, a little shorter than broad, a little narrowed behind, with an indistinct fovea in the middle of the base; densely and very finely punctured, and with extremely delicate pubescence. Elytra lighter in colour than the head and thorax, about one-fourth longer than the latter; their breadth rather greater than their length, densely and finely punctured, and delicately pubescent. The abdomen is black, and rather shining, with the apex lighter in colour; all the segments are thickly and equally punctured, the punctuation and pubescence being much coarser than on the front parts of the body. The legs are dirty yellow.

In the male, the under plate of the seventh abdominal segment is considerably produced, and narrower than in the female. In the female, the hind margin of the same plate, as well as being broader than in the male, is in the middle very gently emarginate.

Rare. I have found it in muddy places, on the sea shore, at Deal and Brighton, and it has been taken in other localities; always on the sea shore.

H. littorea is best compared with *H. luteipes*, than which it is rather smaller; the antennæ are shorter, the thorax is much shorter and broader, and the punctuation of the abdomen is a little coarser and more sparing.

Obs.—The above is the insect referred to as possibly *H. fluviatilis*, Kr. (in Proc. Ent. Soc. Lond. 1858, p. 16.) by Mr. Waterhouse; but it conforms neither with Kraatz's description, nor with specimens of *H. fluviatilis*, sent by Kraatz to the British Museum. Moreover, I have seen a specimen which has been sent to Dr. Kraatz, and returned by him marked "*H. nov. spec., ex affinitate H. elongatula.*"

14. *Homalota imbecilla*.

Depressa, nigro-fusca, antennis ore ano pedibusque testaceis, elytris ferrugineis; antennis elongatis, apicem versus vix incrassatis; thorace transversim subquadrato; elytris hoc paulo longioribus; abdomine supra toto confertim evidenter punctato. Long. $1\frac{1}{3}$ lin.

Mus; abdomine segmento 7° ventrali producto, apice rotundato.

Fem.; segmento 7° ventrali apice medio emarginato.

H. imbecilla, Wat. Proc. Ent. Soc. Lond. 1858, p. 16.

A moderate-sized, depressed, rather brightly coloured species. The antennæ are much longer than the head and thorax, moderately stout, scarcely at all thickened towards the apex, the length of each joint greater than its breadth; first joint rather stout; two and three more slender than it, of about equal length; four shorter than three, five rather longer than four; five to ten differing but little from one another in length and breadth, the length of each distinctly greater than its breadth; eleventh joint oblong-ovate, elongate, quite as long as the two preceding joints together. Head nearly black, suborbiculate, a little narrowed in front, narrower than the thorax, finely but not densely punctured. Thorax pitchy-black, narrower than the elytra, a little broader than long, slightly narrowed behind, finely and rather densely punctured, and with an obsolete impression behind. Elytra a little longer than the thorax, their length scarcely equal to their breadth, thickly and not altogether finely punctured. Abdomen with distinct and not very fine pubescence, all the segments pretty densely and finely punctured, the sixth segment, however, rather more sparingly than the anterior ones, the seventh segment, and hind part of the sixth, reddish-yellow. Legs yellow.

In the male, the under plate of the seventh segment of the abdomen is considerably produced, and its hind margin gently rounded, while in the female it is broadly and distinctly emarginate.

Found rarely, under sea-weed, in various parts of the south of England, Brighton, Lymington, Chatham.

Obs.—This species occurs in various parts of France, and is generally called *meridionalis*, Muls., which is, however (according to Kraatz) a darker coloured species with shorter penultimate joints to the antennæ, &c. M. Brisout de Barneville has forwarded me a specimen taken at Hyères, with the remark, that it is stated by Kraatz to be “*pas meridionalis*, Muls.”

15. *Homalota luteipes*.

Nigra, antennis elongatis piceis, elytris ferrugineis, pedibus testaceis; capite angusto; thorace subquadrato,

postice haud angustato; elytris hoc paulo longioribus; abdomine supra æqualiter dense subtiliter punctato. Long. $1\frac{1}{3}$ lin.

Mas; abdomine segmento 7° ventrali paululum producto; capite evidenter foveolato.

Fem.; segmento 7° ventrali apice medio anguste sed distincte exciso.

H. luteipes, Er. Käf. Brand. i. 320; Gen. et Spec. Staph. 88; Kr. Ins. Deutsch. ii. 224; Wat. Cat. *Dilacra luteipes*, Th. Sk. Col. iii. 32.

Somewhat like a small *H. elongatula*, but not so depressed, and narrower in front. Antennæ pitchy, elongate, rather slender, slightly thickened towards the apex; joints two and three of about equal length, slender; four much shorter than three, five longer than four; five to ten differing but little in length, and each very slightly broader than the preceding one, none of the joints transverse; eleventh joint rather long, ovate, half as long again as the tenth. Head narrower than the thorax, not much more than half the breadth of the elytra, with a fovea in the middle, indistinct in the female, distinct in the male, finely and pretty densely punctured. Thorax narrower than the elytra, subquadrate, its length about equal to its breadth, not narrowed behind, even a little narrowed towards the front, closely and finely punctured, not channelled, with a very small and indistinct fovea in front of the scutellum. Elytra ferruginous, darker towards the base; a little longer than the thorax, closely and finely punctured. All the segments of the abdomen above are very closely and finely punctured, the sixth not at all more sparingly than the others. The legs are bright yellow.

In the male the antennæ are a little more slender than in the female; the fovea on the head is more distinct, and the seventh segment of the abdomen underneath is a little produced, with its apex rounded; while in the female the hind margin of this segment is, in the middle, narrowly but distinctly emarginate.

Rare. Horning and Hammersmith.

Obs.—The dense punctuation of the abdomen, together with the structure of the head and thorax, easily distinguish this from all other species. Thomson remarks that it bears a little resemblance to *Oxytoda longiuscula*. Specimens sent by Kraatz to the British Museum agree entirely with our English ones.

16. *Homalota labilis*.

Nigra, nitida, antennis piceis, pedibus testaceis, femoribus infuscatis; antennis apicem versus paulo incrassatis; thorace subquadrato, cum capite elytrisque subtiliter sat confertim punctato; abdomine supra æqualiter confertim subtiliter punctato. Long. $1\frac{1}{3}$ - $1\frac{1}{2}$ lin.

Mas; capite impresso, abdomine segmento 7° ventrali evidenter producto, angusto, apice rotundato-ovali.

Fem.; segmento 7° ventrali apice medio obsolete, vix evidenter, emarginato.

H. labilis, Er. Käf. Brand. i. 699; Gen. et Spec. Staph. 88; Kr. Ins. Deutsch. ii. 226; Wat. Cat. *Gnypeta labilis*, Th. Sk. Col. iii. 7.

Var.—Robustior, pedibus nigris, genubus tarsisque testaceis.

H. cærulea, Wat. Cat.

A black and very shining species. Antennæ of moderate length and thickness, a little thickened towards the apex; pitchy, sometimes paler at the base; second and third joints rather long, third nearly as long as the second; five to ten differing but little in length; the first of them a little longer than, the last of them scarcely so long as, broad; eleventh about half as long again as the tenth. Head but little narrower than the thorax, extremely finely, but pretty densely punctured. Thorax considerably narrower than the elytra; a little narrowed behind, its length about equal to its breadth, with an impression in front of the scutellum; extremely finely and tolerably densely punctured. Elytra about a fourth part longer than the thorax; very finely and pretty densely punctured. Abdomen with all the segments above densely and finely punctured; the sixth not more sparingly than the others; both the punctuation and pubescence are more distinct than those of the fore parts. The legs are yellowish, with the thighs (and the tibiæ more or less) infusate.

In the male the head has a distinct impression on the upper surface, and the seventh abdominal segment underneath is narrow, and distinctly produced.

Common on the muddy banks of rivers and ponds. It runs with great rapidity in the warm sunshine of spring days.

Obs.—The variety with black legs is also generally larger, broader, and more robust. The species also varies a good deal in the thickness of the antennæ.

17. *Homalota carbonaria*.

Cæruleo-nigra, subnitida, tarsis nigro-testaceis, confertim subtilius punctata, fronte impressa; abdomine supra undique æqualiter confertissime punctato. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° ventrali paulo angustiore et magis producto.

Fem.; abdomine segmento 7° ventrali apice rotundato-truncato.

Tachyusa carbonaria, Sahl. Ins. Fenn. i. 351. *T. cærulea*, Sahl. l. c. *H. ripicola*, Kies. Stet. Ent. Zeit. v. 317; Kr. Ins. Deutsch. ii. 227.

This species is so closely allied to *H. labilis*, that it is sufficient to point out the characters which distinguish it from that common species. *H. carbonaria* is rather larger, of a distinct blue colour, with the legs and antennæ entirely blue-black, except that the tarsi, and a small spot at the knees, are dusky testaceous; the head has a distinct impression in both sexes, and the upper surface is not so shining as in *H. labilis*.

Very rare. I have found it in company with *Tachyusa chalybea* (which it resembles in colour) on the banks of the Nith, and it occurs also, I believe, on the banks of the Trent.

Obs.—This species is generally represented in British collections by dark coloured robust varieties of *H. labilis*.

18. *Homalota plumbea*.

Plumbeo-nigra, sub-opaca, confertissime subtilissimeque punctata, undique densius griseo-pubescens, antennis piceis, pedibus fusco-testaceis; antennis apicem versus vix incrassatis; thorace subquadrato, coleopteris multo angustiore; abdomine æqualiter confertissime subtilissimeque punctato. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° supra et infra apice rotundato.

Fem.; abdomine segmento 7° supra obsolete, infra late sed evidenter, emarginato.

H. plumbea, Wat. Proc. Ent. Soc. Lond. 1858, p. 15.

Black; but the whole body covered with a short dense pubescence, giving it a gray appearance. Antennæ rather slender and moderately long, but little thickened towards the apex; pitchy; joint three considerably shorter than two, four shorter than three, four to ten each differing but little in length and breadth, the first of them a little longer than broad, the last scarcely so long as broad; eleventh joint rather stout, about twice as long as the tenth. Head small, narrower than the thorax, only about half the width of the elytra; narrowed behind the eyes; very closely and finely punctured; covered with a short, fine, and dense pubescence. Thorax subquadrate, nearly as long as broad; much narrower than the elytra; a little narrowed behind, with a broad shallow impression in the middle before the base; densely and finely punctured, and pubescent. The elytra are broad, rather broader than long; nearly one-third longer than the thorax; like it very densely punctured and pubescent. The abdomen is not quite so dull as the fore parts; all the segments very densely and finely punctured, and covered (except at the extreme base of each segment, which is rather shining) with a depressed pubescence. The legs are testaceous, more or less infusate; the tarsi rather short and stout.

The sexes are easy to distinguish, but I am not quite certain which is the male; in that which I suppose to be the male, both the upper and lower plates of the seventh segment of the abdomen have the hind margin gently rounded; while in the other sex, the hind margin of the same segment is obsoletely emarginate above, and more evidently so on the underside. The antennæ are a little longer in this sex, so that it may perhaps prove to be the male.

Local: in chalky places on the coast, under seaweed; when found, generally in numbers. Brighton, Seaford, Weymouth.

Obs.—This is a remarkable species, not readily to be confounded with any other; the dense pubescence with which it is covered, giving it a peculiar grayish appearance; the thorax, much narrower than the elytra, is also remarkable.

19. *Homalota fallax*.

Linearis, opaca, omnium subtilissime confertissimeque punctata, pube brevissima densius vestita, nigra, elytris ferrugineis, antennis fusco-testaceis, pedibus testaceis; antennis apicem versus vix incrassatis; capite thoraceque elytris vix angustioribus; thorace subquadrato; elytris hoc paulo longioribus; abdomine opaco, undique subtilissime confertissimeque punctato. Long. $1\frac{1}{4}$ - $1\frac{1}{3}$ lin.

Mas; abdomine segmento 7° ventrali angustiore, et magis producto.

Fem.; abdomine segmento 7° ventrali apice, supra et infra, rotundato.

H. fallax, Kr. Ins. Deutsch. ii. 227.

A remarkable species; its punctuation and pubescence being rather those of an *Oxyptoda* than a *Homalota*. Antennæ moderately stout, scarcely thickened towards the apex; third joint a little shorter than the second; four to ten differing but little from one another in length, but each one slightly broader than the preceding; the first of them distinctly, the last of them scarcely, longer than broad; eleventh joint not quite twice as long as the tenth. Head but little narrower than the thorax, a little broader behind the eyes, extremely densely and finely punctured. Thorax scarcely narrower than the elytra, subquadrate; a little broader than long, scarcely narrowed behind, with a shallow impression in the middle in front of the base, from which proceeds a very indistinct channel; extremely densely and finely punctured. Elytra but little longer than the thorax, lighter in colour than it and the head, brownish, darker towards the base, their length scarcely so great as their width, very densely and finely punctured. The abdomen is very dull; all the segments extremely densely and finely punctured, and entirely covered with a very short dense pubescence; the posterior margins of the segments and the anus brownish. Legs reddish-testaceous, the posterior tarsi long and slender, their basal joint being nearly twice as long as the second.

In the male, the under plate of the seventh segment of the abdomen is much narrower, and is more produced than in the female.

The only locality I know for this remarkable species is Hammersmith Marshes, near London; where it was formerly not uncommon among dead leaves in winter and spring.

Obs. I.—The punctuation and pubescence of this species are entirely those of an *Oxyopoda*, to which genus it approaches, moreover, in the structure of its posterior tarsi.

Obs. II.—Kraatz says that *H. fallax* is found exclusively on the coast; this would raise a suspicion that his species is not the same as the one I have described above. I have never seen a foreign example of *H. fallax*, Kr., but can find no discrepancy between Kraatz's description and my numerous specimens from Hammer-smith. I am not aware that the species has ever been found on the coast in this country.

Group IV. *Male without tubercle or keel on the sixth segment; abdomen with the sixth segment nearly impunctate, the others pretty closely punctured, the fifth often more sparingly than the fourth.* (Species 20—27).

A natural group, the species of which live among moss and leaves, in damp, and sometimes in muddy places. *H. elongatula* is often found in great numbers, running on the banks of rivers and ponds.

20. *Homalota luridipennis*.

Lata, sat depressa, nigro-fusca, antennarum basi elytris pedibus anoque testaceis, abdominis segmentorum marginibus ferrugineis, confertim subtiliter punctata; thorace transversim subquadrato; abdomine supra segmentis 2-4 confertim subtiliter punctatis, 5° sparsim punctato, 6° fere lævigato. Long. 2 lin.

Mas; abdomine segmento 7° dorsali apice medio leviter emarginato, ventrali recurvo, valde triangulariter producto, apice ipso emarginato-truncato.

Fem.; segmento 7° dorsali apice medio obsoletissime emarginato, ventrali apice rotundato.

Bolitochara luridipennis, Man. Précis, p. 77; *H. luridipennis*, Kr. Ins. Deutsch. ii. 221; *Atheta producta*, (Muls.), Th. Sk. Col. iii. 66.

A large, broad, rather dull, and depressed species. Antennæ moderately long and stout, a little thickened towards the apex, fuscous, with the base lighter; joints

two and three of about equal length, four to ten differing little from one another in length, but each one a little stouter than its predecessor, the first of them longer than broad, the last of them scarcely so long as broad; eleventh joint half as long again as the tenth. Palpi testaceous. Head broad, rounded, a little narrower than the thorax, closely and finely punctured, the vertex flattened in the male. Thorax a little narrower than the elytra, about one-third broader than long, scarcely at all narrowed behind; its disc flat, with an indistinct impression in the middle in front of the base, closely and finely punctured. The elytra are yellowish, about one-third longer than the thorax, their length not quite so great as their breadth, their punctuation dense and fine. The margins of the segments of the abdomen are brownish, and the extremity is lighter in colour; segments two to four are pretty thickly and finely punctured; fifth segment sparingly punctured; sixth nearly impunctate. The legs are yellow, rather robust.

In the male, the upper plate of the seventh abdominal segment has the hind margin emarginate in the middle, while the under plate is very much produced, and turned upwards; the sides of the produced part are not evenly rounded, but suddenly narrowed in the middle; the extreme apex is narrow, and emarginate.

In the female, the upper plate of the seventh segment is obsoletely emarginate at the apex, while the under plate is not produced, and the posterior margin is gently rounded.

Generally distributed, and not uncommon in damp places, on the banks of rivers, &c., in both England and Scotland.

Obs.—This species is allied to *H. elongatula*, but is readily distinguished by its broader, more robust form, more transverse thorax, and the extraordinary structure of the seventh segment of the abdomen in the male.

21. *Homalota londinensis*.

Linearis, nigra, antennarum basi elytris pedibus anoque rufo-testaceis, confertim subtiliter punctata; antennis sat tenuibus, articulo penultimo leviter transverso; capite medio canalicula brevi; thorace subquadrato,

longitudine latitudine haud brevior; abdomine segmentis 2-4 crebre subtiliter punctatis, 5° parce punctato, 6° fere lævigato. Long. 2 lin.

Mas; abdomine segmento 7° ventrali producto, apicem versus angustato, apice ipso emarginato-truncato.

Fem.; abdomine segmento 7° supra et infra apice rotundato.

Var.—Rufo-testacea, capite abdomineque cingulo ante apicem fuscis.

Very like a large brightly-coloured *H. elongatula*, but still larger than the largest of that species. Antennæ moderately long and slender, but little thickened towards the apex, pitchy, with the basal joints reddish-testaceous; joints two and three of about equal length, four to ten each one a little shorter and broader than its predecessor, the first of them longer than broad, the last of them not quite so long as broad; eleventh joint moderately long, not quite so long as the tenth. Palpi, and parts of the mouth, reddish-yellow. Head narrower than the thorax, suborbiculate, with a distinct short channel on the vertex finely but not closely punctured. Thorax a little narrower than the elytra, about as long as broad, not narrowed behind, with a longitudinal channel in the middle; closely and finely punctured; scarcely black in colour, generally more or less distinctly reddish-brown. Elytra about a third longer than the thorax, their length slightly greater than their width, of a reddish or brownish-red colour, closely and finely punctured. Abdomen black, with the extremity, as well as the hind margins of the segments, more or less distinctly reddish-yellow; segments two to four closely and finely punctured, fifth more sparingly, sixth nearly smooth. Legs reddish-yellow.

In the male, the under plate of the seventh segment of the abdomen is produced, and narrowed towards the apex, but scarcely bent upwards; the apex itself is truncate, and a little emarginate; the hind margin of the upper plate is not at all emarginate. In the female, the upper and under plates of the seventh segment both have the hind margin gently rounded.

This species varies considerably in colour.

Not uncommon in marshy places in the neighbourhood of London. It occurs elsewhere, but, apparently, more

rarely. I have a specimen from as far north as Inverness-shire, and have also seen the species from Germany.

H. londinensis may readily enough be mistaken for any of three other species, *luridipennis*, *elongatula*, and *terminalis*. From *luridipennis* it is distinguished by its narrow form, bright colour, not transverse thorax, and less marked male characters. From *elongatula* its larger size, brighter colour, rather more transverse penultimate joints of the antennæ, and the male characters (approaching *luridipennis*) distinguish it. It has much the colour of *terminalis* (a species not yet found in Britain), but has slender antennæ, which are also darker in colour; it is larger, and has different male characters.

22. *Homalota hygrotopora*.

Lator, fusco-nigra, antennis piceis, basi piceo-testaceis, elytris fuscis, pedibus obscure testaceis, confertim subtiliter punctata; thorace transversim subquadrato; abdomine supra segmentis 2-4 sat crebre subtiliter punctatis, 5° sparsim punctato, 6° fere lævigato. Long. $1\frac{3}{4}$ lin.

Mas; abdomine segmento 7° ventrali evidenter producto, apicem versus angustato, apice ipso rotundato-acuminato.

H. hygrotopora, Kr. Ins. Deutsch. ii. 220; Wat. Cat. *H. opacula*, Th. Sk. Col. ix. 272 (forte).

Like *H. elongatula*, but larger, broader, of a more obscure colour. The antennæ are moderately slender, scarcely thickened towards the apex; pitchy black, obscurely paler at the base; joints two and three moderately long, two a little longer than three, four to ten differing but little in length, the first of them longer than broad, the last of them about as long as broad; eleventh joint about half as long again as the tenth. Palpi pitchy-yellow. Head rather broad, narrower than the thorax, the disc flat, finely, not very thickly punctured, dull. Thorax narrower than the elytra, about one-third broader than long, scarcely narrowed behind, with an indistinct impression in the middle in front of the scutellum; very finely and pretty densely punctured. The elytra are of an obscure pitchy-brown colour; about one-third longer than the thorax, their length not quite so

great as their breadth. Abdomen black, shining; segments two to four pretty finely and thickly punctured, fifth segment more sparingly punctured, sixth nearly impunctate; the extreme apex obscurely pitchy. Legs pitchy-testaceous.

In the male the under plate of the seventh abdominal segment is much produced, narrowed towards the apex; the apex is not pointed, but formed by the meeting of two gentle curves.

This species is generally distributed in England and Scotland. It is fond of very wet places, in marshes, and on the banks of streams and rivers.

Obs.—Thomson's *H. hygrobia* is said to be this species (*vide* Kr. Berl. Ent. Zeit. 1860, p. 99), but his description does not bear this out; moreover, Thomson in his 9th vol., when going over the synonymy of the genus, does not quote Kraatz's *hygrotopora* as a synonym of his *hygrobia*. On the other hand the description by Thomson (*loc. cit.*) of *H. opacula* seems to agree very well with this species. I think it not improbable that *H. hygrobia*, Th., will prove to be a var. of *H. elongatula*.

23. *Homalota elongatula*.

Linearis, nigra, subnitida, elytris antennisque fuscis, harum basi pedibusque testaceis, confertim subtiliter punctata; thorace subquadrato; abdomine supra segmentis 2-4 sat crebre punctatis, 5° sparsius punctato, 6° fere lævigato. Long. 1½ lin.

Mas; abdomine segmento 7° ventrali evidenter producto, apicem versus sat angusto.

Fem.; segmento 7° dorsali apice medio obsolete emarginato.

Aleochara elongatula, Grav. Mic. Bruns. 79; *H. elongatula*, Er. (*ex parte*) Gen. et Spec. Staph. 89; Kr. Ins. Deutsch. ii. 216; *Atheta elongatula*, Th. Sk. Col. iii. 67.

A moderate-sized, rather narrow and elongate species, varying somewhat in colour and size. The antennæ are rather long, scarcely thickened towards the apex; joints two and three rather long and slender, three not quite so long as two, four to ten differing little from one another, the first of them longer than broad, the last of them about as long as broad; eleventh joint not quite twice the length of

the tenth. The palpi are yellowish, with the last joint more or less infuscate. The head is narrower than the thorax, suborbiculate, the disc moderately convex, very finely and not very closely punctured. The thorax is but little narrower than the elytra, subquadrate, the length being about equal to the breadth, scarcely narrowed behind, with or without a central longitudinal channel, finely and closely punctured. The elytra vary in colour, being sometimes reddish-brown, sometimes pitchy-black; they are about one-third longer than the thorax; subquadrate, their length being about equal to their breadth; closely and finely punctured. The abdomen is black and shining, more or less distinctly yellow at the apex; segments two to four pretty closely and finely punctured, fifth segment more sparingly punctured, sixth nearly smooth. Legs yellow.

In the male, the under plate of the seventh segment of the abdomen is narrow, and projects considerably beyond the upper plate; its hind margin is gently rounded.

In the female, the upper plate of the seventh segment is slightly emarginate in the middle, while the under plate is broader than the same part in the male, and does not project beyond the upper plate.

Extremely common all over the kingdom, in moss, and wet places, on the banks of rivers, &c.

24. *Homalota volans*.

Linearis, antennis sat tenuibus, articulis penultimis quadratis, crebre subtiliter punctata; thorace transversim subquadrato; abdomine segmentis 2-4 sat crebre subtiliter punctatis, 5° sparsius punctato, 6° fere lævigato. Long. $1\frac{1}{4}$ - $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° ventrali vix producto, apice rotundato.

Fem.; segmento 7° dorsali apice rotundato.

H. volans, Scriba, Stet. Ent. Zeit. 1859, p. 413.

This species, distinguished from *H. elongatula* by Herr Scriba, is extremely variable, and most difficult to characterize. Some of its varieties approach extremely closely to *H. elongatula*, but it is, I think, a really distinct species. Compared with *H. elongatula*, it has less developed antennæ, these being a little more slender,

and a little shorter than in *elongatula*; the second joint is rather longer in proportion to the third, and each joint is generally rather more narrowed towards the base. *Volans* is generally smaller than *elongatula*, and the specimens of equal size with *elongatula* are broader in proportion (though the smallest variety of *volans* is, comparatively, narrower than *elongatula*). The thorax of *H. volans* is shorter than that of *H. elongatula*, and the male and female characters offer constant distinctive characters. The male of *H. elongatula* has the ventral portion of the seventh segment narrow, and produced considerably beyond the upper plate, while in *volans* the same part is broader, shorter, and more evenly rounded, and projects but little beyond the upper plate.

In the female of *H. elongatula*, the upper plate has the apex in the middle a little emarginate, while in *volans* the outline of the hind margin is not interrupted. The setæ towards the apex of the abdomen are in each sex of *H. volans* more numerous than in *elongatula*.

The type of *H. volans* is $1\frac{3}{8}$ - $1\frac{1}{2}$ lin. long; the antennæ are moderately long and slender, of an obscure ferruginous colour. The thorax is about a fourth broader than long, a little narrower than the elytra; these are about a third longer than the thorax. The legs reddish-yellow.

Var. a.—Smaller than the type, more especially narrower and more parallel, the thorax rather longer, and a little more narrowed behind; the antennæ and legs of a dusky yellow.

Var. β.—Rather larger and more robust than the type, the colour of the legs, antennæ, and elytra, brighter.

Var. γ.—Like *β*, but still brighter in colour, with a more transverse thorax, this part appearing therefore more narrowed behind.

Var. δ.—Broader and more depressed than the type; black, with the antennæ pitchy and slender; the head small in proportion to the thorax, and the thorax more transverse, being fully one-third broader than long (? *H. melanocera*, Th.).

Though the extreme forms of these varieties might be considered distinct species, yet they are connected with the type by intermediate specimens in the most unmis-takeable manner. They occur more or less as races; that

is to say, that in a given spot the greater portion of the specimens found may be referred to one or other of the varieties. The type and var. β are the commonest, more especially in the south; var. α is rare, I have found single specimens of it at different times near Thornhill; var. γ is rare, but generally distributed; of var. δ , the extreme forms are to be found only among the Scotch hills, in shady and wet places, but I have from Wimbledon Common numerous specimens intermediate between it and the type.

The varieties might be increased to an indefinite extent, by taking into consideration the channelling of the thorax, the colour of the extremity of the abdomen, and of the elytra, &c.

Obs.—I am strongly inclined to think that several of the species of *Homalota* described by Thomson as allied to *H. elongatula* will prove to be forms of *H. volans*. Indeed, a specimen of *Atheta halophila* which Mr. Crotch has received from Herr Thomson is certainly not specifically distinct from *H. volans*.

25. *Homalota clavipes*.

Linearis, nigra, sat nitida, subtiliter sat confertim punctata, antennis pedibus anoque fusco-testaceis; thorace subquadrato, elytris hujus longitudinis; abdomine supra segmentis 2-4 confertim subtiliter, 5-6 sat sparsim punctatis. Long. $1\frac{3}{4}$ lin.

Mas; segmento 7° ventrali distincte producto.

Fem.; segmento 7° ventrali haud producto, apice medio obtuse angulato.

Var.—Capite medio canalicula brevi.

Resembles a large dark coloured *elongatula*. Antennæ pitchy-testaceous, with the base a little paler, moderately long, a little thickened towards the apex; joint two rather longer than three; joints four to ten varying but little in length, but each one a little broader than the one before it, the fourth joint longer than broad, the tenth about as long as broad; the eleventh not quite twice the length of the tenth. Palpi pitchy-testaceous. Head narrower than the thorax, pretty densely and finely punctured, sometimes with a distinctly impressed short channel on the disc, sometimes with an indistinct fovea, and sometimes convex. The thorax is very nearly as

broad as the elytra, its length about equal to its breadth, scarcely visibly narrowed behind, finely but not densely punctured, with an indistinct impression in front of the scutellum, from which proceeds a short channel, varying in distinctness, and sometimes absent. Elytra pitchy-black, not longer than, or scarcely so long as, the thorax, finely and pretty densely punctured. Segments two to four of the abdomen are finely, evenly, and densely punctured; the punctuation of the fifth and sixth segments is more sparing, but distinct; the extremity of the abdomen is obscurely paler. The legs are pitchy-testaceous.

In the male, the ventral plate of the seventh segment of the abdomen is narrower than in the female, and projects considerably beyond the upper plate; its hind margin is flattened, and sometimes appears emarginate in the middle.

This species can only be confounded with *H. elongatula*, but it is a little larger, darker, and more shining; the elytra are shorter, and the punctuation of the abdomen is throughout denser and more even than in *H. elongatula*.

Found hitherto only on the higher mountains of Scotland, Ben Lomond, Mamsoul, &c.

26. *Homalota tibialis*.

Linearis, nigra, sat nitida, pedibus piceis; thorace subquadrato, elytris hoc fere brevioribus; abdomine supra segmentis 2-4 parce punctatis, 5-6 fere lævigatis. Long. $1\frac{1}{3}$ lin.

Mas; abdomine segmento 7° ventrali producto, apicem versus angustato.

Fem.; abdomine segmento 7° ventrali margine posteriore medio subtiliter emarginato.

H. tibialis, Heer, Faun. Col. Helv. 335; Kr. Ins. Deutsch. ii. 325; Wat. Cat.

This species is readily distinguished by its deep black colour, its rather narrow elongate form, and its short elytra, only the length of the thorax. The antennæ are pitchy, or pitchy-black, with the basal joint obscurely paler; they are a little thickened towards the apex; joints two and three of about equal length; four and five each about as long as broad, the fourth smaller than the

fifth ; the following joints differ but little in length, each is a little broader than its predecessor ; the penultimate joints each a little broader than long ; the eleventh joint is rather stout, about half as long again as the tenth. The head is a little narrower than the thorax ; the disc flattened, and somewhat depressed in the male ; in the female convex and with a small fovea, sparingly and indistinctly punctured. The thorax is about as broad as the elytra, about a fourth broader than long ; the sides nearly straight, very slightly narrowed behind, very finely and not closely punctured, moderately shining, with an indistinct impression in front of the scutellum. The elytra are about as long as the thorax, black or pitchy-black, rather sparingly punctured, but more distinctly than the thorax, pubescence fine and scanty. The abdomen is black and shining, segments two to four sparingly punctured, fifth still more sparingly punctured, sixth nearly impunctate. Legs pitchy, or pitchy-yellow, tarsi rather stout.

In the male, the under plate of the seventh segment of the abdomen is considerably produced and narrowed towards the apex ; in the female, the apex of this plate is broad, not produced, a little emarginate in the middle, and furnished with short parallel black cilia.

Common on the hills of Scotland, Wales, and the north of England.

Obs.—It is remarkable that no one of the three species restricted in this country to the hills (viz., *tibialis*, *eremita*, and *clavipes*,) appears to have yet been found in Sweden.

27. *Homalota gregaria*.

Linearis, vix nitida, dense subtiliter punctata, fusconigra, antennis pedibusque fusco-testaceis ; antennis sat validis, apicem versus vix incrassatis ; thorace subquadrato ; abdomine supra segmentis 2-5 crebre subtiliter punctatis, 6° fere lævigato. Long. $1\frac{1}{3}$ - $1\frac{1}{2}$ lin.

Var.—Minor, elytris antennis pedibusque testaceis.

H. gregaria, Er. Gen. et Spec. Staph. 87 ; Kr. Ins. Deutsch. ii. 215 ; Wat. Cat. *Tachyusa immunita*, Er. Gen. et Spec. Staph. 916 ; *Aloconota immunita*, Th. Sk. Col. iii. 10.

Somewhat like a small *H. elongatula*, but with a peculiar dullish appearance, and at once to be distinguished from that species by the punctuation of the abdomen, and the structure of the posterior tarsi. The antennæ are rather stout for a species of this section, pitchy-testaceous, a little thickened towards the apex; joints two and three rather long, and of nearly equal length; from the fourth to the tenth each one is just a little shorter and broader than the preceding one, the tenth scarcely so long as broad, the eleventh rather stout and about twice the length of the tenth. The palpi are pitchy-testaceous. The head is narrower than the thorax, dull; the punctuation so fine as to be scarcely visible. The thorax is evidently narrower than the elytra, but little narrowed behind, the length about equal to the breadth, very finely and closely punctured, with a more or less distinct broad shallow impression in the middle in front of the base. The elytra are scarcely a fourth longer than the thorax, closely and finely punctured. The abdomen has segments two to five above, closely, finely, and evenly punctured, the punctuation of the fifth segment being a little more sparing than that of the fourth; the sixth segment is nearly impunctate. The legs are yellow, more or less pitchy; the posterior tarsi long and slender, the basal joint nearly twice as long as the second.

The male is with difficulty distinguished from the female by the upper and under plates of the seventh abdominal segment being narrower than in the other sex. The impression at the base of the thorax is often more evident in the male than in the female.

A very abundant species all over the country, and one which occurs in very different spots.

Obs.—Out of some hundreds of specimens, I find only one that can be considered a variety; it is much smaller, and generally paler in colour than ordinary *H. gregaria*.

Group V. *Abdomen with the basal segments sparingly punctured, the apical ones nearly impunctate.*

(Species 28—35).

Of this group *H. vestita* and *silvicola* are somewhat discordant members; the male characters of these two are different from the rest. *H. silvicola* indeed exhibits a considerable resemblance to the *merdaria* group. *H. vestita* is confined to the coast; the other species are found among moss, dead leaves, &c.

28. *Homalota vestita*.

Nigra, elytris ferrugineis, antennarum basi plus minusve pedibusque testaceis, corpore anticè pube flavescente sat dense evidentius vestito; capite et thorace sat fortiter distincte punctatis, hoc basin versus evidenter angustato; abdomine supra basi parce punctato. Long. $1\frac{2}{3}$ lin.

Mas; abdomine segmento 7° ventrali vix producto, apice rotundato.

Fem.; segmento 7° ventrali haud producto, apice medio late haud profunde emarginato.

Pæderus vestitus, Grav. Mon. 140; *H. vestita*, Er. Gen. et Spec. Staph. 84; Kr. Ins. Deutsch. ii. 208; Wat. Cat. *Thinobæna quisquiliarum*, Th. Sk. Col. iii. 59.

This species is distinguished from its allies by the punctuation of its head, thorax, and elytra, which is more distinct and sparing than usual. The pubescence with which it is clothed is yellowish, and like the punctuation, is more conspicuous, though less dense, than in the neighbouring species.

The antennæ are moderately stout, but little thickened towards the apex, varying in colour, but with the basal joints yellow, and rather paler in colour than the apical ones; joints two and three of nearly equal length; four to ten differing but little in length, the first of them longer than broad, the last not quite so long as broad; eleventh joint half as long again as the tenth. The head is narrower than the thorax, black and shining, distinctly but not closely punctured, the punctures not covering the central part. The thorax is narrower than the elytra, its length about equal to its breadth, distinctly narrowed behind, with a central longitudinal channel varying in distinctness, rather coarsely, but not closely punctured. Elytra obscurely brown, or yellowish-brown, a little longer than the thorax, and moderately closely and coarsely punctured. The abdomen is black and shining, with the apex obscurely paler, the basal segments are sparingly punctured, the fifth even more sparingly than the fourth, sixth nearly impunctate. The legs are of a yellowish colour, the posterior tarsi rather long and moderately stout, with the claws more developed than usual.

The male has the under plate of the seventh segment of the abdomen projecting a little beyond the upper plate, and its apex is rounded; while in the female, the under plate does not project beyond the upper, and its hind margin is emarginate in the middle.

Abundant under sea-weed on the coasts of England and Scotland.

Obs.—Thomson has reversed the sexes of this species.

29. *Homalota nitidula*.

Nigra, nitidula, elytris vel piceis vel brunneis, pedibus piceo-testaceis; subtiliter sat confertim punctata; thorace subquadrato, postice haud angustato; abdomine supra segmentis 2-4 parcius punctatis, 5 et 6 fere lævigatis. Long. $1\frac{3}{4}$ -2 lin.

Mas; abdomine segmento 7° supra parce subtiliter granulato, margine apicali truncato et obsolete crenulato.

Fem.; abdomine segmento 7° supra et infra margine apicali rotundato.

H. nitidula, Kr. Ins. Deutsch. ii. 211; Wat. Cat.; *Atheta nitidula*, Th. Sk. Col. iii. 64.

Var.—Angustior, antennis tenuioribus, thorace paulo longiore, elytris thoracis longitudinis. *Hab.* in montibus Scotiæ.

This species varies a good deal in the colour of the legs, antennæ, and elytra. The antennæ are generally black, more or less pale at the base, moderately stout, but little thickened towards the apex; joints two and three of about equal length; four to ten scarcely differing in length, but each a little broader than the preceding one, the fourth longer than broad, the tenth not so long as broad; eleventh joint moderately long and rounded, about twice the length of the tenth. Head black and shining, smaller than the thorax, sparingly and finely punctured. The thorax is but little narrower than the elytra, scarcely a third broader than long, not narrowed behind, finely and rather sparingly punctured, with an obsolete impression in front of the scutellum, but not channelled. The elytra are a little longer than the thorax, but more closely and distinctly punctured. The abdomen is shining black, with the basal segments sparingly but distinctly punctured, the apical ones almost impunctate. The legs pitchy-yellow.

In the male, the seventh segment of the abdomen is, on the upper side, sparingly sprinkled with small granulations, its apical margin is truncate and obsoletely crenulate.

In the female, the upper and under plates of the seventh segment have the hind margin gently rounded.

