ILLUSTRATIONS
OF
BRITISH ENTOMOLOGY;
OR, A
Synopsis of Indigenous Insects:
CONTAINING
THEIR GENERIC AND SPECIFIC DISTINCTIONS;
WITH
AN ACCOUNT OF THEIR METAMORPHOSES, TIMES OF
APPEARANCE, LOCALITIES, FOOD, AND ECONOMY,
AS FAR AS PRACTICABLE.

BY JAMES FRANCIS STEPHENS, F.L.S.
MEMBER OF THE ZOOLOGICAL SOCIETY, ETC.

EMBELLISHED WITH COLOURED FIGURES OF THE Rarer AND
MORE INTERESTING SPECIES.

MANDIBULATA.
VOL. II.

"In his tam parvis tamque fere nullis qua ratio! quanta vis! quam inextricabilis
perfectio!"—Plin.
"Finis Creationis Telluris est gloria Dei, ex opera Natura, per Hominem
solum."—Linne.

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ILLUSTRATIONS
OF
BRITISH ENTOMOLOGY.

COLEOPTERA.
Subsection I.—Geodephaga.

Family VI.—Bembidiidæ mihi.

The remarkable structure of the palpi of those insects which are contained in this family obviously distinguishes them from the Harpalidæ, with which they are associated by Mr. MacLeay, though Knoch, Illiger, Latreille, Clairville, and others, have separated them from the genus Harpalus, by the names of Tachys, Elaphrus, Bembidion, Ocydromus, &c. respectively.

How far their separation as a family from the foregoing may be strictly in accordance with the natural grouping of the Chilopodomorphous insects, I shall not here attempt to show; but, as I believe, with Mr. MacLeay, that Nature forms a kind of circular series in the chain of affinities in which the quinary principle predominates, I shall merely observe that I agree with Mr. Kirby in opinion, that she does not always dispose her subjects, in every department, into fives, but that different numbers may possibly obtain in different groups; and why not more than five in the overwhelming family of Geodephaga, when we find the succeeding one of Hydradephaga so greatly deficient?

So far as the habits of the Geodephaga are capable of differing, the insects of this family are evidently dissimilar to the Harpalidæ, as, unlike those insects in general, they usually frequent low, damp, and marshy situations, while the typical Harpalidæ affect dry, gravelly, chalky, or hilly and mountainous districts; the less typical, as Trechus, &c. approximating to the Bembidiidæ and the latter to the Hydradephaga: again, the difference in the formation of the palpi cannot but strike the most incurious observer.

MANDIBULATA. VOL. II. 1ST JULY, 1828.
The family and the genera into which I conceive that it should be divided may be known by the subjoined characters.

**Palpi; external maxillary and labial, with the terminal joint very minute, subulated; the preceding generally much incrassated and clavate: labrum usually transverse: mandibles rather short, sometimes slender and porrect: labium quadrate: mentum emarginate. Antennae filiform, longer than the thorax: head generally narrower than the thorax; the latter various in form: elytra oblong-ovate; rarely linear: anterior tibia emarginate: anterior tarsi of the males with one or more dilated joints, sometimes armed with a recurved claw beneath.**

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### Genus LXIV.—**Lymnæum** *mihi.*

Palpi rather elongate; external maxillary with the basal joint minute, the second very long, cylindric, the third stout, subclavate, very pilose, shorter than the second, terminal very minute: labial with the terminal joint one-third as long as the preceding, which is much incrassated, ovate-truncate, and very pilose: labrum transverse, entire, slightly rounded anteriorly: mandibles short, obtuse, bent: mentum deeply emarginate, the emargination with an obtuse lobe. Antennæ slightly pubescent, with the basal joint naked, the third and fourth joints of equal length; the following elongate: head large, subovate: thorax cordate truncate: elytra nearly linear, greatly depressed: anterior tarsi of the males? with the two basal joints dilated; the antepenultimate with a curved spine beneath.

Lymnæum differs from Cillenum by the equal length of the third and fourth joints of the antennæ, and by the elongation of all the following, by having the labrum entire, and slightly produced in the centre, by the greater elongation of the palpi, and by their form and proportions; the terminal joint of the labial being much longer, and of the external maxillary considerably shorter, than in that genus; the third joint of the latter is much more robust, and...
the preceding cylindric; the armed antepenultimate joint of the tarsi (as in Aepus) is also an essential distinction, and the body is rather dilated.


Pitchy-black, with a tendency to ferruginous: head nearly castaneous, with two oblong longitudinal slightly rugose impressions in front, the posterior part impunctate: thorax deep pitchy ferruginous, depressed, with a strong longitudinal dorsal channel, terminating anteriorly in a bifid oblique line, which reaches to the anterior angle, leaving a triangular space, which is impunctate and of a paler hue than the rest of the surface, the base excepted, which is similar and a little punctate; the disc has a tinge of blue: elytra depressed, deep pitchy-black, striated, the striae deep, but simple, the interstices convex, with two very strongly impressed dots on the fourth from the suture: legs ferruginous: antennae, palpi, and labrum fulvous-red.

The only specimen I have seen of this remarkable insect I obtained from the Marshamian cabinet; its locality is unknown to me.

Sp. 2. depressum. Piceo-nigrum, antennarum basi ore pedibusque pallide fulvis, elytris tenue striatis. (Long. corp. 1½ lin.)


Pitchy-black; head with an arcuated impression on each side round the eyes; thorax greatly depressed, with a deep longitudinal line; the disc sparingly, and the base thickly, punctured: elytra also very flat, slightly clothed with short hairs, obsoletely striated, the striche impunctate, the interstices depressed and sparingly punctulate: legs pale rufo-fulvous: antennae with the basal joint fulvous; the two following tinged with the same, the rest dusky.

This insect appears to associate with the foregoing; but, having a single injured specimen only, I cannot decide with certainty on the point.

" Taken on Dudden Sands, near Broughton, Lancashire; not uncommon, but difficult to secure, on account of the wind."—J. C. Dale, Esq.

Genus LXV.—Cillenum, Leach.

Palpi short; external maxillary with the second and third joints subclavate, the latter rather the longest and stoutest, and pilose, the terminal short and slender; labial with the terminal joint very minute and short, the preceding robust, subclavate, pilose; labrum transverse, concave anteriorly: mandibles elongate, slender, bent, and acute: mentum deeply notched, with an obtuse central lobe. Antenna pubescent, the third joint considerably longer than the fourth, the fifth to the tenth moniliform: head broad: thorax cordate-truncate; hinder angles acuminated: elytra linear, much depressed: anterior tarsi dilated, especially in the males.
Cillenum differs from the other Bembidiiidae (excepting Lymnæum) by its linear depressed body; and from that genus it may be known by the length of the third joint of the antennæ, which considerably exceeds that of the fourth, and by the following joints being moniliform: it also differs in the proportions of the palpi, and in wanting the spine beneath the antepenultimate joint of the anterior tarsi.


Bright-copper, or ãneous, sometimes glossed with purplish: head and thorax minutely punctured, the former with two frontal sulci, the latter with a faint longitudinal channel; elytra ochraceous, glossed with greenish-brass, the lateral margin and part of the base excepted; slightly striated; the striae obscurely punctured, and the third with four foveæ on the inner side: body beneath shining bronze; legs and base of the antennæ testaceous; tip of the latter and mouth pale-tawny.

Taken on several of the coasts, particularly on the northern coast of Norfolk. "Portobello Sands."—Dr. Leach, who discovered the insect in Britain. "Southend."—Rev. F. W. Hope. "Near Cromer, in Norfolk."—Rev. T. Skrimshire.

**Genus LXVI.—Tachys, Ziegler.**

Palpi nearly as in Lymnæum, but shorter, and more slender in proportion; external maxillary with the second joint obscurely subclavate; the following robust, subclavate, pilose; the terminal very short, slender, acute, usually deflexed; labial with the terminal joint above one-third as long as the preceding, slender; the latter subclavate, a little curved on one side: labrum transverse, entire: mandibles short, acute: mentum emarginate anteriorly, the emargination with an acute central tooth. Antenna pubescent, the basal joint naked, second and fourth joints of equal length: head ovate: thorax transverse, the sides rounded, entire, as wide behind as before: elytra oblong ovate: body slightly convex: anterior tarsi of the males with the basal joint dilated.

The short, transverse, regularly-rounded, entire thorax, well distinguishes this genus from the others of the family: it has also some other peculiar characters, particularly the elongation of the second joint of the antennæ, which is equal in length to the fourth, and thus also differs from Philochthus.
Sp. 1. scutellaris. _Subdepressus, niger, elytris pallidis versus suturam utrinque obsolete tristriatis._ (Long. corp. 1½ lin.)


Somewhat depressed; black: head smooth, with a deep impression on each side in front between the eyes: thorax with the disc slightly convex; a strong dorsal channel, and a slight fovea on each side at the base: elytra pale, with the region of the scutellum dusky, and the hinder half somewhat suffused with the same; on each side of the suture three imperfect and obsolete punctate stripes, vanishing at the tip; the exterior portion of the elytra smooth, with a deep impression on the disc: legs very pale: antennae pale at the base, slightly fuscous towards the apex: labrum and mandibles pale fulvous, the latter with the tip dusky.

Two specimens of this species were taken on the sandy coasts of Hants, by an active and industrious collector, Mr. D. Bydder, some years since; they are the only examples I have hitherto seen, and greatly resemble the insects of the preceding genus upon a transient inspection.

Sp. 2. binotatus. _Nigro-aneus, elytris striatis puncto apicali, tibiis tarsisque pallidis._ (Long. corp. 1½—1¼ lin.)


Brassy or greenish-black; slightly glossy: head with a deep longitudinal impression on each side, between the eyes: thorax a little convex, obsoletely wrinkled transversely, with a faint longitudinal channel, and a deep impressed fovea on each side at the base: elytra slightly convex, striated, the striae composed of punctate dots, and nearly obliterated on the outer edge of the elytra, towards the apex of which is a round pale spot: femora pitchy-black; tibiae and tarsi pale fulvous: antennae fuscous, with the basal joint rufescent.

Not uncommon throughout the metropolitan district. "Southend."—Rev. F. W. Hope.

Sp. 3. vittatus. _Nigro-aneus, elytris striatis, vittā apicali pedibusque pallidis._ (Long. corp. 1½—1¼ lin.)


Rather larger than the last; deep, glossy, brassy-black; head as in the last: thorax smooth, or very obsoletely wrinkled transversely, with a faint longitudinal channel, and a small impression on each side at the base: elytra rather deeply punctate-striated, the striae obsolete at the apex; the latter with an undefined pale streak, or sometimes entirely pale: legs entirely pale-fulvous: antennae dusky, with the basal joint reddish.

Common in damp banks, &c near London. "In Copenhagenfields, near ponds."—Mr. Ingpen.
Sp. 4. immunis. *Aeneo-niger,* aut violaceus, elytris obsoletissimae punctato-striatis, immaculatis, pedibus piceo-rufis, femorum basi piceis. (Long. corp. \( \frac{1}{2} \) lin.)


Glossy brassy-black or violet; head with a rather obsolete curved impression on each side, between the eyes: thorax with the disc convex, the dorsal channel obsolete, and an excavated fovea on each side at the base: elytra a little dilated in the middle, of a bluish or violaceous hue, the suture somewhat rufescent, obsolete punctate-striated, the lateral stria nearly obliterated, the apex immaculate: the legs pitchy-red, with the base of the thighs pitchy; antennae rufescent at the base, the tip dusky.

Also common near London, in Copenhagen and Battersea Fields, &c. "Cork, Milford-Haven, and Dartmoor."— *Dr. Leach.*

Sp. 5. obtusus. *Piceo-niger,* antennarum basi pedibusque rufescentibus, elytris immaculatis punctato-striatis, interstitio tertio bipunctato. (Long. corp. \( \frac{1}{2} \) lin.)


Allied to the last: deep pitchy-black: head with a deep impression on each side: thorax broad, convex, with a slight dorsal line; the base punctulate, with an impressed line on each side: elytra punctate-striated, with two or three impressed dots between the second and third striae from the suture: legs pitchy-red: antennae fuscous, with the base pitchy.


Sp. 6. pusillus. *Piceo-teneus aut virescens,* thorace postice utrinque foveolat punctata, elytris tenui punctato-striatis, apice piceis. (Long. corp. \( \frac{1}{2} \) lin.)


Pitchy-brass or greenish, shining: head with a small impression on each side between the eyes: thorax convex, with a faint dorsal line, and a punctate impression on each side at the base: elytra rather faintly punctate-striated, the exterior stria nearly obliterated, the tip piceous: legs pitchy-red: antennae fuscous, with the basal joint rufescent.

Frequently taken near London. "Netley, Salop."— *Rev. F. W. Hope.* "Banks of ponds, Copenhagen-fields."— *Mr. Ingpen.*

Sp. 7. gracilis. *Attenuatus, piceo-niger,* elytris tenui punctato-striatis, interstitios impunctatis: thorace postice utrinque foveolat simplici. (Long. corp. \( \frac{1}{2} \) lin.)


Longer and more attenuated than the last; head with a slight impression on
each side between the eyes: thorax convex, with a faint dorsal line, and a simple impunctate fovea on each side at the base: elytra with the suture and apex slightly rufescent, faintly punctate-striated, the interstices impunctate: legs entirely of a fulvous red: antennae dusky, with the base reddish.

On the sand-hills, near Swansea, in Glamorganshire.

Sp. 8. minutissimus.  
**Ferrugineo-piceus, elytris pallidioribus striis duabus obsoleteoribus dorsalisibus.**  
(Long. corp. \(\frac{7}{8}\) — 1 lin.)

Ta. minutissimus.  
**Leach MSS.—Steph. Catal. p. 36. No. 350.**

Of a pitchy ferruginous, somewhat opaque: head blackish, with a longitudinal impression in front on each side: thorax with a very faint dorsal line, the hinder angles slightly prominent; near each a subtrigonal simple fovea: elytra rather slender, with two somewhat obsolete impunctate striae on each near the suture; the rest of the disc smooth: legs and mouth pale rufofulvous: antennae pitchy, with the apex dusky.

Unquestionably the smallest of the indigenous Geodephagous insects, at least so far as I have hitherto observed: upon a casual glance somewhat resembling a species of Hydrina.

**Found on the Glamorganshire coast.**

**GENUS LXVII.—PHILOCHTHUS **

* phiXo; amicus, ripa.

* 

**Genus LXVII.—Philochthys **

Palpi as in Tachys: labrum transverse, entire: mandibles broad, short, bent, not very acute: mentum emarginate anteriorly, with an acute central tooth.  
Antenna pubescent, the basal joint naked, the second joint shorter than the fourth: head ovate: thorax transverse, slightly emarginate anteriorly, truncate posteriorly; the sides dilated, obtusely rounded, deeply notched at the hinder angle: elytra oblong-ovate, subconvex: anterior tarsi of the males with the basal joint dilated.

The name Leia having been used by Meigen for a genus of Diptera several years since, it became necessary to employ a new term to designate the insects of the genus Leja of Megerle; I have therefore proposed the above, in allusion to the usual place of resort which the species affect: the species may be distinguished from Tachys by the thorax, which has a deep emargination at its hinder angle; the second joint of the antennæ is also considerably shorter than the fourth.

Sp. 1. aeneus.  
**Aeneus, elytris immaculatis, punctato-striatis, opice laxibus, plicatis, femoris nigris, tibii tarsisque piceis.**  
(Long. corp. 2\(\frac{1}{2}\) lin.)

Be. aeneum.  

* phiXo; amicus, ex ripa.
MANDIBULATA. — COLEOPTERA.

Brassy, shining; head with two sulci anteriorly: thorax smooth, with a faint dorsal channel, the base with an excavation near the angles on either side: elytra rather wider than the thorax, oblong-ovate, somewhat convex, punctate-striated, the striae vanishing before the tip, which has, on each side near the margin, an elevated distinct line: body beneath, antennae, and femora black; tibiae and tarsi piceous.


Sp. 2. fuscipes. _Nigro-aneus, elytris punctato- striatis, apice laevis pallidis, plicatis, pedibus ferrugineo-fuscis._ (Long. corp. 2 — 2½ lin.)


Allied to the foregoing, but rather broader, and of a different hue above: deep glossy black-brass: head with two impressions in front: thorax slightly wrinkled transversely, with an obsolete dorsal channel, the base with a transverse impression, with a depression at each end: elytra rather broad, oblong-ovate, a little convex, bright brassy-green; punctate-striated, the striae not reaching to the apex, which is pale testaceous, and has a slight elevated line near the outer margin: body beneath blue-black: legs rusty-brown, or fulvous: antennae dusky, with the basal joint rufescent.

Frequently met with near London; also found in Devonshire, and near Swansea. “Netley, Salop.” — Rev. F. W. Hope.

Sp. 3. subfenestratus. _Neo-niger, elytris punctato- striatis, apice laevis, macula rotundata pallida, pedibus rufo-fulvis._ (Long. corp. 2 — 2½ lin.)


Very similar to the last: above of a brassy or greenish-black, shining: head smooth, with two anterior depressions: thorax smooth, with a faint dorsal line and a depression on each side near the posterior edge: elytra rather broad, oblong-ovate, subconvex, shining, smooth, punctate-striated; the apex impunctate, with a small, round, testaceous spot towards the outer margin, and sometimes the extreme tip pale: body beneath pitchy-black: legs fulvous-red: antennae dusky, with the base reddish.


Sp. 4. biguttatus. _Viridi-aneus, elytris punctato- striatis disco bipunctato, macula apicali rotundata, antennarum articulo primo pedibusque palладe rufo-testaceis._ (Long. corp. 1⅔ — 2 lin.)


Rather less than the preceding: brassy-green, shining: head with a slight impression on each side in front between the eyes: thorax somewhat convex,
very glossy, with a faint dorsal line, the edges of which are a little transversely wrinkled; near the hinder angles a depressed space: elytra rather broad, deeply punctate-striated, nearly to the apex; between the second and third striae, two rather deep impressions: the apex with a strongly elevated line, and a fulvescent round spot: body beneath greenish, or brassy-black; the legs pale testaceous-red: antennae fuscous, with the first joint rufous.


Sp. 5. guttula. *Nigro aut virescenti aeneus, elytris punctato-striatis, maculi apicis pedibusque rufescensibus, antennis fuso-ferrugineis, extrorsum nigricantibus.* (Long. corp. 1½—1¾ lin.)


Again smaller than the last: black, or greenish-brass; shining: head smooth, often bluish, with a slightly oblique impression on each side anteriorly: thorax a little convex, glossy, smooth, with a faint dorsal channel; and, near the base on each side, an oblong, moderately-impressed, oblique foveola: elytra oblong-ovate, rather convex, striated, the striae anteriorly punctate, posteriorly vanishing before the apex, the outer ones very obsolete; near the apex, on the margin, a pale reddish transparent spot: body beneath of a glossy, brassy-black; legs rufescent, the femora often dull-pitchy at the base.


The smallest species of the genus: of a deep bronzed-black; rather shining: the head smooth, with two oblique sulci in front: thorax convex, with a very faint longitudinal channel; a transverse, impressed line at the base; and, on each side of the latter, a small oblique foveola: elytra oblong-ovate, faintly punctate-striated, the striae evanescent at the apex, the latter pale-pitchy; legs deep-pitchy: antennae black.

I have twice captured this species near London, and have received it from Norfolk.

**Genus LXVIII.—Ocys, Kirby.**

*Palpi* nearly as in *Tachys*, but the terminal joint of both external maxillary and labial rather elongate: *labrum* subquadrate, entire: *mandibles* short,
mandibulata.—coleoptera.

arcuate, rather obtuse: mentum emarginate anteriorly, the emargination with an acute central lobe. Antenna with the two basal joints naked, the rest pubescent, the fourth longest: head small, ovate: thorax transverse, the sides regularly rounded, as wide posteriorly as anteriorly, the hinder angles prominent, acute: elytra rather broad, ovate: body somewhat convex: anterior tarsi of the males with the basal joint dilated.

Ocys (a MS. name applied by Mr. Kirby to designate the Bembidiiide long since) I have restricted to those insects of the family which have the sides of the thorax gradually rounded, as in Tachys and Philochthus, but the hinder angles acute and prominent: the labrum broader, and nearly quadrate: the antennæ with the fourth joint longest; the elytra considerably dilated on the sides, and the terminal joints of the external maxillary and labial palpi longer than in those genera. The form of the thorax obviously disunites it from all the following genera, which have that part attenuated posteriorly.


Brassy, or greenish-blue; shining: head smooth, with an obscure impression on each side, between the eyes: thorax smooth, greenish-black, with a rather faint longitudinal channel; the base with a transverse impression, terminating in a moderately-deep foveola: elytra of a rich immaculate blue, or slightly greenish: deeply punctate-striated at the base towards the suture, the striae vanishing before the apex, and the outer ones nearly obliterated; the two sutural ones, however, are produced to the tip itself, which is sometimes narrowly edged with reddish: body beneath pitchy black: legs and antennæ testaceous red.

Not a common insect; generally met with in damp, marshy situations: on the 1st January, 1825, I found three specimens in moss, at the foot of Ockham-park wall, near Ripley. It likewise occurs in Norfolk and Suffolk. "Battersea-fields."—Mr. Westwood.


Rusty-red, shining, rather convex: head dusky; faintly rugose anteriorly, and with two moderately impressed sulci in front: thorax somewhat convex, bright ferruginous-red; with a moderate dorsal channel, and two deeply impressed striole at the base, towards the centre of the margin: elytra dull
ferruginous or pitchy black, very faintly striated, the striae obsoletely punctate, vanishing before the apex, and the outer ones obliterated: body beneath pale-reddish ferruginous: antennae fulvous: legs and palpi pale testaceous.

Far from an abundant species: I have taken it at Ripley, Hertford, and near London; and have received it from Norfolk and Swansea. "Lawrence-Waltham, in March, 1828."—Mr. Hanson. "Netley, Salop, not common."—Rev. F. W. Hope.

Sp. 3. tempestivus. Rufs-ferrugineus, elytris obsolete punctato-striatis, plagì longitudinali atră; antennis pedibusque pallidis. (Long. corp. 2½ lin.)


Rather larger than the last: entirely of a ferruginous-red, with the thorax brightest: head a little dusky, slightly rugose between the eyes, with two moderately deep longitudinal sulci anteriorly: thorax very glossy, with a faint longitudinal channel; the base with a transverse impressed line near the margin, and with an oblique fovea on each side: elytra subovate, rather glossy, with an undefined, black, longitudinal patch towards the margin, obsoletely punctate-striated, the outer striae nearly obliterated, and all but the central one vanishing before the apex: body beneath pale ferruginous red; the margins of the abdominal segments dusky: legs pale rufous: antennae and palpi the same.

I have seen few specimens only of this species, which appears to agree with Panzer's figure of Ca. tempestivus; but the palpi are not sufficiently developed in his figure to decide the point, and Panzer places his insect in the "Index Entomologicus" amongst the Trechi: at all events, the present insect has always been considered, in this country, as the one just named; and as it appears not to be otherwise described, I have retained the name in preference to imposing a new one.

Found occasionally near London, and in Norfolk: also, I believe, in Devonshire.

**Genus LXIX.—**Peryphus, Megerle.

Palpi rather elongate; external maxillary with the second joint nearly equal in length with the third, very slightly subclavate; the third more robust, clavate, the terminal very short, slender, truncate; labial with the terminal joint rather elongate, slender, acute: labrum transverse, entire: mandibles short, curved, rather acute: mentum anteriorly emarginate, the emargination with an obtuse central lobe. Antennae with the two basal joints naked, the rest pubescent, the third joint longest, the remainder elongated, though shorter than the third: head small, ovate: thorax cordate-truncate, the hinder angles prominent, acute: elytra elongate-ovate: body rather depressed: anterior tarsi of the males with the two basal joints dilated.

The genus Peryphus embraces the largest species of the family: the antennae have the two basal joints naked, with the third longest,
and the following elongated: the thorax is cordate-truncate, with prominent angles; and, with the body, rather depressed.

A. Elytra more or less spotted.


(Long. corp. \(\frac{2}{3}\)–\(2\) lin.)


Rather depressed, green; head smooth, with two obsolete sulci anteriorly: thorax smooth, with a rather faint longitudinal impression, and a deep one on each side, near the hinder angles: elytra rather greenish-brass, with a large reddish humeral spot, and another at the base on each; punctate-striated, the lateral striae obsolete, and the others not reaching to the tip: body beneath brassy or pitchy-black: thighs black, more or less ferruginous at the base; tibiae and tarsi generally ferruginous: palpi with the penultimate joint deep-black: antennae black, with the first, and frequently the base of the three following joints, rufous. The size of the spots on the elytra, as well as the colour of the upper surface, varies considerably: the femora are sometimes totally ferruginous.


(Long. corp. \(\frac{2}{4}\)–\(\frac{3}{4}\) lin.)


Probably a variety of the foregoing: it differs chiefly in its paler hue, and in the integrity of the cruciform mark on the elytra: it is smaller; of a brassy-green; the base of the antennae and the legs entirely ferruginous: the elytra pale testaceous, with a blackish-green patch down the suture, transversely crossed near the apex with the same: in some specimens the elytra are nearly pale, with a slight greenish patch near the suture.

Found in damp situations near London, and in Suffolk.

Sp. 3. saxatile. *Depressus, nigro-virescens, antennis pedibusque obscuri ferruginei; elytris obsolete rufo trimaculatis, striis ad apicem excurrentibus.*

(Long. corp. \(\frac{2}{3}\) lin.)


Differs from the two last, and from the following, which it greatly resembles, in its smaller size, more depressed body, and by the elongation of the striae on the elytra: it is of a rich dark-greenish, sometimes tinged with blue: the head is similar to the last: thorax rather larger, with a more evident dorsal line: elytra with two rather obsolete rufous spots upon each, generally round, and the posterior ones frequently minute; striated, the striae punctuated,
and reaching to the apex; but those on the sides rather obsolete: legs deep ferruginous, the femora sometimes brown: antennae also deep ferruginous, with the base paler, and the apex sometimes dusky.

The only examples of this species that I have been able to identify are those which I possess from the north of England, and another taken by myself, near London, some years since.


Larger than the three foregoing: greenish-brass; slightly depressed: head smooth, with an impression on each side, near the eyes, and an elevated carina: thorax above moderately convex, smooth, with a moderate dorsal channel, and a punctulated impression on each side at the base, near the angles: elytra oblong-ovate, of a shining brownish-green, punctate-striated, the marginal striae obsolete, and the others not reaching to the apex; the base with a large, oblong, indeterminate pale, ferruginous spot, and another larger, at the apex; body beneath smooth, glossy, bluish-black: legs entirely pale ferruginous: palpi the same: antennae dusky towards the apex, with the three first, and base of several of the following joints ferruginous.

The size of the spots on the elytra varies greatly.

The most abundant species of the family in England, occurring in plenty everywhere beneath stones, by the sides of ponds, in banks, &c.


Considerably larger than Pe. littoralis: of a shining, rich, green-brass: head porrect, mouth pitchy, palpi entirely pale testaceous: antennae with the three or four basal joints pale-testaceous, the rest fuscescent: thorax of a very brilliant brassy-green, highly polished, with a moderate dorsal channel; and on each side, near the hinder angle, a large, round, impressed fovea: elytra greenish, a little glossed with brassy, with a large, transverse, sublunate, pale, ferruginous-red spot near the apex: striaed, the striae punctate, reaching to the apex: body beneath pitchy-black or pale-ferruginous, impunctate: legs elongate, entirely pale-testaceous.

It varies considerably, both in size and colour: in some species the entire apex of the elytra is of a pale-whitish hue, and the legs are of the same colour: probably the result of immaturity.

The only locality I know for this, which is the largest indigenous insect of the family, is the Glamorganshire coast, near Swansea.
14 MANDIBULATA.—COLEOPTERA.

Sp. 6. ustus? Subconvexus, virescente-aneus, antennis palpis pedibusque pallidis, elytris striatis, apice laevibus pallidissisque; subtius ferrugineus, aut aneo-niger. (Long. corp. 3—3½ lin.)


Greenish-brass or dusky-green, rather shining; a little convex: head subviolet, with the usual frontal impressions: antennae and palpi pale ferruginous: thorax smooth, subvirescent, with a dorsal line and two large punctate basal impressions, one on either side: elytra rather convex, glossy, crenato-striated, the striae obliterated before the apex, and towards the margin; the apex pale ferruginous-brown, very smooth: beneath ferruginous or brassy-black: legs pale rufo-ferruginous.

Taken in Norfolk, and in Yorkshire; but, I believe, somewhat rarely.

Sp. 7. decorus. Subdepressus, virescens, antennarum basi pedibusque ferrugineis, elytris striatis, apice sublaevibus pallidissisque, subtius niger. (Long. corp. 3—3½ lin.)


Similar to the last, but more depressed and smaller; the colour different, &c. Above bright greenish: head with the two usual impressions, rather deep: thorax rather glossy, with a faint dorsal line, and a shallow impressed line on each side at the base: elytra bright greenish, with the tip pale pitchy-ferruginous; crenato-striated, the striae becoming obliterated at the sides and towards the tip, the sutural one carried on to the apex itself: body beneath brassy-black: legs ferruginous: basal joint of the antennae the same; the rest, and the terminal joints of the palpi, dusky.

Not a very common insect; found occasionally in damp gravel-pits, &c. near London. "Sandy-lane, at Richmond."—Rev. T. T. Haverfield.

B. With the elytra immaculate.

Sp. 8. nitidulus. Subdepressus, nigro-carulescens, aut virescens, nitidus, antennarum basi tibiis tarsisque rufescensibus, elytris punctato-striatis, apice sublaevibus. (Long. corp. 2—2½ lin.)


Glossy deep-blue or greenish: head and thorax dusky-blue; the former with two slight frontal impressions, the latter with a faint dorsal channel, and the hinder margin punctate, with an impression on each side near the angles: elytra immaculate shining greenish, or blue, punctate-striated, the striae not reaching to the apex, and the lateral ones somewhat obsolete: legs dusky black or pitchy, with the tip of the thighs, tibiae, and tarsi rufescens: antennae with the base rufescent, the apex dusky: palpi with the terminal joints dusky.

Rather a local species; occurring, however, in tolerable plenty in the gravel-pits on Wimbledon-common, and occasionally in those


(Long. corp. 2½—3½ lin.)


The largest insect of this division, and greatly resembling the next, but at once known by its superior bulk and the striated apex to the elytra: it is depressed, of a bright greenish-brass: the head with two deep frontal sulci: thorax rich glossy green, with a slight dorsal line, and a very deep obsolete rugose impression on each side at the base: elytra punctate-striated, the striae reaching to the apex; the disc with two or three impressed dots: body beneath pale pitchy or brassy-black: legs pale rufous, with the tarsi obscurely dusky: basal joint of the antennae rufescent; the rest and terminal joints of the palpi dusky.

Var. β? Be. tibiale. Megerle? With the femora bronzed-green: the insect of a larger size.

The elytra vary in colour; being sometimes of a pale brownish-green, deep bluish-green, or pitchy.


(Long. corp. —3 lin.)


Rather less than the foregoing: depressed; bright brassy-green: head glossy, with two rather wrinkled shallow frontal sulci: thorax also glossy green, the disc obsoletely wrinkled transversely, and the base strongly so longitudinally, with a shallow fovea on each side near the hinder angle; the disc with a deep dorsal line: elytra rather glossy, bronzed-green; punctate-striated, the striae not reaching to the tip, and the lateral ones becoming obsolete; the disc with three impressed dots between the second and third striae: body beneath pitchy-black: legs pale testaceous-red: basal joint of the antennae (and sometimes the base of several of the following) and of the palpi pale testaceous; the terminal joints dusky.

Inhabits various parts of the north and west of England; also in Scotland and North Wales. "Near Liverpool, Falmouth, and Spitchweek."—Dr. Leach. "Netley, Salop, and Capel Cerig, North Wales."—Rev. F. W. Hope.

Sp. 11. tibialis. *Depressus, aneo-niger, antennarum articulo basali, tibius tarsisque rufescientibus, elytris striatis, striis ad apicem excurrentibus.*

(Long. corp. 2¾ lin.)
MANDIBULATA.—COLEOPTERA.


Deep brassy black, shining, depressed: head bright greenish, with the two usual sulci: thorax green, very glossy and smooth, the dorsal line moderate, at the base on each side a single deep impunctate fovea: elytra dusky-brass, striated, the striae rather obsoletely punctate, with two or three impressed dots on the third from the suture, and all reaching to the apex: body beneath deep brassy-black; femora the same, with their apex, the coxae, tibiae, and tarsi reddish: antennae with the basal joint reddish, the rest dusky: palpi also dusky.

This likewise varies in colour; some specimens having the head and thorax light blue, and others nearly black: the elytra are sometimes of the latter colour, at others brownish or virescent.

Also found in places remote from the metropolis. "Near Swansea, and in the north of England."—*Dr. Leach.* "Carfin, Lanarkshire."

Rev. F. W. Hope.


Differs from all the foregoing by the impunctate striae on the elytra, and from the next by its colour, which is blackish-brass, slightly shining: head smooth, with the usual impressions very shallow, and with a violet tinge: thorax smooth, with an abbreviated dorsal line, and a large, deep, impunctate fovea on each side at the base: elytra rather broad, deep greenish-bronze, striated, the striae impunctate, but two or three impressed dots on the disc: body beneath, palpi, and legs, entirely black, the latter with the base of the femora sometimes very obsoletely rufescent.

Allied to Be. *olivaceum* of Gyllenhal; but I presume that the next species is synonymous with his insect.

This is also found at a distance from the metropolis; Dr. Leach supplied me with a pair, and I obtained one from the Marshamian collection.—"Loch Lomond."—*Dr. Leach.*


Greatly allied to the last, of which it may prove a mere variety: its head is the same in colour and in sculpture; the palpi are black, and the mandibles rufescent: the thorax is also similar, and the elytra are simply striated with two or more impressed dots on the disc: the body beneath is deep greenish-black and glossy: the legs are of a pitchy-brown, with the thighs paler, or rufescent at the base: the first joint of the antennae is more or less pitchy, and the rest dusky.

This is probably synonymous with the Be. *olivaceum* of Gyllenhal.


Similar to Pe. tibialis, but the striae on the elytra less punctate, &c. of a deep brassy-black; head and thorax glossy, tinged with greenish, the former with the usual frontal sulci; the latter slightly wrinkled transversely, with a faint dorsal channel, and an impressed fovea on each side at the base: the elytra deep blue, faintly striated, the striae obsolete punctate, and extending to the apex; the disc with two impressions; body beneath and femora brassy-black; tibiae, tarsi, and basal joint of the antenna pitchy-ferruginous; the rest of the latter and the palpi dusky.

I have three specimens of this insect, two of which were taken near Halifax by Mr. Gibson; the locality of the other I have forgotten.

GENUS LXX.—NOTAPHUS, Megerle.

Palpi rather more slender than in Peryphus; the external maxillary with the terminal joint scarcely truncate, the third very pilose, longer than the second; labial with the terminal joint rather stout: labrum quadrate, entire: mandibles rather stout, somewhat acute: mentum emarginate anteriorly, the emargination with an acute central lobe. Antenna with the two basal joints naked, the rest pubescent, the third and fourth shorter than the fifth; head ovate, with two frontal sulci, and a deep fold on each side adjoining the eyes: thorax cordate-truncate, attenuated behind: body slightly depressed: elytra oblong-ovate, the natural stria rather elongated: anterior tarsi of the males with the basal joint dilated.

Notaphus offers many points of resemblance to Peryphus; but among other characters the head is rather larger, and in addition to the two frontal sulci, it has an elevated circular fold over each eye; the body is shorter and more convex; the elytra have the usually abbreviated stria longer, and the prevalent colour is aeneous, more or less minutely spotted with yellowish, and not tints of green or bluish with large pallid spots, as in the latter genus; the insects are usually smaller.

A. Elytra spotted or variegated.


MANDIBULATA. VOL. II. 1ST JULY, 1828.
The largest of the genus: head and thorax of a bright coppery-green or brassy-black, the former smooth, with the usual sulci rather obsolete, the ophthalmic fold very distinct: thorax slightly convex, with a moderate dorsal line; the base impunctate, with a deep fovea on each side, margined with a longitudinal carina, as in Argutor: elytra brassy-brown, punctato-striated, with a transverse pale waved fascia towards the apex, and two deep impressed dots between the second and third striae from the suture: body beneath greenish, or brassy-black, shining: legs and basal joint of the antennae brown, the rest of the latter and the palpi dusky, sometimes a little tinged with piceous.

Not very common: it is, however, occasionally taken in damp places near London, but is far more abundant in South Wales, occurring near Swansea and Milford. "Earl's-court, Old Brompton, rather plentifully."—Mr. Waterhouse. "Walham-green."—Mr. Westwood. "Netley, Salop."—Rev. F. W. Hope.


Much less than the last: head and thorax of a green or bronzed copper, the former minutely punctulated, with two rather shallow frontal sulci; the latter with a deep dorsal line, and a deep large fovea on each side at the base: elytra of a vivid hue, glossed with brown, with various irregular brown streaks and patches, leaving a waved paler band towards the apex; they are rather faintly striated, the striae punctate and brown; the disc with two impressed dots: the body beneath pitchy-black or brassy: the legs testaceous brown; the basal joint of the antennae the same; the others pitchy or dusky.

Sometimes met with in the metropolitan district, though not in company with the last, but infinitely more abundant near Swansea. "Netley, Salop; Isle of Sheppey, Sandown, and Deal, in June last."—Rev. F. W. Hope. "Banks of ponds, Battersea, and Copenhagen-fields, April to June."—Mr. Ingpen. "Ditto, and under rejectamenta, banks of the Thames, Plaistow marshes."—A. Cooper, Esq.