The type of this species (that described above) occurs very rarely in the South of England, sometimes in the nests of *Formica fuliginosa*.

In the north of Scotland, on Mamsoul, I have captured a series of about two dozen specimens of a *Homalota*, which may, perhaps, prove a distinct species from that described above, though I think them only a variety. They are lighter in colour, and not quite so shining, and are narrower, especially towards the front; the antennæ are a little thinner, the thorax is longer and narrower, so that its length is about equal to its breadth, and the elytra are but little, if at all, longer than the thorax. The male characters are the same as in our Southern specimens. I have not seen a sufficiently large series of the Southern form to be able to judge to what extent it varies; but should these Scotch specimens prove a distinct species, the name *nitidiuscula* may be applied to it. Two or three examples taken on the hills about Thornhill appear to be somewhat intermediate.

Obs. I.—A German specimen of *H. nitidula*, sent by Kraatz to the British Museum, agrees entirely with our Southern examples.

Obs. II.—*H. nitidula* is only likely to be confounded with *H. graminicola*, but is readily distinguished from it by its stouter antennæ, and the much finer punctuation of its elytra.

30. *Homalota oblongiuscula*.

Nigra, nitidula, elytris vel ferrugineis vel fuscis, pedibus fusco-testaceis, subtiliter sat confertim punctata; antennis sat validis, apicem versus incrassatis; thorace transversim subquadrato; abdomine supra basi parcius punctato, apice lævigato. Long. $1\frac{1}{2}$ - $1\frac{3}{4}$ lin.

Mas; antennis articulo tertio incrassato, capite utrinque fortius punctato; abdomine segmento 7° dorsali obsoletissime crenulato, ventrali subproducto.

H. oblonga, Wat. Cat.

Var.—Thorace medio ante basin obsolete bi-impresso.

Very like *H. vicina*, and but little smaller; the antennæ are black, stout, and distinctly thickened towards the apex; second and third joints rather stout, of about equal length (the third joint thicker in the male than in the female); joints four to ten differ but little in length, the first of them is a little longer than broad, the last of them not so long as broad; the eleventh joint rather long, twice the length of the tenth. The head is much smaller than the thorax, black and shining, distinctly but not densely punctured; the disc more flattened in the male, and the punctuation much more distinct. The thorax is but little narrower than the elytra, not, or scarcely at all, narrowed behind, its breadth about one-third greater than its length, finely and not very densely punctured, not channelled. The elytra are generally of an obscure brownish colour, sometimes pitchy, not much longer than the thorax, finely and pretty densely punctured. The abdomen is black and shining, the basal segments sparingly and finely punctured, the apical ones almost impunctate. The legs are testaceous, more or less dusky, the femora not darker than the tibiæ.

The male differs in several points from the female. The antennæ have the third joint stouter than in the female, and the other joints slightly shorter; the punctuation of the head is much more distinct; the seventh segment of the abdomen, on the upper side, has the hind margin obsoletely crenulate; and the ventral plate is more produced than in the female, though but little narrower.

Not common, but pretty generally distributed in England and Scotland.

H. oblongiuscula sometimes greatly resembles *H. vicina*, but is readily distinguished, amongst other characters, by its rather stouter antennæ, shorter elytra, and the thighs not darker than the tibiæ. From *H. nitidula* its smaller size and comparatively stouter antennæ distinguish it.

Obs.—*H. oblongiuscula* is very closely allied to *H. oblonga*, Kr. It is smaller, has a shorter thorax, which is without any broad shallow impression at the base, and it has less developed and darker coloured antennæ. Judging from Thomson's description, Sk. Col. ix. 266, *Liogluta microptera* should be one or the other of these two species; or, at any rate, is very closely allied.

31. *Homalota silvicola*.

Nigra, nitidula, antennis validis, piceo-testaceis, basi dilutiore, articulo ultimo magno, conico; thorace subquadrato; elytris thorace paulo longioribus, læte brunneis, evidentius punctatis; abdomine supra basi distincte minus crebre punctato, apice fere lævigato; pedibus testaceis. Long. $1\frac{3}{4}$ - $2\frac{1}{8}$ lin.

Mas; abdomine segmento 7° ventrali producto, angustato, apice rotundato.

Fem.; segmento 7° ventrali haud producto, apice lato, vix rotundato.

H. silvicola, Fuss, Berl. Ent. Zeit. xii. 1868, p. 353. *H. hypnorum*, Sharp, Trans. Ent. Soc. Lond. 3rd ser. v. 450; *Liogluta hypnorum*, Th. Sk. Col. ix. 265 (forte).

N.B.—Species antennarum prothoracisque structura variabilis.

A large fine species, with remarkable antennæ; these are stout and thickened towards the apex, bright reddish-testaceous at the base, and more or less infuscate towards the apex; the first joint stout, two and three moderately long, the latter a little the longer; in different specimens the intermediate joints of the antennæ differ considerably in length, the fourth is sometimes a little longer than broad, sometimes even broader than long; after the fourth, the joints differ but little from another in length, but each one is a little broader than its predecessor, more so in some specimens than others; the intermediate joints are more or less transverse, the tenth always broader than long, sometimes strongly transverse, the eleventh is stout and remarkably long, about as long as the three preceding joints; it is of a more or less dusky testaceous colour, and generally lighter in colour than the preceding joints. The head is rather small, much smaller than the thorax; black and shining, finely and sparingly punctured. The thorax is somewhat narrower than the elytra, variable in length, sometimes nearly as long as broad, sometimes one-third broader than long; very little narrowed behind, pretty finely and not densely punctured; with an impression in front of the scutellum, from which proceeds a short, more or less distinct channel. The elytra are a little longer than the thorax, of a bright brownish colour, indistinctly darker about the scutellum and at the apical margins; thickly

and rather strongly punctured; shining, but with a well marked pubescence. The abdomen is black and shining, with the segments two to four distinctly but not densely punctured; fifth segment very sparingly punctured, sixth almost impunctate. Legs yellow.

In the male, the ventral plate of the seventh segment of the abdomen is narrower and more produced than in the female, its apex forming as it were the half of an oval.

Rare. Found at Shirley Common near London, and in moss in different parts of Scotland; Dumfries, Strath Cannich.

The remarkable terminal joint of the antennæ of this species, should prevent its being confounded with any other of this section.

Obs. I.—I am indebted to Herr Scriba for an opportunity of examining Herr Fuss's type of *H. silvicola*; it is undoubtedly a female of the present species, with longer thorax and longer antennæ than the average of specimens, the latter are also less thickened towards the apex than usual in this species.

Obs. II.—*H. silvicola* must be closely allied to *H. micans*, Muls. (*hypnorum*, Kies.) to which species indeed I formerly referred a very large and fine female specimen, found by me in Inverness-shire. I have never had an opportunity of examining an authentic example of *H. micans* or *hypnorum*, all the specimens I have seen named as that species being varieties of the present insect. Thomson's description of *Liogluta hypnorum* seems to me also clearly to point to the species I have described above.

32. *Homalota vicina*.

Nigra, nitida, elytris fuscis disco testaceis, pedibus fusco-testaceis, femoribus obscurioribus, subtiliter punctata; thorace transversim subquadrato; abdomine supra parce subtiliter punctato, segmento 2° dorsali medio tuberculo parvo. Long. $1\frac{3}{4}$ lin.

Mus.; abdomine segmento 2° tuberculo evidentiore, 7° dorsali subtiliter granulato, margine apicali medio obscure acuminato.

Fem.; abdomine segmento 2° tuberculo minore, 7° ventrali medio late obsolete emarginato.

Aleochara vicina, Steph. Ill. Brit. Ent. v. 116; *H. vicina*, Wat. Cat. *H. umbonata*, Er. Gen. et Spec. Staph. 82; Kr. Ins. Deutsch. ii. 209; *Liogluta umbonata*, Th. Sk. Col. iii. 56.

This species is remarkable by the small tubercle at the base of the second segment of the abdomen. The antennæ are black, rather stout, a little thickened towards the apex; joints two and three rather long, of about equal length, four to ten differing but little in length, the first of them longer than broad, the last of them scarcely so long as broad; eleventh about twice as long as the tenth. Head black and shining, much narrower than the thorax, a little narrowed behind the eyes, which are rather large and prominent, with an indistinct impression behind the insertion of the antennæ, so that the middle part of the head in front appears raised; sides sparingly and finely punctured, the middle black, shining and impunctate. Thorax a little narrower than the elytra, not narrowed behind; about a third broader than long, finely but rather sparingly punctured, with an impression in front of the base in the middle. The elytra are a third longer than the thorax, of a blackish colour at the base and edges, the middle of a lurid testaceous, finely and pretty closely punctured. The abdomen is black and shining, the basal segments very sparingly punctured, the apical ones impunctate; the second segment has in the middle a small tubercle, very indistinct in the female. The legs are pitchy testaceous, the thighs always darker than the tibiæ.

The male has the abdominal tubercle on the second segment larger than in the female. The dorsal plate of the seventh segment is sprinkled with small tubercles, and its hind margin projects a little in the middle.

In the female, the under plate of the seventh segment is broader and shorter than in the male, and has its hind margin broadly but obsoletely emarginate.

Abundant all over the country.

This species is distinguished by its dark black colour, and the lighter disc of the elytra; in this respect *H. triangulum* somewhat resembles it, but that species is not so shining, and is without any tubercle on the second segment of the abdomen.

Obs.—As Stephen's description of *Aleochara vicina* is pretty clearly recognizable as this species, and is anterior to Erichson's *umbonata*, I have adopted his name.

33. *Homalota crassicornis*.

Nigro-picea, nitidula, antennis fusco-testaceis, basi dilutiore, elytris testaceo-brunneis, pedibus testaceis; thorace transversim subquadrato; elytris thorace paulo longioribus, alutaceis; abdomine supra antice parcius punctato, apice lævigato. Long. $1\frac{2}{3}$ lin.

Mas; thorace medio late bi-impresso, abdomine segmento 7° dorsali confertim granulato, utrinque apicem versus granulo dentiformi majore, margine apicali medio obtuse acuminato.

Fem.; abdomine segmento 7° supra et infra late rotundato.

Aleochara crassicornis, Gyll. Ins. Suec. iv. 486; *Lio-gluta crassicornis*, Th. Sk. Col. iii. 56. *H. granigera*, Kies. Stet. Ent. Zeit. xi. 218; Kr. Ins. Deutsch. ii. 207.

A shining and brightly coloured species, narrow (especially in front) in comparison with its length. The antennæ are rather long, not stout, thickened towards the apex; joints two and three long and slender, three longer than two, four to ten differing but little in length, but each one a little broader than its predecessor, the fourth and following joints longer than broad, but the tenth scarcely so long as broad; eleventh about as long as the two preceding joints. Head considerably narrower than the thorax; shining, nearly black, rather sparingly punctured, the punctures rather large but very shallow. The thorax is a little narrower than the elytra; pitchy-black, and rather shining; nearly a third broader than long, not narrowed behind, its punctuation rather sparing and shallow, but distinct; in the male with a broad impression on the disc. The elytra are a little longer than the thorax, of a testaceous brown colour, obscurely darker about the base and towards the margins, alutaceous. The abdomen is pitchy-black, with the posterior edges of the segments more or less pale, shining, the basal segments very sparingly punctured; fifth and sixth segments nearly impunctate. Legs yellow.

In the male, the thorax has a broad impression on the disc, formed by two longitudinal impressions nearly united. The seventh segment of the abdomen is thickly sprinkled with very distinct granulations, one of these on each side at the apex being larger and thickened at the front; its

hind margin is thickened and a little produced in the middle, which forms, therefore, an obtuse angle. The head also has sometimes a broad impression.

Of this species, I have seen only three British specimens; they were taken by me in Inverness-shire. They agree specifically with specimens of *H. granigera*, sent by Kraatz to the British Museum.

Obs.—This species is closely allied to *H. pagana*, but is smaller and narrower, especially in front, it is darker in colour and more shining; the hind margin of the seventh segment is of a different shape in the male, and the large granulation on each side at the apex is thickened at its forward end—a slight, but apparently very constant, character.

34. *Homalota pagana*.

Picea, antice subnitida, antennis fuscis, basi pedibusque testaceis, elytris testaceo-brunneis; thorace subquadrato, elytris hoc paulo longioribus; abdomine supra basi parce punctato, apice lævigato. Long. 2-2½ lin.

Mas; abdomine segmento 7° dorsali confertim granulato, apicem versus utrinque granulato dentiformi, apice ipso late rotundato, fere truncato.

Fem.; segmento 7° supra et infra apice late rotundato.

H. pagana, Er. Gen. et Spec. Staph. 83; Kr. Ins. Deutsch. ii. 206; Wat. Cat. *Liogluta arvicola*, Th. Sk. Col. iii. 55.

A large and peculiarly coloured species. The antennæ are long, and moderately stout, but little thickened towards the apex; pitchy in colour, with the base testaceous; basal joint stout, two and three rather long, three longer than two, four to ten differing but little in length, the length of each greater than its breadth; the eleventh about as long as the two preceding. Head nearly black, rather broad, but considerably narrower than the thorax; its punctuation distinct, but not close. Thorax of a pitchy-yellow colour, a little broader than long, a little narrower than the elytra, slightly narrowed behind, distinctly and pretty closely punctured. The elytra are a little longer than the thorax, and lighter in colour than it, their sculpture close and fine, alutaceous (the German expression for this is "lederartig," like leather). The abdomen is

shining, pitchy; the fourth, fifth and sixth segments darker than the base and apex, the basal segments very sparingly punctured, the apical ones impunctate. The legs are yellow.

In the male, the third joint of the antennæ is a little stouter than in the female, and the antennæ are altogether a little longer and stouter; the seventh segment of the abdomen is sprinkled above with distinct granulations, one of these on each side at the apex being longer and more distinct than the others; the hind margin is thickened, and nearly truncate.

Not common, but it occurs in various parts of England and Scotland. London; the Cheviots; Strath Cannich.

Obs.—In this species the second, third, and fourth joints of the antennæ are furnished on the inside with numerous fine white hairs; this character is common, in a greater or less degree, to the males of several species of the genus, but is more easily seen in *H. pagana* than in others.

35. *Homalota graminicola*.

Nigra, nitidula, antennis piceis, pedibus piceo-testaceis; thorace transversim subquadrato, basi impresso; elytris evidenter punctatis; abdomine supra basi parcius punctato, segmentis 5 et 6 fere lævigatis. Long. $1\frac{2}{3}$ lin.

Mas; capite impresso, thorace basi late foveolato, elytris confertim fortiter granulatis, abdomine supra segmento 6° granulis sparsim, 7° confertim asperato, hoc apice truncato et subtiliter crenulato; 7° ventrali producto, apicem versus angustato, apice ipso exciso.

Fem.; segmento 7° ventrali apice late rotundato.

Aleochara graminicola, Grav. Mon. 176; *H. graminicola*, Er. Gen. et Spec. Staph. 81; Kr. Ins. Deutsch. ii. 212; Wat. Cat.; *Atheta graminicola*, Th. Sk. Col. iii. 62.

Var.—Elytris castaneis, antennis pedibusque rufo-testaceis.

A black shining species, with the sculpture of the elytra coarse and distinct. Antennæ slender, rather long, but little thickened towards the apex, pitchy; joints two and three moderately long, three a little longer than two; four to ten differing but little in length, the length of each greater than its breadth; eleventh joint about

twice as long as the tenth. Head black and shining, sparingly and indistinctly punctured, much narrower than the thorax. Thorax narrower than the elytra, not (or scarcely) narrowed behind, its breadth about one and a half times its length, finely and pretty closely punctured, with an impression in front of the base in the middle. The elytra are about a third longer than the thorax, coarsely sculptured, the sculpture consisting of small granulations, shining in the female, duller in the male. The abdomen is black and shining, segments two to four sparingly punctured, five and six nearly impunctate; the apical segment in the male distinctly, in the female sparingly and obscurely, granulate. Legs pitchy testaceous, the femora rather darker than the tibiæ.

In the male, the head has a distinct impression in the middle of the upper surface, the impression at the base of the thorax is larger, the granulations of the elytra are much coarser, and more numerous, so as to make the elytra dull. The sixth segment of the abdomen is sparingly sprinkled, on the upper side, towards the apex, with granulations; the seventh segment is distinctly granulate, the granulations more numerous and distinct than on the sixth segment, its apex is truncate, and finely crenulate. The under plate of the seventh segment is considerably produced, narrowed towards the apex, the apex itself being a little emarginate. In the female, both the upper and under plates of the seventh segment have the hind margins broad, and rounded.

Very abundant all over the kingdom, in damp places.

Obs.—A variety occurs in which the elytra are of a brownish colour, and the antennæ and legs are also of a lighter colour than usual; it is, perhaps, Thomson's *tenuicornis*. This colour-variation is to different extents, its extreme form appears very rare.

SECTION B.

Group VI. *Head strongly punctured.*

(Species 36—38).

The three species of this group are closely allied; they occur only on the coast, and are easily distinguished from others of the genus. *H. vestita* (of Group V.), occurring also on the coast, has a similarly punctured head.

36. *Homalota Halobrectha*.

Fusco-nigra, pube flavescenti distincte vestita, sat nitida, antennis, ore, pedibus, anoque rufo-testaceis; capite distincte punctulato; thorace subquadrato, basin versus angustato; elytris thorace longioribus, confertim distincte punctatis; abdomine supra segmentis 2-4 parce punctatis, 5 et 6 fere lævigatis. Long. $1\frac{1}{3}$ - $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° dorsali apice obtuse acuminato, ventrali apice rotundato.

Fem.; segmento 7° ventrali apice latiore, medio fere emarginato.

H. atricilla, Scriba, Berl. Ent. Zeit. 1866, p. 290 (*nec* Er. Gen. et Spec. Staph.). *H. algæ*, var., Hardy, Cat. Col. North. & Dur. p. 116. *H. maritima*, Wat. Proc. Ent. Soc. Lond. 1863, p. 138. *Halobrectha flavipes*, Th. Sk. Col. iii. 50.

Var.—Minor, elytris thorace paulo longioribus, thorace lateribus antice magis rotundatis.

Of an obscure blackish or pitchy colour, with the elytra browner, the legs, extremity of abdomen, antennæ, and mouth, yellowish; the anterior parts with a distinct, moderately dense, depressed, fine, but rather rigid, yellowish pubescence. The antennæ are about as long as the head and thorax, gently thickened towards the apex, with a moderately distinct exserted pubescence, reddish-yellow, a little infusate towards the apex; joints two and three long and slender, three not quite so long as two; four to ten, each one a little shorter and broader than its predecessor, the first of them is longer than broad, the last of them (eight to ten) broader than long. The head is scarcely narrower than the thorax, suborbiculate, with the upper surface convex, blackish, with the palpi and parts of the mouth yellow, distinctly and rather coarsely, but shallowly and moderately densely punctured, the punctures being real depressions; with a fine yellowish pubescence. The thorax is considerably narrower than the elytra, its width rather greater than its length, the sides rounded in front, then slightly but distinctly narrowed behind, moderately closely punctured, and with a yellowish pubescence, the punctuation finer than that of the head. The elytra are a third or fourth longer than the thorax, of a brownish or pitchy-black

colour, pretty closely and distinctly but shallowly punctured, and with a distinct yellowish pubescence. The abdomen is black and shining, with the extremity yellowish: segments two to four sparingly punctured, five and six almost impunctate. Legs yellowish.

In the male, the apex of the dorsal plate of the seventh segment is not altogether rounded, but a little flattened on each side, so that it is indistinctly and obtusely pointed in the middle. The ventral plate of the same segment is narrower, and its apex more rounded than in the female; but these characters are not easy to perceive.

Common under sea-weed on the coasts of England and Scotland.

Obs. I.—Scotch specimens of this species are smaller than the Southern ones, and have their elytra rather shorter, the sides of the thorax more dilated and rounded in front, so that it is more narrowed behind; having regard, however, to the great general resemblance in other respects, these cannot be considered as a distinct species. It was from such specimens, I should think, that Thomson's description of *H. flavipes* was made.

Obs. II.—This species is said, by Herr Scriba, on the authority of the type in the Museum at Turin, to be *H. atricilla*, Er. (Gen. et Spec. Staph. 101). It is quite certain, however, I think, that Erichson's description is in no way applicable to, or characteristic of, this species; and I do not believe it was made from specimens of it. I have, therefore, not adopted his name; there may have been some mistake about the type, there can be none as to the description. I have not adopted Mr. Waterhouse's name of *H. maritima*, as, according to Harold's Catalogue, there is a prior *maritima*. (I have not, however, had any opportunity of verifying Harold's quotation.) Hardy's name, *H. algæ*, has also been proposed for this species, but it cannot be used, as his description refers to *H. puncticeps*, of which he considered this a variety. As there is already a well known *Homalota flavipes*, I am obliged to find a new name for the species.

37. *Homalota puncticeps*.

Subdepressa, subopaca, nigra, antennis pedibusque piceis, pube flavescenti evidenter vestita; capite confer-

tim distincte punctato; thorace subquadrato, basin versus angustato, elytris hoc fere sesqui longioribus; abdomine supra segmentis 2-4 parce subtiliter punctatis, 5 et 6 fere lævigatis. Long $1\frac{1}{3}$ lin.

Mas; abdomine segmento 7° dorsali apice angusto, truncato.

H. puncticeps, Th. Öfv. Vet. Ac. Förh. 1852, p. 133; Kr. Ins. Deutsch. ii. 232; Wat. Cat.; *Halobrectha puncticeps*, Th. Sk. Col. iii. 49. *H. algæ* (ex parte) Hardy, Cat. Col. North. & Dur. p. 116. *H. anthracina*, Fairm. Faune Franc. 424.

Allied to *H. Halobrectha*, but readily distinguished by its darker colour, more depressed form, longer elytra, and rather finer but more distinct punctuation, and the different male characters. The antennæ are about as long as the head and thorax, thickened towards the apex, pretty distinctly furnished with exserted hairs, blackish, with the base pitchy; joints two and three long and slender, three not so long as two; four to ten each a little broader than its predecessor, from the seventh to the tenth transverse; eleventh joint not quite so long as the two preceding. The head is but little narrower than the thorax, distinctly, deeply, and pretty closely punctured, with a fine yellowish-gray pubescence. The thorax is considerably narrower than the elytra, its length nearly equal to its breadth, the sides rounded in front, a little narrowed behind, its punctuation fine and moderately close, not so distinct as that of the head and elytra, with scarcely any impression in front of the scutellum. The elytra are black, nearly one-half longer than the thorax, closely, distinctly, and regularly punctured, and with a fine yellowish distinct pubescence. The abdomen is black and shining, obscurely paler at the apex, segments two to four finely and sparingly punctured, five and six almost impunctate. Legs pitchy, or pitchy-yellow.

In the male, the apex of the dorsal plate of the seventh segment of the abdomen is truncate; the truncate part is narrow, and not quite straight, for it has an indistinct projection in the middle; the ventral plate of the same segment is considerably narrower at the apex than it is in the female.

Pretty common under sea-weed on the coasts of England and Scotland.

Obs.—Hardy's name of *H. algæ* should, perhaps, be used for this species, as it is the oldest. He, however, considered this and *H. Halobrectha* as one species in his description.

38. *Homalota princeps*.

Nigra, pube flavescenti vestita, antennis elytrisq[ue] fuscis, antennarum basi pedibus anoque rufis; antennis articulis 8-10 subtransversis; capite evidenter punctato; thorace subquadrato, basin versus angustato; abdomine supra segmentis 2-4 parce punctatis, 5 et 6 lævigatis. Long. $1\frac{3}{4}$ lin.

Mas; abdomine segmento 7° dorsali apice angusto, truncato.

Much larger than the largest examples of *H. Halobrectha*, or *puncticeps*, and in colour somewhat intermediate between the two; allied to *H. puncticeps* by the male characters, and the elytra comparatively longer than in *Halobrectha*; to *H. Halobrectha* by its punctuation, which is more sparing and shallow, but rather coarser than in *puncticeps*. The antennæ have the penultimate joints not so broad in proportion to their length as in *puncticeps* and *Halobrectha*. The apex of the dorsal plate of the seventh abdominal segment is truncate and narrow, the truncate part is, however, not quite straight, but obscurely produced in the middle.

I have seen four specimens of this fine species, all, I believe, taken in the Isle of Wight. They are none of them in good condition, so that I have not given a detailed description of minor points, but I have no doubt they will prove a good and distinct species. These specimens agree entirely among themselves, except that one of them is rather darker than the others.

Group VII. *Head finely punctured, or nearly impunctate.*
(Species 39—54).

This group is an entirely artificial one, containing a number of very discrepant species. Its subdivision into five or six others would, however, scarcely simplify matters. *H. occulta* and its allies are found in fungi and vegetable refuse; *æquata* and *linearis* are bark or wood species; *incana* and *nigella* are confined to large marshes,

where they occur amongst reeds; *debilis* and *angustula* are damp moss species; and the very peculiar *H. cæsula* occurs only in very dry, sandy places. *H. subglabra* might, perhaps, be quite as correctly placed near *H. palustris*.

39. *Homalota occulta*.

Linearis, subdepressa, antice subopaca, sculptura subtiliore, nigra, elytris fuscis, pedibus fusco-testaceis; antennis apicem versus vix incrassatis; thorace transversim subquadrato, basin versus vix angustato; elytris alutaceis; abdomine nitidulo, basi parce punctato, apice fere lævigato. Long. $1\frac{1}{2}$ - $1\frac{2}{3}$ lin.

Mus; antennis articulo 3^o crassiore, abdomine segmento 7^o dorsali, lateribus et apice, reflexo-marginato, apice late obsolete emarginato.

H. occulta, Er. Käf. Brand. i. 317; Gen. et Spec. Staph. 83; Kr. Ins. Deutsch. ii. 233; *Bessobia occulta*, Th. Sk. Col. iii. 43.

Antennæ entirely black, moderately stout, but scarcely thickened towards the apex; first joint stout and rather long, two and three of about equal length; four to ten differing but little in length, seven to ten not quite so long as broad; eleventh joint about half as long again as the tenth. Head smaller than the thorax, dull, its sculpture very indistinct, with a shallow impression on the disc, more evident in the male than in the female. The thorax is a little narrower than the elytra, about a third broader than long, slightly narrowed behind, its sculpture fine, not very dense, with a not very distinct impression in the front of the base in the middle. Elytra about one-third longer than the thorax, of a peculiar dull pitchy-testaceous colour, alutaceous, punctuation or sculpture being scarcely visible. Abdomen black and shining, segments two to four sparingly punctured, five and six almost impunctate. Legs pitchy-testaceous.

In the male, the third joint of the antennæ is much stouter than in the female, and the impression on the middle of the head is more evident. The dorsal plate of the seventh abdominal segment has the sides very distinctly raised, the apical margin also raised, but not so distinctly as the sides, the apex itself is broadly, but very indistinctly, emarginate.

In the female, both the upper and under plates of the seventh segment are simple, and with the hind margin broadly rounded.

I have seen only two specimens, ♂ and ♀, that I can certainly refer to this species; most of the specimens representing it in our collections belong to the next species; a male specimen of *H. occulta*, sent by Kraatz to the British Museum, agrees altogether with these two.

40. *Homalotu fungivora*.

Linearis, subdepressa, nigra, elytris obscure fuscis, pedibus fusco-testaceis; sculptura subtiliore; antennis apicem versus paulo incrassatis; thorace transversim subquadrato, basin versus subangustato; abdomine supra basi parce punctato, apice fere lævigato. Long. $1\frac{1}{4}$ - $1\frac{1}{2}$ lin.

Mas; antennis articulo 3° incrassato, capite late impresso, abdomine segmento 7° dorsali lateribus evidenter elevatis, apice rotundato truncato, minus evidenter incrassato.

Bessobia fungivora, Th. Sk. Col. ix. 260.

This species is extremely closely allied to *H. occulta*, and is, perhaps, not really distinct from it. *H. fungivora* is smaller, has joints four to six of the antennæ narrower in proportion to the following ones, so that the antennæ appear more thickened towards the extremity than in *H. occulta*; the impression on the front of the head is broader and larger, the thorax appears a little less transverse, and more narrowed behind, and the posterior margin of the seventh segment in the male is not broadly emarginate, but is nearly straight, and shows sometimes, in the middle, traces of a very minute notch; its upper surface also generally bears a broad, indistinct, longitudinal channel. These characters, however, all appear to vary somewhat, and, as I have said above, *H. fungivora* may ultimately prove to be a variety of *H. occulta*. I have not, however, seen a sufficient series of the larger species to enable me to express a positive opinion.

H. fungivora is pretty generally distributed over the country, but is not common; it is found in fungi, especially when growing on the stumps of trees, in autumn.

Obs.—Mr. Crotch has submitted to me a specimen of *H. fungivora* forwarded to him by Herr Thomson; this agrees altogether with my British specimens.

41. *Homalota picipes*.

Nigra, antice alutacea, antennis elytrisque nigro-piceis, pedibus fusco-testaceis; antennis sat crassis, apicem versus vix incrassatis; thorace transversim subquadrato, basin versus haud angustato, postice foveolato; elytris hoc tertia parte longioribus; abdomine basi parce punctato, apice fere lævigato. Long. $1\frac{1}{3}$ lin.

Mas; antennis articulo 3^o incrassato, abdomine segmento 7^o dorsali, apice medio, late, fere triangulariter, emarginato, margine posteriore subtiliter incrassato, ventrali, paulo producto, apice rotundato.

Fem.; abdomine segmento 7^o dorsali, apice medio triangulariter exciso, ventrali, apice obtuse acuminato.

H. picipes, Th. Öfv. Vet. Ac. Förh. 1856, p. 99; *Athetia picipes*, Sk. Col. iii. 81. *H. fusco-femorata*, Wat. Cat.

Flat, but not very depressed, shorter, broader, and comparatively rather more robust, than *H. fungivora*. The antennæ are short and stout, about the length of the head and thorax, scarcely thickened towards the apex; pitchy-black, obscurely paler at the base; first joint stout, second and third short, of about equal length, fourth a little more slender than the fifth, its length about equal to its breadth, five to ten differing but little in length and breadth, each one distinctly transverse; eleventh joint nearly as long as the two preceding. Head rather broad and short, narrower than the thorax, dullish; flat above, broadly impressed in the male, very obscurely in the female. Thorax but little narrower than the elytra, fully one-third broader than long, not narrowed behind, with an impression or short channel in the middle in front of the base, in the male with a broad impression, its sculpture alutaceous, fine and pretty dense. The elytra are quadrate, about a fourth longer than the thorax, alutaceous, the sculpture pretty dense and distinct. The abdomen is black and shining, sometimes brownish at the apex; the basal segments sparingly punctured, the fifth and sixth almost impunctate. The legs are pitchy-testaceous.

In the male, the third joint of the antennæ is thickened, the head and thorax are distinctly impressed; the upper plate of the seventh abdominal segment has its posterior margin a little thickened, and emarginate in the middle,

the lobe formed by each side of the emargination gently rounded; the under plate of the same segment is more produced than in the female, and its posterior margin is gently rounded.

In the female, the upper plate of the seventh segment of the abdomen has the apex with a distinct triangular notch in the middle; the posterior margin of the under plate is not rounded, but a little acuminate in the middle.

I have found this species only in Scotland; Edinburgh, Rannoch, Strath Cannich.

Obs.—This species has the structure of the antennæ very much like that of *H. fungicola* and its allies, but it is certainly in its place here, in the neighbourhood of *fungivora* and *excellens*. Two specimens (♂ and ♀) of *H. picipes* sent by Kraatz to the British Museum agree entirely with my specimens.

42. *Homalota excellens*.

Nigra, elytris nigro-fuscis, pedibus fuscis; thorace transversim subquadrato; abdomine basi parce punctato, apice lævigato. Long. $1\frac{1}{3}$ lin.

Mas; abdomine segmento 7° dorsali apice medio triangulariter exciso, margine posteriore subtiliter incrassato, ante apicem tuberculis 6, lineam curvatam transversam formentibus, instructo.

Fem.; abdomine segmento 7° dorsali apice medio leviter emarginato.

H. excellens, Kr. Ins. Deutsch. ii. 235; Wat. Cat.

Antennæ rather short, black, distinctly but not greatly thickened towards the apex, second and third joints rather short, the third not quite so long as the second, four to ten each distinctly broader than its predecessor, seven to ten distinctly transverse; eleventh joint about half as long again as the tenth. Head considerably narrower than the thorax, black, rather dull, its punctuation indistinct, with an impression in the middle, more distinct in the male than in the female. Thorax narrower than the elytra, fully one-third broader than long, a little narrowed behind, the disc flattened, sometimes with a large impression, sometimes with a fovea in front of the base in the middle, from which proceeds a channel; its sculpture and pubescence moderately fine and not dense. The ab-

domen is shining black; the basal segments sparingly punctured, the apical ones still more so, nearly impunctate. Legs pitchy-testaceous; tibiæ and tarsi a little paler than the femora.

In the male, the seventh dorsal segment of the abdomen is furnished, before the apex, with a curved transverse row of irregular tubercles, six in number, three on each side; the outside one starts from the external apical angle of the segment, joins a second more elevated one, while more in the middle is a third smaller and more indistinct one; the posterior margin of the same segment has in the middle a triangular notch, neither very wide nor very deep, and the hind margin is a little thickened.

In the female, the apical margin of the dorsal plate of the seventh segment is a little emarginate in the middle, but not deeply so.

This species is rare, but I have found it in several localities in Scotland. Rannoch, Arran, Strath Cannich, Thornhill.

Obs.—Compared with *H. fungivora*, *H. excellens* is found to be comparatively broader and less elongate, rather more shining, of a darker, blacker colour, with shorter, broader elytra, &c. It is more closely allied to *H. monticola*, and is distinguished from that species by its darker coloured elytra, less shining surface, and less delicate punctuation and pubescence. The males of the two species are to be distinguished at once by the remarkable abdominal characters, but the distinction of the females is by no means easy. A specimen of *H. excellens* sent by Kraatz to the British Museum agrees with my specimens.

43. *Homalota monticola*.

Nitidula, subtiliter punctata, nigra, elytris fuscis, pedibus fusco-testaceis; thorace transversim convexiusculo, latitudine fere dimidio brevior; abdomine basi parce punctato, apice lævigato. Long. $1\frac{1}{2}$ lin.

Mas; capite medio thoraceque ante basin distincte impressis; abdomine segmento 7° dorsali pliculis 4 instructo, apice profunde triangulariter exciso, et cum lateribus reflexo-marginato.

Fem.; segmento 7° dorsali medio leviter emarginato.

H. monticola, Th. Öfv. Vet. Ac. Förh. 1852, p. 143; Kr. Ins. Deutsch. ii. 234; Wat. Cat.; *Bessobia monticola*, Th. Sk. Col. iii. 43.

Antennæ black, rather short and stout, thickened towards the apex, joints two and three of nearly equal length, four to ten each one broader than the preceding, from the fifth onwards distinctly transverse; eleventh joint pointed, rather short, half as long again as the tenth. The head is rather broad, narrower than the thorax, moderately shining, finely and sparingly punctured; in the male with a broad impression, in the female with a channel. Thorax narrower than the elytra, transversely convex, more than a third broader than long; the sides gently rounded, scarcely narrowed behind, finely and not densely punctured; in the male with a broad impression in front of the base in the middle, in the female with an indistinct one; sometimes also with an obsolete longitudinal channel. The elytra are one-third longer than the thorax, of a brownish colour, moderately shining, their sculpture and pubescence fine. The abdomen is shining black, at the base very sparingly punctured, at the apex impunctate. The legs are pitchy-yellow.

In the male, the head and thorax are more impressed than in the female, the seventh dorsal segment of the abdomen has the apex in the middle deeply triangularly emarginate, the sides have a very distinct raised margin, the apical margin is also raised, but less distinctly than the sides, and is furnished with four raised longitudinal folds; of these, the two inner are parallel to one another, the two outer converging towards the apex.

In the female, the posterior margin of the seventh dorsal segment is a little emarginate in the middle.

Rare. I have found it at Croydon, on Purley Downs, and near Thornhill in Dumfries-shire.

The male appears to be quite as common as the female, and the remarkable structure of the seventh segment of its abdomen should prevent its being mistaken for any other species.

Obs.—Two specimens (♂ and ♀) of *H. monticola* sent by Kraatz to the British Museum agree with my specimens.

44. *Homalota subglabra*.

Nitidula, nigra, elytris pedibusque piceo-testaceis, subtiliter haud confertim punctata, subtiliter pubescens; antennis apicem versus leviter incrassatis, articulis 7-10 transversis; thorace transversim subquadrato; abdomine basi parce obsolete punctato, apice lævigato. Long. $1\frac{1}{5}$ lin.

Mas; structura abdominali femina vix distinguitur.

Rather broader than *H. palustris*, more robustly built, and more shining. The antennæ are black, stout in proportion to the size of the insect, but little longer than the head and thorax, distinctly but not greatly thickened towards the apex; the basal three joints rather slender and elongate, the second longer than the third; from the fourth to the tenth, each joint is distinctly broader than its predecessor, seven to ten transverse; eleventh joint gently pointed, moderately long, about twice the length of the tenth. Head black and shining, narrower than the thorax, a little narrower behind the eyes, which are rather prominent, finely pubescent, and almost impunctate. The thorax is narrower than the elytra, fully one-third broader than long, the anterior angles gently rounded, the sides nearly straight, not narrowed behind, its punctuation extremely fine and not dense, without channel or fovea. Elytra dusky-testaceous, darker towards the base and angles, half as long again as the thorax, shining, the sculpture finely alutaceous. The abdomen is black and shining, the basal segments sparingly and not distinctly punctured, the apical ones impunctate. The legs are of a pitchy-testaceous colour.

The male is scarcely to be distinguished from the female, except by the fact that the upper and under plates of the seventh segment of the abdomen are narrower than in the female.