Sp. 3. nebulosus. Cyanoe-niger, capite cyanoe, thorace aneo violaceo micante, elytris lividis fuscis subnebulosis, suturis cyanoe-nigris, pedibus piceo-brunnisis. (Long. corp. 2½ lin.)


Head of a rich glossy blue, with the frontal sulci rather deep: thorax brassy, glossed with violet, especially at the sides; the disc transversely wrinkled, and with a faint dorsal line; the base with a deep obscurely rugged fovea on each side: elytra pale, livid griseous, with the disc obscurely clouded with fuscos, the suture rich blue-black, shaded off into the ground colour of
the disc, which is tinged with a sombre hue towards the shoulders; the elytra are punctate-striated, the striae brown: body beneath brassy-black, tinged with blue on the head and thorax; legs pitchy-brown glossed with bluish: antenna pitchy, with the basal joint brownish-red.

I obtained a single specimen of this insect from the Marshamian cabinet; it is the only one that I have as yet seen.


Head and thorax of a brassy or greenish-black, the former with two obsolete frontal sulci; the latter convex, with a faint dorsal line, and a deep impunctate fovea on each side at the base; elytra punctate-striated, with two or three impressed dots on the disc, of a brassy-brown, with two irregular transverse bands of griseous-yellow spots, one near the base, the other towards the apex, the apex itself pitchy-brown: the body beneath pitchy or brassy-black: legs pitchy-brass, with the tibiae and tarsi brassy-brown: palpi and antennae dusky, the latter with the base rufescent.

This species varies much in colour, and I suspect that the Carabus semipunctatus of Donovan, v. xi. pi. 367. f. 2. is referable to one of the varieties.

Not uncommon in several parts of the country. “Copenhagen-fields.”—Mr. Ingpen. “Paddington, by the canal; Netley, Salop; Isle of Sheppey, and Deal, in June last, abundantly.”—Rev. F. W. Hope. “Near Marystow and Woodland, Devon; and Swansea, Glamorganshire.”—Dr. Leach. “Under rejectamenta, banks of the Thames, Plaistow marshes, and in Copenhagen-fields.”—A. Cooper, Esq.

Sp. 5. obliquus. Splendide aneo-virescens, elytris tenue punctato-striatis, fascis duabus maculique aliquot sparsis flavescentibus, antennis pedibusque nigro-aneis. (Long. corp. 2—2½ lin.)


Closely allied to the last, but of a more brilliant hue; the maculations on the elytra differently disposed, &c.: it is of a brilliant glossy brassy-green; the head, with the usual sulci, rather shallow: the thorax shining, smooth, with the dorsal line faint, and two deep, rather obsoletely rugose, impressions at the base, one on each side: elytra bright brassy-green, finely punctate-striated, the disc with several scattered yellowish spots, and two distinct irregular transverse fasciae, one towards the base, the other near the tip, the latter immaculate: body beneath, and legs, brassy-black; the tibiae and tarsi piceous.

Found on the shores of the Thames and Severn, near their union
with the ocean. "Isle of Sheppey, in June last."—Rev. F. W. Hope. "Plaistow marshes."—A. Cooper, Esq.

Sp. 6. stictus. _Aeneo aut virescenti-niger, elytris tenus punctato-striatis pallidis, maculis aliquot irregularibus nigris, pedibus piceo-ferrugineis, antennis piceo-fuscis, basi piceo._ (Long. corp. 1½—2 lin.)


Smaller than the foregoing: brassy or greenish-black; head as before; thorax with a faint dorsal line, and a deep smooth fovea on each side at the base: elytra rather faintly punctate-striated; pale brownish-yellow, with several scattered irregular black spots and blotches: body beneath glossy bronzed-black; legs pitchy rust-colour; antennae pitchy-brown, with the base pitchy.

"Found at Southend."—Rev. F. W. Hope; to whom I am much indebted, not only for specimens of this, but of several other insects, many of very great rarity, and for much valuable information relative to their localities, &c.


Size of the last: of a rich blackish-brass: head green, with the frontal sulci rather deep: thorax with its dorsal line rather abbreviated, and very faint; the base smooth, with a deep impunctate fovea on each side towards the hinder angles: elytra pale yellowish-brown, glossed with brassy, with two irregular black bands, and some scattered spots of the same, the suture tinged with bluish; they are punctate-striated, the striae brown: body shining bronzed-black, with the legs rusty-red; the antennae pitchy.

My specimens of this species I received from the coast of Glamorganshire.

B. With the elytra pale, immaculate.

Sp. 8. ephippium. _Aeneo-niger, elytris testaceis, nebula commune versus apicem fuscâ, antennis pedibusque testaceis._ (Long. corp. 1½ lin.)


Bronzed-black: head with the frontal sulci approximating in front: thorax rather convex, with the dorsal line somewhat abbreviated anteriorly, the base with a slightly rugose fovea on each side: elytra testaceous, with a brownish cloud or spot towards the suture, near the apex, common to each; they are rather faintly punctate-striated, the striae brown: abdomen glossy black: legs and antennae testaceous.

This is evidently a littoral insect; at least all the specimens I have hitherto seen have been captured on the coast: Mr. Bydder
took it in profusion on those of Hampshire, and Mr. Haworth, I believe, near Yarmouth. "Abundantly, in June last, beneath rejectamenta, on the shores of the Isle of Sheppey, Deal, Sandown, &c."—Rev. F. W. Hope.


Rather less than the last: head and thorax deep, slightly glossy, pitchy-black; the former with two parallel frontal sulci; the latter convex, with a faint dorsal line, and a small impunctate fovea on each side at the base: elytra deep immaculate chestnut, striated, the striae faintly punctate and dusky: abdomen beneath pitchy-ferruginous: legs and antenna deep chestnut.

I have one specimen of this insect, which I caught in the neighbourhood of London some years back.

Genus LXXI.—Lopha, Megeerle.

Palpi rather short; external maxillary with the second and third joints of nearly equal length, the latter rather suddenly clavate and very pilose, the terminal joint very short, subtruncated; labial with the terminal joint rather elongate and acute, the preceding abruptly clavate: labrum short, transverse, entire: mandibles rather slender, elongate, acute: mentum with the anterior edge emarginate, the emargination with an acute central lobe. Antennæ with the two basal joints naked, the rest pubescent; the third and fifth of equal length, and longer than the fourth: thorax very globose anteriorly, depressed and attenuated posteriorly, and apparently remote from the elytra; the latter rather convex, the back depressed: legs rather slender: anterior tarsi of the males with the basal joint dilated.

The great convexity of the anterior portion of the thorax, and the attenuation of the posterior (which gives it the appearance of being somewhat remote from the elytra), well distinguish this genus from the rest of the family: to which may be added the greater convexity and glossiness of the body and slenderness of the legs. A few of the last species greatly resemble the insects of the genus Tachypus, by having the thorax more depressed anteriorly, &c. as hereafter mentioned.


A beautiful species; of a deep glossy blue-black: head with two deep anteriorly approximating sulci in front: thorax above convex, glossy, smooth, black-blue, with a faint dorsal channel, and a transverse punctate impression at the
base, terminating at each end in a deep fovea near the hinder angles: elytra much broader at the base than the thorax, slightly convex, moderately punctato-striated, the striae vanishing before the apex; shining reddish-testaceous, with an irregular dusky-brown bar in the middle, then an oblique slender testaceous bar interrupted at the suture, afterward a fuscous band, attenuated externally, followed by a pale testaceous apex: legs and antennae testaceous, the latter dusky at the tip.

This pretty and neat little insect is far from rare: it occurs in the neighbourhood of London, especially in damp situations. "In Battersea and Copenhagen-fields."—Mr. Ingpen. "Netley, Salop, in wet moss, in October."—Rev. F. W. Hope. "Ben Lomond."—Dr. Leach. "Walham-green."—Mr. Westwood.

Sp. 2. quadriguttata. Nigro-aenea, nitidissima, elytris basi punctato-striatis, maculis duabus albidis, pedibus pallidis. (Long. corp. 2—2½ lin.)

Externally glossy brassy-black: head very smooth, with an oblong impressed line on each side between the eyes: thorax above very convex, greenish-blue, polished, smooth, with a faint dorsal line, a transverse punctate depression at the base, terminating at each end in a small foveola: elytra rather convex, very glossy, smooth, greenish-violet or black, striated, the striae punctate at the base, and some of them at the apex, the sutural one continued to the tip, the rest more or less abbreviated; at the base is a large subtriangular whitish spot, and beyond the middle a second round one of the same colour: legs pale, with the thighs dusky at the apex; antennae black, with the basal joint entirely, and the base of the three following ferruginous.

An elegant and rather conspicuous insect, occurring in damp places throughout the metropolitan district, and I believe equally common in other parts. "Near Carlisle."—T. C. Heysham, Esq. "Devonshire."—Dr. Leach. "Netley and Deal."—Rev. F. W. Hope.

Sp. 3. quadrimalaculata. Virescenti-aenea, antennis pedibusque testaceis, elytris punctato-striatis, maculis duabus pallidis. (Long. corp. 1½—1½ lin.)

Somewhat resembling, but very distinct from, the last: head smooth, glossy, greenish-brass, with an oblique sulcus on each side between the eyes: thorax of a very glossy polished green-brass; with a faint dorsal line; the posterior margin with a deep transverse punctate impression, terminating in a small simple fovea on each side, the margin itself elevated: elytra glossy blue-black, punctato-striated, the striae vanishing before the apex; at the base is a large angulated pale spot, and towards the apex another round one, the apex itself pale: legs pale testaceous; the femora sometimes reddish-pitchy; antennae testaceous, dusky towards the apex.
Far less common than the last, though it cannot be esteemed rare: it occurs in damp and marshy situations, at Battersea, Hertford, near Ripley, &c. "Southend, Deal, and Isle of Sheppey."—Rev. F. W. Hope.

Sp. 4. pulchella. *Nigro-cerulescens, nitida, pedibus rufescentibus, antennis omnino nigris, elytris punctato-striatis.* (Long. corp. 1½ lin.)


Glossy blue-black: head with two parallel frontal sulci, placed rather closely together: thorax deep blue-black, very smooth and shining, with a faint dorsal line, and a slight transverse impression behind, terminating in a simple fovea: elytra blueish-black, immaculate, faintly punctate-striated: legs anteriorly rufescent: antennae entirely black.

The original Carabus pulchellus of Marsham, which is in my collection, is the only specimen I have hitherto seen of this species; it is very distinct from all the others of the genus; its locality is unknown.

Sp. 5. assimilis. *Plate X. f. 5.—Nigro-subanea, nitida, thorace postico bifoveolato, elytris punctato-striatis, apice pedibusque pallidis.* (Long. corp. 1½—1⅔ lin.)


Glossy bronzed-black; head smooth, with two rather oblique frontal sulci: thorax moderately convex, of a black or greenish-brass, shining, with a faint dorsal channel, and a subpunctate transverse stria at the base, terminating in a moderately deep simple foveola on each side: elytra greenish-black, moderately convex, shining, rather deeply punctate-striated anteriorly, the striae vanishing before the apex, the latter pale testaceus, and within the margin a round pale pellucid spot: legs pale rufescent: antennae dusky-black, with the base reddish.

Decidedly uncommon; the only localities I am aware of being the shores of the Thames, towards the ocean. "Sheppey, in June last, and Southend."—Rev. F. W. Hope.


Allied to the last; deep brassy-black, slightly glossy; head with the front slightly rugose, and bearing two parallel sulci: thorax deep shining black, with a slight dorsal line, and a transverse series of impressed dots at the base, terminating in a deeper fovea on each, and near the hinder angle: elytra deep chestnut, with the tip paler and inclined to pitchy, deeply punctate-striated at the base, the striae vanishing before the apex: abdomen black: legs pitchy-ferruginous: antennae dusky, with the basal joints piceous.
I named this pretty species in my catalogue after my kind friend the Rev. W. Kirby, of whose zeal for science, and liberality in the communication of entomological lore, it were futile in me to dilate; his works forming a more lasting memorial than my feeble praise; but I have since ascertained that it is synonymous with the insect described by Gyllenhal (vol. iv. p. 403), by the name above quoted.

This is not a common species: I have hitherto seen three or four specimens only, two of which were taken on the coast of Norfolk, the others near London.

Sp. 7 nigra. Caruleo-nigra, nitida, antennarum basi pedibusque rufescentibus, elytris punctato-striatis, immaculatis. (Long. corp. 1\(\frac{3}{4}\) lin.)


Deep bluish-black, shining; head with two oblique frontal sulci: thorax rather greenish-black, with a moderate dorsal line, and two basal fovee, one on each side: elytra deep black, tinged with bluish or violet, immaculate, punctate-striated, the striae vanishing before the tip: abdomen black: legs and basal joints of the antennae rufescent; the rest of the antennae dusky.

Found in marshy places near London, and in the neighbourhood of Norwich.

Sp. 8. pulicaria. Aeneo-nigra, nitida, antennis pedibusque nigris, elytris punctato-striatis, immaculatis. (Long. corp. 1\(\frac{1}{4}\) lin.)


Deep brassy-black, shining; head with two oblique frontal sulci: thorax rather greenish-black, with a moderate dorsal line, and two basal fovee, one on each side: elytra deep black, tinged with bluish or violet, immaculate, punctate-striated, the striae vanishing before the tip: abdomen black: legs, antennae, and palpi black: in some specimens the tibias and tarsi are pitchy.

Allied to Bembidium Grapii of Gyllenhal.

Not unfrequently taken in Battersea-fields; also at Hertford, and other places near London.

Sp. 9. minima. Aeneo-nigra, nitida, antennis pedibusque pico-nigris, elytris punctato-striatis, immaculatis. (Long. corp. 1—1\(\frac{1}{4}\) lin.)


Considerably less than the last; deep brassy-black, shining; head with the frontal sulci nearly parallel: thorax glossy, with an evident dorsal line, rather convex, greenish; the base with a fovea on each side, near the hinder angles, and frequently connected by a transverse row of impressed dots: elytra rather pitchy-black, immaculate, punctate-striated, the striae reaching nearly to the apex: body black: legs, palpi, and antennae pitchy-black.

Not a very common species; found sometimes near London.

“Liverpool and Falmouth.”—Dr. Leach. “Southend.”—Rev. F. W. Hope.
Sp. 10. Doris. Nigro-carulescens, nitida, elytris punctato-striatis, maculis apicis pedibusque pallidis. (Long. corp. \( \frac{1}{2} - 1\frac{1}{2} \) lin.)


Shining blue-black: head with two parallel frontal sulci: thorax very glossy, with a moderate dorsal line and two basal impressions, one on each side: elytra deep bluish-black, shining, punctate-striated, with a testaceous spot near the apex: legs pale testaceous: body black: antennae fuscous, with the base testaceous.

This, which appears to be the true Ca. Doris of Illiger and Panzer, is far from an uncommon species in Battersea-fields, where it has been taken abundantly by Messrs. Waterhouse and Westwood.

Sp. 11. Spencii. Nigro-carulescens, nitida, elytris punctato-striatis, apice piceo, fronte sulcis duobus parallelis, pedibus antennarumque basi rufis. (Long. corp. \( \frac{1}{2} \) lin.)


Shining blue-black: head with the frontal sulci parallel: thorax convex, slightly glossy, smooth, with a faint dorsal line, and a simple impression on each side at the base: elytra rather shining: deep black-blue or violaceous; somewhat deeply punctate-striated, especially at the base, the striae vanishing before the apex, which is piceous: legs bright rufous: basal joint of the antennae the same, the rest dusky.

This and the three preceding insects rather depart from the habit of the genus, and may probably hereafter be associated together under a distinct appellation: the thorax is less convex anteriorly, and the hinder angles more obvious than in the typical species, Lo. quadrimaculatus.

My specimens of this insect I caught in Battersea-fields many years since, and compared with Mr. Kirby’s in 1821, with which they appeared to correspond. Mr. Kirby’s insects were found in Suffolk.

Genus LXXII.—Tachypus, Megerle.

Palpi moderate; external maxillary with the second and third joints of nearly equal length, the latter very pilose, attenuated at the base, rather suddenly elevated, the terminal joint extremely minute, truncate; labial as in Lopha: labrum transverse, entire: mandibles rather elongate, slightly bent, acute: mentum anteriorly emarginate, the emargination with an obtuse lobe. Antennae with the two basal joints naked; the rest pubescent; third joint longest, the rest gradually decreasing; the eighth, ninth, and tenth being very short; head large; eyes rather prominent: thorax cordate-truncate, somewhat convex anteriorly, attenuated posteriorly, sessile: elytra elongate, ovate, sometimes a little dilated: anterior tarsi of the males with the two basal joints dilated.
Tachypus evidently comprises insects of two very dissimilar forms, the first of which approximates very closely to the four last-described species of Lopha, the other to the true Bembidia: in the former the thorax has the posterior angles scarcely deflexed, and rather prominent, while the latter has them much deflexed and obtuse. The genus may, however, be known from the preceding by the greater depression of the thorax, and from its being sessile; and from Bembidium by the smallness of the eyes: the species affect damp sandy districts.

A. With the hinder angles of the thorax scarcely deflexed, somewhat prominent: body not very broad.

Sp. 1. celer. Aeneus nitidus, antennis fuscis, pedibus piceo-ferrugineis, elytris punctato-striatis. (Long. corp. 1—1 1/2 lin.)

As small again as the next, but very closely allied; it is of a brilliant glossy brass above: the head has the two usual frontal sulci: the thorax is very glossy, has a slight dorsal line, and an impression on each side at the base, rarely connected by a transverse series of impressions: the elytra rather deeply punctate-striated, the striae vanishing considerably before the apex: abdomen beneath blackish-bronze: legs pitchy-red, with the tibiae palest, and sometimes testaceous: the femora often dusky: tarsi and antennae the same.

The great disparity of bulk, and the absence of intermediate sizes between this insect and the following, sufficiently indicates their distinction, which was first pointed out by Count Hoffmannsegg.

Extremely abundant throughout the metropolitan district, especially in the damp sandy places near Ripley. "Oxford."—Rev. F. W. Hope, and Mr. Westwood.

Sp. 2. properans. Aeneus, nitidus, thorace glaberrimo, pedibus piceo-rufis, elytris subtilissimè punctato-striatis. (Long. corp. 1—1 1/2 lin.)

Larger than the last, which it too closely resembles; above of a brilliant rich coppery brass: head with two frontal sulci: thorax very glossy, with a very faint dorsal line; the base on each side with a deep impression, united by a transverse row of impressed points: elytra rather faintly punctate-striated, the striae vanishing a little before the apex: body beneath black: legs generally pitchy-red; the femora sometimes dusky: antennae dusky.