This species is rare, and found only among the Scotch mountains. Rannoch, Strath Cannich, Arran, Thornhill.

Obs.—A specimen of this species, sent by Mr. Crotch to Herr Thomson, was returned by him with a label attached, marked "*umbonatae affinis*." I think, however, it is better placed near *monticola*, from which it is distinguished by its much smaller size, finer punctuation, and absence of marked male characters.

45. *Homalota incana*.

Sat depressa, subopaca, nigra, antennis basi testaceis, apice pedibusque fuscis, harum genubus tarsisque dilutioribus, confertim fortiter punctata; thorace transversim subquadrato, elytris angustiore; abdomine crebre fortiter punctato, apice granulato. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 5° supra subtiliter, 6° et 7° fortiter granulatis, hujus apice extremo lævigato.

Fem.; abdomine segmentis 5 et 6 obsolete vix evidenter granulatis.

H. incana, Er. Käf. Brand. i. 329; Gen. et Spec. Staph. 109; Kr. Ins. Deutsch. ii. 236; Wat. Cat.; *Alianta incana*, Th. Sk. Col. iii. 44.

A peculiar, dull species. The antennæ are testaceous at the base, more or less darkened towards the apex, short, about the length of the head and thorax, thickened towards the apex; first joint longer than the second or third, three a little shorter and narrower than two; four about as long as broad; from this to the tenth, each joint is broader than the foregoing one, seven to ten distinctly transverse; the eleventh joint about twice as long as the tenth. Head a little narrower than the thorax, dull, sometimes with an impression in the middle; its punctuation pretty close, but indistinct. Thorax considerably narrower than the elytra, nearly a third broader than long, a little narrowed behind, dull, its punctuation indistinct, sometimes with an impression or channel in the middle in front of the scutellum. The elytra are nearly one-half longer than the thorax, the sculpture dense and distinct, consisting of small numerous granulations. The basal segments of the abdomen are closely and distinctly punctured, from the fourth segment to the seventh the sculpture consists of distinct fine granulations, the fourth less distinctly granulate than the following ones. The legs are pitchy, the tarsi and knees indistinctly paler than the other parts; the posterior tarsi are stout, and rather short.

In the male, the fourth to sixth segments of the abdomen are moderately shining, the extreme apex of the seventh segment is quite smooth and shining, in front of this shining space is a row of four large indistinct

tubercles, and the space in front of these is thickly studded with granulations; the granulations of the fifth and sixth segments are also very distinct; sometimes also the posterior margin of the seventh segment has a very small notch in the middle.

In the female, the apical segments of the abdomen are not more shining than the basal ones, the granulations on the fifth and sixth segments are indistinct; the extreme edge of the seventh segment is less shining than in the male, and the four elevations in front of this space are smaller, and more separated from one another; the outside one on each side being a sort of raised line connected with the outer angle.

This peculiar species is found in large marshes, and lives in the axils of the leaves of water plants, but is to be found also amongst moss and rubbish at the edges of pools. Hammersmith Marshes and the Fen districts.

46. *Homalota nigella*.

Linearis, angusta, antice opaca; thorace subquadrato, basin versus angustato, dorso late longitudinaliter impresso; elytris hoc paulo latioribus et longioribus; abdomine segmentis 2-4 crebre distincte punctatis, 5° magis sparsim punctato. Long. $1\frac{1}{4}$ lin.

Mas; abdomine segmento 6° supra sat distincte granulato, 7° apice denticulis 4 instructo.

H. nigella, Er. Käf. Brand. i. 323; Gen. et Spec. Staph. 92; Kr. Ins. Deutsch. ii. 237; Wat. Cat. *H. immersa*, Th. Öfv. Vet. Ac. Förh. 1852, p. 139. *Dinaræa punctiventris*, Th. Sk. Col. ii. 292.

Allied both to the preceding and following species, but smaller than either. The head and thorax dull, the elytra and abdomen more shining. The antennæ are thickened towards the apex, about as long as the head and thorax, testaceous at the base, infusate towards the apex; the first joint nearly as long as the second and third, three a little shorter and more slender than two; four to ten each a little broader than its predecessor, six to ten distinctly transverse; eleventh not quite twice as long as the tenth. The head is but little narrower than the thorax, dull, flat, broadly and indistinctly impressed in the male, the sculpture dense, but indistinct.

Thorax but little narrower than the elytra, its length but little less than its breadth, narrowed behind, but not greatly so; dull, with a broad central longitudinal impression, sculpture indistinct. The elytra are not a third longer than the thorax, rather more shining than it, sculpture dense and distinct, consisting of minute granulations. The abdomen is moderately shining, segments two to four are closely and distinctly punctured, fifth segment more sparingly punctured, sixth nearly impunctate, but with granulations in the male. The thighs are pitchy, the tibiæ and tarsi pitchy-testaceous; posterior tarsi short and stout.

In the male, the sixth segment is sprinkled above with granulations, not very conspicuously, however; the seventh segment has the hind margin furnished with four small projecting tubercles, the middle ones more distinct than the lateral.

In the female, the sixth and seventh segments are simple above.

Found in marshy places, in company with *H. incana*; Horning, Hammersmith, &c.

47. *Homalota æquata*.

Antice opaca, nigra, antennis fuscis, basi pedibusque testaceis, elytris brunneis; thorace subquadrato, late longitudinaliter impresso; abdomine segmentis 2-4 crebre punctatis, 5° magis sparsim punctato, 6° fere lævigato. Long. $1\frac{2}{3}$ lin.

Mas; abdomine segmento 5° dorsali medio granulis elevatis duobus, 6° granulis octo, 7° apice denticulis 4 instructo.

H. æquata, Er. Käf. Brand. i. 323; Gen. et Spec. Staph. 92; Kr. Ins. Deutsch. ii. 238; Wat. Cat.; *Dinarea æquata*, Th. Sk. Col. ii. 290.

Antennæ rather stout, about as long as the head and thorax, testaceous at the base, pitchy towards the apex; first joint stout, moderately long, three a little longer than two; four to ten each a little broader than its predecessor, five to ten each broader than long; eleventh joint quite twice as long as the tenth. Palpi yellow. Head but little narrower than the thorax, flat, quite dull, the front depressed in the male, sculpture indistinct.

Thorax a little narrower than the elytra, nearly as long as broad, somewhat narrowed behind, quite dull, with a broad central longitudinal impression in the middle, with a fine channel, sometimes very indistinct; sculpture indistinct. The elytra are brownish, a little longer than the thorax, and not quite so dull as it, punctuation fine and dense. The abdomen is black, shining towards the apex, the posterior edges of the segments obscurely brown; segments two to four closely and distinctly punctured, fifth more sparingly punctured, sixth almost impunctate. Legs yellow, posterior tarsi moderately long.

In the male, the front of the head has a distinct broad impression, and the longitudinal impression on the thorax is more distinct than in the female; the fifth segment of the abdomen has, on the upper side, two small raised granulations; the sixth segment has two transverse rows of short raised longitudinal lines, four in each row; those in the hind row closer to one another than those in the front row. The sixth segment has the posterior margin furnished with four small sharp projecting teeth, the outside ones being indistinct.

Not common; found in the bark of oak stumps in England.

Obs.—This species cannot easily be mistaken for any other, if the very dull head and thorax, the brownish elytra, and the yellow legs, be noted.

48. *Homalota angustula*.

Linearis, sat depressa, dense subtiliter punctata, capite abdomineque nigris, antennarum basi pedibusque testaceis; thorace subquadrato, canaliculato; elytris læte rufotestaceis, thorace vix longioribus; abdomine segmentis 2-5 dense subtiliter punctatis, 6° parcius punctato. Long. $1\frac{1}{2}$ - $1\frac{2}{3}$ lin.

Mas; abdomine segmento 6° supra granulis elevatis asperato, 7° ante apicem granulis elevatis 4, apice ipso medio denticulis duobus subprominulis, utrinque denticulis duobus obsoletis.

Aleochara angustula, Gyll. Ins. Suec. ii. 393; *H. angustula*, Er. Gen. et Spec. Staph. 91; Kr. Ins. Deutsch. ii. 238; Wat. Cat.; *Dinaræa angustula*, Th. Sk. Col. ii. 290.

A rather flat, parallel species, with very bright coloured elytra. Antennæ moderately long and stout, gently thickened towards the apex, the two or three basal joints reddish-yellow, the rest pitchy; joints two and three moderately long and stout, of about equal length, four and five nearly equal to one another, each longer than broad, six about as long as broad, seven to ten a little transverse; eleventh joint about twice as long as the tenth. Palpi obscurely testaceous. Head a little narrower than the thorax, dull; the upper surface not convex, deeply impressed in the male, its sculpture fine, close and indistinct. Thorax variable in colour, black, reddish or yellow; scarcely narrower than the elytra, but little broader than long, very little narrowed behind, very finely and densely punctured, with a distinct central longitudinal channel. The elytra are but little longer than the thorax, reddish-yellow, slightly obscured about the scutellum, very thickly and finely punctured. The abdomen is black, and, with the exception of the sixth segment, dull, segments two to five are densely and finely punctured, sixth segment rather sparingly punctured. Legs yellow.

In the male, the sixth segment of the abdomen has on the upper surface ten or twelve small elevations, irregularly placed; the seventh segment is furnished before the apex with a row of four short raised lines, and the hind margin itself has in the middle two other lines projecting a little beyond the margin, and on each side of these are one or two similar, but much smaller, and more indistinct lines.

Found in damp places both in England and Scotland, but not common.

Obs.—The brightly coloured elytra and legs, together with the flat parallel form, and the close and fine punctuation of this species, should prevent its being confounded with any other of the genus.

49. *Homalota linearis*.

Subnitida, nigra, antennis basi testaceis, apicem versus infuscatis, elytris brunneis, pedibus anoque testaceis; capite canaliculato; thorace subquadrato, canaliculato; elytris hoc paulo longioribus, evidenter, sat crebre, punctatis; abdomine basi vix crebre punctato, apice fere lævigato. Long. $1\frac{1}{2}$ lin.

Mas; fronte antice late impressa.

Aleochara linearis, Grav. Micr. 69; *H. linearis*, Er. Gen. et Spec. Staph. 91; Kr. Ins. Deutsch. ii. 240; Wat. Cat.; *Dinarcea linearis*, Th. Sk. Col. ii. 291.

A good deal like *H. æquata*, but much more shining, with more sparingly punctured abdomen, &c. Antennæ moderately stout, a little thickened towards the apex, furnished distinctly with projecting hairs, the basal three joints yellow, the others dirty yellow; first joint stout, two and three of nearly equal length, fourth joint not so broad as the fifth, six to ten each broader than long; eleventh about half as long again as the tenth. Head a little narrower than the thorax, not very shining, flat above, with a longitudinal impression on the middle; in the male, with a broad shallow impression between the eyes; rather sparingly and not distinctly punctured. Thorax but little narrower than the elytra, about one-fourth broader than long, slightly narrowed behind, moderately shining, pretty densely and finely punctate, with a broad and distinct longitudinal channel. Elytra a little longer than the thorax, brown, punctuation more evident than on the head and thorax. Abdomen with segments two to four rather sparingly and finely punctured, five and six almost impunctate and shining, apex obscurely testaceous. Legs yellow.

It is not easy to distinguish the male from the female by the structure of the abdomen; but, in the former sex, the front of the head is broadly impressed.

Generally distributed in England and Scotland: found under bark of dead trees, and in moss in woods.

50. *Homalota pilicornis*.

Subdepressa, nitidula, antennis verticillato-pilosis, nigra, antennarum basi pedibus anoque rufo-testaceis, elytris brunneis; thorace transversim subquadrato; abdomine segmentis 2-4 subtiliter haud crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. $1\frac{2}{3}$ lin.

Mas; abdomine segmento 7° dorsali margine posteriore incrassato, obsoletissime crenulato; ventrali apice rotundato.

Fem.; abdomine segmento 7° dorsali apice late obsolete emarginato, angulis externis acutis; ventrali apice medio emarginato.

H. pilicornis, Th. Öfv. Vet. Ac. Förh. 1852, p. 142; *Atheta pilicornis*, Th. Sk. Col. iii. 82. *H. pilosa*, Kr. Ins. Deutsch. ii. 241; Wat. Cat.

A species not much resembling the preceding ones; somewhat like a broad flat *H. elongatula*, but readily distinguished by the antennæ being furnished with long projecting hairs, more distinctly than is usual in the genus. The antennæ are moderately stout, gently thickened towards the apex, the basal three joints rather elongate, lighter in colour than the following ones; joint three longer than two, four to ten each a little broader than its predecessor, four to six about as long as broad, seven to ten transverse; eleventh joint about half as long again as the tenth. Head rather broad and short, narrower than the thorax, somewhat narrowed behind, rather shining, finely and sparingly punctured, sometimes with an impression or channel on the disc. Thorax a little narrower than the elytra, rather flat, more than one-third broader than long, a little narrowed behind, finely and not densely punctured. The elytra are rather longer than the thorax, brownish, not densely but distinctly punctured, and finely alutaceous. The abdomen is black and shining, reddish-yellow at the extremity, segments two to four finely and not densely punctured, fifth segment more sparingly punctured, sixth almost impunctate; the sides and apex distinctly furnished with long exserted hairs. Legs clear yellow.

In the male, the dorsal plate of the seventh abdominal segment has the apex truncate, but with the posterior margin not quite straight; this margin is distinctly thickened, and indistinctly crenulate. The under plate of the seventh segment has the hind margin gently rounded.

In the female, the seventh segment above has the posterior margin broadly but shallowly emarginate, and terminates on each side in a small sharp projection; on the under side the same segment has the posterior margin emarginate, and furnished densely with short parallel cilia.

Rare. Rannoch; and Hampstead, near London.

Obs.—This species is, I think, best placed here; though, in some respects, it is allied to *H. xanthoptera*.

51. *Homalota debilis*.

Linearis, subdepressa, nigro-fusca, antennis ore pedibus anoque testaceis, elytris fusco-testaceis; thorace subquadrato, basin versus leviter angustato; abdomine supra segmentis 2-4 subtiliter sat crebre punctatis, 5° parce punctato, 6° fere lævigato. Long $1\frac{1}{3}$ lin.

Mas; abdomine segmento 7° ventrali producto, apicem versus haud angustato.

H. debilis, Er. Käf. Brand. i. 321; Gen. et Spec. Staph. 94; Kr. Ins. Deutsch. ii. 243; Wat. Cat.; *Atheta debilis*, Th. Sk. Col. iii. 72.

Allied to *H. elongatula*, but smaller and more slender, with broader head, and stouter antennæ; brighter coloured, and with the thorax more narrowed behind, &c. Antennæ yellow, rather longer than the head and thorax, a little thickened towards the apex; joints one to three moderately long, three scarcely so long as two, four to ten each a little stouter than the preceding one, four and five rather slender, six about as long as broad, seven to ten each broader than long; eleventh joint rounded. Mandibles and palpi yellow. Head rather short and broad, but little narrower than the thorax, finely and indistinctly punctured. The thorax is scarcely narrower than the elytra, gently but distinctly narrowed behind, about one-fourth broader than long, finely and closely punctured, with an indistinct longitudinal channel. Elytra a third longer than the thorax, of a brownish or yellowish colour, finely and pretty densely punctured. The abdomen is black, with the extremity yellow; segments two to four finely and moderately closely punctured, fifth segment sparingly punctured, sixth almost impunctate. Legs clear yellow.

In the male, the ventral plate of the seventh segment of the abdomen is produced considerably beyond the upper plate; its sides are parallel, so that it is not narrowed towards the apex, which is truncate, with the angles rounded.

In marshy places in England and Scotland, but not common.

52. *Homalota fallaciosa*.

Nigro-fusca, antennis ore anoque obscure testaceis, pedibus testaceis, elytris fuscis; capite thorace angustiore,

suborbiculato, medio canalicula brevi impresso; thorace transversim subquadrato, basin versus vix angustato; elytris thorace paulo longioribus; abdomine supra segmentis 2-4 subtiliter sat crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° ventrali producto, apicem versus angustato, apice rotundato.

Allied to *H. debilis*, but less depressed, more robust, neither so shining nor so brightly coloured, with narrower more orbiculate head, shorter elytra, different abdominal structure in the male, &c. Antennæ a little longer than the head and thorax, obscure testaceous, the basal joints testaceous; a little thickened towards the apex; joints one to three moderately long, three not so long as two, four to ten each slightly broader than its predecessor, four to six about as long as broad, seven to ten scarcely so long as broad; eleventh joint short, scarcely half as long again as the tenth. Mandibles and palpi obscure yellow. Head considerably narrower than the thorax, a little narrowed in front, with a distinct short channel on the disc, finely and indistinctly punctured. Thorax a little narrower than the elytra, quite one-third broader than long, transversely convex, but little narrowed behind, with a scarcely visible impression in front of the base in the middle, finely and closely punctured. Elytra scarcely one-fourth longer than the thorax, broader than long, thickly and finely punctured, brownish or pitchy-brown. Abdomen black, with the apex yellowish, segments two to four moderately closely and finely punctured, fifth segment sparingly punctured, sixth nearly impunctate. Legs yellow.

In the male, the channel on the head is more distinct, the ventral plate of the seventh abdominal segment is distinctly produced beyond the dorsal plate, and it is narrowed towards the hind margin, which is rounded.

Rare. I have found it only in Scotland; Rannoch, and Thornhill.

Obs.—This species resembles some of the varieties of *H. volans*, but is readily distinguished by its shorter and stouter antennæ, with transverse penultimate joints. It also somewhat resembles *H. Aubei*, Bris., and is distinguished by its shorter antennæ, less punctured abdomen, &c. Its place is certainly next *H. debilis*.

53. *Homalota deformis*.

Linearis, depressa, confertim subtiliter punctata, picea, thorace elytrisque fusco-testaceis, antennis ano pedibusque testaceis; thorace transversim subquadrato, basin versus angustato; abdomine supra segmentis 2-4 subtiliter haud confertim punctatis, 5° parcius punctato, 6° fere lævigato. Long. 1 lin.

Mas; abdomine segmento 7° apice rotundato.

Fem.; abdomine segmento 7° apice medio obsolete emarginato.

H. deformis, Kr. Ins. Deutsch. ii. 244.

An immature looking species, like *H. debilis*, but much smaller and paler. Antennæ pale testaceous, stout for the size of the insect, thickened towards the apex; joint three not so long as two, seven to ten distinctly transverse. Head a little narrower than the thorax, finely and indistinctly punctured; thorax nearly as broad as the elytra, about one-third broader than long, a little narrowed behind, thickly and finely punctured, with a shallow, broad, longitudinal channel down the middle. Elytra about a fourth longer than the thorax, thickly and finely punctured. Abdomen with segments two to four finely and not densely punctured, fifth segment sparingly punctured, sixth nearly impunctate. Legs pale yellow.

In the male, the hind margin of the dorsal plate of the seventh abdominal segment is gently rounded, while in the female it is widely but indistinctly emarginate in the middle.

Rare: in the collections of Mr. Waterhouse, Dr. Power, and Mr. Crotch.

Obs.—The small size and stout antennæ, parallel and depressed form, and the apparently immature colouring, should prevent this species being mistaken for any other of the genus.

54. *Homalota cæsula*.

Nigro-fusca, nitidula, elytris antennisque fuscis, pedibus testaceis, subtiliter punctata; thorace subquadrato; elytris hoc brevioribus; abdomine supra basi obsolete punctato, apice lævigato. Long. $\frac{3}{5}$ lin.

Mas; abdomine segmento 7° ventrali producto, apice fere truncato.

H. cæsula, Er. Gen. et Spec. Staph. 97; Kr. Ins. Deutsch. ii. 328; Wat. Cat. *Sipalia brachyptera*, Th. Sk. Col. iii. 105.

The small size and short elytra of this species distinguish it from all others. It is pitchy-black, with the elytra a little paler. The antennæ are pitchy or obscurely testaceous, a little thickened towards the apex; joint three shorter than two, six to ten transverse; eleventh joint rather large, nearly twice as long as the tenth. Head shining, almost impunctate, but little narrower than the thorax, narrowed towards the front. Thorax almost wider than the elytra, about a fourth broader than long, scarcely narrowed behind, very finely and rather sparingly punctured. Elytra shorter than the thorax, and rather more distinctly punctured. Abdomen shining, a little narrowed at the base, segments two to four sparingly and very obsoletely punctured, sixth and seventh impunctate. Legs yellowish.

In the male, the ventral plate of the seventh segment of the abdomen is very distinctly produced, its apex truncate, with the angles rounded; in this sex also there is sometimes to be seen an indistinct, broad, longitudinal impression on the thorax.

Very local. At the roots of grass in sandy places. Deal, Thetford.

SECTION C.

Group VIII. *Convex, or but little depressed species.*
(Species 55—59).

The species of this group are all peculiar, and by no means closely allied. *H. circellaris* is found everywhere, among moss, &c. The other species are all so rare that I can give no sufficient information as to their habits.

55. *Homalota circellaris*.

Rufescens, abdomine piceo, antennis pedibusque testaceis; capite ovato, thorace subquadrato, elytris hoc brevioribus; abdomine supra segmentis 2-4 subtiliter crebre punctatis, 5 et 6 fere lævigatis. Long. $1\frac{1}{2}$ lin.

Mas; elytris basi utrinque prope suturam tuberculatis; abdomine segmento 6° supra, medio ante apicem, tuber-

culo elongato elevato, segmento 7° apice medio obsolete bituberculato.

Aleochara circellaris, Grav. Mon. 155; *H. circellaris*, Er. Gen. et Spec. Staph. 98; Kr. Ins. Deutsch. ii. 326; Wat. Cat.; *Geostiba circellaris*, Th. Sk. Col. iii. 104.

A very abundant and well-known species. Reddish-yellow, or reddish-brown, with the abdomen darker. Antennæ yellow, stout, thickened towards the apex; first joint not much longer, but stouter than the second, three nearly as long as two, four to ten each distinctly stouter than its predecessor, four and five each about as long as broad, six to ten transverse, the tenth strongly so; eleventh joint about as long as the two preceding. Head rather long and narrow, ovate, a little narrowed towards the front, narrower than the thorax, almost impunctate. Thorax but little narrower than the elytra, its length almost greater than its breadth, very slightly narrowed behind, the base not truncate, but a little produced in front of the scutellum, very finely and closely punctured, with a slight impression in front of the scutellum. Elytra shorter than the thorax, closely and rather strongly punctured. Abdomen pitchy, the base and apex paler, segments two to four finely and moderately thickly punctured, five and six almost impunctate. Legs yellow.

In the male, each elytron is furnished at the base, near the suture, with a distinct elevation. The upper surface of the sixth segment of the abdomen is provided, before the apex in the middle, with a raised linear tubercle, and the hind margin of the seventh segment is indistinctly bituberculate in the middle.

Very abundant everywhere.

Obs.—The narrow form, reddish colour stout antennæ, and short elytra, are characters of themselves sufficient to distinguish this anomalous, but vulgar species, from all others.

56. *Homalota elegantula*.

Subdepressa, nitidula, piceo-rufa, capite abdomineque cingulo piceis, elytris pedibus anoque rufo-testaceis; antennis articulis fortiter transversis; capite thoraceque parce fortiter punctatis, hoc canaliculato; elytris alutaceis; abdomine fere lævigato. Long. $1\frac{2}{3}$ lin.

Mas; latet.

Fem.; abdomine segmento 7° ventrali, apice medio, late obsolete emarginato.

H. elegantula, Brisout, Cat. Grenier, Mat. p. 24.

A remarkable and very distinct species; flat, and moderately broad, of a reddish-yellow colour, with the head and abdomen more or less pitchy. Antennæ reddish-yellow, stout, much thickened towards the apex; first joint rather long and stout, second considerably longer than the third, four to ten short and broad, each one broader than long, the tenth twice as broad as long; eleventh joint about as long as the two preceding together; they are furnished throughout their length with rather long projecting hairs. Head rather elongate, with the sides parallel, narrower than the thorax, pitchy, with the mandibles and palpi reddish-yellow, distinctly and strongly, but not closely punctured, with a channel or impression on the middle of the upper side. Thorax reddish-yellow, more or less suffused with a darker colour, about as long as broad, slightly narrowed behind, rather coarsely and moderately densely punctured, alutaceous between the punctures, with a distinct central longitudinal channel. Elytra reddish-yellow, fully one-third longer than the thorax, alutaceous, but scarcely punctured, with a moderately long and rather sparing pubescence. Abdomen almost impunctate, but with the segments sparingly furnished with distinct hairs; reddish-yellow, more or less pitchy in the middle. Legs yellow.

I am unable to distinguish satisfactorily the male of this species: but in one specimen, which I have no doubt is a female, the ventral plate of the seventh segment of the abdomen has the hind margin a little emarginate in the middle.

I have seen but three or four specimens of this remarkable species; they were taken by Mr. Crotch at Monk's Wood.

Obs.—These specimens agree well with Brisout's description of *H. elegantula*; moreover, an example sent by Mr. Crotch to M. Brisout, was returned with a label, "*elegantula*, mihi," attached. Its peculiar colour, broad antennæ, strongly punctured head and thorax, and impunctate abdomen, should distinguish it from all others. Its nearest ally is the following species.

57. *Homalota rufo-testacea*.

Rufo-testacea, capite abdomineque cingulo piceis; capite thorace elytrisque alutaceis, obsolete vix evidenter punctatis; abdomine nitidulo, lævigato. Long. $1\frac{1}{3}$ lin.

H. rufo-testacea, Kr. Ins. Deutsch. ii. 245. *H. atricapilla*, Muls. Opusc. i. 21 (*nec* Bohem.); *Aleuonota atricapilla*, Th. Sk. Col. iii. 53.

A brightly coloured, rather narrow species, with stout antennæ. These are entirely yellow, thickened towards the apex; second joint distinctly longer than the third, four to ten each strongly transverse, and each broader than its predecessor; eleventh joint nearly as long as the two preceding ones. Head pitchy, with the mandibles and palpi yellow, narrow in proportion to its length, narrower than the thorax, its sides nearly parallel, obsoletely punctured. The thorax is narrower than the elytra, about as broad as long, slightly narrowed behind, rather dull, alutaceous, very obsoletely punctured, and with a fine and not very distinct longitudinal channel. The elytra are about a third longer than the thorax, alutaceous. The abdomen is reddish-yellow, the fifth segment and base of the sixth pitchy, shining and impunctate. Legs yellow.

I am unable to give any characters for the male of this species; I have, indeed, seen but one British specimen, which was taken at Mickleham, by Mr. Champion. Its narrower and less depressed form, and indistinctly punctured head and thorax, readily distinguish it from *H. elegantula*.

58. *Homalota splendens*.

Linearis, sat convexa, nitidula, fere impunctata, picea, capite nigro, elytris brunneo-testaceis, antennis ano pedibusque testaceis; thorace subquadrato, elytris hoc paulo longioribus. Long. $1\frac{1}{4}$ lin.

H. splendens, Kr. Ins. Deutsch. ii. 246.

A narrow, shining, delicately pubescent, and almost impunctate species, with stout entirely yellow antennæ. These are thickened towards the apex, third joint nearly as long as the second, four a little broader than three, transverse and very short, four to ten each broader

than its predecessor, and distinctly transverse, penultimate joints strongly transverse; eleventh joint large, as long as the two preceding. Mandibles and palpi yellow. Head black and shining, narrower than the thorax, rather long in proportion to its width, moderately convex above, without impression, impunctate, but with a slight pubescence. Thorax quadrate, not quite so long as broad, the sides nearly straight, scarcely perceptibly narrowed behind, of a pitchy colour, almost impunctate, and with a delicate pubescence. Elytra about a fourth longer than the thorax, yellowish or brownish in colour, not entirely impunctate, but with the sculpture scarcely visible, pubescence sparing. Abdomen pitchy in the middle, paler at the apex, and with the fifth and sixth segments rather darker than the preceding ones, shining and impunctate.

The three specimens of this species I have seen, are, I think, all females; they have the posterior margins of the upper and under plates of the seventh abdominal segment gently rounded.

Very rare. I have captured a specimen in the chalk-pit at Charlton, in May, and it is also in Mr. Crotch's collection. These specimens accord with an example of *H. splendens* sent by Kraatz to the British Museum.

59. *Homalota ægra*.

Nitidula, subtilissime pubescens, vix visibiliter punctata, picea, capite abdomineque nigro-piceis, pedibus piceo-testaceis; thorace transversim subquadrato, elytris hoc longioribus. Long. vix 1 lin.

H. ægra, Heer, Faun. Col. Helv. 595; Kr. Ins. Deutsch. ii. 249; Wat. Cat.

A small, dark-coloured, shining, almost impunctate species, with delicate but distinct pubescence. Antennæ pitchy in colour, moderately stout, a little thickened towards the apex; joint three not so long as two, four about as long as broad, five to ten transverse, the first of them slightly so, the last of them distinctly; eleventh joint rather short and broad, not quite so long as the two preceding together. Head black, with the mandibles and palpi pitchy, a little narrower than the thorax, shining, impunctate, and with a delicate pubescence. Thorax a little narrower than the elytra, one-third broader than

long, but slightly narrowed behind, impunctate, and with a delicate pubescence. The elytra are about a third longer than the thorax, very obsoletely punctured. Abdomen pitchy-black, shining, almost impunctate, but with a distinct pubescence. Legs dirty yellow.

In the male, the upper and under plates of the seventh segment of the abdomen are narrower than in the female, and the under one is a little more produced.

This species is rare, but I have found single specimens in several localities. Brighton, Cambridge, Edinburgh, London.

Obs.—This species is readily distinguished from *H. splendens* by its smaller size, darker colour, slenderer antennæ, &c.; on account of its almost impunctate surface it is readily distinguished from most others of the genus. *H. atomaria* resembles it in this respect, but, to say nothing of other characters, is easily separated by its smaller size. *H. luctuosa*, Muls., is extremely closely allied to *H. ægra*, but I have not as yet seen a British example of it.

Group IX. *Very flat species.*

(Species 60—63).

The three species with whose habits I am acquainted are all found under bark. *H. cribriceps* is a most remarkable insect, about which I can give no information; its colour is different from that of the other species, and gives it some resemblance to *H. boletobia*.

60. *Homalota immersa*.

Depressa, nigra, antennarum basi tibiisque testaceis, femoribus piceis; capite transverso, postice truncato; thorace subquadrato, basin versus angustato; abdomine supra parce obsolete punctato. Long. $\frac{4}{5}$ lin.

H. immersa, Er. Käf. Brand. i. 324; Gen. et Spec. Staph. 96; Kr. Ins. Deutsch. ii. 252; Wat. Cat. *Dado-bia planicollis*, Th. Sk. Col. ii. 287.

A very depressed species, readily known by the peculiar shape of its head. Antennæ pitchy, with the first and second joints yellow, but little thickened towards the apex; joint one longer than two, three shorter and more slender than two, scarcely half as long as the first, four to

ten differing but little in length and breadth, the first three or four of them each about as long as broad, the remainder slightly transverse; eleventh joint oblong, rather long, twice as long as the tenth. Head broad, about as broad as the thorax, straight behind, the posterior angles nearly right angles, flat, and dullish above, punctuation indistinct and sparing. Thorax as long as broad, narrower than the elytra, evidently narrowed behind, flat above, sometimes even with the disc depressed, rather dull, obsoletely and sparingly punctured. Elytra a third longer than the thorax, longer than broad, indistinctly and not densely punctured, the punctuation more evident than on the head and thorax. Abdomen black, a little narrowed at the base, punctuation sparing, and scarcely visible. Thighs pitchy; tibiæ and tarsi testaceous.

I am unable satisfactorily to distinguish the males from the females of this species.

Rather common in the North under the bark of fir trees; more rare in the South.

Obs.—A specimen of *H. immersa* sent by Kraatz to the British Museum is undoubtedly identical specifically with our British ones; according to descriptions, however, our specimens appear to be darker than Continental ones.

61. *Homalota cribriceps*.

Lata, subdepressa, nitidula, nigro-picea, antennarum basi pedibusque testaceis, elytris luteis, angulis apicis infuscatis; capite postice crebre fortiter punctato; thorace transverso, lateribus rotundatis, basin versus angustato, crebre fortiter punctato, medioque late impresso; abdomine supra basi sat crebre, apice parce, punctato. Long. $1\frac{1}{4}$ lin.

A most remarkable species, to be compared with no other; allied by the form of its head to *H. plana*; broad, flat, and shining, pitchy-black, with the base of the antennæ, the legs, and the elytra, except the apical angles, yellow. The antennæ are yellow at the base, infusate outwards, rather short, stout, thickened towards the apex; third joint quite as long as the second, fourth nearly quadrate, much narrower than the fifth, fifth to tenth strongly transverse; eleventh joint stout, as long as the two preceding. Head nearly black, shining, nar-

rowed behind the eyes, which are very large and prominent, very coarsely and closely punctured, but with a smooth impunctate space in the front. Thorax nearly as broad as the elytra, more than half as broad again as long, pitchy-black, almost without pubescence, the sides much rounded and considerably narrowed behind, the posterior angles a little prominent, the base not truncate, but produced in front of the scutellum, coarsely and closely punctured, especially on the disc, where there is also a broad distinct impression. Elytra pale testaceous, pitchy at the external angles, one-third longer than the thorax, indistinctly punctured. The abdomen is pitchy, paler at the extremity, with very scanty pubescence; the basal segments moderately closely, the apical ones sparingly punctured. Legs yellow. Tarsi formed as in *H. plana*, but rather longer.

A single specimen (a female, I believe) of this very remarkable species has been submitted to me by Mr. Waterhouse, without any indication of locality. I could well believe it to be an exotic species. From the structure of its antennæ it might be placed in the neighbourhood of *H. subterranea*, but as it is allied to none of the species of that group, and as the shape and punctuation of its head show a distinct affinity with *H. plana*, I have preferred placing it next that species.

62. *Homalota plana*.

Depressa, subopaca, nigra, elytris fuscis, antennis femoribusque piceis, tibiis testaceis; capite confertim distincte haud profunde punctato; thorace transversim subquadrato, basin versus leviter angustato; abdomine supra segmentis 2-4 subtiliter haud crebre punctatis, 5 et 6 fere lævigatis. Long. $1\frac{1}{4}$ lin.

Mas; abdomine segmento 6° medio ante apicem tuberculo parvo, 7° lineis elevatis duabus instructo.

Aleochara plana, Gyll. Ins. Suec. ii. 402. *H. plana*, Er. Gen. et Spec. Staph. 93; Kr. Ins. Deutsch. ii. 250; Th. Sk. Col. ii. 285; Wat. Cat.

A flat, broad, and dull species. Antennæ not quite so long as the head and thorax, rather stout, pitchy; first joint about as long as the second and third together, three nearly as long as two, four small, about as long as

broad, five considerably broader than four, five to ten transverse; eleventh joint rather short. Head large, but little narrower than the thorax, a little rounded behind the eyes, which are large and rather prominent, dull, closely and distinctly though not deeply punctured. Thorax a little narrower than the elytra, about a fourth broader than long, a little narrowed in front, and slightly more so towards the base, with an indistinct longitudinal channel along the middle, dull, obsoletely but closely punctured. Elytra of a lurid brownish colour, fully one-third longer than the thorax, densely but extremely finely punctured. Abdomen black (sometimes with the extremity pale), segments two and three finely and not densely punctured, four rather more sparingly punctured, five and six almost impunctate. Thighs pitchy, tibiae and tarsi testaceous.

In the male, the sixth segment of the abdomen is furnished, on the upper side in the middle, before the posterior margin, with a small raised tubercle; the seventh segment has two raised longitudinal lines on its surface, the space between which is rather depressed, especially just before the hind margin, and the lines project a little beyond the margin in the form of two small indistinct teeth.

Rather common in England, under the bark of dead elm trees.

Obs.—This species may be distinguished from all others by its distinctly and thickly punctured head, taken in conjunction with its flat broad form, and dull appearance.

In Thomson's arrangement, the genus *Homalota* is reduced to this one species.

63. *Homalota cuspidata*.

Angusta, parallela, depressa, picea, pedibus testaceis; thorace subquadrato; abdomine segmento 7° apice in utroque sexu acute mucronato. Long. $\frac{3}{4}$ lin.

Mas; abdomine supra segmentis 3-5 utrinque tuberculo armatis.

H. cuspidata, Er. Gen. et Spec. Staph. 96; Kr. Ins. Deutsch. ii. 253; Wat. Cat.; *Thectura cuspidata*, Th. Sk. Col. ii. 286.

A small, narrow, flat, and parallel species, distinguished from all others by the long sharp spine, projecting backwards from the middle of the extremity of the upper plate of the seventh abdominal segment. Antennæ short, thickened towards the apex, joints four to ten each distinctly transverse. Head about as broad as the thorax, quadrate, flat, with the sides parallel, closely and distinctly punctured. Thorax a little narrower than the elytra, about one-fourth broader than long; its sides nearly straight, finely and pretty densely punctured, with an indistinct longitudinal channel. Elytra about half as long again as the thorax, finely and pretty densely punctured. Abdomen with the basal segments finely and not densely punctured, the apical segments impunctate, the sixth with an ill-defined broad transverse impression, the apex of the seventh furnished in the middle with a long spine projecting backwards, and on each side with a smaller, easily overlooked, sharp spine. Legs yellow, the tarsi short.

In the male, the third, fourth, and fifth segments of the abdomen have each on the upper side a pair of tubercles, and the spines at the extremity of the seventh segment are larger and more distinct than in the female.

Not uncommon in England, under the bark of decaying oak trees.

SECTION D.

Group X. *The sixth segment of the abdomen punctured sparingly, or not at all; antennæ moderately long, not stout.*
(Species 64—67).

The short thorax of the species of this group prevents their being arranged with *H. elongatula*, while the structure of their antennæ (thinner, and with a well developed fourth joint) separates them from *H. fungicola*. The four species are all found amongst moss, and are apparently gregarious.