This is the Ca. rufipes of Marsham, a name necessarily changed by Hoffmannsegg, in consequence of Illiger having previously described an insect, belonging to the present family, by the same appellation.

Sp. 3. acutus. *Nigro-aneus, nitidissimus, elytris subattenuatis acutis, tibiis pallidis.* (Long. corp. 1¼ lin.)


Entirely of a brilliant glossy bronzed-black, shining, as if varnished: the elytra rather attenuated and pointed, punctate-striated, the striae not reaching to the apex: legs pitchy-brass; the tibiae pale testaceous: antennae fuscous, with the base reddish.

I strongly suspect that this supposed species is merely an immature state of the preceding. I have the original pair from Mr. Marsham's cabinet, and one that I captured myself near London.

Sp. 4. chalceus. *Supra virescente-aneus, antennis pedibusque piceis, elytris subtiliter punctato-striatis.* (Long. corp. 2 lin.)


Similar to the foregoing, but the antennae and legs differently coloured, the elytra without impressed spots, &c. Bright brassy, shining: head with two rather shallow parallel frontal sulci: thorax slightly convex, with a faint dorsal line, the base with an impressed striola on each side: elytra bright glossy brass, finely striated, the striae punctate, and not reaching to the apex: legs pitchy: tibiae and tarsi sometimes rather paler: antennae pitchy, with the base palest.

The upper surface is sometimes greenish or bluish.

A few specimens caught by myself near London, which appear dissimilar to any of the preceding, being considerably larger, and differing in other points as above described.

Sp. 5. orichalcicus. *Supra aeneus, antennarum femorumque basi tibiisque testaceis, elytris subtiliter punctato-striatis, punctis duobus impressis.* (Long. corp. 2 lin.)


Rather larger than the foregoing; of a shining greenish-brass: head rather coppery, with two parallel frontal sulci: thorax virescent, with a faint dorsal line, and a very deep fovea on each side at the base: elytra bright coppery or greenish brass, with two obsolete impressed dots; faintly punctate-striated, the striae not reaching to the apex, which is very smooth: body pitchy-brass beneath: legs pitchy-testaceous: femora sometimes pitchy: antennae with the base testaceous; the apex dusky.

I am not certain whether this is referable to the Elaphrus orichalcicus of Illiger; it decidedly is not of Duftschmid; though it accords with Panzer's figure, which professes to be a representation of Illiger's insect: but not having this last author's work, I cannot determine the point: it is very closely allied to the two foregoing.

Taken in the neighbourhood of London, and near Swansea.
Sp. 6. bipunctatus. *Supra orichalcicus, nitidus, elytris subdepressis, tenuæ punctato-striatis, foveolis duabus discò profundi impressis.* (Long. corp. 2½ lin.)


Above shining brassy, or greenish-brass, rarely bluish: head a little rugose, with two frontal sulci; the crown and space between the latter rather smooth: thorax moderately convex, with a dorsal channel, very obsoletely striolated transversely, the margin depressed, deeply punctated, with a small ridge at the hinder angle: elytra rather convex, the back flat, faintly punctate-striated, the striae not reaching to the apex, the interstices smooth; but between the second and third striae from the suture are two rounded, rather deep, remote, coppery-brass, foveolae: abdomen glossy blue-black: legs black, glossed with anecous: antennae and palpi blackish-brass.

Not very common, frequenting damp and sandy places: I have found it occasionally at Darenth-wood, and once or twice near London. "Two specimens taken on the bank of a pond on Wandsworth-common in April last." — *Mr. Ingpen.* "Netley, Salop." — *Rev. F. W. Hope.*

B. With the hinder angle of the thorax deflexed, obtuse: body very broad.


Similar to the last, but of a bright green above, and without the dorsal impressions on the elytra: the prevalent hue above is bright brassy-green; the head and thorax are punctate, as in Ta. striatus; the impressions are larger, the frontal sulci less curved, and the dorsal line on the thorax more faintly impressed: the elytra are rich bronzed green, and regularly punctate-striated to the apex: the legs and antennae are yellowish-red, the tips of the joints of the latter, and the tarsi dusky.

Taken in the north of England: on the coasts of Lancashire and Cumberland.


Of a rich bronze or brassy-black: head and thorax thickly punctate, the former with two rather faint curved frontal sulci, the latter with a deep abbreviated dorsal line, the base slightly impressed transversely, but without any fovea near the angles: elytra sometimes bright brassy (especially in the males), punctate-striated, the striae reaching to the apex, and between the third and fourth from the suture two large impressed dots: body beneath greenish-brass: legs rufescent, or pitchy: the femora often pitchy-bronze: antennae also rufescent at the base; the apex dusky.
This appears to be a common species in the northern counties of England, and the southern parts of Scotland, but does not occur in the south of England. "Near Carlisle on banks of rivers, and near the Canon-mills, Edinburgh."—Dr. Leach. "Midgley-moor, near Halifax."—Mr. Gibson. "Netley, Salop."—Rev. F. W. Hope.


Shining, greenish-copper: head rather deeply punctate, especially on the sides: thorax with the disc smooth, faintly channelled, the base transversely impressed and punctate: elytra short, broad, oval, somewhat convex, regularly punctate-striated, the striae vanishing before the tip, the interstices very smooth; entirely of a pale whitish ochraceous, glossed with greenish round the scutellum, and a little behind the middle a waved dentate transverse brown fascia, common to both elytra, glossed with greenish in certain positions, and not touching either margins; in the middle of each elytron it is anteriorly produced: legs and antennae entirely pale testaceous.

In living specimens the elytra are said to be nearly white.

Evidently a littoral insect, being chiefly found near the mouths of great rivers: it, however, occurs on various parts of the coast, and has been taken on those of Norfolk, Suffolk, &c. "On the shores of the Ex, near Exmouth."—W. Spence, Esq.—"Near Dublin."—N. A. Vigors, Esq.—"Aldborough, Suffolk."—Rev. F. W. Hope.

Genus LXXIII.—Bembidium Auctorum.

Palpi rather slender; external maxillary with the second and third joints nearly equal, the latter not much stouter than the former, slightly subclavate and pilose, the terminal short, truncate-conic; labial with the terminal joint rather elongate, the preceding slightly clavate, with a few hairs: labrum transverse, entire: mandibles short, acute, bent: mentum emarginate anteriorly, the notch with an acute central tooth. Antenna with the two basal joints, and base of the following, naked, the rest pubescent: head porrect, ovate: eyes very large and prominent: thorax rather narrower than the head, cordate-truncate, attenuated posteriorly: body slightly depressed: elytra ovate, retuse at the base, pubescent: legs rather long, slender: anterior tarsi of the males with the basal joint dilated.

The great bulk of the eyes at once distinguishes this genus from the other Bembidiidae, and shows its connexion with the Elaphridae; other characters, however, discriminate the genus, some of the species having the elytra clothed with pubescence, while the
rest have them adorned with various elevations and depressions, as in Elaphrus: they frequent damp sandy situations, chiefly on the coast.


Broader and larger than the other indigenous species: head, thorax, and elytra brassy: antenna; fuscous: head smooth: thorax with an impressed stria in the middle: elytra punctate-striated; with several remote, smooth, obscure spots between the striae, and two quadrate golden ones on each elytron between the first pair of striae: legs golden: body beneath obscure aeneous.

Very few indigenous specimens are preserved in collections; there is a fine series in the British Museum cabinet, taken by Dr. Leach at Swansea. Mr. Haworth has one, found, I believe, in Yorkshire. “Near Berkeley-castle, Gloucester.”—Rev. F. W. Hope.

Sp. 2. impressum. *Virescente-aneum, subopacum, elytris tenuc punctato-striatis, foveolis duabus subquadratis pallide aureis, macula cyanida distinctis.* (Long. corp. 2$\frac{1}{2}$ lin.)


Greenish-brass, slightly glossy, and thickly punctulate: head porrect, with an impressed line on each side between the eyes: thorax rather convex, aeneous, transversely impressed at the base and apex, and faintly channelled down the centre: elytra much broader than the thorax, slightly convex, opaque greenish-brass, regularly but faintly punctate-striated, with an oblong slightly impressed pale golden fovea towards the middle of each elytron, between the second and third striae, and another towards the apex, the space between, before, and behind, violet, and slightly elevated: body beneath of a shining blue-brass: legs pale rufescent, with the tips of the femora aeneous, and the tarsi obscure: the antennae fuscous, with the first joint and base of the three following testaceous.

Of this insect, which is the Cicindela striata of Marsham, I have hitherto seen only my own injured specimen, which I obtained from that gentleman’s collection: I am, however, ignorant of its locality.

Sp. 3. flavipes. *Fusco-aneum, subpubescens, elytris vagi punctatis griseo-nebulosis, antennarum basi, palpis pedibusque pallidis.* (Long. corp. 2—$\frac{1}{2}$ lin.)


Brownish-brass, slightly pubescent: head large, depressed, thickly punctulated, with a transverse line between the eyes: thorax above convex, thickly punctated, with an obsolete dorsal line: elytra slightly convex, rather irregular, thickly but strongly punctated throughout, of a brownish-copper, clouded
ELAPHRIDE.—BEMBIDIUM.

with griseous pubescence; towards the suture, on the disc, are two impressed
dots on each elytron, one towards the apex, the other rather before the middle:
body smooth, glossy, bluish-green or coppery, beneath: legs testaceous-yellow:
antennae pale testaceous at the base, dusky towards the apex: palpi yellowish.

Common in banks by the sides of ponds, &c. round London.
“Very abundant in a gravel-pit in Kensington-gardens, in May and
June.”—Mr. Ingpen. “Netley, Salop, and Gravesend.”—Rev.
F. W. Hope.

Sp. 4. pallipes. Cupreo-anemum, subpubescens, elytris viridi-irroratis sublcevibus,
antennis pedibusque pallide testaceis. (Long. corp. \(2\frac{3}{4}\)–3 lin.)

Coppery-brass, slightly pubescent: head depressed, thickly punctate: thorax
slightly convex, thickly and finely punctate, with a rather strong dorsal line,
the hinder angles greatly depressed: elytra rather smooth, irrorated with
greenish, finely and thickly punctate, and obsoletely striated on the back;
with two impressed dots on each between the second and third from the
suture: body greenish-bronze beneath: legs and antennae pale testaceous,
the latter rather dusky towards the apex, and with their basal joint bronzed-
green.

Apparently scarce or very local: I have seen, comparatively,
very few specimens, most of which were caught near Cromer, in
Norfolk. “Cromer and Swansea.”—Dr. Leach. “Aldborough,
Suffolk.”—Rev. F. W. Hope.

FAMILY VII.—ELAPHRIDÆ mihi.

Antennæ very short, stout: palpi with the last joint elongate-obconic, or stout
and tumid: labrum entire, slight or rounded anteriorly: mandibles simple:
maxillaæ without an articulated claw at the apex: labial palpi with three distinct
joints: mentum emarginated, with a bifid central tooth: eyes large: anterior
tibiae not emarginated.

The Elaphridæ chiefly differ from the preceding families by the
brevity and stoutness of the antennæ: but, there are several other
very obvious characters which, taken collectively, sufficiently in-
dicate their distinction: they approximate to the Cicindelidæ and
Carabidæ by the integrity of the interior tibiae; from the former
they differ by wanting an articulated claw at the tip of the maxillaæ,
and from the latter by the brevity of the antennæ.

The three following genera occur in Britain, and may be thus
known:
MANDIBULATA.—COLEOPTERA.

Palpi articulo ultimo brevissimo, subumbido:

Palpi articulo ultimo elongato, obconico; thorax rotundatus:

74. NOTIOPHILUS.

Genus LXXIV.—Notiophilus, Dumeril.

Palpi, external maxillary, and labial with the last joint short, slightly tumid, subovate, truncate; labrum entire, rounded, nearly covering the mandibles, which are not dentate internally: stemum emarginate anteriorly, with a bifid central lobe. Antennae slender, slightly thickened towards the extremity: head deeply sulcated between the eyes: eyes large, not very prominent: thorax quadrate, flat, as broad as the head: elytra depressed, elongate, and nearly parallel: legs rather slender: anterior tarsi of the males not dilated.

Notiophilus differs from Elaphrus by its elongate depressed body; the less projecting mandibles; deeply sulcated forehead; large but scarcely prominent eyes; narrow, rounded, and advanced labrum; and shorter and swollen terminal joint to the palpi: the elytra are also flat, with a very smooth longitudinal space on the disc. The species greatly resemble each other; they are lively and active; occur usually beneath stones, in damp and gravelly places, or at the roots of trees. It is probable that we have more than two species in Britain, but I have not yet ascertained the point.

Sp. 1. aquaticus. Supra argenteus, fronte profundi striata, elytris punctato-striatis, plagis longitudinalibus ad suturam apiceque politis, punctisque impressis. (Long. corp. 2½—3 lin.)


Above of a bronzed copper, more or less dusky: head very deeply sulcated between the eyes: palpi dusky: thorax about as broad as the head, nearly smooth on the disc, the margin deeply punctate throughout; with a faint longitudinal dorsal line, and a slight transverse impression at the base, and another on each side towards the hinder angles; elytra elongate, each with eight deep punctate striae; the first towards the suture; the six following close to each other, leaving a broad highly polished space between them and the sutural stria; the eighth on the outer margin, rather faint, and nearly approximating to the other; they vanish before the apex of the elytra, except the sutural one and the seventh; on the disc is an impressed dot between the third and fourth striae: the body beneath, and legs, are deep bronzed-black. The colour of the upper surface varies slightly.

A very common species in Britain, frequenting sand and gravel-pits: I have taken it abundantly at Hertford, Ripley, Hampstead, &c.
Sp. 2. biguttatus. Supra anceus, nitidus, fronte profunde striato, thorace omnino punctato, elytris profunde punctato-striatis, plagâ longitudinali nitidissimâ ad suturam, apice flavescente, punctoque impresso. (Long. corp. 2—2½ lin.)


Closely allied to the last; it is however of a smaller size, and the colour is more brilliant and glossy; the thorax has the disc and margins punctate: the striae on the elytra are more evident and deeply punctate, and prolonged towards the apex; the polished space on the disc is rather narrower, and more brilliant; the discoidal impression is deeper, and placed more posteriorly on the elytra, and there is an obsolete one towards the apex, which latter is of a pale testaceous, more or less distinct: the base of the antenna and the middle of the tibiae are testaceous yellow or reddish.

Var. β. With the upper surface of a very brilliant violet-blue.

There are several other variations of hue, but none very conspicuous.

Var. α. With the upper surface of a very brilliant violet-blue.

Far from uncommon throughout the metropolitan district, and I believe frequently taken in other parts. Var. β was taken in Scotland by Mr. Dale, who supplied me with a specimen.

**Genus LXXV. — Elaphrus, Fabricius.**

Palpi, external maxillary, and labial elongate-ovate, truncate; the terminal joint longer than the preceding: labrum transverse, short, straight anteriorly, covering the mandibles at the base only; the latter denticulated at the base: mentum slightly emarginate anteriorly, with a bifid lobe in the centre of its notch. Antennæ rather stout, slightly striated at the extremity: eyes very large, and prominent; thorax convex, dilated at the sides: elytra very convex, mamillated, the sides rather dilated: legs moderate: anterior tarsi of the males with four slightly dilated joints.

Elaphrus is to be distinguished from Notiophilus by the brevity of the labrum, which merely covers the base of the mandibles, by the difference in the proportion of the palpi, the dilatation of the sides of the elytra, and the mamillated impressions with which the latter are adorned: the form of the thorax is also different, and the eyes very large and prominent. The species usually frequent damp places by the sides of ponds, rivers, &c. and are to be seen running on the dry mud banks, hiding themselves in the fissures, beneath stones, plants, &c.

Sp. 1. uliginosus. Viridi-anceus, thorace capite latiore, elytris maculis rotundatis violaceis quadruplici serie, tibiis nigris. (Long. corp. 4—4½ lin.)


Brassy-green, bright green, or bronzed: head deeply punctate, with a slight transverse impression between the eyes, and a deep longitudinal one on each
side in front: thorax rather broader than the head, convex, deeply punctate, with a deep dorsal channel furcate anteriorly, and terminating abruptly posteriorly; on each side are several deep impressions: elytra broader than the thorax, convex, finely punctate, each with four rows of catenulated impressions, interrupted by smooth glossy violaceous spaces; these series are separated by a slightly elevated ridge: body beneath bronzed green: thighs the same or coppery: tibiae and tarsi dusky blue.

I first detected a third species of Elaphrus in the British cabinets, and pointed out the fact to Messrs. Cooper, Curtis, and Ingpen, from my own collection, which at the time contained no less than six specimens of the present species, varying considerably in size and colour; some being of a very rich metallic green above, others bronzed-green, and some coppery; but all possessing bluish-black tibiae, and agreeing with each other in the form of the thorax and in sculpture.

It has been stated that this species appears peculiar to the metropolitan district, but two of my specimens were taken near Swansea, and one in Devonshire, in 1812; the others were captured by myself in a wet path in the hollow, beneath the "gallery," at Coombe-wood, in June 1814, where the species appeared at that period to be in considerable plenty. "Once taken at the root of a willow near Chelsea, in September, 1824."—Mr. Ingpen.

Sp. 2. cupreus. *Cupreo-cuneus, thorace latitudine capitis, elytris maculis rotundatis violaceis quadruplici serie impressis, tibiis ferrugineis.* (Long. corp. 3 3/4—4 lin.)


Above glossy brass, obscurely tinged with greenish: head thickly punctate, with an arched impression between the eyes; two larger beneath, and a transverse frontal line: thorax above convex, punctate, with a deep anteriorly furcate dorsal line, and some deep impressions on the disc, the latter not touching the base, which is rather distant from the elytra, the latter above convex, of a dusky-brass, thickly, but irregularly punctate, each with four rows of large violaceous-green circular impressions, interrupted by polished brassy spaces, those towards the suture being largest and subquadrate: body glossy greenish-brass beneath: thighs greenish-brass, with the base somewhat testaceous; the tibiae pale testaceous, with the apex and tarsi blue-black: antennæ greenish-brass at the base, dusky at the apex.

Differs a little in colour, being sometimes of a dusky, and at others of a brilliant greenish-brass.

Common in several places near London, especially in Battersea-fields, where I have very frequently taken it, and in Copenhagen-fieldes, at Hampstead, Hertford, &c. It also abounds near Whittlesea Mere. "Carlisle."—T. C. Heysham, Esq.
Sp. 3. riparius. Aeneo-virescens, punctatissimus, thorace subst内外ato, elytris mamillis cupreo-anemis, circulo impresso cinetis, quadruplici serie. (Long. corp. 3—3½ lin.)


Dull greenish-bronze: head very thickly punctate: thorax above convex, thickly punctate, with an abbreviated dorsal channel, anteriorly furcate, and an oblong fovea on each side posteriorly: elytra ovate, slightly convex, greenish-brass or dull brownish-bronze, thickly punctate throughout; each with four rows of catenated striae, as in the two preceding species, but less profound, and the colours rather different, the centre of each circle being purplish, the margin brassy, the elevated patches between are rather obsolete, the four nearest the suture being most evident, quadrate, and of a polished brass: body beneath glossy greenish-brass: thighs the same, the base frequently testaceous; tibiae testaceous, with the apex and tarsi greenish-brass.