64. *Homalota eremita*.

Piceo-nigra, antennis pedibusque obscure testaceis, subtiliter sat crebre punctata; antennis sat elongatis,

apicem versus vix incrassatis; thorace transverso, basi impresso, plus minusve distincte canaliculato; elytris thoracis longitudinis; abdomine segmentis 2-4 evidenter sat crebre punctatis, 5° parcius punctato. Long. $1\frac{1}{2}$ - $1\frac{2}{3}$ lin.

Mas; abdomine segmento 7° ventrali producto, apicem versus angustato.

H. eremita, Rye, Ent. Month. Mag. iii. 123 (1866).

Var.—Capite canaliculato.

An anomalous species, very difficult to place satisfactorily; allied as it is at the same time to such different species as *elongatula*, *fungi*, and *gemina*; it is also a variable species in size, colour, and the channelling of the head and thorax. Pitchy-black, with the elytra slightly paler, the antennæ and legs obscurely testaceous. Antennæ moderately long, very little thickened towards the apex; first joint rather stout, two and three moderately long, three longer than two, but not quite so long as the first joint, four to ten differing but little from one another, four slender and longer than broad, ten about as long as broad; eleventh joint rather long, nearly as long as the two preceding. Head rather broad and short, but considerably narrower than the thorax, a little broader behind the eyes, which are small and not prominent, finely and indistinctly punctured. Thorax as broad as, or even broader than, the elytra, about half as broad again as long, the sides a little rounded in front, scarcely narrowed behind, in the middle in front of the base with an impression, which is generally continued forwards as a longitudinal channel, very finely but not very densely punctured. Elytra about as long as the thorax, finely and pretty densely punctured, the punctuation more distinct than on the thorax. Abdomen black, shining towards the apex, and furnished there with numerous and pretty distinct hairs, segments two to four finely but distinctly and not closely punctured, fifth segment sparingly punctured, sixth almost impunctate. Legs dirty testaceous, thighs darker than the tibiæ, posterior tarsi rather long and slender.

In the male, the head and thorax are generally more distinctly channelled than in the female; the third joint of the antennæ is a little stouter; and the under plate of the seventh abdominal segment is considerably produced, and narrowed towards the apex.

Common in moss in the hilly districts of Scotland.

Obs.—As *H. Aubei* is in some respects intermediate between *eremita* and *gemina*, I have associated the three species together in the present position, as being, perhaps, the one least open to objection for them. The transverse and broad thorax separates *H. eremita* from the *elongatula* group; the stouter and more developed antennæ, the flatter and more parallel form, from *H. fungi*.

65. *Homalota Aubei*.

Nigro-fusca, antennarum basi pedibusque sordide testaceis; capite canaliculato, thorace multo minore; hoc transverso, canaliculato; abdomine supra segmentis 2-5 confertim subtiliter punctatis, 6^o parce punctato. Long. $1\frac{1}{3}$ lin.

H. Aubei, Brisout, Ann. Soc. Ent. Fr. 1860, p. 339.

A good deal like *H. gemina*, but twice the size, and with the thorax channelled, and the fifth segment of the abdomen punctured. Also much like some of the varieties of *H. volans*, but with shorter and broader thorax, and more closely punctured abdomen. Antennæ longer than the head and thorax, slightly thickened towards the apex, of a pitchy colour, with the two or three basal joints paler; two and three of nearly equal length, four to ten differing but little in length, four rather slender, longer than broad, five to nine also each longer than broad, ten about as long as broad; eleventh joint half as long again as the tenth. Head much smaller than the thorax, round, a little wider behind the eyes, finely and indistinctly punctured, with a distinct longitudinal channel, sometimes short and sometimes longer (the male probably); mandibles and palpi pitchy. The thorax is but little narrower than the elytra, nearly half as broad again as long, the sides gently rounded, almost more narrowed in front than behind, at the base in the middle with an obscure impression, from which proceeds a central longitudinal channel, fine and not very distinct; closely and finely punctured. Elytra about one-third or fourth longer than the thorax, closely and finely punctured. Abdomen with segments two three and four finely and densely punctured, fifth segment rather more sparingly punctured, sixth very sparingly punctured. Legs dirty testaceous.

I am not able to point out satisfactory abdominal characters to separate the male from the female, but the male appears to have the front of the head flattened, and the longitudinal channel extending quite to the back.

Rare. I have found the species at Horning in Norfolk, and there are specimens in Mr. Crotch's collection, probably from the same locality. It has also been found by Mr. Hislop in Scotland.

Obs.—I am much indebted to M. Ch. Brisout de Barneville for an opportunity of examining his types of *H. Aubei*; they agree with my British examples: and I consider the species is best placed near *H. gemina*, to which it is more allied in structure than to any other of the genus.

66. *Homalota gemina*.

Nigro-fusca, antennis piceis, basi pedibusque fusco-testaceis; antennis sat elongatis, apicem versus vix incrassatis; capite thorace evidententer angustiore; hoc transverso, basi indistincte impresso; elytris thorace longioribus; abdomine supra segmentis 2-4 subtiliter sat crebre punctatis, 5 et 6 parce punctatis. Long. 1 lin.

Mas; capite evidententer canaliculato, abdomine segmento 7° ventrali producto.

H. gemina, Er. Käf. Brand. i. 330; Gen. et Spec. Staph. 112; Kr. Ins. Deutsch. ii. 255; Wat. Cat.

Antennæ fusco-testaceous, with the basal joint lighter; moderately long and stout, but little thickened towards the apex; joints two and three of about equal length, four to ten differing but little in length, and each one only slightly broader than its predecessor, four longer than broad, ten not quite so long as broad; eleventh joint rather long, oblong-ovate, nearly as long as the two preceding joints together. Head considerably smaller than the thorax, round, slightly broader behind the eyes, finely and indistinctly punctured; in the male, with a fine channel in the middle, reaching nearly to the back part, in the female with a very short and indistinct channel. Thorax transverse, nearly half as broad again as long, but little narrower than the elytra; the sides gently rounded, the base as wide as the apex, thickly and very finely punctured, and in front of the scutellum with an obsolete double impression. Elytra about a third longer than the

thorax, punctured closely and finely, but more distinctly than the thorax. Abdomen with segments two to four finely but distinctly and moderately closely punctured, five and six very sparingly punctured, apex indistinctly paler. Legs fusco-testaceous.

In the male, the channel on the head is longer and more distinct than in the female, and the abdomen has the seventh segment underneath more produced and narrower than in the female.

This species appears to be not common; I have found it only at Hammersmith Marshes, and in a marshy place near Thornhill.

Obs.—Compared with typical *H. analis*, *H. gemina* is larger and darker coloured, with longer and stouter antennæ, differently shaped head, and more sparingly punctured abdomen. Two specimens of *H. gemina* sent by Kraatz to the British Museum agree with my British ones.

67. *Homalota curtipennis*.

Nigro-fusca, antennis elytrisque fuscis, illarum basi pedibusque obscure testaceis; capite thorace evidentè angustiore, antice angustato; thorace transverso, basi plus minusve impresso; elytris hoc nonnihil longioribus; abdomine segmentis 2-4 sat crebre punctatis, 5° parcius punctato, 6° fere lævigato. Long. 1 lin.

Mas; fronte plana, capite subtiliter canaliculato, abdomine segmento 7° ventrali paulo elongato.

Fem.; fronte convexiuscula.

Atheta breviceps, Th. Sk. Col. ix. 273 (forte).

Allied to *H. gemina*, but with shorter antennæ and elytra. The antennæ are quite as long as the head and thorax, obscure testaceous, paler at the base, moderately stout, distinctly thickened towards the apex; joint three not quite so long as two, four to ten differing but little in length, but each a little broader than its predecessor, four to six each about as long as broad, seven to ten broader than long; eleventh joint moderately long, nearly twice as long as its predecessor. Head distinctly narrower than the thorax, considerably broader behind the eyes, and narrow in front, finely and indistinctly punctured, flat above and indistinctly channelled in the male,

in the female convex. Thorax about as broad as the elytra, transverse, half as broad again as long, the sides but little rounded, the base about as wide as the apex, closely and very finely punctured; sometimes in the middle before the base with a broad shallow impression, sometimes not impressed. The elytra are scarcely longer than the thorax, generally a little lighter in colour than it, finely and densely punctured. Abdomen black, a little paler at the apex, segments two to four finely but distinctly and moderately densely punctured, fifth segment sparingly punctured, sixth almost impunctate. Legs dirty testaceous.

In the male, the upper surface of the head is flatter than in the female, and channelled; the abdomen has the seventh segment underneath a little longer and narrower.

I have found this species only in Scotland. At Rannoch, on the Pentlands, and near Thornhill. I have not seen any other specimens, except some taken by Mr. Crotch, at Rannoch.

Obs.—*H. curtipennis* can be confounded only with *H. gemina*, but its shorter and stouter antennæ, and shorter elytra readily distinguish it. Thomson's *H. breviceps* may prove identical with it, though I cannot satisfy myself of this from description.

Group XI. *The sixth segment of the abdomen closely punctured; antennæ not very stout.* (Species 68—73).

The following species constitute a natural group, with the exception of *H. vilis*, which, although always associated with *H. analis*, would, perhaps, be better placed in Group III. The species are found amongst moss, and in damp places.

68. *Homalota vilis*.

Linearis, nigro-fusca, antennis elytrisque fuscis, pedibus testaceis; thorace leviter transverso; abdomine supra toto confertim subtiliter punctato. Long. vix 1 lin.

Mas; capite medio impresso, abdomine segmento 7° ventrali paulo elongato.

H. vilis, Er. Käf. Brand. i. 325; Gen. et Spec. Staph. 97; Kr. Ins. Deutsch. ii. 257; Wat. Cat.

Much smaller than *H. gemina*, and with the abdomen throughout thickly and finely punctured. Rather narrow and elongate. The antennæ are longer than the head and thorax, obscurely testaceous, with the first joint a little paler, but slightly thickened towards the apex; third joint not so long as the second, four to ten differ but little either in length or breadth, the tenth about as long as broad; eleventh joint oblong-ovate, nearly as long as the two preceding. Head a little narrower than the thorax, not narrowed towards the front, very finely and indistinctly punctured; in the male with an indistinct impression. The thorax is nearly as broad as the elytra, about one-third broader than long, nearly straight at the sides, very finely and closely punctured. The elytra are a little paler in colour than the head and thorax, about one-third longer than the latter, closely and finely punctured. The abdomen is throughout closely and very finely punctured, paler towards the apex. The legs are yellowish.

In the male, the head is obscurely impressed, and the seventh abdominal segment a little produced underneath.

I have seen only two British specimens of this species; one in Mr. Waterhouse's collection, and one in my own. I captured this specimen in a marshy place near Eltham.

Obs.—*H. vilis* can readily be distinguished from *H. analis* by its longer antennæ, less thickened towards the apex; by its head not broader behind the eyes, as well as by a different facies. With other species it is not very likely to be confounded. Specimens of *H. vilis* sent by Kraatz to the British Museum agree with my example mentioned above.

69. *Homalota analis*.

Nigra, thorace elytrisque piceis, antennis ano pedibusque testaceis; capite subtriangulari; thorace basi foveolato; abdomine supra confertim subtiliter punctato, segmento 7° apice medio in utroque sexu triangulariter emarginato. Long. 1 lin.

Var.—Major, colore obscuriore, antennis longioribus, thorace magis transverso.

Var.—Thorace elytrisque rufis.

Aleochara analis, Grav. Micr. 76; *H. analis*, Er. Gen. et Spec. Staph. 114; Kr. Ins. Deutsch. ii. 256; Wat. Cat.; *Amischa analis*, Th. Sk. Col. ii. 293.

A very abundant and variable species, with thickly punctured abdomen, and peculiarly shaped head. The antennæ are rather short, a little thickened towards the apex; joint three shorter and more slender than two, four much shorter than three, about as broad as long, from this to the tenth the joints differ but little in length, but each one is a little broader than its predecessor, from the sixth onwards each broader than long; eleventh joint rather large, a little broader than the tenth. The head is a little narrower than the thorax, considerably widened behind the eyes, so as to make it somewhat triangular, the upper surface moderately convex, very finely and indistinctly punctured. The thorax is but little narrower than the elytra, one-third broader than long, the sides but little rounded, and scarcely narrowed behind, very finely punctured, and with a fovea in front of the scutellum, sometimes with an indistinct central longitudinal channel. The elytra are a little longer than the thorax, finely and closely punctured. Abdomen more or less pale towards the apex, closely and finely punctured throughout, and the seventh segment has the posterior margin triangularly emarginate in the middle. Legs yellowish.

Varies much in colour; sometimes the thorax and elytra are bright reddish-brown, while at other times the general colour is blackish, with the legs and antennæ pitchy.

A large dark variety occurs, which is often confounded in collections with *H. soror*; this, besides its colour and size, differs from ordinary *H. analis*, by having the joints of the antennæ longer, the thorax broader, flatter, and more transverse, the elytra longer, and not narrowed at the shoulders, and the emargination of the seventh abdominal segment larger. It may possibly prove to be a distinct species, but all the characters mentioned above vary, and after the examination of several hundreds of specimens, I find myself unable to draw any satisfactory line of separation. This large form appears to be commoner in the North than in the South.

It is extremely difficult to separate the sexes of *H. analis*. Kraatz says that a larger triangular notch of the seventh

segment of the abdomen is indicative of the male; this notch certainly varies in size in different individuals, but I am unable to satisfy myself that the difference is sexual.

H. analis is extremely abundant in all sorts of situations all over the country.

70. *Homalota cavifrons*.

Nigra, thorace elytrisque piceis, antennis ano pedibusque testaceis; capite subtriangulari; thorace basi foveolato; elytris thoracis longitudinis; abdomine supra confertim subtiliter punctato, segmento 7° apice medio in utroque sexu triangulariter emarginato. Long. vix 1 lin.

Mas; capite medio late impresso, abdomine segmento 7° ventrali elongato.

This species so greatly resembles the small forms of *H. analis*, that it will be sufficient to point out the characters distinguishing it from that species. These are almost entirely sexual. The upper surface of the head of the male of this species is broadly and very distinctly impressed, whereas it is convex in all specimens of *H. analis*; also in this sex of *H. cavifrons*, the ventral plate of the seventh abdominal segment is considerably produced (as in *H. soror*), and the hind margin is furnished in the middle with a bunch of five or six distinct black hairs. In the female of *H. cavifrons*, the notch of the seventh segment is broader and deeper than in specimens of *H. analis* of the same size; and in both sexes the elytra are shorter, being only of the length of the thorax.

I have found this species only in the hilly districts of Scotland, in the neighbourhood of Edinburgh, and near Thornhill.

71. *Homalota simillima*.

Picea, antennis ano pedibusque testaceis; capite subtriangulari; thorace basi obsolete foveolato; elytris hoc paulo longioribus; abdomine supra undique confertim subtiliter punctato, segmento 7° apice medio in utroque sexu emarginato. Long. vix 1 lin.

Mas; capite impresso, abdomine segmento 7° ventrali elongato.

Very like *H. analis*, and equal in size to the small individuals of it, but of more parallel and flatter form, more unicolorous, and even more finely and densely punctured, so as to be less shining; the thorax is flatter and more transverse, and less distinctly foveolate at the base.

The male is readily distinguished from the female; it has the upper surface of the head deeply impressed, and its abdomen has the seventh ventral segment distinctly produced, and the apex furnished in the middle with five or six distinct black hairs.

Also closely allied to *H. cavifrons*, and possessing similar sexual characters, but more unicolorous, more parallel in form, more densely and finely punctured, with flatter and more transverse thorax, and with the elytra longer than the thorax, and not narrowed at the shoulders.

I have found this species only on the banks of the Nith, and its tributary Cairn Water, under stones, in company with *Scopæus Erichsoni*.

72. *Homalota soror*.

Nigra, antennis fuscis, pedibus fusco-testaceis; capite subtriangulari; thorace basi foveolato; abdomine supra undique dense subtiliter punctato. Long. 1 lin.

Mas; abdomine segmento 7° dorsali apice medio profunde exciso, ventrali elongato.

H. soror, Kr. Ins. Deutsch. ii. 257; Wat. Cat.

Extremely like the large dark form of *H. analis*, and distinguished from such only by its more densely and distinctly punctured abdomen (especially notable towards the apex), and its different sexual characters; the male has the head more or less distinctly channelled; the seventh segment of the abdomen has a much deeper and more distinct notch than has *H. analis*; this notch, too, is of a different shape, and commences on each side much nearer the outside angle of the plate; the ventral plate of the same segment is distinctly produced, and its hind

margin furnished in the middle with five or six distinct black hairs.

Apparently very local, and found hitherto only in the neighbourhood of London, Hammersmith, Barnes, &c.

Obs.—Kraatz says the abdomen is much more finely punctured than in *H. analis*. I find, however, the contrary to be the case. It is possible that Kraatz may have included the following very closely allied species with *H. soror*; this, at least, would account for the discrepancy in question.

73. *Homalota decipiens*.

Nigra, thorace elytrisque piceis, antennis ano pedibusque testaceis; capite subtriangulari; thorace basi foveolato; abdomine supra undique dense subtiliter punctato. Long. 1 lin.

Very closely allied to *H. soror*, and differing from it only by the more finely punctured abdomen, with differently formed seventh segment, and by having the legs, antennæ, and extremity of the abdomen of a clearer yellow colour. It is also, on the average, slightly smaller than *H. soror*.

The male of this species is only to be distinguished from the female by the under plate of the seventh segment of the abdomen being slightly narrower and more elongate than in the female. In neither sex has the posterior margin of the upper plate of this segment any triangular notch; the posterior margin is not, however, completely rounded, but is slightly and indistinctly emarginate.

Not common, though I have found it in several localities in the South. Chatham, Weymouth, Southend, Hammersmith, Charlton. I have also seen it in Mr. Crotch's collection.

Obs.—This species is closely allied to *H. analis*, and is probably confounded with it. It has, however, rather longer elytra, more densely punctured abdomen, which is on this account less shining, and the seventh segment is without the characteristic notch always found in *H. analis*.

Group XII. *The sixth segment of the abdomen not punctured; antennæ stout or very stout.* (Species 74—78).

The very small species forming this group are found amongst moss and leaves, with the exception of *H. parallela*, which is quite confined to the nests of *Formica rufa*; this species has thinner antennæ than the others, and a different facies.

74. *Homalota exilis*.

Parallela, fusca, antennis pedibus anoque testaceis, obsolete punctata, tenuissime pubescens; antennis crassis; thorace leviter transverso; elytris hoc paulo longioribus; abdomine confertim obsoletissime (apicem versus vix visibiliter) punctato. Long. $\frac{4}{5}$ lin.

H. exilis, Er. Käf. Brand. i. 333; Gen. et Spec. Staph. 115; Kr. Ins. Deutsch. ii. 260; Wat. Cat.; *Aleuonota exilis*, Th. Sk. Col. iii. 54.

Var.—Minor, angustior, colore obscuriore, antennis paulo brevioribus.

A remarkable little species, of a pale colour, with short thick antennæ, and extremely fine, scarcely visible punctuation and pubescence. Antennæ testaceous, not quite so long as the head and thorax, stout, thickened towards the apex; third joint triangular, not nearly so long as the second, fourth joint small, broader than long, from this to the tenth the antennæ are considerably thickened, with each joint very transverse; the penultimate joint more than twice as broad as long; eleventh joint broad, double the length of the tenth. Head large, scarcely narrower than the thorax, a little widened behind the eyes, which are small and not at all prominent; very obsoletely punctured, and sometimes with an indistinct longitudinal channel. The thorax is about as wide as the elytra, about one-third broader than long, the sides nearly straight, a little narrowed behind, very finely punctured and pubescent. The elytra are a little longer than the thorax, and rather more distinctly (yet extremely finely) punctured. The abdomen is yellow at the extremity, the middle segments are pitchy, the basal segments sometimes pitchy, sometimes yellow; its punctuation is pretty dense, but extremely fine, and is, towards the apex, scarcely visible. The legs are yellow.

I am not able to point out characters to distinguish the sexes.

Local, but sometimes found in great abundance, especially in early spring. Wimbledon, Edinburgh, &c.

Obs.—A small form of this species occurs, which besides its smaller size, is narrower, and of a more obscure colour, with rather shorter antennæ, and less transverse thorax; a specimen of it sent to Kraatz for examination, some years back, was returned by him as a distinct species, and it is possible it may prove to be so. I have found it in very great abundance on Wimbledon Common, unaccompanied by any of the larger typical form, which indeed appears to be very rare near London.

75. *Homalota pallens*.

Testacea, abdomine ante apicem paulo obscuriore, tenuissime pubescens, obsoletissime punctata. Long. $\frac{2}{3}$ lin.

H. pallens, Redt. Faun. Austr. (ed. i), 662; Kr. Ins. Deutsch. ii. 261.

Extremely like *H. exilis*, but smaller than even the smallest variety of it, and of a uniform pale testaceous colour; the fourth and fifth segments of the abdomen being sometimes a little darker; the punctuation and pubescence are even finer and more delicate than in *H. exilis*, and the elytra are a little shorter than is generally the case in that species.

Rare. Hitherto only found under stones, in rather muddy places, on the banks of the Nith and Avon, in Scotland.

76. *Homalota palleola*.

Testacea, capite elytrisque fusco-testaceis, abdomine ante apicem piceo, nitidula, subtilissime punctata, tenuissime pubescens; abdomine basi parce obsolete punctato, apice lævigato. Long. $\frac{3}{4}$ lin.

Mas; abdomine segmento 7^o dorsali apice truncato.

H. palleola, Er. Käf. Brand. i. 333; Gen. et Spec. Staph. 115; Kr. Ins. Deutsch. ii. 259; Wat. Cat.

A very small, shining, prettily coloured species. Yellowish, with the head and elytra more or less distinctly darker, and the abdomen before the apex pitchy. The antennæ are stout, thickened towards the apex, third

joint considerably more slender and rather shorter than the second, four not quite so long as broad, five to ten each perceptibly broader than its predecessor, and strongly transverse; eleventh joint large, twice as long as the tenth. Head smaller than the thorax, the eyes a little prominent, its punctuation and pubescence almost imperceptible, the upper side with a very small fovea in the middle. The thorax is a little narrower than the elytra, about half as broad again as long, punctuation and pubescence extremely fine and indistinct. The elytra are fully half as long again as the thorax, very finely punctured and pubescent, but rather more distinctly so than the thorax. Abdomen with the penultimate segments pitchy, the base and apex yellow, the basal segments very obsoletely punctured, the apical ones smooth. Legs yellow.

In the male, the apex of the seventh segment above is truncate.

Rare, and hitherto, I believe, found only near Reigate.

Obs.—A specimen of *H. palleola* sent by Kraatz to the British Museum agrees with my English specimens.

77. *Homalota validiuscula*.

Nigra, antennarum basi pedibusque testaceis, thorace elytrisq. rufo-testaceis; capite coleopteris angustiore; thorace transversim subquadrato, basi canaliculato; abdomine basi obsolete punctato, apice lævigato. Long. $\frac{3}{4}$ lin.

H. validiuscula, Kr. Ins. Deutsch. ii. 261.

Allied to *H. palleola*, but a little larger, not so depressed or parallel, with the abdomen darker in colour, the head rounder and narrower in proportion to the elytra, and the anterior parts of the body more distinctly punctured and pubescent. Antennæ stout, thickened towards the apex, pale at the base, pitchy outwards; joint three rather shorter than two, narrowed at the base, four to ten each distinctly broader than its predecessor, four slightly transverse, the following ones gradually more strongly so, tenth joint about twice as broad as the fourth; eleventh joint rather large, twice as long as the tenth. Head smaller than the thorax, round, black and shining; very finely and indistinctly punctured, with a short fine pubescence, the upper surface with a small fovea in the male, convex in the female. Thorax narrower than the elytra, a third or fourth broader than long, finely but distinctly

punctured and pubescent, with a short, indistinct, central longitudinal channel behind. Elytra a little longer than the thorax, punctuation and pubescence distinct but fine. Abdomen black, with the apex paler, the basal segments very finely and indistinctly punctured, the apical ones smooth. Legs yellow.

The male has a small fovea on the middle of the head, and the seventh segment of the abdomen has the ventral plate rather longer and narrower, and its apex more rounded, than in the female.

On one occasion, I found this species in numbers on the Braid Hills, Edinburgh, in a ditch among dead leaves early in the spring. I have not seen any other British specimens.

Obs.—I have not seen a specimen of *H. validiuscula* named by Kraatz; though there are several discrepancies when compared with his description, I think the species above described will prove to be identical with Kraatz's. Its less parallel form, differently shaped head, and more distinct punctuation and pubescence, readily distinguish it from *H. exilis*.

78. *Homalota parallela*.

Nigra, antennis pedibus anoque testaceis, elytris brunneis, confertim subtiliter punctata, tenuiter pubescens; thorace transverso, elytris hoc paulo longioribus; abdomine basi parce subtiliter punctato, apice lævigato. Long. vix $\frac{3}{4}$ lin.

Mas; abdomine segmento 7° supra et infra margine posteriore magis rotundato.

Bolitochara parallela, Man. Bull. Mosc. 1844, p. 173 (*teste* Kraatz); *H. parallela*, Kr. Ins. Deutsch. ii. 262; Wat. Cat.; *Amidobia parallela*, Th. Sk. Col. ii. 295.

Likely to be confounded only with *H. analis*, but smaller than the smallest specimens of that species, and readily distinguished by its differently shaped head, and impunctate and shining extremity of the abdomen. The antennæ are yellowish, rather stout, a little thickened towards the apex; joint two longer than three, four nearly quadrate, five to ten transverse; eleventh not so long as the two preceding together. Thorax a little narrower than the elytra, about a third broader than

long, with a scarcely visible fovea in front of the base in the middle, very finely punctured. The elytra are a little longer than the thorax, thickly and finely punctured. The abdomen is black and shining, yellowish at the extremity, the basal segments finely and indistinctly punctured, but with the pubescence pretty distinct, apical segments impunctate. Legs yellow.

In the male, the seventh segment of the abdomen has the hind margin of both the upper and under plates rather more produced and rounded than in the female.

Abundant in the large ants' nests at Rannoch. I am not aware of its occurrence elsewhere in the country.

SECTION E.

Group XIII. *Large species, with the thorax strongly punctured; penultimate joints of the antennæ transverse.*

(Species 79—81).

H. brunnea is our only British representative of four or five allied European species, and it is only in order to facilitate reference, that I have associated it with *H. hepatica*, which has a totally different facies. *H. brunnea* is a common species amongst moss, &c. *H. hepatica* I have never found, and *H. exarata* occurs very rarely in nests of *Formica fuliginosa*.

79. *Homalota brunnea*.

Depressa, nitidula, testacea, capite, antennis extrorsum, abdominisque segmentis plus minusve nigro-piceis; capite thoraceque sat fortiter haud crebre punctatis; abdomine supra segmentis 2-4 crebre evidentius punctatis, 5° parcius punctato, 6° fere lævigato. Long. $1\frac{1}{2}$ - $2\frac{1}{4}$ lin.

Mas; abdomine segmento 6° dorsali medio ante apicem tuberculo elevato, 7° apice dentibus 4 instructo.

Fem.; abdomine segmento 7° dorsali margine posteriore medio obsolete emarginato.

Staphylinus brunneus, Fab. Ent. Syst. Suppl. 180; *H. brunnea*, Er. Gen. et Spec. Staph. 98; Kr. Ins. Deutsch. ii. 265; Wat. Cat.; *Plataræa brunnea*, Th. Sk. Col. iii. 46. *H. depressa*, Er. Gen. et Spec. Staph. 99; *Plataræa depressa*, Th. Sk. Col. iii. 45.

A large, brightly coloured, and handsome species, flat,

yellowish, with the antennæ towards the apex, the head, and the abdomen more or less, blackish. The antennæ are moderately long, rather slender for the size of the species, but little thickened towards the apex; joints two and three of about equal length, four about as long as broad, from this to the tenth, but little difference between the length and breadth of each joint; in some specimens, however, the penultimate joints are distinctly transverse; the eleventh joint is gently pointed, not quite so long as the two preceding together. Head blackish, with the palpi and parts of the mouth testaceous, considerably smaller than the thorax, flat above, and sometimes obscurely impressed, distinctly but rather distantly punctured, each puncture being distinguishable as a real impression. The thorax is narrower than the elytra, about a third broader than long, the sides nearly straight, rounded towards the anterior and posterior angles, rather strongly and distantly punctured, the disc is flattish, with more or less distinct indications of one or more shallow impressions. The elytra are yellowish, a little darker in the neighbourhood of the scutellum, the punctuation not quite so coarse as that of the thorax, but rather closer. The abdomen is somewhat variable in colour, blackish, the base and apex sometimes obscurely, sometimes distinctly paler; segments two to four are distinctly and pretty densely punctured, fifth segment more sparingly punctured, sixth nearly impunctate. Legs yellow.

In the male, the third joint of the antennæ is stouter than in the female; the sixth segment of the abdomen is furnished above, just before the hind margin, with a distinct raised tubercle; the hind margin of the seventh segment is provided with four distinct teeth, of which the outer ones are the stouter, the two inner ones are rather closer together, and are like tubercles; the hind margin of the same segment, underneath, is more rounded than in the female.

In the female, the hind margin of the seventh dorsal segment is slightly emarginate in the middle.

Rather common in moss and dead leaves throughout the country.

Obs.—This species varies somewhat in colour, size, and punctuation of the head and thorax. Erichson divided it into two species, *H. brunnea* and *depressa*, which are still maintained by Thomson.

80. *Homalota hepatica*.

Nigra, elytris ferrugineis, antennis pedibusque testaceis; antennis sat validis; thorace elytrisque crebre distinctius punctatis, evidenter pubescentibus; abdomine basi parce punctato, apice lævigato. Long. 2-2½ lin.

Mas; elytris linea prope suturam longitudinaliter elevata; abdomine segmento 6° supra lineis 2 elevatis postice convergentibus instructo.

Fem.; abdomine segmento 7° ventrali margine posteriore medio sat profunde emarginato.

H. hepatica, Er. Gen. et Spec. Staph. 102; Kr. Ins. Deutsch. ii. 268; Wat. Cat.

A fine, large, and robust species. Antennæ yellow, stout, the first three joints elongate, two and three of nearly the same length, four to ten each a little broader than its predecessor, of four and five the length is about equal to the breadth, six to ten distinctly transverse, last joint long and pointed, as long as the two preceding together. Head roundish, smaller than the thorax, rather coarsely but obsoletely punctured. The thorax is nearly as broad as the elytra, about one-third broader than long, the sides rounded in front, then nearly straight behind, distinctly and pretty closely punctured, and with a well-marked yellowish pubescence. The elytra are reddish-brown, rather longer than the thorax, distinctly and pretty closely punctured, and with a well-marked pubescence. The abdomen is black and shining, a little paler at the apex, segments two to four sparingly punctured, fifth segment still more sparingly punctured, sixth nearly impunctate. Legs reddish-yellow.

The male has on each elytron a raised longitudinal line, nearly parallel with the suture, and on the sixth abdominal segment above, two raised lines converging posteriorly. (Kraatz).

The female has the posterior margin of the seventh ventral segment distinctly excised in the middle.

This fine species is rare, but has occurred in several parts of England. All the specimens I have seen are females.

81. *Homalota exarata*.

Linearis, nigro-picea, antennis elytris pedibusque rufo-testaceis, abdomine rufo-piceo; thorace transverso, elytris

minus crebre sat fortiter punctatis; abdomine fere lævigato. Long. $1\frac{2}{3}$ lin.

Mas; elytris prope suturam linea longitudinali elevata instructis.

Allied to *H. hepatica*, but smaller, especially narrower, not so dark in colour, with more slender antennæ, and shorter thorax. The antennæ are unicolorous, reddish-brown, stout, but little thickened towards the apex, basal joints rather long; joints two and three of about equal length, four and five each about as long as broad, six to ten rather transverse; eleventh joint rather long and pointed, about as long as the two preceding together. Head smaller than the thorax, neither finely nor closely punctured, the punctures shallow and indistinct. Thorax pitchy, nearly as broad as the elytra, half as broad again as long, the sides gently rounded in front, scarcely narrowed behind, rather coarsely, pretty densely, and not very distinctly, punctured. Elytra reddish, rather coarsely but indistinctly and not closely punctured, about a fourth longer than the thorax. Abdomen pitchy, the extremity, as well as the margins of the segments reddish, almost impunctate, and sparingly pubescent. Legs yellowish.

The male has a raised fold on each elytron, beginning close to the suture near the hind margin, and getting broader and more indistinct as it proceeds forwards.

Very rare; a few specimens found by Dr. Power and Mr. Brewer, in Tilgate Forest, in the nests of *Formica fuliginosa*, are all I have seen.

Group XIV. *Large species, with the penultimate joints of the antennæ not transverse.* (Species 82—86).

The members of this group form a natural cluster, allied in many respects to Group V. *H. xanthoptera* and *æneicollis* occur in numbers in fungi, and decaying vegetable matter; *H. valida* and *incognita* I have found in heaps of vegetable refuse, while *H. subænea* appears to prefer the neighbourhood of rivers and streams.

82. *Homalota subænea*.

Nigra, capite thoraceque subæneis, antennarum articulo primo pedibusque testaceis, elytris sordide brunneis;

thorace transverso, basi impresso; elytris confertim distinctius granuloso-punctatis; abdomine segmentis 2-4 parce punctatis, 5 et 6 fere lævigatis. Long. $1\frac{1}{2}$ - $1\frac{3}{4}$ lin.

Mas; abdomine segmento 7° dorsali apice truncato, et crenulato.

An obscurely coloured, rather large species, with the anterior parts dullish, the abdomen shining. The antennæ are moderately long, slender, scarcely thickened towards the apex; black, the basal joints yellowish; joints two and three rather slender, of about equal length, the third being very little the longer of the two, four shorter and more slender than five, five to ten nearly like one another, each a little narrowed towards its base, each a little longer than broad; the eleventh joint is rather long and pointed, not quite so long as the two preceding together. The head is narrower than the thorax, blackish, with a rather dull, brassy appearance, finely and indistinctly punctured. The thorax resembles the head in colour, it is narrower than the elytra, about a third broader than long, the sides gently rounded in front, then very slightly narrowed behind, very finely and not closely punctured, and with a broad shallow impression in front of the scutellum. Elytra about a third longer than the thorax, of a dirty brownish or yellowish-brown colour, slightly darker about the scutellum, closely and distinctly punctured, the sculpture consisting of small roughish elevations; their pubescence is depressed, and pretty distinct. The abdomen is black and shining; segments two to four sparingly but distinctly punctured, five and six almost impunctate. Legs dirty testaceous.

The male has the apex of the seventh segment of the abdomen above, truncate and crenulate, the crenulations are rather large and about eight in number, the outer one on each side the most distinct.

In wet places on the banks of the Scotch rivers, among moss, also sparingly in England.

Obs.—This species may readily be distinguished from *H. xanthoptera*, by the darker antennæ with shorter apical joint, the obscurely brassy colour of the head and thorax, and the more strongly punctured and obscurely coloured elytra. It may possibly prove identical with *Atheta aquatica*, Th., but Thomson describes the male of that species as having the hind margin of the seventh segment furnished with four teeth.

83. *Homalota ceneicollis*.

Nigra, nitidula, antennarum basi pedibus elytrisque testaceis, his circa scutellum angulisque apicis infuscatis; thorace transverso, basi obsolete impresso; abdomine supra segmentis 2-4 parcius punctatis, 5 et 6 fere lævigatis. Long. $1\frac{1}{2}$ - $1\frac{3}{4}$ lin.

Mas; abdomine segmento 7° dorsali apice truncato, et crenulato.

This species is extremely closely allied to *H. xanthoptera*, and I have no doubt is generally confounded with it; it is, on an average, a little smaller than, and not so robust as *H. xanthoptera*. The elytra are paler in colour, and more distinctly marked with black. The antennæ are darker in colour, and neither quite so long, nor quite so stout; they are darker towards the extremity, and the apical joint is not so long, though it bears nearly the same relation to the two preceding ones, as the last joint in *H. xanthoptera* does.

It is an abundant species in decaying vegetable matter, especially in Scotland, where it is commoner than *H. xanthoptera*, and may sometimes be found in numbers without any of that species being associated with it. It is widely distributed, as I have seen it from Naples.

Obs.—I am indebted to M. Ch. Brisout de Barneville, for the loan of his two types (♂ and ♀) of *H. parisiensis*; they are either the above species, or a closely allied one, the differences being, apparently, that these French specimens are rather smaller and narrower, and have the base of the antennæ, and the elytra, of a darker colour, and the antennæ rather more slender. They are rather old rubbed examples, and without the examination of a greater number of specimens, I can express no positive opinion as to their distinctness from the species above described.*

84. *Homalota xanthoptera*.

Nigra, nitidula, antennis articulo ultimo elongato, fusco-testaceis, basi testaceis, elytris pedibusque testaceis; thorace transverso, basi obsolete impresso; abdomine segmentis 2-4 parce punctatis, 5 et 6 fere lævigatis. Long. $1\frac{2}{3}$ -2 lin.

Mas; abdomine segmento 7° dorsali apice truncato, et crenulato.

* Since the above was written, I have seen one or two other examples of *H. parisiensis*; they tend to confirm my opinion of its distinctness.

Aleochara xanthoptera, Steph. Ill. Brit. Ent. v. 116 (1832); *H. xanthoptera*, Wat. Cat. *H. socialis*, var. *b*, Er. Gen. et Spec. Staph. 102. *H. merdaria*, Th. Öfv. Vet. Ac. Förh. 1852, p. 141; Kr. Ins. Deutsch. ii. 269; *Athetamerdaria*, Th. Sk. Col. iii. 81.

Antennæ long and rather slender, very little thickened towards the apex; yellowish, more or less darker towards the extremity, but with the terminal joint nearly always a little paler than the penultimate one, their pubescence rather distinct; joints one, two, and three moderately long, three slightly longer than two, four about as broad as three, longer than broad, five a little broader than four, from this to the tenth the joints differ but little from one another, each is a little longer than broad, and a little narrowed towards the base; the last joint is elongate, nearly the length of the three preceding together, gently pointed, not stouter than the tenth. Head black, with the mandibles and palpi yellowish, considerably narrower than the thorax, rounded behind the eyes, finely and indistinctly punctured. Thorax black and shining, a little narrower than the elytra, fully one-third broader than long, the sides gently rounded in front, then nearly straight behind, finely and pretty closely punctured, with an indistinct impression in front of the scutellum. Elytra a third or fourth longer than the thorax, of a chestnut-yellow colour, very indistinctly darker about the scutellum and towards the apical angles, pretty closely and finely punctured, and with a soft distinct pubescence. Abdomen black and shining, the extremity sometimes yellow; segments two to four sparingly but distinctly punctured, five and six almost impunctate. Legs bright yellow.

In the male, the hind margin of the upper plate of the seventh abdominal segment is truncate and crenulate, the number of crenulations varies a little, but is generally eight; of these, the outer one on each side is larger than the others; the under plate of this segment is also more produced, and its hind margin more rounded, than in the female.

Common all over the country, in fungi and decaying vegetable matter, especially in the months of August and September; sometimes found at the sap of trees.

Obs.—Stephens' description of *A. xanthoptera*, gives characters by which, considered together, this species

may be distinguished from all others, viz., size, colour, and the elongate terminal joint of the antennæ; and, as his name is many years older than Thomson's *merdaria*, I have adopted it.

85. *Homalota incognita*.

Lator, nigra, antennis pedibusque testaceis, illis apicem versus infuscatis, elytris obscure castaneis; thorace transverso, basi impresso; elytris crebre sat fortiter punctatis; abdomine segmentis 2-4 parce punctatis, 5 et 6 fere lævigatis. Long. 2 lin.

Mas; abdomine segmento 7° dorsali margine posteriore medio truncato, haud crenulato.

A large species, allied to *H. xanthoptera*, usually larger and broader in proportion, the thorax being evidently broader; it is more obscurely coloured, has the elytra more strongly punctured, the fourth joint of the antennæ longer, and the apex of the abdomen not visibly crenulate in the male. The antennæ are long, but slightly thickened towards the apex; yellow at the base, more or less infusate towards the apex, pretty distinctly furnished with outstanding hairs; joints two and three moderately long and slender, four considerably longer than broad, from this to the tenth the joints differ but little in length, but each is a little stouter than the foregoing one, each longer than broad; the eleventh joint is elongate (especially in the male), longer than the two preceding together, and a little stouter than its predecessor. The head is broad, narrower than the thorax, rounded behind the eyes, finely and indistinctly punctured. The thorax is a little narrower than the elytra, fully a third broader than long, the sides gently rounded in front, then nearly straight, and but very slightly narrowed behind, pretty finely and not densely punctured, with an indistinct impression in front of the scutellum, from which proceeds a short indistinct channel. The elytra are about a fourth longer than the thorax, of an obscure brownish colour, indistinctly darker about the scutellum and towards the apical angles, rather strongly and closely punctured. The abdomen is black and shining, pitchy at the extreme apex; segments two to four sparingly but distinctly punctured, five and six nearly impunctate. Legs yellow.

In the male, the last joint of the antennæ is longer than in the female, the seventh segment of the abdomen has the hind margin of the upper plate quite straight in the middle, but not visibly crenulate; the ventral plate is also more produced, and its posterior margin more rounded, than in the female.

Rare. Rannoch, Edinburgh, Inverness-shire, Thornhill.

Obs.—This species is in some respects intermediate between *H. xanthoptera* and *valida*; it is distinguished from *H. valida* by its more obscure colour, paler antennæ, less coarsely punctured elytra, and the non-crenulate seventh abdominal segment of the male.

86. *Homalota valida*.

Nigra, nitidula, antennarum basi pedibusque testaceis, elytris brunneis, crebre evidententer punctatis; thorace transverso, basi impresso; abdomine supra segmentis 2-4 parce punctatis, 5 et 6 fere lævigatis, ano obscure brunneo. Long. 2 lin.

Mas; abdomine segmento 7° dorsali medio crenulato.

H. valida, Kr. Ins. Deutsch. ii. 274.

A fine large species, the smallest specimens equal in size to *H. xanthoptera*. Antennæ pitchy, with the three basal joints dark yellow, rather long and stout, slightly thickened towards the apex, with a sparing exserted pubescence; joint three rather longer than two, four to ten each slightly broader than its predecessor; in the male each longer than broad, in the female about as long as broad; the terminal joint is elongate and pointed, rather more than the length of the two preceding. The head is black and shining, finely and sparingly punctured. Thorax a little narrower than the elytra, nearly half as broad again as long; black and shining, rather finely and not closely punctured, with a broad shallow impression in front of the scutellum, and sometimes with a fine indistinct channel. Elytra about a fourth longer than the thorax, shining brown, a little darker about the scutellum and towards the external angles, strongly and closely punctured, and with a well marked pubescence. The abdomen is black and shining, scarcely paler at the extremity, segments two to four sparingly but rather coarsely punctured, five and six nearly impunctate. Legs yellow.

In the male, the joints of the antennæ from the fourth onwards are a little longer than in the female, the upper plate of the seventh abdominal segment has the hind margin crenulate, and sometimes slightly emarginate; the crenulations vary in fineness, and are about eight in number; the ventral plate of the same segment is more produced, and has the hind margin more rounded, than in the female.

Rare. Edinburgh, Strath Cannich, Thornhill.

Obs.—I have but little doubt this is the *H. valida* of Kraatz, though I have not seen any specimen of the species so named, except my British ones. It is readily distinguished from *H. xanthoptera* by its darker and more shining colour, its less elongate apical joint to the antennæ, and its more strongly punctured elytra.

Group XV. *Moderately sized, or small species, with the penultimate joints of the antennæ transverse.*

(Species 87—107).

An artificial group, comprising a number of species of very different appearance and size. They occur, however, nearly without exception, in refuse vegetable matter and in fungi; *H. succicola* and *triangulum* prefer the sap of trees, and the latter species is also sometimes found on the coast. *H. succicola* is a large species, while *atomaria* and *peregrina* are amongst the smallest of the genus. *H. palustris* and others are placed by Kraatz near *H. atramentaria*, but the parallel abdomen, and the tibiæ entirely without setæ, make them even more unnaturally placed than in my arrangement.

87. *Homalota succicola*.

Nigra, nitidula, elytris brunneis, pedibus testaceis; antennis articulis 5-10 transversis; thorace transverso, basi impresso; abdomine segmentis 2-4 parce punctatis, 5 et 6 lævigatis. Long. $1\frac{2}{3}$ – $1\frac{3}{4}$ lin.

Mas; abdomine segmento 7° dorsali apice truncato, et subtiliter crenulato.

H. succicola, Th. Öfv. Vet. Ac. Förh. 1852, p. 141; *Atheta succicola*, Th. Sk. Col. iii. 78. *H. validicornis*, Maerk., Kr. Ins. Deutsch. ii. 271. *H. socialis*, var. *a*, Er. Gen. et Spec. Staph. 102. *H. euryptera*, Wat. Cat.

Compared with *H. xanthoptera*, this species is broader and stouter in proportion, with stouter shorter and darker antennæ, of which the fifth joint is considerably broader than the fourth. The antennæ are nearly black, stout, after the fifth joint not thickened towards the apex; joint three a little longer than two, four small in comparison with the others, about as broad as three, and nearly as long as broad, five considerably broader than four, distinctly transverse, the other joints onwards to the tenth closely resembling it; the eleventh joint is long in proportion to its predecessors, longer than the two preceding together. Head black, rather broad and short, distinctly narrower than the thorax, rounded behind the eyes, finely and indistinctly punctured. Thorax a little narrower than the elytra, quite half as broad again as long, the sides rounded in front, then nearly straight behind, so that it is a little narrower at the anterior than at the posterior angles, pretty finely and not closely punctured, and with a more or less distinct, shallow impression in front of the scutellum. Elytra about a third longer than the thorax, brownish in colour, a little darker about the scutellum, pretty closely and finely punctured. Abdomen black and shining; segments two to four sparingly but pretty distinctly punctured, five and six almost impunctate. Legs not very clear yellow.

In the male, the seventh dorsal segment of the abdomen has the apex truncate and finely crenulate, the number of the crenulations not easy to count, about twelve to sixteen, the outside one on each side a little the larger.

Very common at the sap of trees, and also in other situations throughout the country.

Obs. I.—Kraatz very truly remarks that this species might perhaps be more correctly placed in the next section, but that its nearest allies are in the present group.

Obs. II.—This species is the *H. euryptera* of Mr. Waterhouse's catalogue. As Stephens' description of *Aleochara euryptera* contains nothing peculiarly characteristic of this species, I have not felt justified in adopting this name, to the displacement of another in general use, merely because a specimen is so named in Stephens' cabinet.

88. *Homalota trinotata*.

Nigra, elytris pedibusque testaceis, illis circa scutellum angulisque apicis fuscis; antennis articulis 5-10

transversis; thorace transverso; abdomine segmentis 2-4 subtiliter sat crebre punctatis, 5 et 6 parcius punctatis. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° dorsali margine posteriore subtiliter crenulato, utrinque denticulo acuto terminato.

H. trinotata, Kr. Ins. Deutsch. ii. 272; Wat. Cat. *Atheta socialis*, Th. Sk. Col. iii. 76.

A rather shining, and with the exception of the elytra and legs, dark-coloured species. The antennæ are nearly black, pitchy at the base, from the third joint onwards gradually though slightly thickened towards the apex; the three basal joints moderately long, three a little longer than two, four slightly broader than three, about as broad as, or a little broader than long, from this onwards each joint is slightly broader than its predecessor, five to ten distinctly transverse; eleventh joint rather broad, as long as the two preceding together. Head black, moderately shining, finely and indistinctly punctured, narrower than the thorax. Thorax a little narrower than the elytra, half as broad again as long, the sides nearly straight, gently rounded at the anterior angles, finely and not closely punctured, with an indistinct impression in front of the scutellum. Elytra fully a third longer than the thorax, yellowish, with a tolerably well defined, dark, triangular patch at the scutellum, and another on each side near the apical angle, finely and pretty closely punctured. The abdomen is black and shining, segments two to four pretty finely and tolerably closely punctured, fifth segment distinctly but more sparingly, sixth sparingly punctured. Legs yellow.

In the male, the seventh dorsal segment of the abdomen has the posterior margin finely crenulate, but not thickened, the crenulations on each side terminated by a small and not distinct sharper tooth; the ventral plate of the same segment has the posterior margin less straight, more rounded than in the female.

Very abundant in vegetable refuse matter all over the kingdom. Especially fond of foul straw.

Obs.—Seeing the great confusion that exists as to the synonymy of *H. socialis*, and the impossibility of determining with accuracy the exact species to which the name of the older authors should be applied, I have

thought it better to adopt Kraatz's name of *trinotata*. Paykull's *Staphylinus socialis*, may, or may not, be this species, but it is certain from his description, that he confounded more than one species together.

89. *Homalota hybrida*.

Nigro-picea, elytris pedibusque testaceis, illis circa scutellum angulisque apicis obscure fuscis; antennis apicem versus vix incrassatis; thorace transverso, basi obsolete impresso; abdomine segmentis 2-4 subtiliter sat crebre punctatis. Long. $1\frac{1}{2}$ lin.

Mas; antennis articulo penultimo quadrato, abdomine segmento 7° dorsali apice truncato, haud crenulato.

This species is so closely allied to *H. trinotata* that it will be sufficient to point out the characters which distinguish it. Its colour is not so well marked, the black being pitchy, and the elytra obscure yellow, with the markings indistinct. The antennæ are of different structure, being rather more slender, even less thickened towards the apex, and with the terminal joint longer. The male characters are different; in that sex the penultimate joint of the antennæ is markedly longer than in the female, about as long as broad; the seventh dorsal segment of the abdomen has the hind margin non-crenulate, and the ventral plate of the same segment has the hind margin less straight and more rounded than in the female.

I have found this species only near Edinburgh.

Obs.—I have seen but three specimens (two ♂ and one ♀) of this species. The structure of its antennæ seems to me to be quite irreconcilable with the idea of its being a variety of *H. trinotata*. Its shorter more transverse thorax, and broader less parallel form, apart from the ♂ characters, will readily distinguish it from *H. xanthopus*. Perhaps it may be found mixed with long series of *H. trinotata*, but I expect it will prove very rare.

90. *Homalota xanthopus*.

Linearis, nigra, antennarum basi elytris pedibusque testaceis; elytris circa scutellum angulisque apicis

fuscis; thorace transverso, basi plus minusve impresso; abdomine segmentis 2-4 subtiliter haud crebre punctatis, 5° parcius punctato, 6° lævigato. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° dorsali apice truncato, et crenulato.

Fem.; abdomine segmento 7° supra et infra margine posteriore obsoletissime emarginato.

H. xanthopus, Th. Öfv. Vet. Ac. Förh. 1856, p. 96; *Atheta xanthopus*, Th. Sk. Col. iii. 77. *H. sublinearis*, Kr. Ins. Deutsch. ii. 275; Wat. Cat.

This species, though narrower and more parallel than its allies, is pretty near to *H. trinotata* and *triangulum*. The antennæ are moderately long and stout, very little thickened towards the apex, the basal joint yellow, and the two or three following ones more or less distinctly so, the rest pitchy; joints two and three of nearly the same length, four small, about as long as broad, five broader than four, five to ten differing but little from one another, transverse but not strongly so, the last joint moderately long and stout, about as long as the two preceding together. The head is a little narrower than the thorax, rounded behind the eyes, finely and indistinctly punctured. The thorax is but slightly narrower than the elytra, a third or fourth broader than long, the sides a little rounded at the anterior angles, then nearly straight and scarcely narrowed behind, finely and not closely punctured, with a very obsolete impression in front of the scutellum, and sometimes with a fine indistinct channel. The elytra are about a third longer than the thorax, yellow, with three tolerably distinct darker triangular patches, one at the scutellum, and one on each side near the outer angle; finely and pretty closely punctured. The abdomen is black and shining, segments two to four rather sparingly punctured, fifth very sparingly punctured, sixth nearly impunctate. Legs yellow.

In the male, the dorsal plate of the seventh abdominal segment has the apex truncate and crenulate; the ventral plate of the same segment has also the posterior margin more rounded than in the female.

Generally distributed in England, and in the south of Scotland, but rare.

Obs.—This species in colour bears a resemblance to *H. æneicollis*, but is smaller and narrower, and has shorter-jointed antennæ.

91. *Homalota triangulum*.

Nigra, sat nitida, elytris testaceis, circa scutellum angulisque apicis determinate nigris, pedibus fusco-testaceis; thorace transverso; abdomine supra segmentis 2-4 parce punctatis, 5 et 6 lævigatis. Long. $1\frac{1}{2}$ - $1\frac{2}{3}$ lin.

Mas; abdomine segmento 7° dorsali apice truncato, et crenulato.

Fem.; segmento 7° supra et infra margine posteriore medio obsoletissime emarginato.

H. triangulum, Kr. Ins. Deutsch. ii. 273; Wat. Cat.

Allied to *H. trinitata*, but more parallel, with the thorax more developed, the end joint of the antennæ longer, and the black triangular patch about the scutellum larger and more distinct. The antennæ are black, moderately long and stout, slightly thickened towards the apex; joints two and three of about equal length, four scarcely broader than three, about as long as broad, from this onwards very slightly thickened, and each joint transverse, but not strongly so; eleventh joint long, more than twice the length of the tenth. Head narrower than the thorax, black, finely and indistinctly punctured. Thorax a little narrower than the elytra, about a third broader than long, the sides gently rounded at the anterior angles, then nearly straight behind, pretty finely and closely punctured, with a very indistinct impression in front of the base in the middle. The elytra are more than a third longer than the thorax, testaceous, with a large, black, well-defined, triangular patch at the scutellum, and with a black patch at each side, rather closely and distinctly punctured. The abdomen is black and shining, segments two to four sparingly punctured, fifth segment very sparingly punctured, sixth nearly impunctate. Legs fusco-testaceous, the thighs darker than the tibiæ.

In the male, the apex of the dorsal plate of the seventh segment of the abdomen is truncate and crenulate, the outer tooth on each side being rather the more distinct; the ventral plate is a little produced, and has the hind margin rounded.

The female has the posterior margins of the same segment, both above and below, very indistinctly emarginate in the middle.

Scarce. Croydon, Darenth, Chatham, Brighton.

It is remarkable that this species has two very distinct habitats, viz., at the sap of trees, and under sea-weed on the coasts; I have never found it except under these conditions, and can find no difference whatever between the specimens from these different localities. Kraatz mentions it only as a coast species.

Obs.—This species is allied to *H. xanthopus*, but is larger and broader, has the base of the antennæ black, and the triangular patches on the elytra much more distinctly marked.

92. *Homalota fungicola*.

Nigra, antice haud nitida, antennarum basi pedibusque testaceis, elytris brunneis; thorace transverso; abdomine segmentis 2-4 subtiliter vix crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. circiter $1\frac{1}{2}$ lin.

Mas; antennis articulo 3° incrassato; abdomine segmento 7° dorsali apice truncato, et crenulato; ventrali producto, apicem versus paulo angustato.

Fem.; abdomine segmento 7° ventrali haud producto, apice lato, leviter rotundato.

H. fungicola, Th. Öfv. Vet. Ac. Förh. 1852, p. 142; Kr. Ins. Deutsch. ii. 274; *Atheta fungicola*, Th. Sk. Col. iii. 76. *H. nigricornis*, Wat. Cat. *H. socialis*, Er. Gen. et Spec. Staph. 102 (*ex parte*).

Rather flat, the fore parts dull, the antennæ stoutish, and the elytra brown; but a very variable and puzzling species. The antennæ are rather stout, two or three basal joints yellowish, gradually thickened from the fourth to the eighth joint, but not after that; joint three distinctly longer than two, slender in the female, stout in the male; four comparatively small, scarcely or not at all broader than three, five considerably broader than four, from this to the seventh or eighth each slightly stouter than its predecessor, five to ten distinctly but not strongly transverse; eleventh joint rather pointed, about as long as the two preceding together. The head is narrower than the thorax, broad and short, dullish, finely and not closely punctured. The thorax is but little narrower than the elytra, fully half as broad again as long,

the sides gently rounded in front, the disc flat, sometimes obscurely depressed, and channelled, rather dull, pretty closely and distinctly punctured. The elytra are brownish, about one-third longer than the thorax, pretty thickly and finely punctured, rendered dullish by a soft pretty close pubescence. The abdomen is black and shining, segments two to four rather finely and not closely punctured, fifth segment sparingly punctured, sixth impunctate. Legs yellow.

In the male, the third joint of the antennæ is much stouter than in the female; the hind margin of the upper plate of the seventh abdominal segment is truncate, and finely crenulate, terminated on each side by a more distinct but small tubercle; the ventral plate of the same segment is distinctly produced, and much narrower at the apex than in the female. In the female, the ventral plate of the seventh segment is broad at the posterior margin, and gently rounded.

Abundant all over the country, especially in fungus in the autumn.

Obs.—There are, I think, still two species confounded under this; the female, in one, has the hind margin of the ventral plate of the seventh segment, distinctly, even deeply, excised; while, in the other, it is rounded as described above; the species with the excision seems to be much rarer than the other, and as I am unable to point out other satisfactory characters to distinguish it, I content myself at present, with calling attention to this anomaly.

93. *Homalota ignobilis*.

Sat convexa, nigra, elytris fuscis, pedibus piceis; thorace transverso; abdomine segmentis 2-4 distincte haud crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° dorsali apice truncato, et obsolete crenulato; ventrali apicem versus paulo angustato, apice ipso rotundato.

Fem.; abdomine segmento 7° ventrali margine posteriore dense evidenter ciliato, medio sat profunde exciso.

Allied to *H. fungicola*; compared with typical examples of that species, a little larger, not so flat, with the front

parts not so dull, the base of the antennæ dark, the head narrower, and the ventral plate of the seventh abdominal segment differently formed in the female. The antennæ are blackish, not thickened outwards after the sixth or seventh joint, formed much as in *fungicola*, the fourth joint small and transverse. The head is smaller than the thorax, the vertex moderately convex, finely and indistinctly punctured. The thorax is not quite so broad as the elytra, nearly half as broad again as long, pretty closely and distinctly punctured, the disc not flattened, sometimes with a fine indistinct channel. The elytra are of a dark fuscous colour, about one-third longer than the thorax, rather closely and finely punctured. Abdomen with segments two to four pretty distinctly and rather sparingly punctured, fifth segment sparingly punctured, sixth almost impunctate. Thighs pitchy; tibiæ pitchy-testaceous.

In the male, the upper plate of the seventh abdominal segment has the hind margin truncate, and finely crenulate, and is terminated on each side by a more distinct but small tubercle, much as in *H. fungicola*; the ventral plate of the seventh segment in the female, has the hind margin fringed with closely-set parallel cilia, and is in the middle distinctly, even rather deeply, excised.

Rare. I have taken it on one or two occasions at Shirley near Croydon, in the autumn, and also near Edinburgh. I have seen specimens from Germany.

Obs.—The cilia at the posterior margin of the seventh segment (ventral plate) of the female, so conspicuous in this species, are also to be found in ♀ *H. fungicola*, but are there so short, fine, and light coloured, as only to be perceived with difficulty.

94. *Homalota diversa*.

Nigra, subdepressa, vix nitida, elytris fuscis, pedibus testaceis; antennis articulo 4° quadrato; thorace transverso, basi plus minusve canaliculato; abdomine supra segmentis 2-4 parce punctatis, 5 et 6 fere lævigatis. Long. $1\frac{2}{3}$ lin.

Mas; abdomine segmento 7° dorsali apice truncato, et subtiliter crenulato.

Allied to *H. succicola*, and perhaps confounded with it; not quite so shining, rather more depressed, with the

elytra darker coloured, and the antennæ differently formed, the fourth joint not being transverse, and only a little narrower than the fifth, the following joints narrower, and the terminal one much shorter than in *succicola*. The antennæ are black, with the basal joint sometimes pitchy; moderately long, scarcely thickened towards the apex; joint three slightly longer than two, but little difference between four and five, each about as long as broad, six to ten each a little broader than long; eleventh joint rather short, pointed, about half as long again as the tenth. Head much narrower than the thorax, disc moderately convex, generally with a small but distinct fovea, finely and indistinctly punctured, not very shining. Thorax a little narrower than the elytra, nearly half as broad again as long, gently rounded and depressed at the anterior angles, the sides nearly straight behind; generally with a distinct longitudinal channel, reaching from the base half way to the front, this is sometimes, however, scarcely to be seen; rather dull, pretty finely and not closely punctured. Elytra about a third longer than the thorax, pitchy-brown, pretty closely and distinctly punctured. Abdomen black and shining, segments two to four rather finely and sparingly punctured, fifth segment very sparingly punctured, sixth almost impunctate. Legs dark yellow.

The male has the hind margin of the seventh dorsal segment of the abdomen truncate, and very finely crenulate, the truncate part terminated on each side by a rather longer and more distinct projection.

I have a good series of this species taken at Rannoch in Perthshire, and have besides found it at Thornhill, and in Glen Almond, Perthshire.

Obs.—Though somewhat allied to *H. succicola*, it is, I think, more correctly placed near *fungicola*, from which its larger size, darker colour, less parallel form, and somewhat differently formed antennæ, distinguish it.

95. *Homalota boletobia*.

Nigra, antennarum basi pedibus elytrisque testaceis, his circa scutellum angulisque apicis infuscatis; thorace fortiter transverso, basi obsolete impresso; abdomine supra segmentis 2-4 minus crebre punctatis, 5° parce punctato. Long. $1\frac{1}{3}$ lin.

Mas; abdomine segmento 7° dorsali apice truncato, et obsolete obtuse quadridentato.

H. boletobia, Th. Öfv. Vet. Ac. Förh. 1856, p. 96; *Athetaboletobia*, Th. Sk. Col. iii. 78. *H. nigritula*, Kr. Ins. Deutsch. ii. 276; Wat. Cat.

A rather broad and short species. The antennæ are rather short, a little thickened towards the apex, pitchy, with the two or three basal joints paler; joint three scarcely so long as two, four small, but little broader than three, broader than long, five to ten distinctly and pretty strongly transverse; eleventh joint moderately long, about half as long again as the tenth. The head is broad and short, narrower than the thorax, rather shining, finely and indistinctly punctured. The thorax is black or pitchy, nearly as broad as the elytra, not quite twice as broad as long, nearly straight in front, gently rounded at the sides and base, with an indistinct impression or channel in front of the scutellum, rather finely and not closely punctured. The elytra are a third longer than the thorax, pale yellow, darker about the scutellum, and at the sides towards the apical angles, pretty finely and closely punctured. The abdomen is black, or pitchy-black, sometimes a little paler at the extremity; segments two to four are rather distinctly but not closely punctured, fifth segment punctured at the base, almost smooth at the apex, sixth almost impunctate. Legs pale yellow.

In the male, the posterior margin of the seventh segment of the abdomen is truncate, and a little thickened, with four obtuse obsolete teeth; these teeth are rather undulations of the margin, than to be distinguished as distinct projections.

Not very common. In fungi in the South, in autumn.

Obs.—Kraatz's description of *H. nigritula*, as well as specimens sent by him to the British Museum under that name, are to be referred to this species. Its much shorter broader form, shorter antennæ, and paler elytra, should prevent its being confounded with *H. xanthopus*.

96. *Homalota nigritula*.

Nigro-picea, vix nitida, subtiliter punctulata; thorace transverso, piceo; antennis elytris pedibusque testaceis;

abdomine supra segmentis 2-4 subtiliter sat crebre punctatis, 5 et 6 fere lævigatis. Long. $1\frac{1}{4}$ lin.

Mas; abdomine segmento 7° dorsali apicem versus utrinque linea longitudinali elevata, margine apicali medio profunde semicirculariter exciso, excisionis margine evidenter incrassato.

Aleochara nigritula, Gyll. Ins. Suec. ii. 408; *Atheta nigritula*, Th. Sk. Col. iii. 80. *H. liturata*, Wat. Cat.

Antennæ rather short and stout, yellow; joints two and three of about equal length, four to ten short, the first of them rather, the last of them very transverse, five a good deal broader than four; eleventh joint comparatively long, quite as long as the two preceding together. The head is narrower than the thorax, black, dull, narrower behind the eyes, which are rather prominent, finely and indistinctly punctured; palpi yellow. Thorax nearly as broad as the elytra, strongly transverse, twice as broad as long, pitchy or pitchy-red, finely and rather closely punctured, sometimes with an indistinct longitudinal channel. Elytra pale yellow, sometimes a little darker about the scutellum, about half as long again as the thorax, finely and densely punctured. Abdomen pitchy-black, segments two to four finely but not very closely punctured, fifth and sixth segments almost impunctate. Legs pale yellow.

The male has, in the middle of the hind margin of the dorsal plate of the seventh abdominal segment, a deep semicircular incision, the margin of which is thickened all the way round; outside this on each side is a thickened raised line terminating in a slight projection at each outer angle.

Taken in abundance in fungi in the Fens, Cambridge, by Mr. Crotch.

Obs.—The smaller size, pale antennæ with shorter joints, &c., distinguish this species from *H. boletobia*, with which it appears to have been confounded by Kraatz. It might almost be naturally placed in the next section.

97. *Homalota coriaria*.

Nigra, nitida, elytris fuscis, antennarum basi pedibusque obscure testaceis; thorace fortiter transverso; abdo-

mine segmentis 2-4 subtiliter haud crebre punctatis, 5 et 6 fere lævigatis. Long. $1\frac{1}{3}$ lin.

Mas; thorace disco impresso; abdomine segmento 7° dorsali margine apicali utrinque denticulo prominulo terminato, et medio leviter emarginato.

H. coriaria, Kr. Ins. Deutsch. ii. 282; Wat. Cat.

Not very closely allied to any other species; rather broad and convex. The antennæ are moderately stout, rather short, a little thickened towards the apex, blackish, with the two or three basal joints paler; joints two and three rather short, of about equal length, four small, about as broad as three, not quite so long as broad, five broader than four, from this to the tenth transverse, but not strongly so; eleventh joint moderately stout, about as long as the two preceding together. The head is rather broad, but considerably narrower than the thorax and elytra, black and shining, finely and indistinctly punctured, rounded behind the eyes. Thorax strongly transverse, its breadth twice its length, a little narrower than the elytra, the sides gently rounded, rather narrower at the anterior than at the posterior angles, extremely finely punctured and pubescent; in the female with a small fovea in front of the scutellum, in the male with a more or less distinct large impression on the middle. The elytra are about a third longer than the thorax, of an obscure brownish colour, finely and closely punctured. The abdomen is black and shining, segments two to four rather sparingly punctured, fifth segment very sparingly and finely punctured, sixth almost impunctate. Legs pitchy-yellow.

In the male, the thorax is impressed on the disc; and the seventh segment of the abdomen has a small notch in the middle of the hind margin, and the lateral margin on each side is produced into a small sharp tooth, between which and the central notch can generally be seen one or more indistinct smaller teeth, which, however, are sometimes quite absent.

Not common. In cut grass, &c. Thornhill, and near London.

98. *Homalota sodalis*.

Convexa, nigra, nitidula, elytris nigro-brunneis, antennis piceis, basi pedibusque rufo-testaceis; thorace

transverso, basi indistincte impresso, elytris angustiore; his dense sat fortiter punctatis; abdomine supra segmentis 2-4 haud crebre punctatis, 5 et 6 fere lævigatis. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° dorsali apice angulatim emarginato, ventrali apicem versus angustato.

H. sodalis, Er. Käf. Brand. i. 328; Gen. et. Spec. Staph. 104; Kr. Ins. Deutsch. ii. 279; Wat. Cat.; *Atheta sodalis*, Th. Sk. Col. iii. 84.

Antennæ moderately stout, thickened towards the apex, pitchy in colour, paler at the base; joint two slightly longer than three, four to ten each slightly broader than its predecessor, four about as long as broad, five a little transverse, the following ones gradually more distinctly so; eleventh joint nearly as long as the two preceding together. The head is rather small, narrower than the thorax, much narrower than the elytra, black and shining, finely and indistinctly punctured. Thorax narrower than the elytra, a third broader than long, rather narrower at the anterior than at the posterior angles, its punctuation neither fine nor close; in front of the scutellum is a broad obsolete impression, sometimes appearing double. The elytra are about a third longer than the thorax, of a brownish or blackish colour, densely and rather strongly punctured and pubescent. The abdomen is black and shining, segments two to four distinctly but not densely punctured, five and six nearly impunctate. Legs reddish-yellow.

The male has the hind margin of the upper plate of the seventh abdominal segment distinctly excised, the margin of the excision is scarcely visibly thickened; the ventral plate of the same segment is very narrow towards the apex, but the apex itself is not pointed.

Not uncommon in fungi in the summer. Abundant near Edinburgh.

Obs.—This species varies in the colour of its antennæ and elytra. It is not very closely allied to any of our other species, but *H. humeralis*, Kr., found in Germany and Sweden, is very near it.

99. *Homalota gagatina*.

Convexiuscula, antice et postice subangustata, nigra, elytris fuscis, antennarum basi pedibusque testaceis; an-

tennis articulis 7-10 minus evidenter transversis; thorace transverso; abdomine segmentis 2-4 sat crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. $1\frac{1}{4}$ lin.

Mas; abdomine segmento 7° dorsali apice 4-dentato, dentibus intermediis obtusis.

H. gagatina, Baudi, Stud. Ent. 119 (1848). *H. compressicollis*, Th. Sk. Col. iii. 85. *H. variabilis*, Kr. Ins. Deutsch. ii. 284; Wat. Cat.

Somewhat resembling the species of the *H. fungi* group, the head being narrow in proportion to the thorax, and the abdomen somewhat narrowed behind. It is rather convex, and but little shining, owing to a tolerably evident pubescence. The antennæ are moderately slender, a little thickened towards the apex, pitchy-black, with the two or three basal joints more or less distinctly yellow; joints two and three of nearly equal length, only moderately long, from the fourth onwards each joint is slightly stouter, four to six each about as long as broad, seven to ten slightly transverse; eleventh joint about as long as the two preceding together. The head is moderately broad, much narrower than the thorax, scarcely shining, finely and indistinctly punctured. The thorax is a little narrower than the elytra, about half as broad again as long, the sides gently rounded, narrower at the anterior than at the posterior angles, finely and pretty closely punctured, and with a very indistinct impression in front of the scutellum. The elytra are nearly a third longer than the thorax; of a brownish or pitchy-brown colour, finely and closely punctured. The abdomen is black, shining towards the extremity, which is sometimes paler; segments two to four distinctly and moderately closely punctured, fifth segment finely and sparingly punctured, sixth nearly impunctate. Legs yellow, sometimes infusate.

In the male, the hind margin of the dorsal plate of the seventh abdominal segment is furnished with four teeth, the two central ones are only separated by a shallow notch, and are broad and blunt, the outer ones do not reach quite so far back as the middle ones, and are narrower and sharper.

Generally distributed and not rare. In fungi or dead leaves. London, Inverness-shire, &c.

Obs.—This species is a troublesome one to recognize; the male characters distinguish that sex readily enough,

but the female might be confounded with *H. subsinuata* or *fungicola*, though distinct enough from either. It varies a good deal in colour, and northern specimens appear to be larger and darker than those found near London.

100. *Homalota divisa*.

Subdepressa, antice subopaca, nigra, antennarum basi elytrisq. fuscis, pedibus testaceis; antennis articulo ultimo elongato; thorace transverso, basi canaliculato; abdomine supra segmentis 2-4 subtiliter sat crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. $1\frac{1}{4}$ lin.

Mas; capite prothoraceque lato et profunde canaliculatis; segmento abdomine 7° dorsali margine posteriore incrassato, vix emarginato, angulo externo prominulo.

H. divisa, Maerk. Germ. Zeit. v. 213; Kr. Ins. Deutsch. ii. 279; Wat. Cat. *Atheta aridula*, Th. Sk. Col. iii. 75.

A rather broad, flat species. Antennæ rather slender, scarcely thickened towards the apex; joints two and three rather short, three not quite so long as two, four rather small, about as long as broad, the following joints slightly transverse; eleventh joint long in proportion to the rest of the antennæ, about three times as long as the tenth. The head is narrower than the thorax, subquadrate, with the angles rounded, finely and indistinctly punctured; in the male with a deep longitudinal impression or channel, in the female generally with a short channel, but sometimes without any trace of this. The thorax is a little narrower than the elytra, about half as broad again as long, the sides a little rounded at the anterior angles, then a little narrowed behind, finely and closely punctured; in the female with a short channel in front of the scutellum, in the male with the disc longitudinally depressed and channelled. The elytra are about a third longer than the thorax, of a brownish colour, finely and pretty densely punctured. The abdomen has the basal segments, two to four, finely and moderately closely punctured, fifth segment more sparingly punctured, sixth nearly impunctate. Legs yellow.

In the male, the head and thorax are deeply impressed, the abdomen has the dorsal plate of the seventh segment

with a thickened posterior margin, and the sides also towards the apex elevated, the outer angles project a little, so as to give the hind margin a slightly concave appearance.

In moss in wet places, generally distributed in England and Scotland, but nowhere common.

Obs.—The comparatively elongate terminal joint of the antennæ in this species, is its most notable character.

101. *Homalota nigricornis*.

Subdepressa, crebre subtiliter punctata, subopaca, nigra, antennis elytrisque nigro-fuscis, pedibus fusco-testaceis; thorace transverso; abdomine supra segmentis 2-4 subtiliter sat crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. $1\frac{1}{4}$ lin.

Mas; capite prothoraceque disco impressis; abdomine segmento 7° dorsali apice late indistincte emarginato.

H. nigricornis, Th. Öfv. Vet. Ac. Förh. 1852, p. 142; Kr. Ins. Deutsch. ii. 281; *Atheta nigricornis*, Th. Sk. Col. iii. 86.

Allied to *H. divisa*, but readily distinguished by its darker elytra, and the shorter terminal joint of the antennæ. The antennæ are moderately long, slightly thickened towards the apex, pitchy-black, the basal joint pitchy; joints two and three moderately long, of about equal length, four rather small, about as broad as three, and about as long as broad, five rather stouter than four, slightly transverse, six to ten transverse, the first of them indistinctly, the last of them distinctly so; eleventh joint nearly twice as long as the tenth. The head is black, narrower than the thorax, finely and indistinctly punctured; in the male the disc is more or less depressed. The thorax is a little narrower than the elytra, about half as broad again as long, the sides a little rounded in front, then scarcely narrowed behind, finely and closely punctured; in the male the disc has a broad impression, and in the female there is sometimes a short channel in front of the scutellum. The elytra are fully a third longer than the thorax, black or pitchy-black, finely and closely punctured. The abdomen is black, segments two to four finely and moderately densely punctured, fifth segment very sparingly and finely punctured, sixth nearly impunctate. Legs pitchy-yellow, the femora being darker than the tibiæ.

In the male, besides the impressions on the head and thorax, the posterior margin of the dorsal plate of the seventh abdominal segment, is slightly excavated.

Found both in England and Scotland, but not abundant; at the sap of trees, and in vegetable refuse.

Obs.—I have not thought it necessary to adopt the name of *H. Thomsoni* which has been proposed for this species, as Stephens' description of *Aleochara nigricornis* may be considered for all practical purposes as not existing, and cannot therefore require the suppression of Thomson's *H. nigricornis*.

102. *Homalota angusticollis*.