The colour of the upper surface varies greatly, from various shades of light greenish-brass to dusky; sometimes purplish, with violet patches between the striae on the elytra.

Abundant in several places near London, especially in Copenhagen and Battersea-fields; also at Coombe-wood, on the banks of the Thames, near Putney, Richmond; at Hertford, Ripley, &c.; in Glamorganshire, and near Bristol, and in Devonshire.

**Genus LXXVI.—Blethisa, Bonelli.**

*Palpi, external maxillary, and labial elongate-ovate, truncate, the two last joints of equal length: labrum transverse subtrilobate: mandibles bent, acute, obscurely denticulated internally at the base: mentum deeply emarginate anteriorly, the emargination with a slightly produced bifid lobe. Antennae stout, the three basal and base of the fourth joints naked, the rest pubescent: eyes rather large, slightly prominent: thorax subquadrate, truncate, the sides slightly rounded: elytra very convex, with impressed dots, elongate-ovate: legs rather stout: anterior tarsi of the males with four dilated joints.*

Bonelli judiciously separated Blethisa, as a genus, from the other adephaga, in which subsequent writers have followed him. Latreille, in his genera, &c. and Gyllenhal, associated it with Nebria; Dr. Leach, however, distinguished it from that genus by the name Helobium, in the Edinburgh Encyclopaedia, without being aware of Bonelli's arrangement: its location has also been frequently altered, but I presume that its nearest affinity is Elaphrus, from which it differs chiefly by having the third and fourth joints of the external maxillary and labial palpi of equal length, the labrum rather trilobate, the mentum more deeply notched anteriorly, with a moderately-produced bifid central lobe: it also differs in its qas-
Mandibulata.—Coleoptera.

Drate thorax, deeply excavated and more convex elytra, and in other less conspicuous characters.

Sp. 1. multipunctata. *Nigro-aven, nitida, limbo virescente, elytris punctato-striatis, foveolisque duplici serie impressis.* (Long. corp. 5 7 lin.)


Of a deep blackish-bronze, slightly glossy, with the margins of the thorax and elytra bright-green or coppery: head with a deep sinuated impression on each side between the eyes, and a shallow transverse one behind; the nape with a few impressed dots: thorax shining, with some obsolete transverse wrinkles, and the margins more or less punctate; the dorsal line rather deep and abbreviated anteriorly, with a transverse impression posteriorly, bordered externally by an elevated fold: elytra slightly but irregularly punctate-striated, each with two series of deep, impressed, shining, brassy foveae, the first placed on the third, and the second on the fifth, interstice from the suture: body dusky or coppery-brass beneath: legs black, tinged with brassy.

Rather uncommon: I have taken a few specimens in Copenhagen-fields, running on the dry mud of ponds in the summer, and also on a bank in Battersea-fields. I believe it occurs on the borders of Whittlesea Mere, and near Horning, in Norfolk.

The aquatic Adephaga, or

Subsection II. *Hydadephaga, MacLeay,*

Are thus, in general terms, characterized by him:—*Legs formed for swimming,* the hinder having a horizontal motion only, the pectoral lamina into which they are inserted being large: *body ovate.* Latreille, less generally, says, *legs proper for walking and swimming,* the four posterior being compressed and fringed; the *mandibles scarcely exserted,* the *body oval,* with the *eyes* slightly prominent, and the *thorax* broader than long: the *hook* at the extremity of the maxillae curved at the base.*

The insects of this subsection differ chiefly from the former in habit, from the element in which they reside being different; but their devouring propensities are equal, if not superior, to any of the foregoing, the larger and more typical species especially, which are pre-eminently distinguished by their voracity and destructiveness: they all inhabit the water in their first and final states, and subsist upon other aquatic insects, vermes, &c.; they swim admirably in the water, but are compelled at intervals to ascend to the surface for respiration; when they may be observed, resting obliquely, with the extremities of their elytra raised a little above.
the surface, to admit the supply of air to reach the tracheae or spiracles, which supply enables them to descend, and to pursue their subaqueous avocations for some considerable period. Towards evening, they may be frequently observed upon the wing, and they not uncommonly fly towards a lighted candle, after the manner of a moth.

Their larvae are long and narrow, composed of twelve segments, of which the first is largest, with a strong scaly head, furnished with two powerful curved mandibles, pierced towards the points, two short antennae, palpi, and six minute shining eyes on each side: their legs are very long, pilose, and terminate in two small claws. They are very active, carnivorous, and voracious; reside, as before-stated, in the water, which they quit previously to their transformation into pupae: which process they undergo in an oval cell, formed by themselves, a few inches beneath the surface, on the borders of ponds, ditches, &c.

The two families into which I shall divide this subsection may be readily known by the subjoined characters:

- Antena longiores, setacea: 8. Dyticidae
- Antena breves, clavate: 9. Gyrinidae

**FAMILY VIII.—**Dyticidae, Leach.

Antennae setaceous, rather elongate: body ovate, or oval, anteriorly and posteriorly rounded: thorax short, transverse: legs generally formed for swimming, the posterior usually deeply ciliated, with broad, flat tarsi, terminating in a point: in the males, the anterior tarsi are more or less dilated; and some females have the elytra deeply sulcated.

The Dyticidae, or water-beetles, differ considerably in appearance from the preceding insects, nevertheless they possess many characters in common, and have considerable resemblance in their habits, as before-stated; but, in lieu of residing upon land, they inhabit the water: their larvae are elongate, swollen in the middle, with the extremities more slender, especially behind, the two caudal segments forming an elongate cone, fringed with hairs, and terminating generally with two conical and moveable appendages, between which are two perforated cylindric tubes, communicating with the respiratory organs; the head is large, oval, distinct; the mandibles much bent and pierced near the apex; the three first segments of the body have each a pair of elongate legs, having the
shanks and tarsi fringed with hairs: the first segment is largest, and armed above and below with a scaly plate: these larvae subsist chiefly upon those of the Libellulidae, Agrionidae, Ephemeridae, Culicidae, and Tipulidae, which they seize and retain with their powerful jaws, and extract their juices through their perforated extremities: they swim with facility by means of the ciliated legs; and, like the imago, are compelled to approach the surface of the water occasionally to respire, where they suspend themselves by means of the caudal appendages, leaving the tip of the cylindrical tubes exposed to the atmosphere; when ready to undergo their change, they seek for a convenient spot in the neighbouring banks, and form an oval cavity, in which they become pupae, and remain in that state from fifteen to twenty days, when the imago is produced: the latter chiefly occurs from April to August.

The indigenous genera which have come beneath my observation may be thus discriminated from each other:

**Genus LXXVII.—** Haliplus, Latreille.

*Palpi, external maxillary, and labial,* with the terminal joint minute, subulated, the preceding elongate, clavate; the first and second very short: *labrum* emarginate anteriorly: *mandibles* short, triangular, internally excised at the apex: *mentum* transverse, anteriorly tridentate, the central tooth shortest. *Antenna* linear, apparently 10-jointed, the basal joint minute, the fourth shortest, the terminal elongate, acute: *head ovate,* exerted: *eyes moderately prominent:* *thorax* with its base triangulate, the central angle occupying the
situation of the scutellum: body oval, convex, posteriorly attenuated; legs long, slender, gressorial: the posterior femora covered at the base with a broad shield-like lamella: claws didactyle.

Haliplus consists of several insects, which vary much amongst each other, and differ in such trifling particulars, that it is very probable some of the apparent species and varieties are not distributed strictly in accordance with their natural distinctions: the genus bears considerable affinity to the Bembidiidae in the structure of the palpi, the terminal joint being very small and subulated, in which particular it may be known at once from the other Dyticidae; it also differs essentially from the rest of the family by the magnitude of the laminae which cover the posterior femora, the short, and apparently ten-jointed, antennae, and in other less important characters, and it may probably form the type of a new family of Hydradephaga, approximating closely to the genus Omophron (amongst the Elaphridae?) a genus which has not hitherto been discovered in Britain.

A. Elytra with elevated lines.
Sp. 1. elevatus. Supra pallidus, elytris convexis punctato-striatis, nigro-lineatis, costa disci elevata abbreviata. (Long. corp. 2 lin.)
Elongate, pale-testaceous: head deep testaceous, convex, punctulated: eyes dusky: thorax transverse, narrower than the elytra, finely but sparingly punctulate, with an impressed line on each side, parallel with the lateral margin: elytra oblong-ovate, dilated at the base, attenuated at the tip, above slightly convex, each with eight elongate and two abbreviated, deeply-punctate striae, the latter on the shoulders, and all but the two marginal ones dusky; the suture black: the interstices smooth, the third from the suture much elevated anteriorly: body deep testaceous beneath, subpunctate, the base of the abdomen pitchy; the abdominal laminae deeply punctated: legs very long, pale testaceous.
The elytra are more or less suffused with black between the striae in different individuals.
Not very common: occasionally met with in running streams near Bexley.

B. Elytra without elevated striae.
Sp. 2. impressus. Ovatus, convexus, flavo-testaceus, nitidus, elytris cinereis, profundi punctato-striatis, interstisim impunctatis, thorace postice transversum profundior impresso. (Long. corp. 1½—2 lin.)
Ovate, convex, testaceous-yellow: head testaceous, punctulated: thorax flavescent, the disc convex, the base with an arcuated impression, in which is a series of deeply impressed dots, the anterior and posterior margins rather clouded: elytra cinereous, very convex, rather obtuse behind, the apex itself
acuminated; each elytron with ten striae, composed of deeply-excavated spots, diminishing in size at the apex, the interstices impunctate; body testaceous beneath; the femoral laminae deeply punctate; legs elongate, entirely testaceous.

Var. β. Steph. Catal. l. c.—The punctures on the thorax and elytra larger than in var. α; the suture with a dusky spot in the centre.

Var. γ. Steph. Catal. l. c.—The head dusky cinereous, the mouth pitchy.

Var. 2. Steph. Catal. l. c.—The head rufo-ferruginous; the elytra immaculate.

Not very abundant near London: found occasionally in ponds and ditches in Battersea-fields, and near Hertford: also found in Norfolk. "Putney and Wandsworth Commons."—Mr. Ingpen.

"In the pond in the Botanic Garden, Cambridge."—Rev. L. Jenyns.

Sp. 3. mucronatus. Plate XI. f. 1.—Rufo-ferrugineus, nitidus, elytris tenue punctato-striatis, interstitiis levigatis, apice mucronato. (Long. corp. 2—2½ lin.)


Ovate-acuminate; deep rufo-ferruginous; glossy; head slightly punctulate; thorax finely and very thickly punctulate throughout, especially on the hinder margin; elytra faintly punctate-striated, the interstices impunctate, the apex mucronated; the disc convex, immaculate; body beneath pale testaceous-red; the ventral laminae deeply and coarsely punctate; legs and antennæ ferruginous. Distinguished from the following by the absence of punctations between the striae, the mucro at the apex of the elytra, deeper colour, and totally punctate thorax.

My specimens of this insect were obtained from the neighbourhood of Swansea: I believe the Ha. ophthalmicus of Mr. Kirby's MSS. is synonymous; if so, it inhabits the county of Suffolk also.

"A single specimen taken at Bottisham."—Rev. L. Jenyns.

Sp. 4. ferrugineus. Rufo-ferrugineus, nitidus, elytris profundi punctato-striatis, interstitiis sericibus punctorum minorum. (Long. corp. 2—2½ lin.)


Ovate acuminate, glossy, ferruginous-red; head finely punctate; thorax ferruginous, with the disc rather smooth, the margins thickly punctate, the base with a transverse streak of impressed dots; elytra ovate, much dilated at the base, the apex obliquely truncate, rather acuminate, each with ten regular punctate striae, the interstices with a faint row of small remote impressions on each, and a continuous stria of minute approximating dots towards the suture: body deep glossy ferruginous beneath; the central laminae paler, deeply punctate; legs ferruginous.

Var. β. Steph. Catal. l. c.—With the striae dusky, with a few oblong dusky-black spots between.

Var. γ. Steph. Catal. l. c.—The elytra dusky, thickly spotted with black in the interstices between the striae.
Dyticus.—Haliplus.


Sp. 6. obliquus. Flavo-testaceus, elytris obsolete punctato- striatis, basi, fascia media inaequali literaque intra apicem nigris. (Long. corp. 1 1/2—2 lin.)


Testaceous yellow; head glossy, finely and thickly punctate, with a blackish streak behind: thorax pale testaceous, the anterior margin more or less dusky, the surface very finely punctate throughout, with a sinuated row of larger impressions at the base, and a straight one at the apex, placed transversely, elytra acuminated, pale-yellowish, rather obsolete punctate-striated, with the base, an irregular oblique interrupted fascia, and a patch at the apex, black: body glossy testaceous-yellow beneath, the lamina obsolete punctated: legs and antennae pale ferruginous.

Var. β. With the spots on the elytra more or less confluent.

Not very common: found in the metropolitan district, and in Norfolk. “Sparingly at Bottisham.”—Rev. L. Jenyns.

Sp. 7. lineato-collis. Pallide testaceus, thorace lineis longitudinali nigris, strigis posticis lunulisque duabus impressis. (Long. corp. 1 1/2—1 lin.)


Pale-testaceous: head ferruginous, thickly punctate, the vertex sometimes pitchy: thorax rather convex, rather thickly punctulate, the anterior edge and a longitudinal dorsal line dusky-black; near the base is a transverse impressed streak, deepest in the middle, and, near the margin, on each side, a very deep arcuated impressed stria: elytra acuminated, rather convex, pale, shining, striated, the striae composed of deep impressions, the interstices with a few scattered dots, and several obsolete brown spots; at the base of the fourth and fifth striae from the suture are two very short and deep oblique strioles: body
deep-ferruginous beneath; the laminae deeply punctate; legs elongate, pale-testaceous.


Sp. 8. margine-punctatus. Flavo-griseus, aut fuscus, elytris punctato-striatis maculis marginalibus utrinque tribus. (Long. corp. l/2 lin.)


Deep testaceous red: head finely punctured, with the vertex piceous: thorax pale, or yellowish-red; glossy, the disc nearly smooth, the margin finely punctate, with a transverse waved striga of small, obsolete, impressed dots, and a minute stria at the base on each side: elytra acuminate, rather convex, pale dusky-testaceous, deeply punctate-striated, the punctures dusky, and the interstices more or less spotted with deep pitchy dots, and each with a few minute scattered impressions, the sutural one with the latter approximating: body pale-testaceous beneath: the lamina deeply punctate: legs and antennae pale.

Very abundant in ponds and ditches throughout the metropolitan district: also found in Norfolk, in Whittlesea Mere, &c. “Wandsworth-common and Copenhagen-fields.”—Mr. Ingpen. “At Bottisham, plentifully.”—Rev. L. Jenyns.

Sp. 10. affinis. Griseo-flavus, capite rufo-testaceo, elytris punctato-striatis, striis infuscatis, interstitiis immaculatis, thoracis disco obsoletissime punctulato. (Long. corp. 1½ lin.)

Griscous-yellow: head testaceous-red, obscurely punctulate: thorax with the disc very obsoletely punctate, the margins distinctly punctate, the base with
an undulated row of impressed dots, and an obsolete short stria on each side,
as in the preceding insect: elytra acuminate, punctate-striated, the stria
dusky, the interstices immaculate and impunctate: body pale-testaceous be-
neath; ventral lamina finely punctate: legs and antenna pale.
Closely allied to the last, but the stria on the elytra dusky, the spaces between
immaculate and impunctate: the disc of the thorax more obsoletey punctate.


Sp. 11. melanocephalus. Piceo-testaceus, elytris profundi punctato-striatis,
striis infuscatis, interstitiis obsoletissime maculatis, capite nigro-piceo. (Long.
corp. 1 lin.)
Less than any of the foregoing: pitchy-testaceous; the head pitchy-black, the
vertex deepest, punctulated: thorax ferruginous, very finely punctate through-
out, especially on the hinder margin, which is rather depressed: elytra acu-
minate, deeply punctate-striated, the stria dusky, with the interstices ob-
scurely spotted with black, and impunctate: body testaceous beneath; ventral
lamina rather deeply punctate: legs and antenna testaceous; the latter
palest.
I have one specimen of this insect, which I obtained from the
Marshamian Collection: its locality is unknown to me.

Sp. 12. brevis. Rufo-testaceus, elytris obtusis, subcinereis, punctato-striatis,
striis infuscatis, interstitiis immaculatis, thoracis disco punctulato. (Long.
corp. $\frac{1}{4}$ lin.)
Rufo-testaceous: head slightly ferruginous: thorax with the disc punctulate,
the margin more deeply so, especially behind, where it is a little depressed,
and has a faint rudimentary striola on each side: elytra obtuse, slightly cine-
reous, punctate-striated, the stria dusky, the interstices immaculate: body
beneath pale-testaceous; laminae paler, deeply punctate: legs and antenna
ferruginous.
Distinguished from the nine preceding insects by the obtuseness of the apex of
the elytra, and from the three last by the punctulated thoracic disc.

Of this species I have also one specimen only, which I caught
near London, and compared several years since with Mr. Kirby’s,
which were taken in Suffolk.

GENUS LXXVIII.—PELOBIUS, Schönherr.

Palpi, external maxillary with the terminal joint subclavate, the preceding
elongate, clavate, with a tooth on its inner edge, the two basal rather short:
labrum very narrow, entire, with a depression on its anterior edge: mandibles
obtuse, strongly bidentate at the tip: mentum anteriorly emarginate: Antennae
distinctly 11-jointed, the basal joint very large and thick, the second some-
what globose; the following, to the tenth, nearly equal in length, elongate, clavate; the terminal elongate acute; head ovate; eyes very prominent: thorax bisinuate behind: scutellum exposed, triangular: body oval, convex, obtuse posteriorly: legs gressorial, the hinder femora free: claws didactyle. 

Males with the four anterior tarsi equally dilated.

Pselobius differs from Haliplus and the five following genera by having a distinct, exposed, scutellum, and from the remaining Dytiscidae by having all the legs gressorial: it also differs in other important characters, as above pointed out, and very conspicuously by the great convexity of its body, which somewhat approaches to the form of that of the genera Haliplus, Hyphidrus, and Hygrotus.


Ferrugineus: head with a black patch round the eyes, expanded towards and somewhat approximating on the forehead: thorax with its anterior and posterior margins black: elytra with a large black patch on the disc, the anterior and lateral edges a little sinuated with the ferruginous ground, very convex, rugose, with several smooth longitudinal lines, which converge towards the suture at the apex: abdomen with the base ferruginous, the apex black; breast and sides of the thorax the same: legs pale ferruginous.