Nigra, elytris nigro-fuscis, pedibus fuscis; thorace subquadrato, basi canaliculato; elytris hoc sesqui longioribus; abdomine supra segmentis 2-4 parce subtiliter punctatis, 5 et 6 fere lævigatis. Long. $1\frac{1}{3}$ lin.

Mas; antennis articulis haud vel vix transversis; abdomine segmento 7° dorsali apice obsoletissime emarginato.

Fem.; antennis articulis 7-10 leviter transversis; abdomine segmento 7° dorsali apice rotundato.

H. angusticollis, Th. Öfv. Vet. Ac. Förh. 1856, p. 100; *Atheta angusticollis*, Th. Sk. Col. iii. 87.

A dark-coloured, rather narrow and elongate species, with the thorax distinctly narrower than the elytra, and scarcely transverse; head, thorax and elytra rather dull. The antennæ are black, rather long, scarcely thickened towards the apex; joints two and three of about equal length, four rather small, about as wide as three, and about as long as broad, joints five and six each about as long as broad, seven to ten, in the male nearly or quite as long as broad, in the female transverse, but not strongly so; last joint nearly twice as long as the tenth. The head is scarcely narrower than the thorax, rather long, the sides straight behind the eyes, then rounded at the posterior angles, finely and indistinctly punctured, but scarcely shining; convex above in the female, flattened and sometimes indistinctly impressed in the male. The thorax is considerably narrower than the elytra, a fourth broader than long, slightly narrowed behind, finely and not densely punctured, and not shining, with a short long-

itudinal channel in front of the scutellum. The elytra are about half as long again as the thorax, obscurely brownish or brownish-black or nearly black, finely and pretty closely punctured, but little shining. The abdomen is black and shining, segments two to four finely and sparingly punctured, fifth segment very sparingly punctured, sixth nearly impunctate. The legs are pitchy-testaceous, the thighs generally darker than the tibiæ.

In the male, the penultimate joints of the antennæ are longer than in the female, the upper surface of the head is flatter, the hind margin of the dorsal plate of the seventh abdominal segment is obsoletely emarginate, and the ventral plate of the same segment is narrower and rather longer than in the female, and its hind margin is more rounded.

Not uncommon in fungi, vegetable refuse, &c., in Scotland; Thornhill, Edinburgh, Rannoch, Inverness-shire. In England, I have only found it near Croydon.

Obs.—My specimens agree entirely with a specimen of *H. angusticollis*, sent by Thomson to Mr. Crotch. The species has been generally supposed to be synonymous with *H. ravilla*, Er., Kr., but Thomson, in the 9th vol. of Sk. Col., recognizes *H. ravilla* and *angusticollis* as distinct species, both occurring in Sweden; and states that the much longer terminal joint of the antennæ of *H. ravilla* distinguishes it from *angusticollis*. An example of *H. ravilla*, sent by Kraatz to the British Museum, when compared with my specimens of *angusticollis*, shows this distinction in a very marked manner; and among a long series of *H. angusticollis*, taken by me in different parts of Scotland, I find no variation in the length of the last joint of the antennæ.

103. *Homalota palustris*.

Nigra, sat nitida, elytris obscure brunneis, pedibus testaceis; thorace transversim subquadrato; abdomine segmentis 2-4 subtiliter sat crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. 1-1½ lin.

Mas; abdomine segmento 7° dorsali apice emarginato, ventrali producto, apicem versus vix angustato.

H. palustris, Kies. Stet. Ent. Zeit. v. 318; Kr. Ins. Deutsch. ii. 309; Wat. Cat. *Atheta brunnipes*, Th. Sk. Col. iii. 72.

Antennæ moderately slender, scarcely thickened towards the apex, pitchy or pitchy-black, the base sometimes indistinctly paler; joint three not quite so long as two, four rather smaller than five, each of them about as long as broad, six to ten each a little broader than long; eleventh joint about twice as long as the preceding one. The head is slightly narrower than the thorax, black and shining, very finely and indistinctly punctured. The thorax is a little narrower than the elytra, about a third broader than long, the sides a little rounded at the anterior angles, then nearly straight behind; it is black and shining, very finely and not closely punctured, its pubescence is extremely fine. The elytra are about a third longer than the thorax, brownish, often nearly black, finely and closely punctured. The abdomen is black and shining, segments two to four are finely and moderately closely punctured, fifth very finely and sparingly punctured, sixth almost impunctate. Legs rather dirty yellow.

In the male, the hind margin of the dorsal plate of the seventh abdominal segment is distinctly emarginate; the ventral plate of the same segment is considerably produced, but little narrowed towards the hind margin, which is nearly straight, with the angles rounded.

Moderately common all over the country.

Obs.—This species is readily distinguished from *H. angusticollis* by its more shining head and thorax, the latter of which is broader, and by its shorter elytra. Its most marked character is the formation of the upper and under plates of the seventh segment in the male.

104. *Homalota corvina*.

Linearis, nigra, elytris nigro-piceis, pedibus fuscis; antennis articulo penultimo præcedente longiore; thorace transversim subquadrato, basin versus subangustato, elytris angustiore; his thorace sesqui longioribus; abdomine basi parce punctato, apice lævigato. Long. vix 1 lin.

Mas; capite profunde canaliculato, thorace medio late foveolato, abdomine segmento 7° dorsali apice obsolete truncato.

H. corvina, Th. Öfv. Vet. Ac. Förh. 1856, p. 101; *Atheta corvina*, Th. Sk. Col. iii. 88. *H. lepida*, Kr. Ins. Deutsch. ii. 309.

A small dark-coloured species, with large head, and the thorax narrower than the elytra. Antennæ black, the basal joint pitchy, a little thickened towards the apex; first joint stout in proportion to the others, three not so long as two, four smaller than any of the others, five to nine distinctly transverse, ten notably longer and less transverse than nine; eleventh joint rather short and stout, about half as long again as the tenth. The head is scarcely narrower than the thorax, rather long, with the eyes prominent; in the male with a deep longitudinal channel, extending the whole length, in the female with a short impression in the middle behind the antennæ. The thorax is considerably narrower than the elytra, scarcely a third broader than long, a little narrowed behind, finely but somewhat roughly and pretty closely punctured; in the male with a large fovea in the middle, in the female with an indistinct impression or channel in front of the scutellum. The elytra are black or pitchy-black, long in proportion to their breadth, half as long again as the thorax, finely and pretty closely punctured. Abdomen black and shining, segments two to four sparingly punctured, five and six nearly impunctate. Legs pitchy or pitchy-testaceous.

In the male, the third joint of the antennæ is stouter than in the female, the head and thorax are more distinctly impressed, the seventh abdominal segment is narrower than in the female, and the apex of its dorsal plate a little truncate.

In fungi and vegetable refuse, not common. Brockenhurst, Edinburgh, Thornhill.

Obs.—I think, from descriptions, that *H. corvina*, Th., is pretty certainly identical with *H. lepida*, Kr. Kraatz truly says, that fresh specimens of this species appear more strongly punctured than old ones.

105. *Homalota puberula*.

Subdepressa, parallela, nigro-picea, nitidula, elytris fuscis, pedibus fusco-testaceis; capite thorace elytrisq; parce subtilissime punctatis, et tenuissime pubescentibus; thorace transverso, elytris hoc sesqui longioribus; abdomine basi parce punctato, apice fere lævigato. Long. 1 lin.

Mas; thorace medio profunde impresso; abdomine segmento 7° dorsali apice truncato et crenulato, ventrali producto, apice late rotundato.

Allied to *H. corvina*, and about the size of that species, but more parallel, with broader thorax, and the anterior parts of the body much more finely and sparingly punctured. Antennæ black, a little thickened towards the apex; joint three shorter than two, four to ten each slightly broader than its predecessor, and each a little broader than long, and a little narrowed towards the base; eleventh joint moderately stout and pointed, not twice the length of the tenth. Head distinctly narrower than the thorax, rather broad, eyes moderately prominent, the disc flat and shining, and slightly channelled in the male. The thorax is black and shining, very nearly as broad as the elytra, more than half as broad again as long, scarcely narrowed behind, very finely and sparingly punctured, the disc in the male with a large deep impression. The elytra are pitchy, fully half as long again as the thorax, finely and sparingly punctured, and with very fine pubescence. The abdomen is black and shining, its pubescence rather more distinct than that of the fore parts of the body, the basal segments are sparingly punctured, the apical ones nearly impunctate. The legs are dirty yellow.

In the male, the seventh abdominal segment has the dorsal plate with the apex broad and truncate, and crenulate, the ventral plate is distinctly produced, its hind margin broad and rounded.

Very rare; taken by Dr. Power, and by myself at Mickleham, in the month of September.

106. *Homalota atomaria*.

Nigra, nitidula, elytris vel nigris vel fuscis, pedibus piceo-testaceis, omnium parce subtilissime punctata tenuissimeque pubescens; thorace transverso, basi indistincte foveolato; abdomine supra vage punctato, fere lævigato. Long. $\frac{2}{3}$ lin.

H. atomaria, Kr. Ins. Deutsch. ii. 254; *H. minuscula*, Bris. Ann. Soc. Ent. Fr. 1859, p. cexviii.

A very small, black and shining species, with scarcely visible punctuation or pubescence. The antennæ are

black, the base sometimes indistinctly pitchy, a little thickened towards the apex; joint three shorter and more slender than two, narrowed towards the base, four to ten transverse; eleventh joint nearly twice as long as the tenth. The head is a little narrower than the thorax, black, shining, and impunctate. The thorax is but little narrower than the elytra, about a third broader than long, shining, extremely finely and sparingly punctured, with a small, very indistinct impression in front of the scutellum. The elytra are black, or pitchy, a third longer than the thorax, extremely sparingly and finely punctured, and with a very sparing and delicate pubescence. The abdomen is black and shining, very sparingly punctured. The legs are pitchy.

The male is scarcely to be distinguished from the female, except by the considerably narrower abdominal segment.

Rare. I have found it in heaps of cut grass at Thornhill, and have seen it also in Mr. Waterhouse's and other collections.

Obs.—I have identified this species by comparison with the types of *H. minuscula*, Bris. Kraatz has himself declared the identity of M. Brisout's *minuscula* with his *atomaria*.

107. *Homalota perezigua*.

Nigra, nitidula, elytris nigro-fuscis, pedibus piceo-testaceis, omnium parce subtilissime punctata tenuissimeque pubescens; thorace transversim subquadrato, elytris angustiore; abdomine supra fere lævigato. Long. $\frac{1}{2}$ lin.

Closely allied to *H. atomaria*, but still smaller and more fragile, the thorax less transverse and narrower than the elytra, the antennæ notably thinner, though similarly formed, so that the intermediate joints are less transverse.

In the male, the seventh abdominal segment is narrower than in the female, its ventral plate is narrow, a little produced, and with the hind margin rounded.

Very rare. I have found it on one or two occasions near London, and have seen specimens in several collections.

SECTION F.

Group XVI. *Large, or not very small species; the penultimate joints of the antennæ very strongly transverse.*
(Species 108—115).

The species herein contained constitute a tolerably natural assemblage, though there is a great diversity of colour and size. The male characters of all the species are well marked and unmistakeable. *H. cinnamomea*, and *hospita* occur only among the burrows of *Cossus ligniperda*; they might naturally be separated from the others as a distinct group, except that no practical advantage would result from this. *H. oblita* occurs gregariously in fungi in the autumn. The other species are all rare, and little is known of their habits.

108. *Homalota cinnamomea*.

Lata, brunneo-testacea, antice vix nitida, subtiliter punctata; abdomine nigricante, vix punctato; thorace fortiter transverso. Long. 2-2 $\frac{1}{4}$ lin.

Mas; *a.* elytrorum sutura basi evidenter carinata elevata; abdomine segmento 7° dorsali medio ante apicem longitudinaliter elevato, apice triangulariter producto, medioque obsolete inciso, utrinque spino minore acuto subcurvato.

β. elytrorum sutura basi vix elevata; abdomine segmento 7° medio obsolete longitudinaliter elevato; cætera ut in *a.*

Aleochara cinnamomea, Grav. Micr. 88; *H. cinnamomea*, Er. Gen. et Spec. Staph. 127; Kr. Ins. Deutsch. ii. 289; Wat. Cat.; *Thamiarcea cinnamomea*, Th. Sk. Col. iii. 60.

One of the largest and finest species of the genus, and perhaps resembling in appearance rather a *Myrmedonia* or an *Aleochara*. It is broad, and robustly formed, a little narrowed both before and behind, of a cinnamon-brown colour, with the abdomen black, or pitchy-black. The antennæ are pitchy in colour, testaceous at the base, stout and rather short, increasing in thickness from the third to the seventh or eighth joint; joint three considerably longer than two, four comparatively small, nearly as long as broad, five considerably broader than four, five to ten strongly transverse; eleventh joint large, pointed,

as long as the two preceding together. Head broad and short, but much narrower than the thorax, rounded and narrowed behind the eyes, which are large and prominent; finely and not closely punctured. The thorax is somewhat narrower than the elytra, its breadth twice its length, gently rounded at the sides, a little narrower at the anterior than at the posterior angles, finely and moderately closely punctured, sometimes with an obsolete channel in front of the scutellum. The elytra are about a third longer than the thorax, a little darkened in colour towards the apical angles, finely and pretty closely punctured. The abdomen is black and shining, the basal segment finely and sparingly punctured, the others impunctate; the hind margins of the segments often brownish. The legs are yellow, or reddish-yellow.

The male characters are very peculiar, and not easy to describe; the suture of the elytra is elevated at the base into a distinct carina, terminating abruptly at the scutellum; the seventh segment of the abdomen, is raised in the middle to a sort of carina, the lateral margin projects on each side, as a short pointed, rather curved spine, between these two spines the middle part of the hind margin is much produced, and the apex in the middle has a small notch. A form of the male occurs, however, in which the elevation of the suture, and the carina-like elevation of the seventh segment, are scarcely to be seen.

Pretty common; lives in the burrows of the goat moth, especially in oak and elm trees in England.

Obs.—The abdomen of this species is undoubtedly somewhat narrowed towards the apex.

109. *Homalota hospita*.

Brunnea, haud nitida, abdomine piceo-nigro; thorace fortiter transverso, subtiliter canaliculato; abdomine supra segmentis 2-4 crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. $1\frac{3}{4}$ lin.

Mas; abdomine segmento 7° dorsali apice medio acuminato, obsolete bituberculato, margine laterali obsolete producto.

H. hospita, Maerk. Germ. Zeit. v. 216; Kr. Ins. Deutsch. ii. 290; Wat. Cat.; *Thamiaræa hospita*, Th. Sk. Col. iii. 60.

This species resembles *H. cinnamomea* in colour, but is easily distinguished by its smaller size and punctured abdomen. The antennæ are stout, a little longer than the head and thorax, yellowish, a little thickened towards the apex; joint three longer than two, four about as stout as three, about as long as broad, five to ten each a little broader than its predecessor, five slightly, ten distinctly, transverse; eleventh joint stout, as long as the two preceding together. Head broad, but considerably narrower than the thorax, with the eyes rather large and prominent, moderately finely and pretty closely punctured. The thorax is nearly of the breadth of the elytra, its breadth about twice its length, the sides gently rounded, finely and closely punctured, with an indistinct longitudinal channel in the middle. The elytra are a little longer than the thorax, pretty finely and closely punctured. The abdomen is blackish, with the base and apex, and the margins of the segments more or less reddish; segments two to four are evenly and pretty closely and finely punctured, fifth segment more sparingly punctured, sixth nearly impunctate. Legs yellowish.

In the male, the seventh abdominal segment has, on the upper side before the apex, an ill-defined indistinct elevation, the apex is produced in the middle, in the form of two teeth close to one another, and not very distinct, the hind margin is also again somewhat produced on each side.

This species is found in company with *H. cinnamomea*, at *Cossus*-infested trees. In Germany, however, it appears to have been found among *Formica fuliginosa*; perhaps, as is often the case, the tree may have been attacked by the *Cossus*, as well as tenanted by ants.

110. *Homalota scapularis*.

Convexiuscula, rufo-testacea, capite abdomineque ante apicem nigricantibus; thorace transverso, apicem versus angustato; abdomine segmentis 2-4 sat crebre minus subtiliter punctatis, 5° parce punctato, 6° fere lævigato. Long. $1\frac{1}{3}$ - $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° dorsali apice 4-dentato, dentibus intermediis obtusis.

Aleochara scapularis, Sahl. Ins. Fenn. i. 372; *H. scapularis*, Kr. Ins. Deutsch. ii. 292; Wat. Cat.; *Alaobia scapularis*, Th. Sk. Col. iii. 100. *H. ochracea*, Er. Gen. et Spec. Staph. 104.

A reddish-yellow species, the head and fourth and fifth abdominal segments blackish; with comparatively small head, and with the punctuation and pubescence of the surface distinct and well marked. The antennæ are reddish-yellow at the base, infusate towards the apex, they are moderately stout, joint three a little longer than two, four not broader than three, nearly as long as broad, five distinctly broader than four, five to ten transverse, but not strongly so; eleventh joint about as long as the two preceding. The head is roundish, much narrower than the thorax, rather finely and moderately closely punctured, with the eyes rather prominent. The thorax is convex, narrower than the elytra, its breadth nearly twice its length, narrower at the anterior than at the posterior angles, the anterior angles rounded and depressed, closely and moderately finely punctured, and with a distinct pubescence. The elytra are about a third longer than the thorax, closely and rather strongly punctured, with a distinct pubescence. The abdomen is yellowish-red, with the fourth and fifth segments darker; segments two to four are rather strongly and pretty closely punctured, fifth segment more sparingly but distinctly punctured, sixth nearly impunctate; pubescence rather coarse. Legs yellow.

In the male, the hind margin of the dorsal plate of the seventh abdominal segment is armed with four teeth, the middle ones are stout, short and rounded, the outer ones project rather more backwards, are slender and pointed.

Scarce; but occurs sparingly in several localities about London, and has been found, not uncommonly, at Monk's Wood, by Mr. Crotch; Weybridge, Mickleham, Croydon.

111. *Homalota subterranea*.

Linearis, sat nitida, rufo-testacea, capite abdomineque plus minusve nigricantibus, subtiliter punctata, antennis validis, basi pedibusque testaceis; abdomine supra segmentis 2-5 parce punctatis, 6° fere lævigato. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° dorsali apice 4-dentato, dentibus validis.

H. subterranea, Muls. Opusc. ii. 40; Kr. Ins. Deutsch. ii. 291; Wat. Cat.

A parallel, prettily coloured, rather convex species, with very stout antennæ; the anterior parts with fine punctuation and pubescence. The antennæ are short and very stout, pitchy, paler at the base, gradually thickened from the fourth to the tenth joint; joint three short and stout, triangular, slightly shorter than two, four to ten each a little broader than its predecessor, five to ten strongly transverse, and each narrowed towards the base; eleventh joint pointed, about twice as long as the tenth. The head is rather large, nearly as broad as the thorax, blackish, finely and indistinctly punctured; the eyes not prominent. The thorax is more than half as broad again as long, but little narrower than the elytra, reddish-brown, finely and moderately closely punctured. The elytra are about a third longer than the thorax, yellowish-red, finely and moderately closely punctured. The abdomen is shining, pitchy-black, the apex yellowish-red, the base reddish or pitchy-red; segments two to five finely and sparingly punctured, sixth segment nearly impunctate. Legs yellow.

In the male, the hind margin of the dorsal plate of the seventh abdominal segment is furnished with four stout teeth of nearly equal length, the two middle ones are stout rounded projecting tubercles, the outer ones, also rather stout, are more pointed.

I have seen only two British specimens of this species, one taken by Mr. Crotch, at Beaulieu in Inverness-shire, the other by Mr. Hislop at Forres; it is to be found amongst moss and dead leaves.

112. *Homalota dilaticornis*.

Obscure rufa, capite abdomineque nigricantibus, antennis elytrorumque angulo apicali fuscis, antennarum basi pedibusque testaceis; antennis validis; thorace transverso; abdomine segmentis 2-4 parce punctatis, 5° et 6° fere lævigatis. Long. 1½ lin.

Mas; abdomine segmento 7° dorsali margine apicali producto, medio indistincte emarginato, ante apicem tuberculis duobus elevatis, margine laterali utrinque in spina tenui producto.

H. dilaticornis, Kr. Ins. Deutsch. ii. 293.

Rather smaller and less robustly formed than *H. subterranea*, and with a much smaller head; of a reddish colour,

finely punctured and delicately pubescent, with the head, abdomen, and sides of the elytra towards the hinder angles, darker. The antennæ are short and stout, considerably thickened from the fourth to the seventh joint; joints two and three very nearly of equal length, four small but transverse, five considerably broader than four, it and the following strongly transverse; eleventh joint pointed, as long as the two preceding. The head is pitchy, considerably narrower than the thorax, narrowed behind the eyes, finely and indistinctly punctured. The thorax is rather narrower than the elytra, its breadth about twice its length, narrower at the anterior angles than at the base, very finely and moderately closely punctured. The elytra are about a third longer than the thorax, reddish, infusate towards the apical angles, finely and pretty closely punctured. The abdomen is shining, pitchy-black, obscurely paler at the base and apex; segments two to four finely and sparingly punctured, five and six nearly smooth. Legs yellow.

The male characters are very peculiar, but not easy to describe. The seventh abdominal segment has the dorsal plate in the middle a little produced behind, and the middle of its hind margin presents a shallow notch, the margin of which is a little thickened; a little before the hind margin, and close to the outside, is to be seen on each side a distinct raised tubercle; moreover the lateral margin of this segment, is, on each side, produced behind, into a very slender and very indistinct spine, not reaching so far back as the produced middle part of the segment.

Very rare. I have seen only a few specimens, all of which have been taken by Dr. Power, in the neighbourhood of London.

113. *Homalota testaceipes*.

Subdepressa, nitida, subtiliter punctata et tenuiter pubescens, nigra, antennarum basi elytris pedibusque testaceis; antennis validis; thorace transverso, æquali; abdomine supra segmentis 2-4 subtiliter parce punctatis, 5° et 6° fere lævigatis. Long. $1\frac{1}{4}$ lin.

Mas; abdomine segmento 7° dorsali margine posteriore 4-dentato, dentibus elongatis, acutis.

H. testaceipes, Heer, Faun. Col. Helv. 327. *H. brevicollis*, Baudi, Kr. Ins. Deutsch. ii. 1060. *H. varicornis*, Kr. l.

c. 292. *H. Saundersi*, Rye, Ent. Month. Mag. iii. 121 (1866).

Comparatively broader and flatter than *H. subterranea* and *dilaticornis*, and darker in colour. The antennæ are short and very stout, blackish, obscurely paler at the base; joint three nearly as long as two, four small but transverse, about as broad as three, five much broader than four, from this to the tenth each joint is very broad and transverse; the eleventh joint is pointed, about the length of the two preceding. The head is a little narrower than the thorax, but broad, black and shining, very finely punctured. The thorax is but little narrower than the elytra, its breadth about twice its length, the sides evenly rounded, scarcely narrower at the anterior than at the posterior angles, closely and very finely punctured. The elytra are testaceous or fusco-testaceous, the lateral margins a little darker, fully one-third longer than the thorax, finely and pretty closely punctured, with a delicate but distinct pubescence. The abdomen is black and shining; segments two to four sparingly and finely punctured, fifth segment very sparingly punctured, sixth nearly impunctate. Legs yellow.

The male characters are peculiar. The hind margin of the dorsal plate of the seventh abdominal segment is furnished with four very distinct teeth; of these, the two middle ones are near one another, and appear as two produced elongate tubercles, the apex of each of which is a little flattened and somewhat curved inwards, the outer teeth are long, slender, pointed, and a little curved inwards, and project backwards further than the central ones.

This species has as yet been found, in this country, only in the neighbourhood of London. There is a fine series of it in Dr. Power's collection, varying somewhat in size, and a little in the colour of the elytra.

Obs.—There are in the British Museum specimens of *H. brevicollis*, sent by Kraatz; they agree with the examples described above.

114. *Homalota oblita*.

Nigra, haud nitida, elytris fuscis, pedibus fusco-testaceis; thorace transverso, medio canaliculato; abdomine

supra segmentis 2-4 sat crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. 1 lin.

Mas; abdomine segmento 7° dorsali apice 4-dentato, dentibus intermediis obtusis, rotundatis, lateralibus tenuibus, introrsum curvatis.

H. oblita, Er. Gen. et Spec. Staph. 113; Kr. Ins. Deutsch. ii. 294; Wat. Cat.

A rather small, obscure species, with short stout antennæ. The antennæ are blackish, sometimes obscurely paler at the base, thickened from the third to the sixth joint, but scarcely after that; joints two and three of about equal length, four considerably broader than three, but narrower than five, distinctly transverse, five to ten strongly transverse; eleventh joint about as long as the two preceding. The head is broad, narrower than the thorax, black and dull, pretty closely but very finely and indistinctly punctured. The thorax is but little narrower than the elytra, its breadth fully half as great again as its length, the sides gently rounded in front, scarcely narrower at the anterior than at the posterior angles, very finely and closely punctured, and delicately pubescent, with a moderately distinct longitudinal channel in the middle. The elytra are fully one-third longer than the thorax, sometimes obscurely brown in colour, sometimes nearly black, finely and closely punctured. The abdomen is black, segments two to four distinctly and moderately closely punctured, fifth segment sparingly and finely punctured, sixth nearly impunctate. The pubescence of the abdomen is more distinct than that of the anterior parts. The legs are testaceous, more or less dusky.

In the male, the dorsal plate of the seventh abdominal segment has, in the middle, two stout rounded tubercles projecting backwards, these tubercles are united at their base, but separated at the apex by a slight notch; besides this, on each side is to be seen a rather longer, slender, pointed spine, curved inwards.

Local; but often to be found abundantly in August and September, in fungi. Cambridge, New Forest, Malvern, Shirley, &c.

Obs.—Specimens of this species occur, with rather brighter-coloured elytra and legs than in the type, and in such cases are often more shining and smaller.

115. *Homalota autumnalis*.

Fusco-nigra, sat nitida, parce tenuiter pubescens, antennarum basi pedibusque testaceis; thorace transverso, medio canaliculato; abdomine supra segmentis 2-4 parce distinctius punctatis, 5° et 6° fere lævigatis. Long. 1 lin.

Mas; capite subtiliter canaliculato; abdomine segmento 7° dorsali apice 4-dentato, dentibus intermediis obtusis, approximatis, fere conjunctis, externis acuminatis.

H. autumnalis, Er. Gen. et Spec. Staph. 113; Kr. Ins. Deutsch. ii. 283.

A small, rather broad species, sparingly punctured and pubescent, and yet but little shining, from the fact that the surface between the punctures is very finely coriaceous. The antennæ are short and moderately stout, considerably thickened from the third joint to the apex, pitchy in colour, with the three basal joints yellowish; joint three more slender than two, but nearly as long, four small, about the width of three, nearly as long as broad, five to ten transverse, the first of them slightly, the last of them rather strongly so; eleventh joint stout, as long as the two preceding. Head rather narrower than the thorax, broad, very indistinctly punctured, the parts of the mouth testaceous. The thorax is a little narrower than the elytra, transverse, its breadth about twice its length, the sides rounded at the anterior angles, finely and sparingly punctured and pubescent, with an indistinct longitudinal channel in the middle. The elytra are about a third longer than the thorax, rather more distinctly and closely punctured than it. The abdomen has segments two to four sparingly and moderately finely punctured, five and six nearly impunctate. The legs are yellow, the posterior tarsi stout, and moderately long, the basal joint very short, the terminal one about as long as the four preceding.

In the male, the front of the head is indistinctly channelled, the hind margin of the dorsal plate of the seventh abdominal segment is furnished with four teeth, of about the same length; the middle ones are broad and rounded, and near one another, so as to appear as if forming a central, rather produced, lamina, with a notch at its apex; the lateral teeth are fine and pointed.

Very rare. I have found it only at Horning, in Norfolk, and in a piece of wet ground near Norwood.

Obs.—I have only one example of the male of this species at my command; its male characters do not seem to agree altogether with Kraatz's description, or Mulsant's figure. The place of the species is near *H. oblita*, (as in Erichson), and not next *coriaria*, where it is placed by Kraatz. It is readily distinguished from *oblita* by its more sparing punctuation and pubescence, and the brighter-coloured legs and base of the antennæ.

Group XVII. *Small or very small species; the penultimate joints only of the antennæ strongly transverse.*

(Species 116—122).

A group of small black or obscurely coloured species, found in dung, vegetable refuse, and carcasses. *H. inquinula* is the smallest species of the genus. The male characters are but unimportant.

116. *Homalota sericea*.

Nigra, antennis elytrisque fuscis, pedibus fusco-testaceis, tenuiter distincte pubescens; thorace transverso; abdomine supra segmentis 2-4 parce subtiliter punctatis, 5° et 6° fere lævigatis. Long. $\frac{3}{4}$ -1 lin.

Mas; abdomine segmento 7° dorsali apice truncato, vix emarginato.

H. sericea, Muls. Opusc. i. 41; Kr. Ins. Deutsch. ii. 295; *Atheta sericea*, Th. Sk. Col. iii. 89; *H. amacula*, Wat. Cat.

A rather robust little species, delicately but distinctly pubescent, moderately shining, with short stout antennæ. These are pitchy-black, with the two first joints pitchy, thickened from the third to the apex; joint two stout, three rather shorter and more slender than two, four to ten each a little stouter than its predecessor, four slightly transverse, ten strongly so; eleventh joint stout, about as long as the two preceding. Head moderately large, rather narrower than the thorax, the sides a little straight behind the eyes, before being rounded at the posterior angles, extremely finely punctured; in the male with an indistinct fovea on the disc. The thorax is but

little narrower than the elytra, its breadth fully half as great again as its length, about as wide at the anterior as at the posterior angles, finely and indistinctly punctured, sometimes with an indistinct impression in front of the scutellum, sometimes with an obscure channel, and often without either. The elytra are blackish, or pitchy-black, rather short, about one-third longer than the thorax, finely and closely punctured, with a fine and moderately close pubescence. The abdomen is black and shining, often a little broader towards the apex, its pubescence pretty distinct, segments two to four finely and rather sparingly punctured, five and six nearly impunctate. Legs dirty testaceous.

In the male, the hind margin of the dorsal plate of the seventh abdominal segment is truncate, and obscurely emarginate; the under plate of the same segment is also more produced than in the female, its apex less flattened, and more round.

Abundant all over the country in vegetable refuse, hayricks, outhouses, &c.

Obs.—I see no sufficient reason for considering this species as Stephens's *Aleochara amicula*; his description may, or may not, apply to *H. sericea*. His descriptions (Ill. v. 131) of species 66-72 would each apply about equally well to *H. sericea*, and each is about equally vague and uncharacteristic.

117. *Homalota subtilis*.

Nigra, haud nitida, confertim subtiliter punctata, evidenter pubescens, elytris fuscis, pedibus fusco-testaceis; thorace transverso, æquali; abdomine supra segmentis 2-4 sat parce punctatis, 5° et 6° fere lævigatis. Long. $\frac{3}{4}$ lin.

H. subtilis, Scriba, Berl. Ent. Zeit. 1866, p. 128.

Allied to *H. sericea*, but distinguished by its denser punctuation and pubescence, its longer elytra, and the thinner joints (especially two to six) of the antennæ. The antennæ are moderately stout, a little thickened towards the apex, black; joint three slightly shorter than two, four nearly quadrate, five to ten each slightly broader than its predecessor, the first of them slightly, the last distinctly transverse; eleventh joint rather stout, about as long as the two preceding. The head is a little

narrower than the thorax, indistinctly punctured. The thorax is slightly but distinctly narrower than the elytra, its breadth fully half as great again as its length, about as broad at the anterior as at the posterior angles, finely and thickly punctured, and finely but rather roughly pubescent. The elytra are fully one-third longer than the thorax, closely and finely punctured. The abdomen is punctured much as in *H. sericea*, but not quite so sparingly. The legs are rather dusky testaceous.

Rare. I have found single specimens in several parts of Scotland.

Obs.—I have examined two specimens of *H. subtilis* sent by Herr Scriba to Mr. Crotch; these differ from my specimens by being a little larger and broader, and having no channel or impression at the back of the head. These two specimens are, however, females, while I believe all my Scotch examples to be males; they have the apex of the seventh abdominal segment very indistinctly truncate. This species resembles *H. celata* in some respects, but its abdomen is much more sparingly punctured.

118. *Homalota indubia*.

Nigra, sat nitida, tenuiter pubescens, parce punctata, pedibus piceis; antennis articulis 5-10 minus fortiter transversis; thorace transverso; abdomine supra segmentis 2-4 parce subtiliter punctatis, 5° et 6° fere lævigatis. Long. $\frac{3}{4}$ lin.

Mas; abdomine segmento 7° dorsali margine posteriore sat fortiter crenulato.

Scarcely larger than *H. sericea*, but blacker, still more sparingly pubescent and therefore more shining, with the antennæ not quite so stout, and the seventh abdominal segment crenulate in the male. The antennæ are black, moderately stout, a little thickened towards the apex; joints two and three longer and more slender than in *H. sericea*, three not quite so long as two, four about as broad as three, and about as long as broad, five slightly transverse, ten pretty distinctly so; eleventh joint pointed, about as long as the two preceding. The head is narrower than the thorax, but broad, the disc flat, punctuation and pubescence almost absent. The thorax is

but little narrower than the elytra, its breadth quite half as great again as its length, as broad at the anterior as at the posterior angles, finely and sparingly punctured and pubescent, with a small indistinct impression in front of the scutellum. The elytra are about a third longer than the thorax, rather sparingly punctured and pubescent, the punctuation rather more distinct than on the thorax. The abdomen is black and shining; segments two to four sparingly punctured, five and six almost impunctate. Legs pitchy.

In the male, the apex of the seventh abdominal segment is distinctly, and, for a small species, even coarsely crenulate.

Rare. I have found it at Thornhill, and near Edinburgh and Dumfries.

119. *Homalota indiscreta*.

Subdepressa, nigra, subnitida, pedibus fuscis, confertim subtiliter punctata; thorace transverso, basi foveolato; abdomine supra segmentis 2-4 subtiliter sat crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. $\frac{3}{4}$ lin.

Closely allied to *H. sericea*, but darker in colour, more depressed, rather broader but more narrowed to the front, the pubescence finer, denser, and more regular, and the elytra longer in proportion to the thorax. The antennæ are entirely black, rather stout, thickened towards the apex; joint two longer than three, four about as broad as three, and about as broad as long, five to ten transverse, the first of them slightly, the last strongly so; eleventh joint about twice as long as the tenth. Head narrower than the thorax, much narrower than the elytra, finely and indistinctly punctured, and sometimes with an obscure channel or fovea in the middle. The thorax is a little narrower than the elytra, its breadth about half as great again as its length, rather narrower at the anterior than at the posterior angles, finely and pretty closely punctured, and with a very delicate pubescence, with a shallow transverse fovea in front of the scutellum. The elytra are black or pitchy-black, fully one-third longer than the thorax, finely and thickly punctured, and delicately pubescent. The abdomen is black and shining, segments

two to four finely, scarcely closely, punctured, fifth segment very sparingly punctured, sixth nearly impunctate. The legs are testaceous, the tibiæ a little lighter than the femora.

I am unable to point out satisfactory characters to distinguish the male of this species.

Rare. I have found it at Thornhill, and in Inverness-shire.

Obs.—This species is allied to *H. indubia*, but is distinguished by its shorter antennæ more thickened towards the apex, of which joints five to ten are distinctly transverse, and the uncrenulate seventh abdominal segment of the male.

120. *Homalota mortuorum*.

Nigra, subopaca, thorace elytrisque confertim subtiliter punctatis et tenuissime pubescentibus, pedibus fuscis; abdomine supra segmentis 2-4 subtiliter punctatis, 5° et 6° fere lævigatis. Long. $\frac{2}{3}$ lin.

Atheta mortuorum, Th. Sk. Col. ix. 281.

Closely allied to *H. sericea*, but smaller and blacker, with the thorax and elytra thickly and finely punctured, and densely and extremely finely pubescent; the antennæ also are shorter than in *H. sericea*, the basal joints being less elongate. The antennæ are black, short and stout, thickened towards the apex; joint two short and stout, longer than three, three short and triangular, four to ten distinctly transverse, this last strongly so; eleventh joint stout, about twice the length of the tenth. The head is black, dull, finely and indistinctly punctured, with an indistinct impression on the middle. The thorax is a little narrower than the elytra, its breadth about one-third greater than its length, dull, thickly and very finely punctured, sometimes with a short channel in front of the scutellum. The elytra are rather short, about a fourth longer than the thorax, very finely and densely punctured and pubescent. The abdomen is black and moderately shining, segments two to four finely and rather sparingly punctured, five and six almost impunctate. Legs pitchy.

The male appears to differ but little from the female.

Rare. I have found it only in Scotland, at Rannoch in Perthshire, and at Thornhill.

Obs.—I have little doubt this is the *mortuorum* of Thomson; it is allied to *H. indiscreta*, but is smaller, less shining, has shorter antennæ and elytra, and a less transverse thorax.

121. *Homalota atricolor*.

Linearis, subdepressa, vix nitida, nigra, elytris pedibusque nigro-fuscis, confertim subtiliter punctata, et tenuiter pubescens; thorace transverso, basin versus subangustato; abdomine supra segmentis 2-4 crebre subtiliter punctatis, 5° parce punctato. Long. $\frac{2}{3}$ lin.

Var.—Elytris pedibusque nigris, concoloribus.

Mas; abdomine segmento 7° dorsali apice truncato.

H. inconspicua, Wat. Cat. (*nec* Er.).

A very small, black, rather parallel and depressed species, with close and fine but distinct punctuation and pubescence. The antennæ are black, thickened towards the apex; joints two and three short and stout, two longer and stouter than three, from joint four thickened towards the apex, four about as broad as three, nearly as long as broad, the others to the tenth transverse; eleventh joint about as long as the two preceding. Head but little narrower than the thorax, rather quadrate, rather long in proportion to its breadth, the eyes a little prominent, finely and closely punctured, the punctuation consisting of fine elevations, so that the surface appears rough, with a distinct channel or impression on the middle. Thorax a little narrower than the elytra, its breadth fully half as great again as its length, a little narrowed behind, finely and closely punctured. The elytra are black or pitchy-black, one-half or one-third longer than the thorax, closely and finely punctured. The abdomen is black and shining, segments two to four rather closely and finely but somewhat roughly punctured, fifth segment more sparingly punctured, sixth nearly impunctate. Legs black, or pitchy-black.

In the male, the apex of the dorsal plate of the seventh abdominal segment is truncate in the middle.

Extremely abundant in Scotland, in carcasses, dung, &c.; also near London, but not so common there.

Obs.—This species is intermediate between *H. mortuorum* and *inquinula*; it is a little smaller than the

former, considerably narrower, and not so closely and finely punctured, so that it is not so dull. It is considerably larger than *inquinula*, and much darker in colour. Its punctuation is peculiar, being fine but distinctly rough.*

122. *Homalota inquinula*.

Linearis, nigra, subnitida, elytris fuscis, pedibus fusco-testaceis; thorace transverso, basin versus subangustato; abdomine supra segmentis 2-4 sat crebre subtiliter punctatis, 5^o parce punctato. Long. $\frac{1}{2}$ lin.

Mas; abdomine segmento 7^o dorsali apice truncato.

Aleochara inquinula, Grav. Micr. 78; *H. inquinula*, Er. Käf. Brand. i. 334; Gen. et Spec. Staph. 116; Kr. Ins. Deutsch. ii. 297; Wat. Cat.

The smallest species of the genus; narrow, and with fine and pretty close punctuation and pubescence. The antennæ are short and comparatively stout, thickened towards the apex, the three basal joints stout; joint two stouter and much longer than three, this much narrowed at the base, four to ten transverse, the first slightly, the last distinctly so; eleventh joint stout and pointed, about as long as the two preceding. The head is rather narrower than the thorax, rather long in proportion to its breadth, closely, finely, and indistinctly punctured, with a distinct channel or impression on the middle. The thorax is a little narrower than the elytra, its breadth about one-third greater than its length, a little narrowed behind, closely and finely punctured, and sometimes with a longitudinal channel. The elytra are about one-third longer than the thorax, of an obscure brownish or pitchy colour, thickly and finely punctured. The abdomen is black and shining, segments two to four finely and pretty closely punctured, fifth segment finely and sparingly punctured, sixth still more sparingly punctured. The legs are dirty yellow, or pitchy in colour.

In the male, the apex of the dorsal plate of the seventh abdominal segment is a little truncate in the middle.

Local; but common in dung in sandy places in the centre and south of England. I have not found it in Scotland.

* I have only lately distinguished this species from the preceding one, and have named many specimens of it as *H. mortuorum*, Th. I mention this, that those for whom I have done so, may make the change of name where necessary.

SECTION G.

Group XVIII. *Abdomen rather narrowed towards the apex; the hinder angles of the thorax well marked; habitat in ants' nests.* (Species 123—125).

Of this group, *H. flavipes* and *confusa* are closely allied, but *anceps* has an entirely different facies.

123. *Homalota anceps*.

Fusco-nigra, opaca, confertim punctata, antennarum basi pedibus anoque obscure testaceis; thorace transverso, plano, canaliculato, angulis posticis haud rotundatis; abdomine supra confertim subtilissime, apice minus crebre punctato. Long. $1\frac{1}{4}$ lin.

H. anceps. Er. Käf. Brand. i. 336; Gen. et Spec. Staph. 125; Kr. Ins. Deutsch. ii. 264; Wat. Cat.; *Lyprocorrhe anceps*, Th. Sk. Col. iii. 108.

A peculiar and distinct species; the head, thorax, and elytra being harder than in the other species of the genus, and clothed with an extremely short, and scarcely visible pubescence; it has somewhat the appearance of a small *H. fungi*, but is flatter and duller. The antennæ are pitchy, paler at the base, moderately long, rather slender, scarcely thickened towards the apex; joints two and three of nearly equal length, moderately long, four to ten each differing but little from one another in length, the first of them distinctly longer than broad, the last of them about as long as broad; the eleventh joint about as long as the two preceding. The head is considerably narrower than the thorax, rather broad and short, very finely and closely punctured, a little shining. The thorax is at the base about as broad as the elytra, its breadth nearly twice its length, distinctly narrower at the anterior than at the posterior angles, the latter being distinct and not rounded; the surface of the thorax is flat, and has a distinct longitudinal channel in the middle, it is thickly and pretty finely punctured, and has sometimes one or two irregular little pits, or impressions. The elytra are rather short, about one-third longer than the thorax, closely and pretty distinctly punctured, dull. The abdomen is closely and finely punctured, with a distinct moderately long pubescence. The legs are yellowish.

The male is difficult to distinguish; it has the ventral plate of the seventh abdominal segment narrower, and more produced than in the female.

Abundant in England and Scotland, in the nests of *Formica rufa*.

124. *Homalota flavipes*.

Nigra, sat nitida, antennarum basi pedibus anoque rufo-testaceis, elytris rufo-brunneis, abdomine piceo; thorace transverso, angulis posticis haud rotundatis; abdomine supra segmentis 2-4 parce punctatis, 5° et 6° lævigatis. Long. 1½ lin.

Mas; abdomine segmento 7° dorsali apice fere triangulariter emarginato.

Aleochara flavipes, Grav. Mon. 161; *H. flavipes*, Er. Gen. et Spec. Staph. 124; Kr. Ins. Deutsch. ii. 263; Wat. Cat.; *Notothecta flavipes*, Th. Sk. Col. iii. 107.

A rather broad, robust species, narrowed before and behind. The antennæ are pitchy in colour, yellowish at the base, the apical joint also sometimes obscurely yellow; they are moderately long, scarcely thickened towards the apex, and pretty distinctly furnished with projecting hairs; joints two and three are of about equal length, four to ten differ but little from one another in length and breadth, each as long as broad; eleventh joint long and rather slender, pointed, longer than the two preceding together. The head is narrower than the thorax broad and short, black and shining, finely and indistinctly punctured. The thorax is black, or pitchy-black, a little narrower than the elytra, twice as broad as long, narrower at the anterior than at the posterior angles; the base a little sinuate on each side near the external angles, which are distinct and not at all depressed, moderately closely and pretty distinctly punctured, with an indistinct impression in front of the scutellum. The elytra are brownish or reddish-brown, scarcely shining, about one-third longer than the thorax, much broader than long, pretty closely and distinctly, and somewhat rugulosely punctured. The abdomen is black and shining, pitchy at the base, reddish-yellow at the extremity; segments two to four are sparingly punctured, five and six impunctate. The legs are reddish-yellow.

In the male, the hind margin of the seventh segment of the abdomen is distinctly emarginate in the middle.

Abundant in the nests of *Formica rufa*, all over the kingdom.

125. *Homalota confusa*.

Nigra, sat nitida, antennarum basi pedibus anoque rufo-testaceis, elytris rufo-brunneis, abdomine piceo; thorace transverso, angulis posticis haud rotundatis; antennis articulis 5-10 transversis; abdomine supra segmentis 2-4 sat crebre punctatis, 5° parce punctato. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° dorsali apice fere triangulariter emarginato.

H. confusa, Maerk. Germ. Zeit. v. 215; Kr. Ins. Deutsch. ii. 264; Wat. Cat.; *Notothecta confusa*, Th. Sk. Col. iii. 107.

Very closely allied to *H. flavipes*, but rather smaller, and with the antennæ shorter and stouter, so that of joints five to ten each one is distinctly broader than long. The abdomen is more closely punctured, the base of the fifth segment being distinctly punctured. Its structure and punctuation generally are extremely like *H. flavipes*.

I have never found this species, but it has occurred to Mr. F. Smith and others, in the nests of *Formica fuliginosa*.

SECTION H.

Group XIX. *Small or very small species; abdomen only a little narrowed towards the apex, closely punctured; thorax but little narrowed towards the front.*

(Species 126—131).

The species of this group have indistinct male characters; *H. nigra*, *germana*, and *hodierna*, are found in vegetable refuse matter; *sordidula*, *celata*, and (I believe) *canescens*, in dung.

126. *Homalota nigra*.

Linearis, sat nitida, nigra, pedibus fuscis, confertim subtiliter punctata, et tenuiter pubescens; thorace leviter transverso; abdomine apicem versus subangustato, supra toto confertim subtiliter punctato. Long. $\frac{4}{5}$ -1 lin.

Mas; abdomine segmento 7° dorsali apice obsolete quadridentato.

H. nigra, Kr. Ins. Deutsch. ii. 287; Wat. Cat.

A small, rather narrow, black species, shining, but clothed with a fine pubescence, giving it a somewhat gray appearance. The antennæ are black, of moderate length and thickness, a little thickened towards the apex; the first joint is stout, two and three of moderate length and thickness, two longer than three, this latter much narrowed at the base, four scarcely broader than the preceding one, about as long as broad, from this to the tenth each one a little broader than its predecessor, none of them, however, being strongly transverse, and sometimes appearing but little broader than long; eleventh joint about as long as the two preceding together. The head is smaller than the thorax, rather small, black and shining, finely and indistinctly punctured, sometimes indistinctly channelled or impressed. The thorax is a little narrower than the elytra, about a third broader than long, very finely and closely punctured, with an indistinct impression in front of the scutellum, from which proceeds a fine channel, sometimes scarcely to be distinguished. The elytra are about a third longer than the thorax, closely and finely punctured. The abdomen is a little narrowed towards the apex, closely finely and evenly punctured above, segments five and six somewhat more sparingly than the preceding ones. The legs are pitchy.

In the male, the apical angles of the dorsal plate of the seventh abdominal segment are acute, and even a little produced, and the hind margin is furnished besides with two small indistinct projections, the distance between which is about the same as that between each one and the lateral tooth.

In the female, the middle of the hind margin of the same segment is slightly and indistinctly emarginate in the middle.

Extremely abundant, in vegetable refuse, all over England and Scotland.

127. *Homalota germana*.

Nigra, vix nitida, pedibus fuscis, confertim evidenter punctata, et tenuiter pubescens; thorace transverso;

abdomine apicem versus subangustato, supra toto confertim punctato. Long. $\frac{3}{4}$ lin.

Mas; abdomine segmento 7° dorsali apice obsoletissime quadridentato.

Scarcely smaller than *H. nigra*, but distinctly broader in proportion, with a shorter and more transverse thorax, and more distinct and rougher punctuation. The antennæ are formed much as in *H. nigra*, only rather shorter. The head is rather shorter than in *H. nigra*, black, dull, rather sparingly but distinctly and roughly punctured, in the male with a distinct channel or impression. The thorax is a little narrower than the elytra, its breadth more than half as great again as its length, closely and finely but distinctly punctured, sometimes with an indistinct longitudinal channel. The elytra are about a third longer than the thorax, closely and finely punctured. The abdomen is black, a little shining, closely and finely but distinctly punctured, the punctuation not closer but more distinct than in *H. nigra*. The legs are pitchy.

In the male, the hind margin of the dorsal plate of the seventh abdominal segment is formed much as in *H. nigra*, the teeth, however, are still more indistinct, and scarcely to be detected.

This species appears to be generally distributed, and pretty common, especially in Scotland. It is probably mixed in collections with *H. nigra*.

128. *Homalota hodierna*.

Nigra, vix nitida, elytris fuscis, pedibus fusco-testaceis, crebre subtiliter punctata; antennis subelongatis, articulis haud transversis; thorace leviter transverso, canaliculato; abdomine supra toto confertim subtiliter punctato. Long. 1 lin.

Mas; capite impresso; abdomine segmento 7° dorsali apice quadridentato.

Closely allied to *H. nigra*, but larger than the largest of that species, more robustly formed, and at once distinguished by its longer antennæ, less thickened towards the apex. The antennæ are pitchy-black, obscurely paler at the base, rather long and slender, scarcely at all thickened towards the apex; joint two a little longer

than three, three narrowed at the base, four to ten differing but little from one another in length, the length of each a little greater than its breadth; eleventh joint long (much longer than in *H. nigra*), more than twice the length of the tenth. The head is broader and shorter than in *H. nigra*, in the male distinctly channelled and impressed. The thorax is a little narrower than the elytra, about one-third broader than long, thickly and finely punctured, with a distinct central longitudinal channel. The elytra are about one-third longer than the thorax, of an obscure brownish or fuscous colour, closely and finely punctured. The abdomen is a little narrowed towards the apex, its upper surface densely and finely punctured and pubescent, segments five and six rather more sparingly so than the preceding ones. Legs dusky yellow.

In the male, the hind margin of the seventh abdominal segment is furnished with four short projecting teeth much as in *H. nigra*. I have not seen a specimen of the female.

I have captured four specimens of this species at Horning, in Norfolk, and have seen it also in Mr. Crotch's collection. M. Brisout de Barneville has also submitted to me a French example, marked "Lille, roseaux."

129. *Homalota celata*.

Nigra, subopaca, confertim subtiliter punctata, antennarum basi elytrisque fuscis, pedibus obscure testaceis; thorace transverso, basi obsolete canaliculato; abdomine segmentis 2-4 crebre subtiliter, 5° et 6° parcius punctatis. Long. $\frac{3}{4}$ lin.

Mas; abdomine segmento 7° dorsali apice 4-dentato.

H. celata, Er. Käf. Brand. i. 335; Gen. et Spec. Staph. 122; Kr. Ins. Deutsch. ii. 320. *Atheta dadopora*, Th. Sk. Col. ix. 283.

A small, but rather robust, obscure species, readily distinguished from *H. sericea*, and its allies, by its more densely punctured abdomen; broader than *H. sordidula*, and not so flat or depressed. The antennæ are moderately stout, blackish, obscurely paler at the base, not thickened after the sixth joint; joint two is longer than three,

four scarcely broader than three, nearly as long as broad, five distinctly broader than four, from this to the tenth the joints differ but little from one another, the breadth of each is a little greater than its length; the eleventh joint is rather long, quite as long as the two preceding together. The head is broad, a little narrower than the thorax, pretty closely and finely but distinctly and rather roughly punctured, sometimes with an indistinct impression on the disc. The thorax is a little narrower than the elytra, its breadth about half as great again as its length, the sides gently rounded, nearly as broad at the anterior as at the posterior angles, closely and finely but distinctly and rather roughly punctured, and with a more or less distinct longitudinal channel in front of the scutellum. The elytra are about a fourth longer than the thorax, brownish or fuscous in colour, pretty closely and distinctly punctured. The abdomen is black, pitchy at the extremity, a little shining, segments two to four are closely and distinctly punctured, fifth and sixth segments moderately closely punctured. The legs are rather dirty yellow.

The hind margin of the upper plate of the seventh abdominal segment is furnished, in the male, with four small teeth, one at each angle and two in the middle, of these the external ones are the more distinct, the notch separating the two middle ones is broad, but very shallow.

Rare. I have found single specimens in two or three localities near London.

Obs.—I have examined a specimen of *A. dadopora*, sent by Thomson to Mr. Crotch; it is of this species. Thomson considers (*vide loc. cit.*) that Erichson's description of *H. celata* probably refers to Kraatz's *H. nigra*. In this suspicion he is not improbably correct, but I think it better not to change the names, until the question is put beyond doubt by the examination of Erichson's specimens.

130. *Homalota sordidula*.

Nigra, pedibus fuscis, opaca, confertim subtiliter punctata; antennis sat elongatis, articulo ultimo oblongo; thorace leviter transverso, subtiliter canaliculato; abdomine supra toto confertim subtiliter punctato. Long. $\frac{3}{4}$ lin.

H. sordidula, Er. Käf. Brand. i. 335; Gen. et Spec. Staph. 123; Kr. Ins. Deutsch. ii. 296; Wat. Cat.; *Athe-
ta sordidula*, Th. Sk. Col. iii. 91.

A small narrow species, with pretty distinctly pointed abdomen, and elongate terminal joint to the antennæ. The antennæ are long for the small size of the species, black, the two basal joints sometimes obscurely pitchy, not thickened after the fifth or sixth joint; joints two and three rather stout, two longer than three, four smaller than any of the others, but little broader than three, rather transverse, five broader and longer than four, from it to the tenth the length of each joint is nearly equal to its breadth; eleventh joint long, oblong, longer than the two preceding. The head is small, distinctly narrower than the thorax, much narrower than the elytra, its sides a little straight behind the eyes, pretty closely and finely but distinctly punctured, generally with an indistinct longitudinal impression on the front part. The thorax is a little narrower than the elytra, its breadth about one-third greater than its length, finely and closely punctured, and with a fine but distinct longitudinal channel in front of the scutellum. The elytra are about a fourth longer than the thorax, closely and finely punctured. The abdomen is distinctly narrowed towards the apex, its upper surface closely and finely and evenly punctured, the pubescence dense. The legs are pitchy-yellow.

The male is scarcely to be distinguished from the female.

In dung, both in England and Scotland, but apparently scarce or overlooked.

131. *Homalota canescens*.

Nigra, opaca, pedibus fuscis, confertim punctata; antennis articulis 5-10 transversis; thorace transverso, subtiliter canaliculato; abdomine supra toto confertim subtiliter punctato. Long. $\frac{2}{3}$ lin.

Mas; abdomine segmento 7° dorsali apice obsolete 4-dentato.

Allied to *H. sordidula*, broader and more parallel, with the antennæ, especially the terminal joint, shorter, the thorax shorter, and the punctuation throughout not quite so close and fine. The antennæ are blackish, of moderate

length and stoutness, but indistinctly thickened towards the apex; joint three shorter and more slender than two, narrowed towards the base, four smaller than the others, about as broad as three, nearly as long as broad, five to ten differing but little from one another in length, each one slightly broader than its predecessor, the breadth of each evidently greater than its length; eleventh joint rather stout, a little pointed, about as long as the two preceding together. The head is rather broad, a little narrower than the thorax, finely but distinctly and rather roughly punctured, generally with a longitudinal impression on the disc. The thorax is but little narrower than the elytra, its breadth more than half as great again as its length, closely and finely but distinctly punctured, and with a short, not very distinct, channel in front of the scutellum. The elytra are fully one-third longer than the thorax, closely and finely punctured. The abdomen is scarcely narrowed towards the apex, finely, evenly, and closely punctured. The legs are pitchy-yellow.

In the male, the hind margin of the dorsal plate of the seventh abdominal segment is furnished with four small indistinct equidistant teeth, which are placed much as in *H. celata*, but are smaller.

Rare. Thornhill, Brockenhurst, Weybridge, Croydon. In dung, I believe.

Obs.—This species is readily distinguished from *H. celata* by its smaller size, more depressed form, darker colour, and more closely punctured apical segments of the abdomen.

Group XX. *Species of moderate size, abdomen slightly or moderately narrowed towards the apex, thorax scarcely or moderately narrowed towards the front.*

(Species 132—142).

A tolerably natural group, which might, however, be subdivided into several others. *H. marcida*, *intermedia*, and *cadaverina*, are found in moss and vegetable matter; the other species frequent dung, and *cinnamoptera* is often found in small carcases.

132. *Homalota marcida*.

Nigra, sat nitida, antennis piceis, pilosellis, basi pedibusque testaceis, elytris fuscis; thorace leviter transverso,

basi foveolato; elytris hoc sesqui longioribus; abdomine apicem versus vix angustato, supra segmentis 2-4 parce subtiliter punctatis, 5° et 6° fere lævigatis; tibiis posterioribus intus evidenter ciliatis. Long. $1\frac{1}{2}$ - $1\frac{2}{3}$ lin.

Mas; abdomine segmento 7° dorsali margine posteriore obsolete incrassato, ventrali medio obtuse acuminato.

Fem.; abdomine segmento 7° dorsali margine posteriore obsolete emarginato, fere truncato, ventrali late rotundato, dense subtiliter ciliato.

H. marcida, Er. Käf. Brand. i. 328; Gen. et Spec. Staph. 106; Kr. Ins. Deutsch. ii. 298; Wat. Cat.

A peculiar species, scarcely to be confounded with any others, and in many respects resembling *H. occulta* and its allies. The antennæ are long, scarcely thickened towards the apex, brownish, with the three or four basal joints yellow, furnished throughout their length with longish, very fine, outstanding hairs; the first joint is stout, with a long conspicuous seta on its upper side; joints two and three are rather long, three a little longer than two, four and five a little stouter than three, each longer than broad, six to ten each about as long as broad; eleventh joint scarcely so long as the two preceding. The head is rather small, narrower than the thorax, narrowed behind the eyes, which are a little prominent, sparingly and indistinctly punctured. The thorax is distinctly narrower than the elytra, about a third broader than long, a little narrowed behind, moderately closely and finely but distinctly and roughly punctured, with a few long outstanding hairs at the sides, and an indistinct transverse impression in front of the scutellum. The elytra are long and parallel, longer than broad, fully half as long again as the thorax, of a brownish colour, distinctly, rather roughly, and closely punctured. The abdomen is shining, scarcely narrowed towards the apex, which is often paler; segments two to four very sparingly and finely punctured, the apical ones almost impunctate, the sides and apex furnished with distinct outstanding hairs. The legs are yellow, the middle tibiæ on the outside about the middle with a distinct outstanding seta, the posterior tibiæ with a very small and indistinct seta in the middle on the outside, on the inside finely but distinctly ciliate throughout their whole length, these cilia are yellow, and about twelve in number.

In the male, the third joint of the antennæ is more densely furnished with fine outstanding hairs; the dorsal plate of the seventh abdominal segment is narrow, indistinctly rounded at the apex, which is obscurely thickened, and the under plate of the same segment is a little produced in the middle, so as to form an obtuse angle; while in the female, the ventral plate of the same segment is broad and rounded, and furnished with closely-set fine parallel cilia.

In England and Scotland, but never very common.

133. *Homalota intermedia*.

Subdepressa, antice sat nitida, subtiliter punctata, tenuiter pubescens, nigra, antennarum basi obscure testacea, elytris pedibusque testaceis; thorace transversim subquadrato; abdomine apicem versus attenuato, nitidulo, segmentis 2-5 crebre subtiliter punctatis, 6° parce punctato. Long. $1\frac{1}{2}$ - $1\frac{3}{4}$ lin.

H. intermedia, Th. Öfv. Vet. Ac. Förh. 1852, p. 145; Kr. Ins. Deutsch. ii. 301; Wat. Cat.; *Atheta intermedia*, Th. Sk. Col. iii. 95.

This species a good deal resembles *H. xanthoptera* and its allies, but has the abdomen distinctly narrowed to the apex, and its segments more punctured. The antennæ are long and rather stout, scarcely thickened towards the apex; joints two and three long, three longer than two, four about as stout as three, and little less than the other joints, longer than broad, five to ten each about as long as broad, ten, however, a little shorter than the others; the eleventh joint is long, gently pointed, about as long as the two preceding together. The head is narrower than the thorax, but rather broad, finely and indistinctly punctured. The thorax is rather large, a little narrower than the elytra, about a third broader than long, the sides nearly straight, a little rounded at the anterior angles, finely and pretty closely punctured, with a small narrow impression at the base in front of the scutellum. The elytra are yellow, a little darker about the scutellum and at the outsides, closely and finely punctured, about a fourth longer than the thorax. The abdomen is black, rather shining, distinctly narrowed towards the apex; segments two to five finely, evenly, and pretty closely punctured, the fifth rather more sparingly than the basal

ones, the sixth segment shining, and very sparingly punctured; the sides are rather sparingly furnished with outstanding setæ, the apex more distinctly. The legs are bright yellow, the middle tibiæ with a short indistinct outstanding seta about the middle, the hinder ones without any exserted seta.

The male has the ventral plate of the seventh abdominal segment narrower and longer than the female.

This species occurs sparingly in various parts of Scotland; Rannoch, Thornhill, Strath Cannich; also, but very rarely, in the neighbourhood of London.

134. *Homalota longicornis*.

Subdepressa, nitidula, nigra, elytris pedibus anoque brunneo-testaceis; antennis elongatis, articulo quarto transverso; abdomine supra confertim subtiliter punctato; tibiis intermediis et posticis setis exsertis longioribus. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° dorsali apice obsolete emarginato.

Fem.; abdomine segmento 7° ventrali apice ciliato, medio emarginato.

Aleochara longicornis, Grav. Mon. 87; *H. longicornis*, Er. Gen. et Spec. Staph. 129; Kr. Ins. Deutsch. ii. 302; Wat. Cat.; *Atheta longicornis*, Th. Sk. Col. iii. 95.

A very distinct species; the much developed, long antennæ, the yellowish elytra, the much pointed and thickly punctured abdomen, and the very long exserted setæ of the tibiæ are quite sufficient to distinguish it. The antennæ are long and stout, not thickened after the seventh joint, nearly black, with the first joint pitchy, the basal joints with distinct exserted hairs; joint three considerably longer than two, four much smaller than any of the others, its length distinctly less than its breadth, from five to ten each joint is distinctly longer than its predecessor, the fifth not quite so long as broad, the tenth longer than broad; eleventh joint long, obtusely pointed, quite half as long again as the tenth. The head is comparatively small, considerably narrower than the thorax, black and shining, sparingly and finely punctured, but with the pubescence distinct. The thorax is scarcely narrower than the elytra, its breadth about half as great

again as its length, the sides gently rounded, slightly narrowed in front, rather finely and not closely punctured, the pubescence rather long, the sides with a few distinct long outstanding hairs. The elytra are brownish-yellow, darker about the scutellum and towards the sides, closely and rather strongly punctured, a little longer than the thorax. The abdomen is black, strongly narrowed towards the apex, which is pitchy, densely and evenly punctured, the sides and apex with distinct outstanding hairs. The legs are dark yellow, with the femora infusate, the middle and posterior tibiæ each with two long exserted hairs, one a little below the knee, the other a little beyond the middle, they are also pretty closely furnished with short cilia both on the inner and outer sides.

In the male, the apex of the dorsal plate of the seventh abdominal segment is indistinctly emarginate, the ventral plate rounded.

In the female, the ventral plate has the hind margin furnished with short parallel cilia, and is distinctly emarginate in the middle.

Extremely abundant in dung, all over the country.

135. *Homalota macrocera*.

Nigra, sat nitida, crebre subtiliter punctata, elytris fuscis, pedibus piceo-testaceis; antennis longioribus, articulo ultimo oblongo, elongato; thorace leviter transverso, obsolete canaliculato; abdomine apicem versus angustato, supra segmentis 2-4 crebre subtiliter punctatis, 5^o minus crebre, 6^o parce punctato. Long. 1 lin.

H. macrocera, Th. Öfv. Vet. Ac. Förh. 1856, p. 106; *Atheta macrocera*, Th. Sk. Col. iii. 96.

A rather narrow species, with evidently pointed abdomen. Antennæ rather long, not (or scarcely) thickened towards the apex; joints two and three of about the same length, four smaller than five, longer than broad, five to nine differing but little from one another in length and breadth, each distinctly longer than broad, ten about as long as broad; eleventh joint elongate, oblong, quite as long as the two preceding together. The head is a little narrower than the thorax, pretty closely and finely but distinctly and rather roughly punctured, sometimes with an indistinct channel. The thorax is a little narrower

than the elytra, about a third broader than long, the sides gently rounded, scarcely narrower at the anterior than at the posterior angles, the sides with a few fine outstanding setæ, pretty closely and finely punctured, with a fine longitudinal channel in front of the scutellum, varying in length and distinctness. The elytra are but little longer than the thorax, of an obscure fuscous colour, closely and finely punctured. The abdomen is strongly narrowed to the apex, black, the apex sometimes obscurely paler; segments two to four pretty closely and finely punctured, fifth segment more sparingly but distinctly punctured, sixth very sparingly punctured; the sides and apex, as well as the hind margins of the segments, with numerous distinct outstanding black setæ. The legs are dirty yellow, the middle and hinder tibiæ with a distinct outstanding seta on the middle.

I have found this species in numbers, in dung, near Thornhill, and rarely in other parts of Scotland, but never in England.

Obs.—This is not very closely allied to any other species.

136. *Homalota cadaverina*.

Lata, subdepressa, nigra, antice parum nitida; thorace transverso, basi vix foveolato; elytris hoc distinctius punctatis; abdomine nigerrimo, nitidulo, supra segmentis 2-4 parce punctatis, 5° et 6° fere lævigatis; pedibus rufis, femoribus piceis. Long. $1\frac{1}{2}$ lin.

Var.—Elytris fuscis.

H. cadaverina, Bris. Ann. Soc. Ent. Fr. 1860, p. 341.

A fine and distinct species, broader than the others of this group, the head especially being broad. The antennæ are black, moderately long, rather slender, but little thickened towards the apex; joints two and three long and rather slender, two a little the longer; of the following joints the first three or four are longer than broad, the subsequent ones but little broader than long, the penultimate one being scarcely transverse; eleventh joint moderately long, rather pointed, about as long as the two preceding together. The head is broad, but distinctly narrower than the thorax, sparingly and indistinctly punctured. The thorax is a little narrower than the elytra, not quite twice as broad as long, the sides

slightly rounded, scarcely narrower at the anterior than at the posterior angles, finely and rather sparingly punctured, sometimes with a fine indistinct longitudinal channel, the sides with two or three short exserted setæ. The elytra are about a fourth longer than the thorax, closely, rather strongly, somewhat rugulose punctured, their punctuation much stronger than that of the thorax. The abdomen is black and shining, pretty distinctly narrowed towards the apex, segments two to four sparingly punctured, fifth segment very sparingly and finely punctured, sixth segment nearly impunctate; the sides and apex furnished with numerous distinct outstanding hairs. The legs are reddish, the thighs pitchy, tibiæ without exserted setæ, the posterior ones rather long and slender, their tarsi long and pointed.

The male is only to be distinguished from the female by the narrower and more produced ventral plate of the seventh abdominal segment.

I have found one or two specimens of this species near London, and have obtained a fine series, from heaps of cut grass, at Thornhill.

Obs.—I have compared these specimens with M. Brisout's type of *H. cadaverina*, and find they agree in all points with it.

137. *Homalota lævana*.

Nigra, sat nitida, elytris brunneis, pedibus testaceis; thorace transverso, elytris angustiore; abdomine apicem versus minus fortiter angustato, supra segmentis 2-4 sat crebre punctatis, 5° parce punctato, 6° fere lævigato. Long. $1\frac{1}{4}$ - $1\frac{1}{3}$ lin.

Mas; abdomine segmento 7° dorsali apice leviter emarginato, utrinque denticulis 2 subapproximatis.

H. lævana, Muls. Opusc. i. 39; Kr. Ins. Deutsch. ii. 306.

Resembles both *H. cinnamoptera* and *atramentaria*; distinguished from the former by the antennæ stouter towards the apex, the head thorax and elytra more shining and less densely punctured, the abdomen less narrowed towards the apex and more sparingly punctured; from *H. atramentaria* by the stouter antennæ, unicolorous brown elytra, pale legs, and narrower thorax.

The antennæ are of moderate length and stoutness, slightly but distinctly thickened towards the apex, pitchy-black, with the basal joints scarcely lighter; first joint stout, two and three of about equal length, four smaller than the others, scarcely broader than three, about as long as broad, the length of the following joints differs but little from their breadth, the two or three penultimate joints a little transverse; eleventh joint rather long, longer than the two preceding together. The head is rather broad, a little narrower than the thorax, sparingly and moderately finely punctured, rounded behind the eyes, sometimes with a small impression on the disc. The thorax is distinctly narrower than the elytra, about a third broader than long, the sides gently rounded in front, little narrowed behind, so that it is about as broad at the anterior as at the posterior angles, moderately closely and finely punctured, the sides with a few outstanding setæ, sometimes with a short channel in front of the scutellum, sometimes quite unchannelled. The elytra are brownish, one-third longer than the thorax, pretty closely and finely and somewhat rugulose punctured, their pubescence (as well as that of the head and thorax) rather long. The abdomen is black, pretty distinctly narrowed towards the apex, which is sometimes pitchy, segments two to four are distinctly and not very closely punctured, fifth segment more sparingly punctured, sixth nearly impunctate; the sides and apex furnished distinctly with outstanding hairs. The legs are yellow, the middle and posterior tibiæ are furnished each with two fine projecting setæ, of which the one nearer the knee is distinctly the shorter.

In the male, the hind margin of the upper plate of the seventh segment is distinctly emarginate in the middle, the lateral margin projects on each side as a short broad tooth, and on the inner side of this, and only separated from it by an obscure notch, is another similar tooth.

Scarce. Rannoch, Inverness, Brighton, Croydon. It occurs in dung, and is, perhaps, commoner than is supposed.

138. *Homalota cinnamoptera*.

Nigra, antice subopaca, elytris obscure brunneis, pedibus testaceis; thorace transverso, basi leviter canalicu-

lato ; abdomine apicem versus evidenter angustato, supra segmentis 2-4 crebre subtiliter punctatis, 5° parcius, 6° parce punctato. Long. $1\frac{1}{4}$ lin.

Mas ; abdomine segmento 7° dorsali apice vix emarginato, fere truncato, angulis externis acutis.

H. cinnamoptera, Th. Öfv. Vet. Ac. Förh. 1856, p. 105 ; *Atheta cinnamoptera*, Th. Sk. Col. iii. 93. *H. subrugosa*, Wat. Cat.

A species with rather long antennæ, somewhat sparingly furnished with exserted hairs, its head and thorax with a dull almost brassy appearance, the elytra of a dull brownish colour. The antennæ are longer than the head and thorax, scarcely thickened toward the apex, of a blackish colour, obscurely pitchy at the base ; joints two and three rather long, three a little the longer, four to nine as long as or rather longer than broad, ten scarcely shorter than broad ; eleventh joint rather long, about as long as the two preceding together. Head narrower than the thorax, rather broad in proportion to its length, rounded behind the eyes, rather convex above, dull, finely and pretty closely but distinctly, even rather roughly, punctured. The thorax is a little narrower than the elytra, its breadth about half as great again as its length, the sides a little narrower at the anterior than at the posterior angles, the sides gently rounded in front, then nearly straight behind, distinctly, moderately closely, rather roughly punctured, the sides with two or three exserted hairs, with a fine longitudinal channel in the middle in front of the scutellum, sometimes extending the whole length of the thorax, sometimes only half-way. The elytra are of an obscure brownish colour, about one-third longer than the thorax, rather finely but distinctly, closely and somewhat rugulose punctured. The abdomen is black and shining, distinctly narrowed towards the apex, segments two to four finely and rather closely punctured, fifth segment rather more sparingly punctured, sixth very finely and sparingly punctured, the sides and apex furnished with distinct rather long outstanding setæ. The legs are yellow ; the middle and posterior tibiæ furnished each with two fine exserted setæ, one short, just below the knee, the other longer, a little more than half-way down.

In the male, the hind margin of the dorsal plate of the seventh abdominal segment has the external angles more acute than in the female.

Tolerably common in vegetable refuse, and in carcases, in Scotland. I have also found it, very rarely, in the neighbourhood of London.

Obs.—Thomson has suggested that *H. putrida*, Kr., is a synonym of this species; I do not know *H. putrida*, but in any case, Thomson's name has the priority.

139. *Homalota villosula*.

Nigerrima, sat fortiter punctata; antennis apicem versus leviter incrassatis; thorace transverso; abdomine apicem versus minus fortiter angustato, supra segmentis 2-4 sat crebre, 5° et 6° parce punctatis; pedibus piceis, tarsis geniculisque dilutioribus. Long. $1\frac{1}{3}$ lin.

Mas; abdomine segmento 7° dorsali medio producto, apice truncato, utrinque spina tenui armato; ventrali apice leviter rotundato.

Fem.; abdomine segmento 7° dorsali medio late submarginato, utrinque denticulo brevi instructo; ventrali margine posteriore ciliato, medio minus evidenter exciso.

H. villosula, Kr. Ins. Deutsch. ii. 305; Wat. Cat.

Of a deep black colour, with the exception of the abdomen but little shining. The antennæ are black, moderately stout, distinctly thickened towards the apex; joints two and three not slender, of about equal length, four to ten each a little broader than its predecessor, the first of them as long as broad, the latter ones only slightly transverse, the tenth being a little longer than the ninth; eleventh joint rather stout, gently pointed, about as long as the two preceding together. The head is rather small, distinctly smaller than the thorax, sparingly but rather roughly punctured. The thorax is a little narrower than the elytra, its breadth about half as great again as its length, a little narrower at the anterior than at the posterior angles, pretty distinctly and not closely punctured, with an indistinct impression in front of the scutellum, and at the sides with a few outstanding setæ. The elytra are about a third longer than the thorax, closely and strongly punctured, the pubescence rather long. The abdomen is black and shining, but little narrowed except at the apical segments, segments two to four distinctly, moderately, sparingly punctured,

fifth and sixth finely and sparingly punctured, the sides and apex with distinct outstanding hairs. The legs are pitchy, the knees and tarsi reddish; the four posterior tibiæ are furnished each with two distinct long setæ, the lower ones being especially long; the posterior tarsi are stout and pointed, and the hairs with which they are furnished are conspicuous.

In the male, the dorsal plate of the seventh abdominal segment is truncate in the middle, and the lateral margin is produced behind as a long fine spine, reaching only a little beyond the broad truncate middle part, from which it is separated by a distinct space; the posterior margin of the ventral plate is gently rounded.

In the female, the hind margin of the upper plate is broadly and obsoletely emarginate in the middle, the lateral margin projects a little on each side as a short sharp tooth; the hind margin of the ventral plate is furnished with black cilia, and is somewhat excised in the middle.

In dung, generally distributed, but not very abundant. Apparently commoner in Scotland than in England.