Pse. Hermanni is not a very abundant insect, especially in the northern counties, where, I believe, it occurs but rarely, if at all: near the metropolis, however, I have met with it in several places, particularly in the ponds in Copenhagen-fields: it occurs in Norfolk. When taken it makes a noise by the friction of its abdomen against the elytra. "Once found in a stream close to Cambridge."—Rev. L. Jenyns. "Wandsworth-common, Hampstead-heath, and Sunbridge, in Kent."—Mr. Ingpen. "Ditches and ponds near Limehouse and Bow."—Mr. Stone.

Genus LXXIX.—Hyphidrus, Illiger.

Palpi, external maxillary with the terminal joint elongate conic, the preceding short cylindric: labrum transverse entire: mandibles emarginate at the apex: mentum anteriorly emarginate, the centre scarcely produced. Antennae very short, the two basal joints largest, the fourth smallest, the terminal longest, abruptly acuminate: head rounded, depressed: thorax very short, transverse, produced in the middle behind: scutellum none: body nearly globose: legs formed for swimming: the four anterior tarsi four-jointed, with the last joint abbreviated; the posterior tarsi with one claw.
The chief characters of this genus consist in its nearly globose body, the abbreviated joint to the four anterior tarsi, the monodactyl posterior legs, the absence of a scutellum, and the subacute terminal joint of the external maxillary palpus.

Sp. 1. ovatus. *Brevis, ovatus, ferrugineus, elytris brunneis, immaculatis.* (Long. corp. 2—2½ lin.)


Short, ovate, ferruginous: male very finely punctulated: head and thorax rufo-ferruginous; the latter slightly convex, depressed towards the suture of the elytra; finely punctulate throughout, with a few larger impressions towards the middle of the base: elytra ovate, depressed on the back, rusty-brown, with a silken gloss, the margin paler, throughout finely and thickly punctate: body very convex beneath, ferruginous, the breast strongly, and the abdomen faintly, punctate: legs ferruginous: antennae testaceous.


Female larger, of a deeper colour; the thorax and elytra thickly and rather deeply punctate; the latter glabrous and shining.

Most convincing proofs have been observed of the identity of the two insects above described; I have therefore united them as sexes of one species, although Gyllenhal and others still conceive them to be distinct.

Far from uncommon in stagnant waters in the London district; found also in Norfolk and Devonshire. "Common in Cambridgeshire."—Rev. L. Jenyns. "Parson’s-green, Wandsworth-common, and Copenhagen-fields."—Mr. Ingpen.


Elongate-ovate, slightly acuminated: pale ferruginous: head broad, thickly punctate: thorax with two rather indistinct, round, dusky spots towards the base; the disc with a slightly-elevated transverse line; the surface thickly punctate: elytra rather depressed, posteriorly acuminated, obscure, thickly punctated, dusky-ferruginous, with the margin and several spots and streaks pale-testaceous: the body slightly gibbous beneath, testaceous, with the breast thickly punctate: legs testaceous.

This is different from the insect Mr. Hope has received from the continent as the Hy. variegatus of Illiger, but it approaches very closely to the one described by Gyllenhal, in his 4th vol., as a variety of Hy. ovalis; but its form is essentially different from that of the insect last described.

Of this species I have seen but one indigenous specimen, which was captured in Essex, and is in my collection.
Genus LXXX.—Hygrotus, * mihi.

Palpi, external maxillary with the terminal joint stout, tumid, ovate conic, acute: labrum minute: mandibles deeply notched at the apex: mentum tridentate anteriorly. Antennae short, the two basal joints rather elongate; the third and fourth very stout, equal in length; the remainder rather stouter and longer, the terminal being longest: head broad, depressed: scutellum none: body sub-globose, very convex, as high as broad: elytra ovate: legs elongate; the four anterior tarsi with four, the two posterior with five joints; all didactyle.

Hygrotus differs from Hydroporus by the superior convexity of the body, the more deeply emarginated apex of the mandibles, the swollen and acute terminal joint of the external maxillary palpi, and by the brevity of the third and fourth joints of the antennae: the genus very much resembles the preceding one, but from that it is readily known by the didactyle posterior tarsi.

Sp. 1. fluviatilis. Plate XI. f. 2. Flavo-testaceus, thorace utrinque striolat acum impressa, elytrorum disco nigro, flavo-maculato. (Long. corp. 1\(\frac{1}{2}\)—1\(\frac{1}{4}\) lin.)


Testaceous-yellow above, very obscurely punctulated: head pale, eyes dusky: thorax with a transverse elevated disc, and on each side a curved impressed line, the base obscurely impressed; on the disc is an abbreviated transverse spot, which becomes attenuated on each side: elytra very finely punctulated, obsoletely striated, with two of the striae more distinct and punctated: the disc with a large, irregular, black patch anteriorly, united by a smaller posterior one and by three or four black lines, leaving an irregular patch towards the suture, and a rounded one on the lateral margins, as well as the apex, base, and margins, of each elytra, yellowish: body beneath testaceous, finely punctulated: legs testaceous.

Not found in the vicinity of the metropolis, but a native of hilly and mountainous districts. "In the river Cawdor, near Carlisle, and in the Tavy, in Devonshire."—Dr. Leach. "Netley, Salop, very abundant."—Rev. F. W. Hope.

Sp. 2. assimilis. Supra ferrarinseus, thorace utrinque impresso, elytris lineis nigris abbreviatis. (Long. corp. 1\(\frac{1}{4}\) lin.)


Above ferruginous and thickly punctulated: head with a narrow fuscous margin to the vertex: thorax with the sides rounded, transversely convex in the
middle; within the margin, on each side, a bent, impressed fovea, and, towards the middle, an obsolete transverse one, in which are two oblong fuscous spots: elytra moderately convex, pale shining testaceous, the suture narrowly brown, each elytron with about five more or less confluent longitudinal lines on the disc, the two exterior shorter, and interrupted in the middle by a large pale spot: body pitchy-ferruginous, and obsoletely punctated beneath; legs elongate, ferruginous, with the base of the femora obscure.

Very similar to the preceding, but the markings on the elytra different, the colour more ferruginous, &c.

"In the river Plym, near Plymouth."—Dr. Leach. "Netley, Salop, and Aldborough, Suffolk."—Rev. F. W. Hope.

†Sp. 3. decoratus. Ferrugineus, elytris profundi punctatis fusco-brunneis, macula didyma antica, lunulante posteriori pallida. (Long. corp. 1 1/2 lin.)


Somewhat resembling Hy. pictus: colour rufo-ferruginous; head large, glossy, nearly smooth; eyes black: thorax shining, thickly and closely punctate: elytra large, ovate, smooth, shining, pitchy-brown, with several deeply-impressed, large, irregularly-scattered dots, and some minute ones between, with a large double pale spot at the base of each elytron, and a transversely lunule of the same colour a little beyond the middle, following the outline of the thorax, and connected with the exterior pale margin: body shining, reddish-brown beneath: legs entirely pale testaceous: antennae ferruginous, with the tips dusky.

This insect, which is the Hy. cuspidatus of Kunze, has been seldom found in England: there is one specimen in the British Museum, and the Rev. F. W. Hope has taken it at Netley.

Sp. 4. confluens. Niger, capite thoraceque ferrugineis, elytris pallidis, lineis quatuor abbreviatis nigris. (Long. corp. 1 1/2 lin.)


Rather depressed: head finely punctulated, ferruginous, with the crown and region of the eyes dusky: thorax thickly punctulated, pale-ferruginous, immaculate: elytra pale griseous, punctated, with a single regularly punctate stria on each, near the suture, the latter black; the disc posteriorly with four or five parallel black lines, which are frequently united behind; the sutural one and the third abbreviated anteriorly: body glossy-black beneath, deeply punctate: legs pale ferruginous.

A very common species throughout the metropolitan district: also found in Norfolk, and in Whittlesea Mere. "Wandsworth-common and Copenhagen-fields."—Mr. Ingpen.

Sp. 5. collaris. Ferrugineus, elytrorum basi, suturâ lineisque distinctis in-terruptis nigris. (Long. corp. 1 1/2 lin.)

Ferruginous: head finely punctulated, with a large impressed spot on each side between the eyes: thorax with its hinder margin dusky: elytra pale ferruginous, with the base and suture black; parallel with the latter is a longitudinal line, which is generally interrupted beyond the middle, and does not reach to the base: from the shoulder is a second, bent outward obliquely, and behind this is a short, duplex, irregular one, which is sometimes slightly hooked: body beneath totally pale ferruginous: legs testaceous.

Var. js. With the lines on the elytra slightly confluent towards the apex.

Not so abundant as the last, though frequently met with in ditches and ponds round London: also in South Wales and Devonshire. "Wandsworth-common and Copenhagen-fields."—Mr. Ingpen.

Sp. 6. affinis. Saturate ferrugineus, elytrorum disco nigro lineis obsoletis interr uptis margineque ferrugineis. (Long. corp. 1½ lin.)


Deep ferruginous: head as in the last,—with the vertex slightly fuscous: thorax with the hinder margin black: elytra thickly punctulated, black, with several obsolete interrupted lines, and the outer margin ferruginous: body beneath ferruginous: legs pale testaceous.

Found with the preceding, of which it may prove a variety, differing chiefly in having the elytra nearly entirely black, and more punctulated than in the last: it is also somewhat larger.

Taken near London.

Sp. 7. reticulatus. Ferrugineus, thorace margine postico in medio nigricante, elytrorum disco nigro lineis interruptis ferrugineis. (Long. corp. 1½ lin.)


Ferruginous: head as in the last: thorax finely punctulated, pale ferruginous, the hinder margin dusky in the middle: elytra covered with large irregular impressions, and many very minute ones between; the disc black, with the lateral margin, an angulated spot near the base, a line near the suture, and several interrupted ones on the disc pale ferruginous: body pale ferruginous beneath: legs testaceous.

This and the two preceding species greatly resemble each other, and all are by Gyllenhal presumed to be varieties of Hy. reticulatus of Fabricius; but I am induced to consider them different, until their identity shall be more satisfactorily proved.

Found near London: South Wales, and in Devonshire.

Sp. 8. inaequalis. Ferrugineus profundè punctatus, thorace antice posticeque nigris, elytris nigris, lateribus sinuatim ferrugineis. (Long. corp. 1½—1¼ lin.)


Ferruginous, deeply punctate: head faintly punctate, with a deep impression on each side of the forehead; thorax with the anterior and posterior margins...
black: elytra glossy black, thickly and deeply punctate, the lateral margin broadly and unequally ferruginous, with an irregular testaceous spot near the base, posteriorly bifid, sometimes united by a pale streak to the margin, the apex sometimes with a narrow black line on the lateral coloured margin; body deep shining ferruginous; deeply punctulated: legs elongate, pale ferruginous.

The markings on the elytra very much as above indicated.


Black: head deeply but distinctly punctate; with two larger impressions between the eyes: thorax thickly punctate, the disc rather elevated transversely: elytra thickly and finely punctate, the lateral margin irregularly pale testaceous, branching off first obliquely at the base, towards the angle of the suture, where it again turns backward parallel with the suture; secondly, beyond the middle, nearly at right angles, and waved; thirdly, short and obliquely, near the apex: body opaque, black beneath, thickly punctulate: legs ferruginous; the posterior pitchy-black.

I believe this is synonymous with the Hy. lepidus of De Jean; but it is different from the Hy. lepidus of Schonherr, as may be readily observed by a comparison of his figure with the one given in this work.

Common near London. "Ireland, Devonshire, and near Carlisle."—Dr. Leach. "Wandsworth-common and Copenhagen-fields."—Mr. Ingpen.

Sp. 10. pictus. Piceo-ferrugineus, elytris pallidis, sutura maculis oblongis disci, striâque submarginali nigris. (Long. corp. ¾—1¾ lin.)


Black, finely punctulated, the elytra with a few minute hairs; head pitchy-ferruginous, with a shallow impression on each side between the eyes: thorax slightly convex, pitchy-black, the lateral margin rufescent, with an abbreviated curved striola on the inner edge: elytra very convex, pale-yellow, with the suture, an oblong discoidal spot, and a stripe on the lateral margin black, leaving a flexuous stripe, dilated at each extremity, of the former hue upon the disc of each: body pitchy-red or ferruginous beneath: legs elongate, pitchy-red: antennae with the base pale rufous, the apex dusky.


**GENUS LXXXI.—HYDROPORUS, Clairville.**

*Palpi, external maxillary with the terminal joint sub-cylindrical, truncate: labrum minute: mandibles slightly emarginate at the apex, and denticulated internally towards the base: mentum tridentate. Antennae with the two basal joints elongate, the remainder nearly equal in length: head broad, gibbous; body oval, rather depressed, broader than high; elytra ovate: legs slender; the four anterior tarsi with four, the two posterior with five joints; all didactyle.*

This genus, which consists of several closely approximating species, may be known from Hygrothus by the truncate terminal joint of the external maxillary palpi, by the depressed body, which is broader than high, by the slighter emargination at the apex of the mandibles, and by the nearly equal length of the nine last joints of the antennae: from Noterus and Laccophilus it is distinguished by the four anterior tarsi possessing four joints only.

From its extent, I have subdivided the genus into sections, in order to facilitate the investigation of the species.

A. With the sides of the thorax rounded.

a. Elytra with the apex dentate.

*Sp. 1. frater. Plate XI. f. 4. Oblongo-ovatus, niger, thorace flavo baseo medio macula bilobd nigra, elytris limbo, maculis lineisque flavis. (Long. corp. 1½—2 lin.)


Oblong-ovate, convex, black beneath; above rusty-testaceous, rather opaque, very finely punctulated: thorax with a faint dusky margin anteriorly, and a large geminated black spot at the base in the middle; elytra with the suture, and several regular longitudinal lines, black; the apex obliquely truncate, with the outer angle denticulated: legs and antennae ferruginous, the latter dusky at the tip.

Var. 2. With the body entirely ferruginous beneath, or black, with the margins of the abdominal segments testaceous-red.

Sp. 2. areolatus. Oblongo-ovatus, subdepressus, pallidus, thorace nigro bipunctato, elytris pallido nigroque lineatis. (Long. corp. 1½ lin.)
Oblong-ovate, rather depressed, beneath pitchy-black, above pale, slightly pubescent; the thorax rounded anteriorly, the sides margined, with an impression towards the base, the latter with two black spots; elytra with the suture and several irregular lines on the disc black: legs and antennae ferruginous.

Var. b. With the body beneath rusty-testaceous.

"In the north of England."—Dr. Leach. "In running streams, Bottisham."—Rev. L. Jenyns. "Netley and Tradesley, Salop, rare."—Rev. F. W. Hope.

Sp. 3. depressus. Oblongo-ovatus, subdepressus, ferrugineus, thorace maculă basēs geminē elytrorumque suturā, lineisque disci irregularibus. (Long. corp. 2½—3 lin.)
Oblong-ovate, slightly depressed, pale ferruginous, finely punctulate and slightly pubescent: head large, rather dusky on the posterior margin: thorax a little convex on the disc, the anterior and posterior margins with a very narrow black edge, the latter with two small angulated, or rounded, spots: elytra a little convex, pale testaceous, the suture, and several irregular lines on the disc, black, leaving an unequal margin of a pale hue, and two dorsal spots on each elytron, the latter placed one behind the other; the tip of the elytra is obliquely truncate, the outer angle having a powerful dentation: legs and antennae pale ferruginous. The form of the lines and spots on the elytra varies considerably; in some specimens the former are sometimes confluent.


b. Elytra not dentate at the apex.

Sp. 4. duodecim-punctatus. Oblongo-ovatus, pallide ferrugineus, thorace maculā laterālis rotundātis, basi maculā bilobā nigra, elytris nigris, maculis sex ferrugineis. (Long. corp. 2½—3½ lin.)
The largest of this genus; of a pale ferruginous, obsoletely strigulated; head, with the region of the eyes, and its posterior margin, dusky: thorax, with the lateral margins, rounded anteriorly; the anterior with a broad black border in the middle, and the posterior also with a black edge, which is anteriorly produced into two lobes in the middle: elytra slightly convex, black, each with six pale spots, three parallel with the suture, and three on the margin; body pale ferruginous beneath: legs and antennae the same.
The size and form of the spots on the elytra vary greatly, and they are sometimes slightly confluent.

Rare near London, but more frequent in some of the distant counties. "In Devonshire, and near Carlisle."—Dr. Leach. "Very abundant at Netley, Salop."—Rev. F. W. Hope.

Sp. 5. consobrinus. Oblongus, subtus niger, supra pallide-testaceus, nitidus, punctatus, macula thoracis rhombeo, elytrorum basi, suturâ lineisque 5 nigris. (Long. corp. 21 lin.)


Oblong, beneath black; above pale testaceous, shining, punctate; thorax with a central rhomboidal black spot: the elytra, with the base, suture, and five regular longitudinal lines black, the lateral ones somewhat interrupted: legs and antennæ rusty-testaceous.

Not common; found occasionally near London.

Sp. 6. nigro-lineatus. Oblongo-ovatus, subtus niger, supra pallide ferrugineus, thoracæ macula discoidalâ parvâ, elytrorum suturâ lineisque 4 abbreviatis, nigris. (Long. corp. 22 lin.)


Oblong-ovate, beneath black; above pale ferruginous: head, with the nape and eyes, black: thorax with a small round black dot in the centre: elytra pale, with the suture and four distinct lines black, the outer one remote from the margin, and none of them reaching the apex; towards the suture is a single impressed stria: legs ferruginous.

"Near Kean's Cottage, Isle of Bute."—J. C. Dale, Esq.

Sp. 7. lineatus. Oblongo-ovatus, subtus niger, supra pallide testaceus, opacus, subtilissimâ punctatus, maculâ magna thoracis rhombeo, elytrorum basi, suturâ lineisque nigris. (Long. corp. 2 lin.)


Oblong-ovate, beneath black, above pale testaceous, opaque, finely punctulated: head with an oblique black streak on each side between the eyes: thorax with a large discoidal rhomboid black spot: elytra, with the base, suture, and five lines on the disc black; the first and third from the suture not reaching to the base; the fourth interrupted beyond the middle; the fifth very short, in the middle of the margin; the four inner ones more or less confluent at the apex: legs and antennæ ferruginous, the latter palest.

Rare: found near London, as well as in distant parts; near Norwich, Ipswich, &c. "Netley, Salop."—Rev. F. W. Hope. "Wandsworth Common."—Mr. Ingpen.

Sp. 8. picipes. Oblongo-ovatus, subtus niger, supra ferrugineo-testaceus, nitidus, grosse profundeque punctatus, capitis thoracisque basi lineisque elytrorum nigris, striis 6 baseos coleopterorum punctatis. (Long. corp. 22 lin.)

Oblong-ovate, beneath black, above rusty-testaceous, glossy, coarsely and deeply punctate; head with a bilobate dusky-black posterior margin: thorax punctulate, with its anterior margin dusky, its posterior blackish; within the latter a transverse series of deep impressions; elytra very deeply punctate, dusky, with the suture and four parallel lines on each, black, and a short streak of the same colour on the margin towards the apex; at the base are six deeply punctated striae, and a slighter one on each side of the suture: legs bright rufous-ferruginous: antennæ testaceous, annulated with black towards the apex.

More abundant than the three preceding species, but nevertheless somewhat uncommon; found occasionally near London, in Norfolk, Devonshire, and near Swansea. "Southend, rare, and Netley, Salop."—Rev. F. W. Hope.

† Sp. 9. alternans. Oblongo-ovatus, subtilus niger, supra ferrugineus, opacus, subtiliter punctatus, capitis maculis duabus, thoracis maculâ ad basin transversâ, elytorumque lineis nigris, striis & baseos coleopterorum punctatis obsolletis. (Long. corp. 2½ lin.)


Oblong-ovate, beneath black, above ferruginous, opaque, very finely punctulate; head with two black spots: thorax with a transverse black spot on the hinder margin: elytra dusky, with the suture and four parallel lines black, finely punctate, with four obsoletely punctate stria at the base: legs ferruginous.

In the British Museum. "Taken in Ulswater Lake."—Dr. Leach.

Sp. 10. dorsalis. Oblongo-ovatus, niger, pubescens, thoracis margine fasciisque interruptâ, elytorum puncto baseo, margineque inaequaliter ferrugineis. (Long. corp. 2—2½ lin.)


Black, pubescent, thickly punctulate and pubescent: head rufo-ferruginous, with a deep impression on each side in front: thorax transversely convex in the middle, black, the sides broadly ferruginous, sometimes with an interrupted fascia behind the middle: elytra moderately convex, black, the lateral margin more or less ferruginous, with a spot at the base, and a streak towards the apex of the same colour; towards the scutellum, at the base of the elytra, is also a spot, differing in size, of a deeper hue, which is occasionally deficient: body pitchy-ferruginous beneath, with the apex obscure, entirely punctated: legs and base of the antennae ferruginous; the apex of the latter dusky.


Var. γ. Thorax with a round ferruginous spot within the margin, a similar one near the base of the elytra, and the margin of the latter ferruginous.

The size and shape of the maculations vary considerably. Not

Sp. 11. alpinus. PLATE XI. f. 5. Oblongo-ovatus, subdepressus, subtus nigro-piceus, supra pallidas, glaber, thorace subquadrato, utrinque lineola impresso, nigro maculato, elytris subacuminatis, suturâ lineisque disci subregularibus nigris. (Long. corp. 12–1½ lin.)


Oblong-ovate, rather depressed; pitchy-black beneath, above pale testaceous, smooth; head with the forehead flavescent, the vertex rufescent: thorax with the anterior edge dusky; the disc with two interrupted transverse short black lines, bounded on either side with a deep, short, slightly curved, impressed striola, parallel with the lateral margin: elytra flavescent, subacuminated, with the suture, and about eight lines, black; the six inner parallel and unbroken; the seventh interrupted, leaving two large patches of the yellowish ground exposed; the eighth short, parallel with, and about the middle of the margin: some of the inner lines are obliquely turned up towards the base; and occasionally they become confluent, or obliterated; legs pale ferruginous; breast thickly punctulate.

Taken abundantly by Dr. Leach in the north of England, and in Devonshire. "Common in brooks, Netley, Salop."—Rev. F. W. Hope.


Oblong-ovate, black, pubescent, the superficies thickly punctulate: head rufous, with a dusky spot before each eye: thorax black, the disc convex, the lateral margins broadly rufo-testaceus: elytra oblong-ovate, black, a little glossy, more or less spotted on the margins with griseous, usually with a large spot at the base, united by a yellowish streak with the shoulder; the margin beyond the middle pale, behind this another pale spot, varying in size, anteriorly dilated, waved, and posteriorly acuminated; sometimes small, linear; towards the apex a third small, lunate, transverse spot, frequently connected with the second: body black, and slightly punctate beneath: legs rufo-ferruginous: antennae rufous, dusky at the tip.

Var. 6. Steph. Catal. l. c. Elytra with two spots on each, one at the base, the other, less, at the apex.

Var. 7. Steph. Catal. l. c. Of a rufescent colour above: probably immature. The colour, form, and number of spots on the elytra vary greatly.

One of the most abundant species of the family in Britain, occur-
ring in every brook, rivulet, &c. throughout the metropolitan district. "Wandsworth-common."—Mr. Ingpen. "Very plentiful throughout Cambridgeshire."—Rev. L. Jenyns.


Black, opaque: the head anteriorly, and the sides of the thorax, ferruginous: the elytra black, with a pale arcuated spot towards the base: the legs ferruginous.

I conceive that this insect (which I first obtained from the late Mr. Griffin's collection, by the above name) may be a mere variety of the foregoing: the original specimen is in Mr. Vigors' cabinet.

Near Norwich. "Arran, and near Spitchwick, Devonshire."—Dr. Leach.


Oblong-ovate, subconvex, black; the entire surface beneath a strong gloss, thickly and finely punctulate: head large, depressed, pitchy-red, with a dusky patch between the eyes: thorax convex in the middle, anteriorly and posteriorly impressed, thickly punctate, slightly glossy: elytra ovate, a little convex, shining pitchy-red, sometimes pale testaceous-red: body pitchy-black beneath, rather deeply punctate: legs rusty-red: antennae with the base ferruginous: the apex dusky.

The colour of the thorax is sometimes pitchy-red.


Sp. 15. umbrosus. Oblongo-ovatus, subconvexus, niger, pubescens, capite pedibusque rufis, elytris rufo-piceis, posterioris attenuatis. (Long. corp. 1—1½ lin.)


Minute; oblong-ovate, subconvex, black, pubescent; beneath a powerful lens thickly punctulate: head large, rounded, depressed, rusty-red, frequently with a dusky cloud between the eyes: thorax transversely convex on the disc, with a deep waved impression behind, slightly glossy: elytra oblong-ovate, above a little convex, dull pitchy-red, pubescent; body slightly glossy beneath, black, punctulated: legs elongate, pale rufescent: antennae the same, with the tip black.

Taken near London, but rarely.

B. With the sides of the thorax in continuity with those of the elytra.

a. With the tip of the elytra somewhat truncate.

Ovate, subconvex, shining, pitchy-black, deeply punctate: the head finely punctate, anteriorly ferruginous: thorax unequal, the margins thickly punctate, the disc rather elevated, slightly punctate; the lateral margin faintly rufescent: elytra very glossy, thickly punctate; the base and lateral margins more or less ferruginous, and the colour more or less distinct: body beneath glossy black, thickly and deeply punctate: legs deep ferruginous: antennae the same, with the terminal joints belted with dusky.

I have hitherto only met with this insect in the neighbourhood of London. "Wandsworth-common."—Mr. Ingpen. "Netley, Salop."—Rev. F. W. Hope.


Oblong-ovate, pitchy-black, pubescent: head shining, ferruginous, with a dusky spot on each side near the eyes; sometimes confluent, and two impressed dots between: thorax a little convex, unequal, anteriorly and posteriorly impressed transversely, black, punctate, the lateral margins ferruginous: elytra oblong-ovate, slightly convex, finely and thickly punctate, slightly pubescent, rusty-black, with the margins paler at the base: body beneath glossy rusty-black, subpubescent: legs and antennae ferruginous, the latter dusky at the apex.

Gyllenhal’s insect appears, from his description, to be of a deeper hue: I have hitherto seen three or four indigenous specimens only, all of which are of a rufescent or rusty-black.

Once taken by myself near London. I have a second example, but am not aware of its locality. "Ulswater Lake, twice captured." Dr. Leach.


Ovate, flat, pitchy-black, opaque, slightly pubescent, finely punctate; head anteriorly ferruginous, with a dusky curved line near each eye: thorax very short, the base deeply sinuated; above depressed, black, opaque, the lateral margin obscure, ferruginous: elytra slightly convex, nearly flat, pitchy-black, opaque, finely punctulate, and slightly pubescent; the shoulders, more or less, and the lateral margins, beyond the middle, ferruginous: body beneath pitchy-black, rather glossy, obscurely punctate: legs and antennae ferruginous, the latter with the tips dusky.
I have a pair of this species, which I captured in a ditch near the junction of the Surrey and Croydon Canals.

b. With the elytra not truncate at the apex.

Sp. 19. Scalesianus. _Rufō-ferrugineus, elytris saturatoribus, punctulatis, subtus niger; antennis pedibusque rufō-testaceis._ (Long. corp. $\frac{3}{4}$ lin.)


Minute, rufō-ferruginous: head with an impression on each side in front: thorax with the disc slightly elevated transversely, the posterior margin thickly punctulated: elytra deep-ferruginous, inclining to castaneous, the outer margin palest, finely and rather thickly punctulate throughout: body glossy-black beneath, thickly and rather strongly punctate: legs and antennae rufō-testaceus, the latter palest.

Of this insect I have as yet seen but a pair, which were captured by the late R. Scales, Esq., in Norfolk, who kindly supplied me with one of the specimens, and to whom I dedicated the species long since.

Sp. 20. _unistriatus._ _Ovatus, niger, thorace fasciā pallidā strioliāque duabus coleoptris communibus, elytris plagā obsoletā rufescente._ (Long. corp. $\frac{3}{4}$—1 lin.)


Minute: ovate, black, punctulated: head pitchy-brown, scarcely punctulated: thorax transversely testaceous in the middle, the anterior and posterior margins dusky, with an oblique impressed line on each side at the base: elytra ovate, much attenuated posteriorly, above convex, rather deeply punctulate, pitchy-black, with an undefined, obsolete, rufescant patch on each, near the shoulder; in the middle of the base an abbreviated, deeply-impressed striola, in continuity with the one on the base of the thorax; and, parallel with the suture, a rather faint stria, scarcely reaching to the apex: body pitchy-black beneath, deeply punctate: legs ferruginous; tarsi obscure: antennae ferruginous at the base, black towards the tip.

Not very abundant in the neighbourhood of London; more frequent in Devonshire. "Kensington-gardens."—_Rev. F. W. Hope._

Sp. 21. _geminus._ _Oblongo-ovatus, niger, thorace fasciā pallidā strioliāque duabus impressis in elytris continuatis, coleoptris fasciā dentātā margineque pallidis._ (Long. corp. $1\frac{1}{4}$ lin.)


Minute, oblong-ovate, black: head piceous: thorax pale-testaceous, shining, finely punctulated, the anterior margin dusky in the middle, the posterior with a large transverse dusky-black patch, terminating on each side in an oblique, deeply-impressed striola, which is carried on to the base of the elytra; the latter are finely punctulated, glossy-black, with an irregular pale fascia before the middle, a semi-ovate spot behind the middle, and a triangular one,
both pale, within the apex; the margin is also pale; near the suture is a faint stria, reaching to the apex: body glossy pitchy-black beneath, slightly punctate: legs pale-ferruginous.

The markings on the elytra vary much: the anterior fascia is frequently divided into three spots, of which the marginal one is largest and quadrilateral, the inner slender, wedge-shaped; the other spots are sometimes united to the pale margin.

Taken sometimes near London: in ponds on Wimbledon-common, and in Coombe-wood.

Sp. 22. minimus. Ovatus, niger, elytris apice lineisque tribus pallidis; pedibus rufis. (Long. corp. $\frac{3}{4}$—1 lin.)


Ovate minute; ovate black: elytra with a submarginal pale line, and two at the base: the legs rufous: the antennae dusky at the base. Probably a mere variety of the foregoing.


Sp. 23. granulans. Oblongo-ovatus, niger, subpubescens, elytrorum margine lineis duabus pallidis, antennarum basi pedibusque testaceis. (Long. corp. $\frac{2}{3}$—1 lin.)


Minute; oblong-ovate, black, punctulated, slightly pubescent: head glossy black; thorax shining black, the lateral margins generally pitchy-testaceous, with an abbreviated impressed striola on each side within: elytra ovate, each with a slight pale line in the middle, broadest anteriorly, another commencing at the shoulder, angulated and obliquely bent towards the apex, where it becomes recurrent; in the margin is also a pale abbreviated streak: body pitchy-black or ferruginous, beneath punctulated: legs ferruginous; the antennae dusky at the base. Probably a mere variety of the foregoing.


Sp. 24. ovalis. Oblongo-ovatus, subacuminatus, ferrugineus, pubescens, elytris pallidoribus lineis quatuor fasciis. (Long. corp. $1\frac{3}{4}$—$1\frac{3}{8}$ lin.)


Oblong-ovate, ferruginous, slightly pubescent, punctulated: head and thorax shining, the latter with its anterior and posterior margins a little dusky: elytra attenuated towards the apex, opaque, with the suture and four lines fuscous, and an oblique stripe of the same colour on the margin; body pale ferruginous beneath, punctulated: legs and antennae pale ferruginous.
Var. 3. The elytra dusky, with obsolete ferruginous lines, with the outer margin of the latter colour: it also varies in the intensity of the lines on the elytra, which are sometimes deeper and sometimes nearly obliterated.

Not uncommon in ponds and ditches in the vicinity of London; in Battersea-fields, the New River, and also in Norfolk. "In a ditch at Crosby, near Carlisle."—Dr. Leach. "Turf pits in Bottisham and Swaffham-fens."—Rev. L. Jenyns. "Kensington-gardens."—Rev. F. W. Hope.

Sp. 25. nigrita. Oblongo-ovatus, subdepressus, niger, pubescens, antennarum basi pedibusque rufis, elytris stria disci punctata. (Long. corp. 1\(\frac{1}{2}\) lin.)


Oblong-ovate, slightly depressed, black, pubescent, very finely punctulate; head broad, the margin of the vertex ferruginous: thorax slightly convex, totally black: elytra broad, ovate, depressed, black, more or less pubescent, with a very obsolete punctate stria on the disc, and sometimes another towards the margin: body beneath pitchy-black, shining, rather deeply punctate: legs ferruginous-red, with the hinder thighs pitchy at the base.


Ovate, rather convex, black, slightly pubescent: head pitchy: thorax with the disc transversely convex, nearly smooth, the posterior margin rather thickly and strongly punctate: elytra somewhat convex, a little attenuated towards the apex, thickly and rather strongly punctate throughout: body deep black beneath, punctulated: legs pitchy: antennae rufo-piceous at the base, dusky towards the apex.


Sp. 27. minutus. Oblongo-ovatus, subdepressus, niger, pubescens, lateribus thoracis pedibusque piceo-ferrugineis, antennarum basi ferrugineis. (Long. corp. 1\(\frac{1}{4}\) lin.)


Oblong-ovate, subdepressed, black, pubescent: head with the frontal fovea very deep: thorax with a transverse impression behind, the disc rather convex, smooth, the hinder margin punctate, the lateral margins deep pitchy-ferruginous: elytra pubescent, obsoletely punctulate, with a faint elevated carina on each towards the suture: body deep black beneath, the base of the abdomen and the plura rather deeply punctate: legs pitchy-ferruginous: antennae with the base ferruginous, the apex rather dusky.

Sp. 28. planus. Oblongo-ovatus, depressus niger, pubescens, tibiis solis rufis. (Long. corp. 1½ lin.)
Minute; oblong-ovate, depressed, pubescent, black: elytra rather pale at the base, obsolescently punctulate; with a very faint abbreviated stria in the middle of the base; beneath pitchy-black: the legs pitchy, with the tibiae alone rufous. Probably a variety of one of the foregoing; to Hy. trivialis it approximates most closely, but its form appears dissimilar.

The above description drawn from the Marshamian specimen, which I believe was taken near London.

Sp. 29. melanocephalus. Oblongo-ovatus, subconvexus, niger, glaber, antennarum basi ferrugineus, pedibus piceis. (Long. corp. 1½—1¾ lin.)
Oblong-ovate, subconvex, black, glabrous, very finely and faintly punctulate throughout: head with the margin of the crown pitchy-red: thorax transversely convex, nearly smooth, anteriorly and posteriorly impressed, entirely glossy black: elytra oblong-ovate, moderately convex, glossy black, immaculate: body beneath shining black, sparingly punctate: legs pitchy-black, with the joints dull testaceous: antennae ferrugineous at the base, black at the apex.

Var. 8. With the elytra and legs dull pitchy-red; the elytra dusky on the back: probably immature.

Extremely abundant in ponds and rivulets throughout the metropolitan district, and in Norfolk. "Frequent in ditches near Ely, and elsewhere in Cambridgeshire."—Rev. L. Jenyns.

Oblong-ovate, rather convex, black, pubescent, finely punctulate: head rufose-ferruginous, with a dusky cloud between the eyes: thorax obscure black, the lateral margins more or less ferruginous: elytra a little glossy, pubescent, rather strongly punctate, with the shoulders and lateral margin somewhat testaceous: body beneath shining black, punctulated: legs elongate, entirely rusty-red: antennae testaceous at the base, dusky at the apex.

This is likewise very common in the vicinity of London. "Found with the last."—Rev. L. Jenyns.
Sp. 31. flavipes. **Ovatus, subdepressus, niger, pubescens, elytris fuscis basi marginisque testaceis, pedibus pallide ferrugineus.** (Long. corp. 1½—1¾ lin.)


Ovate, slightly depressed, black, pubescent, thickly but finely punctulate: head with two deep frontal impressions: thorax with the disc transversely convex; elytra fuscous, with the base and margin testaceous: body deep glossy black beneath: legs pale ferruginous.

The base and margin of the elytra are sometimes broadly testaceous.


Sp. 32. ater. **Ovatus, subdepressus, niger, antennis pedibusque omnino ferrugineis.** (Long. corp. 2 lin.)


Ovate, subdepressed, black; with the antennæ and legs entirely ferruginous.

I suspect that the above is an immature state, or a variety of the following species.

Taken in pools near London.

Sp. 33. holosericeus. **Ovatus, subdepressus, niger, pubescens, antennarum basi pedibusque ferrugineis.** (Long. corp. 2 lin.)


Ovate, slightly depressed, black, pubescent: head with the margin of the crown glabrous, ferruginous: thorax slightly convex above, and entirely black: elytra black, very pubescent, thickly punctulated, the lateral margin and base generally paler: body shining black beneath, punctulated: the legs ferruginous: antennæ ferruginous at the base, the tip dusky.

Very common near London; also found in Norfolk. “Wandsworth-common.”—*Mr. Ingpen.* “Frequent in ditches near Ely, and elsewhere.”—*Rev. L. Jenyns.*

Sp. 34. pubescens. **Ovalis, planus, niger, pubescens, antennarum basi pedibusque ferrugineis, elytris testaceis, stria disci punctata.** (Long. corp. 1½—2 lin.)


Oval, flat, black, very pubescent, finely and thickly punctate: head ferruginous towards the crown: thorax anteriorly and posteriorly impressed transversely: elytra ovate, much depressed, deep testaceous, much punctulated, and strongly pubescent, the disc with an abbreviated stria of larger impressions: body pitchy-black beneath, rather deeply punctulated: legs ferruginous, the femora sometimes dusky: antennæ ferruginous at the base, blackish at the apex.
Frequent near London, and in Norfolk. "Wandsworth-
common."—Mr. Ingpen.