Obs.—Whether *H. nigripes*, Th., is synonymous with this species is not certain, though it is probable from his description.

140. *Homalota atramentaria*.

Antice nigro-subænea, subnitida, abdomine nitidulo nigerrimo, pedibus piceis; thorace transverso; abdomine apicem versus vix angustato, segmentis 2-4 sat parce punctatis, 5° parcius punctato, 6° fere lævigato. Long. $1\frac{1}{4}$ - $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° dorsali apice medio leviter emarginato, utrinque margine laterali acuto.

Fem.; abdomine segmento 7° dorsali apice medio emarginato.

Var.—Elytris disco plus minusve rufescentibus.

Aleochara atramentaria, Gyll. Ins. Suec. ii. 408; *H. atramentaria*, Er. Gen. et Spec. Staph. 111; Kr. Ins. Deutsch. ii. 303; Wat. Cat.; *Atheta atramentaria*, Th. Sk. Col. iii. 92.

This species is remarkable by the peculiar dull brassy lustre of the head, thorax, and elytra. The antennæ are blackish, with the basal joint pitchy, a little thickened

towards the apex, and furnished throughout pretty distinctly with exserted hairs; joints two and three of about equal length, four to ten each slightly broader than its predecessor, four to six each as long as, or a little longer than broad, seven to ten slightly broader than long; eleventh joint about as long as the two preceding together. The head is narrower than the thorax, not large, sparingly and indistinctly punctured. The thorax is a little narrower than the elytra, about a third broader than long, the sides nearly straight, about as broad at the anterior as at the posterior angles, moderately closely and finely punctured, at the sides with two or three outstanding hairs, in front of the scutellum with an indistinct transverse impression. The elytra are about a third longer than the thorax, their colour either entirely dull brassy, or more or less distinctly reddish, moderately closely and indistinctly, somewhat rugulose punctured. The abdomen is black and shining, scarcely narrowed towards the apex; segments 2-4 finely and sparingly punctured, fifth segment still more sparingly punctured, sixth nearly impunctate, the outstanding hairs of the sides and apex not very marked. The legs are pitchy, the femora generally a little darker than the tibiæ; the middle and posterior tibiæ each with two fine short exserted setæ.

In the male, the middle of the hind margin of the seventh segment of the abdomen is a little emarginate in the middle, on each side of the emargination it is somewhat rounded, and the lateral margin projects somewhat as a short tooth, not easy to see.

In the female, the hind margin of the corresponding plate is a little emarginate in the middle.

Extremely abundant, in dung, in the most varied localities and situations, from the coasts to the tops of the mountains.

141. *Homalota setigera*.

Nigra, nitidula, elytris nigro-piceis, pedibus piceis, crebre sat fortiter punctata; antennis apicem versus leviter incrassatis, articulis 7-10 transversis; thorace leviter transverso, antice haud compresso; abdomine apicem versus subangustato, supra segmentis 2-4 sat parce punctatis, 5^o parcius punctato, 6^o fere lævigato. Long. 1 lin.

Mas; abdomine segmento 7° ventrali margine posteriore rotundato.

Fem.; abdomine segmento 7° ventrali apice medio exciso.

Smaller than *H. atramentaria*, the anterior parts blacker and more shining, the antennæ shorter and more thickened towards the apex. The antennæ are black, the basal joint pitchy; they are distinctly thickened towards the apex, and furnished throughout with exserted hairs much as in *H. atramentaria*; joints two and three moderately long, three scarcely so long as two, four to ten each a little broader than its predecessor, of four and five the length differs little from the breadth, the following joints gradually more transverse, the penultimate ones distinctly transverse; the eleventh joint is rather long, quite as long as the two preceding together. The head is of moderate size, a little narrower than the thorax, its punctuation moderately close, and rather rough. The thorax is distinctly narrower than the elytra, about one-third broader than long, the sides gently rounded in front, then slightly narrowed behind, not narrower at the anterior than at the posterior angles, rather closely and strongly punctured, the sides with a few exserted setæ. The elytra are about a third longer than the thorax, pitchy-black or pitchy, pretty closely and strongly punctured. The abdomen is black and shining, moderately narrowed towards the apex, segments two to four distinctly but not closely punctured, fifth segment more sparingly punctured, sixth nearly impunctate, the sides and apex furnished distinctly with outstanding setæ. The legs are pitchy, the four posterior tibiæ with two fine, rather short, exserted setæ.

In the male, the upper plate of the seventh abdominal segment is without any peculiar structure, and the hind margin of the under plate is gently rounded; while in the female this plate is distinctly excised in the middle, and the hind margin ciliate.

Generally distributed, in dung, but not very common.

Obs.—This species is confounded in collections both with *H. atramentaria* and *H. parva*. I have mentioned above, characters which will distinguish it from the former. From *H. parva*, its more thickened antennæ, broader head, less transverse thorax (which is also less narrowed in front), rather more sparing punctuation, and the shorter lower setæ of its tibiæ, distinguish it.

142. *Homalota parva*.

Nigra, nitidula, crebre punctata, et distincte pubescens; thorace transverso, basi obsolete canaliculato; pedibus piceis; abdomine apicem versus sat fortiter attenuato, segmentis 2-4 crebre, 5° et 6° parcius punctatis. Long. 1 lin.

Mas; abdomine segmento 7° ventrali margine posteriore rotundato.

Fem.; abdomine segmento 7° ventrali apice medio exciso.

Aleochara parva, Sahl. Ins. Fenn. i. 380; *H. parva*, Wat. Cat. *H. cauta*, Er. Gen. et Spec. Staph. 122; Kr. Ins. Deutsch. ii. 318; *Atheta cauta*, Th. Sk. Col. iii. 91.

A small, black, and shining species, with rather rough punctuation and pubescence. The antennæ are moderately long, not stout, but slightly thickened towards the apex; joints two and three moderately long, slender, three scarcely so long as two, four about as long as broad, the following ones slightly transverse, the tenth scarcely more so than the sixth; eleventh joint gently pointed, quite as long as the two preceding together. The head is rather small, a little narrower than the thorax, much narrower than the elytra, pretty closely and distinctly punctured. The thorax is a little narrower than the elytra, its breadth not half as great again as its length, the sides are gently rounded, and it is a little narrower at the anterior than at the posterior angles; it is moderately closely and finely, rather roughly punctured, the sides with distinct outstanding hairs; in front of the scutellum with a short indistinct channel. The elytra are black or pitchy, a little longer than the thorax, closely and moderately finely punctured. The abdomen is black, distinctly narrowed towards the apex, segments two to four distinctly and pretty closely, fifth segment more sparingly, sixth very sparingly, punctured; the outstanding setæ of the sides and apex are distinct. The legs are pitchy, the four posterior tibiæ each with two fine exerted setæ, of which the lower one is considerably the longer.

In the male, the upper and under plates of the seventh abdominal segment are without any particular structure, while in the female the hind margin of the under plate is ciliate, and excised in the middle.

Very common, in dung, as well as in other situations, all over the country.

Group XXI.—*Thorax strongly narrowed to the front; abdomen strongly pointed and thickly punctured.*

(Species 143—148).

If *H. melanaria* be excepted, the species herein contained form a natural group; *melanaria* occurs in vegetable refuse; *testudinea*, *aterrima*, and *pilosiventris* in dung; *pygmæa* and *muscorum*, often among moss and leaves.

143. *Homalota melanaria*.

Nigra, opaca, dense subtiliter et æqualiter punctata; antennis sat validis, piceis, pedibus elytrisque testaceis, his circa scutellum infuscatis; thorace transversim convexiusculo, æquali; abdomine apicem versus angustato, dense æqualiter punctato. Long. $1\frac{2}{3}$ lin.

Mas; abdomine segmento 7° dorsali apice obsoletissime emarginato, ventrali angusto, producto.

Fem.; abdomine segmento 7° dorsali apice obsoleto, ventrali evidenter, emarginato.

Aleochara melanaria, Sahl. Ins. Fenn. i. 389; *Coprothassa melanaria*, Th. Sk. Col. iii. 34. *H. lividipennis*, Er. Gen. et Spec. Staph. 129; Kr. Ins. Deutsch. ii. 311. *H. sordida*, Wat. Cat.

A fine large species, with bright yellow elytra, having a triangular black patch about the scutellum. The antennæ are rather long and stout, slightly thickened towards the apex, of a pitchy colour; joint three longer than two, four a little broader than three, shorter and narrower than the succeeding ones, slightly transverse, joints five to ten each a little longer and broader than its predecessor, each about as long as broad; the eleventh joint is elongate, pointed, longer than the two preceding together. The head is broad and short, much narrower than the thorax, convex above, closely and finely punctured. The thorax is, at the base, as broad as the elytra, transversely arched, its breadth fully half as great again as its length, the sides rounded, a little narrower at the anterior than at the posterior angles, closely and finely, very regularly, punctured, with a short dense regular pubescence. The elytra are about a fourth longer than the thorax, of a clear yellow colour, with a triangular black patch about the scutellum, the point of

which extends almost to the apex of the elytra, closely and finely punctured. The abdomen is narrowed towards the apex, black, with the extremity paler, and on the under side the margins of the segments brownish, closely finely and evenly punctured, the sixth segment a little more sparingly than the basal ones, densely pubescent, the sides and apex as well as the posterior margins of the segments furnished with longer outstanding black hairs. The legs are yellow, the middle tibiæ with a distinct stout exerted black seta in the middle, the posterior tibiæ without any seta.

In the male, the hind margin of the dorsal plate of the seventh segment of the abdomen is indistinctly emarginate, the under plate of the same segment is a little produced in the middle.

In the female, the hind margin of the dorsal plate of the seventh segment is a little emarginate, the under plate is pretty deeply excised in the middle, the hind margin furnished with pale, closely set, fine, parallel cilia.

Very abundant in vegetable refuse all over England and Scotland.

Obs.—Thomson has reversed the sexes of this species.

144. *Homalota testudinea*.

Nigra, pedibus elytrisquæ testaceis, his circa scutellum infuscatis, crebre fortiter ruguloso-punctatis; thorace transverso, convexiusculo, æquali; abdomine apicem versus fortiter angustato, supra crebre distinctius (segmento 6° parcius) punctato. Long. $1\frac{1}{3}$ - $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° ventrali apice medio rotundato.

Fem.; abdomine segmento 7° ventrali apice medio leviter emarginato.

H. testudinea, Er. Gen. et Spec. Staph. 131; *Coprothassa testudinea*, Th. Sk. Col. iii. 35. *H. melanaria*, Kr. Ins. Deutsch. ii. 312; Wat. Cat.

A very distinct species, allied on the one hand to *H. melanaria*, on the other to *H. aterrima*; distinguished from the former by its smaller size, darker colour, stronger

punctuation, and less developed antennæ; from *H. aterrima* by its larger size, stouter antennæ, coarser punctuation, and differently coloured elytra. The antennæ are of moderate length and stoutness, but little thickened towards the apex, black, with the basal joint pitchy, distinctly pilose; joints one and two stout, three longer and more slender than two, four to six each about as long as broad, seven to ten each a little shorter than broad; eleventh joint as long as the two preceding together. The head is broad and short, moderately closely and distinctly punctured. The thorax is ample, as broad as, or broader than the elytra, nearly half as broad again as long, transversely convex, the sides rounded, distinctly narrower at the anterior than at the posterior angles, without exserted setæ at the sides, shining, closely and distinctly punctured. The elytra are but little longer than the thorax, of a livid yellow colour, with a large triangular common black patch, and with the sides also darker, rather strongly and closely, somewhat rugulosely punctured. The abdomen is strongly narrowed towards the apex, closely and distinctly punctured, the sixth segment more sparingly than the basal ones, the pubescence is depressed and pretty dense, the outstanding black setæ of the sides, apex, and margins of the segments long and numerous. The legs are pitchy-testaceous, the middle and posterior tibiæ each with a distinct exserted seta.

In the male, the ventral plate of the seventh abdominal segment is narrow at the apex and rounded.

In the female, it is broader, furnished with distinct short, black, parallel cilia, and rather broadly and not deeply emarginate in the middle.

In dung, not very abundant. I have never found it in Scotland.

145. *Homalota aterrima*.

Nigra, subopaca, confertim subtilissime punctata, pedibus piceo-testaceis; antennis sat elongatis, articulis haud transversis; thorace transverso, æquali, vel subtiliter canaliculato; abdomine apicem versus angustato, supra dense subtilissime punctato. Long. $1\frac{1}{4}$ lin.

Aleochara aterrima, Grav. Micr. 83; *H. aterrima*, Er. Gen. et Spec. Staph. 133; Kr. Ins. Deutsch. ii. 313; Wat. Cat.; *Acrotona aterrima*, Th. Sk. Col. iii. 36.

A dark-coloured, somewhat broad species, with strongly pointed abdomen, rather long and slender antennæ, and dense and fine punctuation. The antennæ are a little longer than the head and thorax, black, scarcely thickened towards the apex; joints two and three rather elongate, of about equal length, three rather the finer, four distinctly longer than broad, five to ten differing but little from one another in length and breadth, the first of them longer than broad, the last of them about as long as broad; eleventh joint pointed, rather long, as long as the two preceding together. The head is rounded, considerably narrower than the thorax, closely and finely punctured. The thorax is, at the base, nearly as broad as the elytra; its breadth nearly twice its length, the sides rounded, narrower at the anterior than at the posterior angles, closely and finely punctured, delicately and distinctly pubescent, sometimes with a fine central longitudinal channel, sometimes unchannelled. The elytra are black, or brownish-black, about a fourth longer than the thorax, broad, closely and finely punctured. The abdomen is strongly narrowed to the apex, densely, finely, and evenly punctured, sixth segment more sparingly than the basal ones; furnished at the sides and apex with outstanding black setæ. The legs are pitchy-yellow, the femora darker than the tibiæ, the middle and posterior tibiæ furnished near the middle with a distinct outstanding seta, the basal joint of the posterior tarsi but little longer than the second.

Very abundant, all over the country, in various situations.

146. *Homalota pygmæa*.

Nigro-fusca, subopaca, elytris fuscis, antennarum basi pedibusque testaceis, confertim subtilissime punctata; thorace leviter transverso, convexiusculo, æquali; abdomine apicem versus angustato, supra dense subtilissime punctato; tarsis posticis articulo basali elongato. Long. 1 lin.

Aleochara pygmæa, Grav. Micr. 86; *H. pygmæa*, Kr. Ins. Deutsch. ii. 314; Wat. Cat. *Acrotona obfuscata*, Th. Sk. Col. iii. 36. *H. aterrima*, var., Er. Gen. et Spec. Staph. 133.

Var.—Antennarum thoracis elytrorumque colore plus minusve dilutiore.

This species more resembles an *Oxyopoda* than does any other of this genus; its punctuation, and the structure of the posterior tarsi, closely imitate the same parts in *Oxyopoda*, nevertheless *pygmæa* is a true *Homalota*. The antennæ are moderately long, pitchy-black, two or three basal joints obscurely yellow, a little thickened towards the apex; joints two and three rather long and slender, of about equal length, four to seven each longer than broad, eight to ten about as long as broad; eleventh joint rather long, gently pointed, about as long as the two preceding together. The head is smaller than the thorax, rounded, a little narrowed to the front, blackish, not shining, the palpi obscurely yellowish, closely and very finely punctured, pubescence distinct but very fine. The thorax is, at the base, as broad as the elytra, its breadth about one-third greater than its length, the sides gently rounded and distinctly narrowed towards the front, transversely convex, very finely and closely punctured, and delicately pubescent. The elytra are brownish or obscurely blackish, about a fourth longer than the thorax, densely and finely punctured. The abdomen is strongly pointed at the apex, finely and densely punctured, the apical segments a little more sparingly than the basal ones, the margins of the segments generally, the apex always, more or less distinctly paler, the sides and apex furnished with outstanding black setæ. The legs are yellow, the basal joint of the posterior tarsi as long as, or longer than, the two succeeding ones, the exerted seta of the posterior tibiæ is absent, or rather so small as to escape observation.

Pretty generally distributed in England and Scotland, but not abundant. The light-coloured form seems to be the common one in the South, while the dark form is the only one I have found in Scotland.

Obs.—Thomson considers this species to be the *Aleochara obfuscata* of Gravenhorst, but I agree with Kraatz that it is rather Gravenhorst's *A. pygmæa*; though it is difficult to speak with any certainty, I should consider Gravenhorst's *A. obfuscata* rather applicable to *H. pilosiventris*, Th. In any case, the name *pygmæa* should be adopted, for if the Gravenhorstian names be left out of the question altogether, *H. pygmæa*, Kr., has priority over *H. obfuscata*, Th.

147. *Homalota muscorum*.

Nigra, parum nitida, elytris nigro-fuscis, pedibus testaceis, femoribus obscurioribus, crebre subtiliter punctata; antennis articulis 7-10 leviter transversis; thorace leviter transverso, convexiusculo, æquali; abdomine apicem versus angustato, supra crebre apice vix parcius punctato. Long. 1 lin.

H. muscorum, Bris. Ann. Soc. Ent. Fr. 1860, p. 344.
H. picipes, Wat. Cat.

Antennæ of moderate length and stoutness, a little thickened towards the apex; joints two and three rather long, two a little longer than three, four moderately stout, four to six about as long as broad, seven to ten each a little shorter than broad; eleventh joint rather long and stout, about as long as the two preceding together. The head is narrower than the thorax, rounded, convex above, finely and moderately closely punctured. The thorax is, at the base, a little narrower than the elytra, its breadth about one-third greater than its length, considerably narrower at the anterior than at the posterior angles, transversely arched, without channel or impression, closely and very finely punctured, and delicately pubescent. The elytra are a little longer than the thorax, of an obscure fuscous or blackish colour, closely and finely punctured. The abdomen is distinctly narrowed towards the apex, finely closely and evenly punctured, the sixth segment a little more sparingly than the preceding ones; the pubescence is long, depressed, and distinct, the outstanding setæ of the sides and apex of moderate length. The legs are yellowish, the femora pitchy, the outstanding setæ of the posterior tibiæ small and indistinct.

Very abundant all over the country.

Obs.—This species is readily distinguished from *H. pygmaea*, by its less elongate form, shorter concolorous antennæ, and shorter basal joint to the posterior tarsi. *H. pilosiventris* is smaller, has a shorter thorax, with a fine channel at the base, shorter antennæ, and smaller head. I have compared my specimens with M. Brisout's type of *H. muscorum*, and find they agree in all respects. Kraatz has stated that *H. muscorum* is identical with *H. stercoraria*, Kr., but I cannot agree that M. Brisout's specimens accord with Kraatz's description of *H. stercoraria*.

raria. *H. muscorum* can, I think, scarcely be wanting in Germany, and it is possible that it has not been separated by Kraatz from *H. stercoraria*, which would account for the above confusion. It is the *H. picipes* of Mr. Waterhouse's catalogue, but as another name exists, I have not adopted Stephens's, his description being quite valueless.

148. *Homalota pilosiventris*.

Nigra, parum nitida, pedibus piceis, crebre punctata; antennis articulis 4-10 leviter transversis; thorace transverso, convexiusculo, basi leviter canaliculato; abdomine apicem versus fortiter angustato, crebre apice vix parcius punctato. Long. 1 lin.

H. pilosiventris, Th. Öfv. Vet. Ac. Förh. 1856, p. 106; *Acrotona pilosiventris*, Th. Sk. Col. iii. 38. *H. stercoraria*, Kr. Ins. Deutsch. ii. 319.

Antennæ pitchy-black, rather short, moderately stout, slightly thickened towards the apex; joint three short, not quite so long as two, distinctly narrowed towards the base, four to ten a little transverse, four a little broader than three, and five than four, after this but little difference in the length and breadth till the eleventh, which is rather large, about as long as the two preceding. The head is rather small, distinctly narrower than the thorax, much narrower than the elytra, moderately closely and finely punctured. The thorax is a little narrower than the elytra, more than half as broad again as long, distinctly arched transversely, and narrower at the anterior than at the posterior angles, closely and rather finely punctured, always with a longitudinal channel in front of the scutellum, sometimes short, and sometimes extending the whole length of the thorax. The elytra are about a third or fourth longer than the thorax, of a pitchy or pitchy-black colour, moderately closely and distinctly punctured. The abdomen is black, strongly narrowed behind, pretty closely, evenly and densely punctured, the apical segments a little more sparingly than the basal ones; its pubescence is long, depressed and distinct, and the sides and apex are furnished pretty numerously with black, rather rigid, long, outstanding hairs. The legs are pitchy-yellow, the middle and posterior tibiæ furnished, on the outside, just below the knee, with a rather stout distinct outstanding seta.

Not common. I have found it in dung at Thornhill, in the New Forest, and near London.

Obs.—There is, in the British Museum, an insect sent by Kraatz, as *H. stercoraria*; it is in very bad condition, but does not, I think, belong to this species. Nevertheless, I am pretty sure that the species above described is Kraatz's *stercoraria*, as his description is very good, and applies thoroughly, with the exception of the preliminary remarks, about which there appears to be some confusion.

Group XXII. *Abdomen distinctly narrowed towards the apex, thorax distinctly narrowed in front, apical segments of the abdomen sparingly, or not at all punctured.*

(Species 149—157).

This group also contains species differing in many respects from one another, but associated in order to facilitate reference. The species apparently all occur among moss and leaves. *H. cribrata* appears to me a species of which the affinities are but little marked; while *H. notha* is one of the most remarkable species of the genus.

149. *Homalota fusca*.

Fusca, sat nitida, antennarum basi pedibusque testaceis, elytris anoque ferrugineis; thorace transverso, canaliculato; abdomine supra segmentis 2-4 crebre, 5° et 6° parcius punctatis. Long. $1\frac{1}{2}$ lin.

Mas; abdomine segmento 7° dorsali apice evidenter 4-dentato.

Aleochara fusca, Sahl. Ins. Fenn. i. 371. *H. vernacula*, Er. Gen. et Spec. Staph. 131; Kr. Ins. Deutsch. ii. 315; *Atheta vernacula*, Th. Sk. Col. iii. 84. *H. laticollis*, Wat. Cat.

Antennæ yellow, more or less infusate after the third joint, moderately long, a little thickened towards the apex, and furnished with fine exserted hairs; joints two and three moderately long, three a little longer and more slender than two, four smaller than the others, about as long as broad, five to seven each a little longer than broad, eight to ten scarcely so long as broad;

eleventh joint rather stout, gently pointed, scarcely so long as the two preceding together. The head is considerably narrower than the thorax, rather broad and short, black, closely and distinctly punctured, palpi yellowish. The thorax is broad, at the base as broad as the elytra, about twice as broad as long, the sides gently rounded, a little narrower at the anterior than at the posterior angles, of an obscure fuscous colour, a little paler at the sides, closely and distinctly punctured, with a central longitudinal channel, pubescence fine and short, exserted setæ at the sides almost none. The elytra are about a third longer than the thorax, of a yellowish colour, closely and pretty distinctly punctured. The abdomen is distinctly narrowed towards the apex, and is of a blackish colour with the extremity paler, segments two to four closely and rather finely, five and six more sparingly and finely, punctured; the outstanding setæ at the sides not numerous. The legs are yellow, the tibiæ without exserted setæ.

In the male, the hind margin of the dorsal plate of the seventh abdominal segment is furnished with four distinct teeth; they are about equidistant from one another, the external ones rather finer and longer than the inner ones, but the notch between the two inner ones is a little the deeper.

In the female, the hind margin of the seventh segment is simple, both above and below.

Common, both in England and Scotland.

Obs.—It is stated, both by Kraatz and Thomson, that the seventh ventral abdominal plate is emarginate in the female of this species. This, however, I do not find to be the case.

150. *Homalota subsinuata*.

Nigra, parum nitida, elytris nigro-fuscis, pedibus fuscis, ano obscure piceo; capite minore, thorace duplo angustiore; thorace transverso, subtiliter canaliculato, transversim convexiusculo; abdomine apicem versus leviter angustato, supra segmentis 2-4 crebre distinctius, 5° et 6° parcius, punctatis. Long. 1-1½ lin.

Mas; abdomine segmento 7° ventrali apice rotundato.

Fem.; abdomine segmento 7° ventrali apice medio leviter emarginato.

H. subsinuata, Er. Gen. et Spec. Staph. 125; Kr. Ins. Deutsch. ii. 316. *H. castanipes*, Wat. Cat. *Acrotona fimetaria*, Th. Sk. Col. iii. 37.

This species is distinguished amongst its allies by its small head, the abdomen but little narrowed towards the apex, and strongly and moderately closely punctured. The antennæ are blackish, with the first joint pitchy; moderately short, not stout, a little thickened towards the apex; joints two and three moderately long, of about equal length, four to ten each slightly broader than its predecessor, of the first of them the length differs but little from the breadth, and the last ones are but little shorter than broad; the eleventh joint is rather stout, about as long as the two preceding together. The head is small and rounded, about half as broad as the thorax, finely and moderately closely punctured. The thorax is, at the base, about as broad as the elytra, about half as broad again as long, distinctly narrower at the anterior than at the posterior angles, pretty closely and finely punctured, with a moderately distinct central longitudinal channel, the exerted setæ of the sides indistinct. The elytra are about a fourth longer than the thorax, pitchy-black or blackish, closely, moderately finely, and distinctly punctured. The abdomen is black and shining, narrowed from behind the middle to the apex, which is pitchy; segments two to four are rather closely and distinctly punctured, five and six more finely and sparingly punctured, the pubescence is distinct and rather rough, the outstanding setæ of the sides and apex rather numerous, but not long. The legs are pitchy-yellow; the middle tibiæ each with a short seta in the middle, posterior ones with the setæ undeveloped.

In the male, the ventral plate of the seventh abdominal segment is a little produced in the middle, while in the female it is furnished with distinct black cilia, and rather broadly and not deeply emarginate.

In England and Scotland, but not very common; generally found among moss and dead leaves, in the spring.

151. *Homalota pulchra*.

Nigra, nitidula, antennis thoracis lateribus anoque fuscis, pedibus elytrisque testaceis, his circa scutellum

angulisque apicis infuscatis; thorace transverso; abdomine supra segmentis 2-4 minus crebre, 5° et 6° parcius punctatis. Long. $1\frac{1}{4}$ lin.

H. pulchra, Kr. Ins. Deutsch. ii. 321; Wat. Cat.

Antennæ rather slender, of a dirty yellowish colour, a little thickened towards the apex; first joint stout, two and three of nearly equal length, four to ten differing but little from one another in length, the first of them longer than broad, the last scarcely so long as broad; eleventh joint about as long as the two preceding together. The head is rather broad, considerably narrower than the thorax, black and shining, indistinctly punctured. The thorax is, at the base, about as broad as the elytra, of a pitchy colour, a little paler at the sides, more than half as broad again as long, a little narrower at the anterior than at the posterior angles, sparingly punctured, with a very indistinct impression at the base in front of the scutellum, with a few short exserted setæ at the sides. The elytra are about a third longer than the thorax, of a shining yellowish colour, with indistinct infuscation about the scutellum and towards the external angles, rather coarsely but shallowly punctured. The abdomen is black and shining, moderately narrowed towards the apex, which is pitchy or yellowish; segments two to four are rather sparingly but distinctly punctured, five and six finely and very sparingly punctured, the outstanding setæ of the sides rather long and distinct. Legs yellow; tibiæ without setæ.

The male is only to be distinguished by the ventral plate of the seventh segment of the abdomen being narrowed, and rather more produced than in the female.

Rare. I have found it at Horning in Norfolk, in the neighbourhood of London, and on the Braid Hills at Edinburgh, in the early spring.

152. *Homalota orbata*.

Nigra, nitida, antennis nigro-fuscis, elytris brunneis, pedibus testaceis; thorace convexiusculo, transverso, parce subtiliter punctato, et tenuissime pubescente; abdomine segmentis 2-4 sat crebre, 5° et 6° parcius punctatis. Long. $1\frac{1}{4}$ lin.

H. orbata, Er. Käf. Brand. i. 339; Gen. et Spec. Staph. 132; Kr. Ins. Deutsch. ii. 322; Wat. Cat.; *Acrotona orbata*, Th. Sk. Col. iii. 39.

Closely allied to *H. fungi*, but with darker antennæ, rather longer thorax, which is also more delicately punctured and pubescent, and with brownish elytra. The antennæ are blackish or pitchy, pretty distinctly pilose, slightly thickened towards the apex; joints two and three of about equal length, four rather longer than broad, five to seven about as long as broad, eight to ten scarcely transverse; eleventh joint moderately stout, about as long as the two preceding together. The head is rather small, much narrower than the thorax, black and shining, very finely and indistinctly punctured. The thorax is black, the sides sometimes pitchy, as broad as the elytra, about one-half or one-third broader than long, the sides rounded, narrower at the anterior than at the posterior angles, transversely convex, very finely and not closely punctured. The abdomen is black and shining, narrowed towards the apex, which is sometimes paler; segments two to four distinctly and pretty closely punctured, five a little more sparingly, six sparingly punctured; the outstanding setæ of the sides and apex are numerous and distinct. The legs are yellow, the tibiæ without exserted setæ.

The male is only to be distinguished by the ventral plate of the seventh abdominal segment being narrower and longer than in the female.

Rare; and in this country found only in sandy places on the coast. Deal, Weymouth, Aberlady, Arbroath.

153. *Homalota fungi*.

Nigra, sat nitida, antennis pedibusque testaceis; illis sat tenuibus, subtiliter pilosellis, articulis haud transversis; capite thorace multo minore; hoc transverso, convexiusculo, æquali, vel obsolete canaliculato, elytrorum fere longitudinis; abdomine segmentis 2-4 crebre, 5° et 6° parcius punctatis. Long. $1\frac{1}{4}$ lin.

Var.—*H. dubia*. Antennis apicem versus subincrassatis, articulo penultimo fere transverso; thorace brevior.

Aleochara fungi, Grav. Mon. 157; *H. fungi*, Er. Gen. et Spec. Staph. 131; Kr. Ins. Deutsch. ii. 321; Wat. Cat.; *Acrotona fungi*, Th. Sk. Col. iii. 38.

An obscurely coloured species, distinctly narrowed both before and behind, and with the thorax largely developed in proportion to the elytra. The antennæ are yellowish, scarcely at all thickened towards the apex, finely but distinctly pilose; joints two and three moderately long, of about equal length, four not so long as five, longer than broad, five to ten differing but little from one another in length or breadth; in the type, the length of each joint is greater than its breadth, while in the var. *dubia*, the penultimate joint is scarcely so long as broad; the eleventh joint is rather long, gently pointed, as long as the two preceding together. The head is small, much narrower than the thorax, rounded, finely and indistinctly punctured; the palpi are dirty yellow. The thorax is as broad as (almost broader than) the elytra, half as broad again as long, transversely convex, the sides rounded, narrower at the anterior than at the posterior angles, finely but not closely punctured, with or without an obscure central longitudinal channel, with a few short, indistinct, exserted setæ at the sides. The elytra are but little longer than the thorax, blackish or pitchy-black, pretty closely and distinctly but shallowly punctured, the apex on each side sinuate at the external angles. The abdomen is black and rather shining; segments two to four distinctly and pretty closely punctured, fifth segment a little more finely and sparingly, sixth segment sparingly punctured; the outstanding setæ of the sides and apex are distinct and numerous. Legs yellow, posterior tibiæ without exserted setæ.

The male is only to be distinguished from the female, by the narrower and more produced apical part of the ventral plate of the seventh abdominal segment.

Very common all over the country, in moss and dead leaves.

Obs.—The var. *dubia* has shorter antennæ and thorax, and on this account, I formerly considered it a variety of *H. clientula*, but in colour and punctuation it agrees better with *H. fungi*. It is more abundant than the type.

154. *Homalota clientula*.

Nigra, sat nitida, antennis pedibusque testaceis, elytris anoque ferrugineis; thorace transverso; abdomine supra segmentis 2-4 crebre, 5° et 6° parcius punctatis. Long. 1 lin.

H. clientula, Er. Gen. et Spec. Staph. 133; Kr. Ins. Deutsch. ii. 322; Wat. Cat.

Very closely allied to *H. fungi*, and probably only a variety of that species; but smaller, not so broad in the middle, the antennæ in proportion to the size somewhat stouter, the punctuation of the thorax and elytra rather closer and finer, and the colour brighter. The sides of the thorax are paler than the centre, the elytra are yellowish or brownish, a little darker about the scutellum, and the extremity of the abdomen is pitchy or yellowish, as are also sometimes the margins of the segments.

Tolerably common, both in England and Scotland.

155. *Homalota orphana*.

Nigra, sat nitida, antennarum basi pedibusque obscure testaceis, elytris nigro-fuscis; thorace fortiter transverso, convexiusculo, æquali; elytris hoc longioribus; abdomine segmentis 2-4 crebre, 5° et 6° parcius punctatis. Long. $\frac{3}{4}$ lin.

H. orphana, Er. Käf. Brand. i. 340; Gen. et Spec. Staph. 133; Kr. Ins. Deutsch. ii. 323; *Acrotona orphana*, Th. Sk. Col. iii. 39.

Allied to *H. fungi*, but much smaller, and proportionately broader and shorter. The antennæ are pitchy, paler at the base, distinctly thickened towards the apex; joint three nearly as long as two, but more slender, four and five each about as long as broad, the following ones slightly transverse; eleventh joint nearly as long as the two preceding together. The head is rather broad and short, much narrower than the thorax, finely and indistinctly punctured. The thorax is, at the base, about as broad as the elytra, its breadth about twice its length, narrower at the anterior than at the posterior angles, finely and moderately closely punctured. The elytra are about a third or fourth longer than the thorax, closely and distinctly punctured. The abdomen is distinctly narrowed towards the apex, segments two to four closely and distinctly punctured, fifth segment rather more sparingly punctured, sixth segment still more sparingly punctured. Legs pitchy, tibiæ without exserted setæ.

Very rare ; single specimens have occurred at Hammersmith Marshes, and elsewhere in the neighbourhood of London.

156. *Homalota cribrata*.

Brevior, nigra, vix nitida, pedibus fusco-testaceis, confertim evidentem punctata ; capite thorace multo minore, hoc transverso ; abdomine apicem versus attenuato, supra segmentis 2-4 crebre subtiliter, 5° et 6° sat parce punctatis. Long. $\frac{2}{3}$ lin.

H. cribrata, Kr. Ins. Deutsch. ii. 288.

A small species, distinguished by its short broad form, with comparatively strong punctuation ; narrowed both before and behind. The antennæ are pitchy-black, rather short, not stout, distinctly thickened towards the apex ; joint two is stout, much longer and stouter than three, four to ten each a little stouter than its predecessor, four about as broad as three, nearly as long as broad, five slightly transverse, ten distinctly so ; the eleventh joint is rather short, pointed, about as long as the two preceding. The head is rather broad in proportion to its length, much narrower than the thorax, only half the width of the elytra, closely, regularly, and distinctly punctured, pubescence scarcely visible. The thorax is a little narrower than the elytra, its breadth nearly twice its length, the sides gently rounded, the base more distinctly so, a little narrower at the anterior than at the posterior angles, closely and finely but distinctly punctured, the pubescence short and indistinct. The elytra are pitchy-black, a third or fourth longer than the thorax, closely and distinctly punctured, the punctuation being rather rugulose, their pubescence more distinct than that of the head and thorax. The abdomen is broad, distinctly narrowed to the apex ; segments two to four are closely finely and distinctly punctured, fifth segment rather more sparingly, sixth sparingly, punctured. Legs pitchy-yellow.

I have seen only two or three specimens of this species, one of which I captured myself near Croydon.

Obs.—I have identified *H. cribrata* only by description, it being apparently as rare abroad as in this country. Kraatz remarks, that among the Erichsonian specimens

of *H. inconspicua* are two of this species; the punctuation of the head certainly resembles that of *H. inconspicua*, but the sculpture of the elytra is very different. The position of the species in the genus is not very easy to determine.

157. *Homalota notha*.

Brevissima, fusca, antennarum basi pedibusque rufis, distincte pubescens; thorace brevi, elytris hujus longitudinis; abdomine lateribus fere rotundatis, supra parce et obsolete punctato. Long. 1 lin.

Mas; elytris angulo suturali tuberculo elevato instructo; abdomine segmento 7° dorsali apice medio anguste emarginato.

H. notha, Er. Gen. et Spec. Staph. 126; Kr. Ins. Deutsch. ii. 323.

The most discordant species of the genus; very broad and short, and having the appearance of a *Gyrophæna* as much as of a *Homalota*. The antennæ are moderately long, distinctly pilose, thickened towards the apex, the basal joints reddish, the apical ones infusate; joint three finer and a little shorter than two, four also slender, longer than broad, five about as long as broad, the following ones transverse, the tenth distinctly transverse; eleventh joint short, stout and pointed, about twice as long as the tenth. The head is broad, but much narrower than the thorax, black and shining, indistinctly but not altogether finely punctured. The thorax is nearly as broad as the elytra, very short, more than twice as broad as long, transversely convex, narrower at the anterior than at the posterior angles, finely and indistinctly punctured, with rather long, distinct, somewhat scanty pubescence. The elytra are about as long as the thorax, pretty closely and distinctly punctured, pubescence distinct and rather long, the sides with a few distinct outstanding setæ. The abdomen is flat above, dilated and convex beneath, the sides rounded and furnished with outstanding setæ, the margins of the segments finely and indistinctly punctured and pubescent. The legs are reddish-yellow, the tarsi rather stout.

In the male, each elytron is furnished at the apex, close to the suture, with a distinct elevated tubercle; the apex of the dorsal plate of the seventh segment of the abdomen has a notch in the middle, and the hind margin projects somewhat on each side of the notch.

Found, very rarely, by Mr. Brewer, on grassy banks, at the sides of the Medway, near Chatham.

Obs.—I have seen this species alive, and find that it not only simulates a *Gyrophæna* in appearance, but that the abdomen is doubled up over the head when the insect walks about, exactly as in *Encephalus complicans*.

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