Sp. 35. fuscatus. *Ovalis, niger, subpubescens, elytris piceo-fuscis, obsolete punctu-
tulis, pedibus ferrugineis, femoribus basi nigro-piceis.* (Long. corp. 2 lin.)


Oval, depressed, black, slightly pubescent: head black, with a rusty streak be-
hind: thorax black, immaculate, the disc slightly convex: elytra ovate, rather
depressed, pitchy-brown, obsoletely but thickly punctulated: the base and
lateral margin rather palest: body beneath deep shining black: legs ferru-
ginous: the base of the femora pitchy-black: antennae ferruginous at the
base, dusky at the apex.

This is apparently the Hy. planus, var. a. of Gyllenhal, but the colour of
the elytra differs.

Rare: I have two specimens, which were captured near Lon-
don, and one taken in Norfolk. "Barham."—Rev. W. Kirby.

Sp. 36. piceus. *Oblongo-ovatus, niger, vic pubescens, elytris piceis profundè punctu-
tatis, pedibus omnino ferrugineis.* (Long. corp. 2½ lin.)


Oblong-ovate, depressed, black, scarcely pubescent: head anteriorly rufo-ferru-
ginous: thorax with the disc convex, the anterior and posterior edges with a
transverse series of impressed dots, black, the lateral margins obsoletely-ferru-
ginous: elytra ovate, piceous, the sides paler, deeply punctate throughout:
body pitchy-black beneath, punctate: legs entirely ferruginous: antennae
ferruginous at the base, dusky at the tip.

Probably synonymous with Hy. planus, var. b. of Gyllenhal, but the colour of
the elytra is different, and they appear more deeply punctate: the head is not
black.

Also rare: I possess one specimen which was caught near Lon-
don, and another from the vicinity of Norwich. "Barham."—Rev.
W. Kirby.

**Genus LXXXII.—Noteurus, Clairville.**

*Palpi, external maxillary with the terminal joint elongate-ovate, the preceding
and basal one shortest; labial with the basal joints short, the last very large,
broad, and emarginate at the apex: labrum small, rounded: mandibles
deeply emarginate at the tip, with a small tooth towards the base: mentum
emarginate anteriorly, with an obsolete lobe in the centre. Antennae with the
fifth or seventh joint dilated, the rest simple, gradually diminishing to the
last, which is acute: head rounded, convex: thorax with a triangular pro-
jection in the place of the scutellum, which is wanting: body very convex,
attenuated posteriorly: posterior legs subnatatorial: posterior tibiae short;
all the tarsi with five joints: males with the anterior tibiae very short, stout, dentate internally.

This genus is distinguished with facility from the foregoing by the incrassated joint of the antennae, the emarginate terminal joint of the labial palpi, and convex body, by which characters it also differs from Laccophilus; and from Colymbetes and the following genera it may be known by the absence of an exserted scutellum.

Sp. 1. crassicornis. *Ferrugineus, elytris saturatioribus, lineis tribus punctorum impressis, abdomen piceo.* (Long. corp. 2½ lin.)


Pale-ferruginous, shining: head smooth: eyes black: thorax convex, smooth: elytra very convex, as broad as the thorax at the base, then slightly attenuated towards the apex, which is rounded, of a deep-ferruginous, inclining to chestnut, with the lateral margin paler; each has three irregular rows of impressions at the base: body deep-ferruginous beneath, the abdomen dusky: legs deep-ferruginous; the male with the four anterior femora with a black ring towards the apex.

Not very frequently met with; I have taken it once or twice in ditches at Battersea-fields, and on Epping-forest: it occurs in Norfolk and Suffolk. "In Milden-hall dmain; also in Burwell-fen, Cambs."—*Rev. L. Jenyns.* "Wandsworth-common."—*Mr. Ingpen.* "Whittlesea Mere."—*Messrs. Chant and Bentley.*


Deep-ferruginous, shining: head and thorax impunctate: elytra rather dusky, with the margin paler, the disc with impressed dots, placed in three somewhat regular lines near the base, and scattered irregularly towards the apex: body ferruginous beneath: legs and antennae rufo-ferruginous.

Var. 8. The centre of the thorax and the abdomen beneath dusky or piceous.

In *Entomologia Britannica,* the length of this insect is accidentally said to be five lines; but the identity of the species is unquestionable, from the accompanying figure having been taken from the original specimen whence Marsham drew his description.

Of more frequent occurrence than the last, and generally found in the same places: it also occurs in Norfolk; but not yet found in Cambridgeshire. "Plentiful near Kimpton."—*Rev. G. T. Rudd.* "Wandsworth-common and Epping-forest."—*Mr. Ingpen.*
Genus LXXXIII.—Laccophilus, Leach.

Palpi, external maxillary with the first and third joints shortest, the fourth elongate, subulated: labial with the terminal joint longer than the others, rather curved, acuminate: labrum minute, emarginate: mandibles acute, dentate towards the apex: mentum bilohate. Antennae simple: head broad, gibbous: thorax triangularly produced in the centre behind, in place of the scutellum: elytra oval, slightly acuminate, a little convex: posterior legs formed for swimming: all the tarsi five-jointed.

Laccophilus bears considerable resemblance in form to Colymbetes, but the absence of a scutellum at once distinguishes it from that genus and the following, as do the simple antennae from Noterus, the five-jointed anterior tarsi from Hydroporus, Hygrotus, and Hyphidrus, and the natatorial posterior feet and depressed body from Pselobius and Haliprus.

Sp. 1. minutus. Flavo-ferrugineus, elytris fuscis, basi lateribusque pallidis, thorace flavo immaculato. (Long. corp. 2 lin.)


Rusty-yellow; very glossy: head very smooth, pale-yellowish or greenish; eyes black: thorax moderately convex, very smooth, yellowish-green immaculate: elytra slightly convex anteriorly, depressed posteriorly, obtuse, smooth, glossy greenish-yellow, with the margin and several irregular spots, one in the middle of the base, another towards the suture, emarginate on either side, an oblique one on the shoulder, and another in the middle, both connected with the margin; an oblong narrow streak toward the middle, and another at the apex: body testaceous-yellow beneath: legs yellowish; hinder tarsi obscure.

The number and size of the maculations vary considerably; they are sometimes nearly obsolete.


Sp. 2. interruptus. Ovalis, fuscus, capite thoraceque flavis, elytris virescentibus pellucidis. (Long. corp. 2 lin.)


Oval, fuscous, very smooth and shining: head and thorax yellow-immaculate: eyes black: elytra greenish, pellucid, rather attenuated towards the apex, the surface beneath a lens finely but faintly and thickly punctulate, marked as in the preceding insect: body testaceous beneath; legs pitchy-ferruginous.
The number and size of the spots on the elytra vary much. The chief distinctions of this insect from the foregoing consist in the more acuminated elytra, and the deeper colour; but I think it probable that both may eventually prove identical.

More abundant than the last: common in ponds and ditches round London; also in Norfolk. "Bottisham, common."—Rev. L. Jenyns.

Genus LXXXIV.—Colymbetes, Clairville.

Palpi, external maxillary with the second and third joints equal, the fourth as long as the two preceding united, with the apex obverse: labrum minute, rounded anteriorly: mandibles truncate, deeply emarginate at the apex: mentum tridentate anteriorly. Antennae slender, rather elongate; the second joint shortest, the third and fourth of nearly equal length: head subovate: thorax short: elytra oblong-ovate: scutellum distinct: posterior legs natatorial: claws didactyle: tarsi five-jointed: four anterior tarsi of the males with the three first joints nearly equally dilated.

Colymbetes embraces an extensive series of insects, which differ considerably in external form from each other; nevertheless their general aspect is so extremely similar, and the gradations of shape so close, that I shall not attempt to divide them into sections, but dispose them in accordance with their apparent affinities, commencing, agreeably to my usual practice, with those species which are nearest allied to the foregoing genus, and terminating with such as approximate to the following. They are usually considerably larger than any of the preceding insects of this family, and may be known by possessing an exserted scutellum, compressed posterior natatorial legs, elongated tibiae, didactyle claws, and an obtuse terminal joint to the external maxillary palpi.


Oblong-ovate, ferruginous, finely punctulate: vertex more or less dusky: thorax with the disc blackish, the margins ferruginous, above rather convex, very delicately punctulate-stribose: elytra oblong-ovate, attenuated towards the apex, a little convex, finely and closely punctulate, with several strie of irregularly-placed deeper impressions, dusky-ferruginous, the basal and lateral margins paler: breast and abdomen beneath dark pitchy-black; the margins of the segments paler: legs and antennae pale-ferruginous.

Var. 2. With the vertex and thorax immaculate-ferruginous.


Sp. 2. guttatus. Oblongo-ovatus, subdepressus, niger nitidus, antennis pedibusque rufo-piceis, elytris guttulis duabus rotundatis pallidis. (Long. corp. 4 lin.)


Rather depressed; oblong-ovate, obsoletely but thickly and finely punctulated throughout: head large, black, smooth, pitchy; vertex with two transverse red spots: thorax black, immaculate, a little convex, with an obsolete impression behind: elytra slightly dilated in the middle, above rather depressed, glossy-black, with the margin concolorous; with a round, pale, transparent spot a little behind the middle, and a second more obsolete and smaller within the apex: near the suture is a continuous stria of impressed dots, and on the disc anteriorly three regularly-punctate striae, becoming irregular and scattered towards the apex: body beneath immaculate glossy-black: four anterior legs pitchy-red, the posterior pitchy-black: antennae ferruginous.

Sometimes met with in the metropolitan district: I have received it from Devonshire. “The most abundant species of Colymbetes in Salop; also near Buxton.”—Rev. F. W. Hope. “Under stones in puddles, Glanville’s Wootton.”—J. C. Dale, Esq. “In a running stream near Ashburton, Devon, June, 1828.”—Messrs. Chant and Bentley.

Sp. 3. fontinalis. Oblongo-ovatus, subdepressus, aneo-niger, antennis pedibusque piceo-nigris, elytris guttulis duabus obsoletissimis pallidis. (Long. corp. 4 lin.)


Closely allied to the preceding, but more oblong and less depressed: the entire surface is very obsoletely punctulate, and of a brassy-black: head with two very faint rufous spots on the vertex; the mouth black: thorax immaculate, convex: elytra convex, deep brassy-black, with a very obsolete, minute, pallid transparent spot behind the middle, and a second, still more minute and indistinct, within the apex; the lateral margin scarcely dilated beyond the middle; the disc with three very faint striae, composed of impressed dots, placed regularly towards the base, and scattered towards the apex: body deep black beneath; legs pitchy-black: antennae piceous, with the base palest.

† Var. β. C. picicornis. Sturm? Deep-black above and beneath, the elytra with a very minute pale spot towards the margin; the antennae, palpi, and tarsi bright pitchy-ferruginous.

The colour is sometimes pitchy above, and the antennae ferruginous.

Found in Devonshire, and near Shoreham, Sussex. “Dartmoor.”
—Dr. Leach. I rather suspect that var. β, which is in the British Museum, may be a distinct species; its form is apparently dissimilar to that of the true Co. fontinalis: the specimen was taken in Devonshire.


Oblong-ovate, the entire surface finely and thickly punctulate: head black, the mouth and margin of the forehead, and a lunule on the crown, rufo-ferruginous; antennae slender, pale rufescent: thorax very short, much sinuated posteriorly, with the hinder angles thrown back and acute; above rather convex, black, the lateral margins rusty-red: elytra large, ovate, very little dilated in the middle, rather depressed, black, opaque, immaculate, the humeral margin slightly piceous, the disc with three faint punctate striae: body pitchy-black beneath, finely striate: anterior legs testaceous-red, the thighs beneath and base pitchy-black; the posterior pitchy-black, with the joints paler.

Six indigenous examples of this insect have come beneath my notice: of which two were captured in Norfolk by Mr. Curtis, and four in Whittlesea Mere by Messrs. Chant and Bentley.

Sp. 5. fuliginosus. Oblongo-ovatus, posterius attenuatus, obscure metallicus, flavo-marginatus, subtus ferrugineo-brunneus. (Long. corp. 5 lin.)


Oblong-ovate, posteriorly attenuated; dull-brassy above; the surface under a deep lens finely coriaceous: head black, anteriorly ferruginous, with two more

† Sp. 6. cicur. Oblongo-ovatus, niger nitidus, levis, maculâ capitis thoracisque margine rufo-ferrugineis, elytris flavis nigro irroratis, lineis tribus flavis. (Long. corp. 8 lin.)


Oblong-ovate, above yellowish, shining, finely and thickly punctulated: head dusky, with a rufo-ferruginous spot on the crown: thorax dusky-black, with the anterior margin dull-testaceous; the lateral margins and an obsolete central line obscure rufo-ferruginous: elytra oblong-ovate, moderately convex, shining, pale flavescent, thickly irrorated with black, with a small patch at the shoulder, another in the middle of the base, and a slender line down the suture, also black; the disc of each with three narrow longitudinal immaculate-yellow lines, and three obsoletely-punctate striae, rather irregular towards the apex: body beneath pitchy-ferruginous, or black: legs dusky or testaceous.

F 2
or less distinct transverse reddish spots on the crown: thorax slightly convex, brassy-black, with the lateral margins pale-ferruginous: elytra elongate, attenuated towards the apex, above convex, dull blackish-brass, with the outer margin pale-yellowish, the disc with an obsolete punctate stria: body pitchy-ferruginous beneath, the abdomen sometimes paler: legs and antennae pale-reddish.


Oblong, posteriorly attenuated, black: head glossy, with fine irregular abbreviated striae; the labrum and a broad band between the antennae yellowish, and the crown with two, more or less apparent, transverse ferruginous spots: thorax very slightly convex, throughout very faintly and irregularly strigose.

The late Mr. Tuther assured me that he caught two specimens of this insect in a pond between Snaresbrook and Wanstead, in Essex, twenty years since. Nevertheless, as it has neither been recaptured (although most diligently searched for, by several most indefatigable collectors and by myself, in the pond above alluded to, and in the neighbourhood), nor known to inhabit any other part of Europe, but, on the contrary, is a native of the Cape of Good Hope, whence the Rev. F. W. Hope has received specimens direct, I conceive that its admission into the indigenous Fauna is questionable, especially as the former possessor of the specimens not only dealt in insects, but had, inter alia, Silpha marginata Fabricius, a species of Mygale, and some other exotic species, in his cabinet, as British. One of the specimens above referred to is in the British Museum by the MS. name elongatus of Leach; the other in that of Mr. Vigors, by the name laevigatus of Wilkin; the specimens having been purchased at a high price by Dr. Leach and Mr. Wilkin.

Forster, in his Century of Insects, has a Dytiscus glaber that, unless intended for a variety of Co. ater, which is barely possible, in some respects agrees with the above insect; but his description is far too concise and indefinite to determine the point: he says, “Antennis setaceis compressis, fuscus, elytris glabris ventre pedibusque ferrugineis. Obs. Magnitudo Dytisci striati, cui admodum simile insectum”: and the observation seems to remove it from Co. ater.
testaceous-yellow, with the middle unequally black: elytra oblong-ovate, attenuated beyond the middle, above moderately convex, dusky-black, the margin pale griseous-yellow; finely and rather deeply transversely striate throughout; each elytron with two longitudinal striae, consisting of rather obsolete impressed dots; towards the suture and the margin are also a few scattered impressions: body beneath dusky-black, rather glossy, thickly strigose: legs black, ruggedly punctate.

The disc of the thorax is sometimes nearly all black, at others a narrow waved transverse band alone occurs; and the margins of the abdominal segments are sometimes ferruginous.


Closely allied to the last, but rather smaller, proportionally shorter and more obtuse posteriorly: head scarcely striated, but obsolete punctulated: thorax rather more convex than in Dy. striatus, testaceous-yellow, the disc obscurely and irregularly pitchy-brown; the anterior and posterior margins generally pale: elytra ovate, apex obtusely rounded, rather convex, pale-fuscous; the lateral margins, and sometimes the base pale-griseous, very finely striated transversely throughout, with two longitudinal punctate striae: body beneath deep rather glossy black, sometimes pitchy; delicately strigose: anterior legs testaceous-yellow, the base of the thighs beneath pitchy; the posterior pitchy, with the joints paler.

Taken abundantly in Whittlesea Mere by Messrs. Chant and Bentley; I have also specimens captured near London.

Sp. 9. pulverosus. Plate XII. f. 2.—Ovatus, niger, supra flavi, thorace maculâ mediâ nigra, elytris crebrâ nigro irroratis, sirtis ausi punctatis. (Long. corp. 6—6½ lin.)


Ovate, black, above yellowish: head posteriorly black, with two, more or less, confluent ferruginous spots: thorax above a little convex, finely rugose beneath a strong glass, luteous, with a transverse dusky-black spot in the middle: elytra ovate, moderately convex anteriorly, rather depressed behind, yellowish: the disc thickly irrorated with black; the lateral margin and a narrow line on the suture immaculate-luteous; the entire surface finely rugulose, and on each elytron three rather conspicuous punctate longitudinal lines, becoming obt-
solete towards the apex: body deep black beneath; the laciniae of the sternum piceous: four anterior legs yellowish, the posterior pitchy-black, with the tips of the thighs ferruginous: antennae pale.

Not uncommon in various parts of England, especially near the metropolis. "Copenhagen-fields and Clapham-common."—Mr. Ingpen.

Sp. 10. notatus. Ovatus, supra flavicans, thorace maculis disci nigris, elytris crebre negro irroratis, striis nullis punctatis: femina; elytris anterius striolis crebris abbreviatis impressis. (Long. corp. 5 lin.)


Ovate, above yellowish: head smooth, anteriorly yellow, the crown black, with two transverse testaceous spots: thorax somewhat waved behind, a little convex, very obsolescent and irregularly punctulated, yellowish, with a large transverse black spot on the disc, more or less divided, sometimes occupying considerable space, and occasionally nearly obsolescent, and the centre of the posterior margin black: elytra ovate, moderately convex, yellowish, with the disc entirely thickly irrorated with black, with the lateral margin and a narrow line down the suture immaculate; the disc has frequently three distinct slender pale streaks: the breast is black, the apex of the sternum testaceous; the abdomen pitchy-black, with the margin of the segments and the apex pale: legs entirely yellowish.

The female has the elytra thickly covered towards the base with abbreviated striae, the abdomen nearly pale, with the base and sides spotted with brown.

Not very common; I have, however, frequently taken it in a pond on Wandsworth-common in April; it is found in Norfolk. "Carlisle."—Dr. Leach. "Southend and Aberystwith."—Rev. F. W. Hope. "Once taken at Bottisham."—Rev. L. Jenyns. "Whittlesea Mere."—Messrs. Chant and Bentley.

Sp. 11. exsoletus. Oblongo-ovatus, undique flavescens, thorace vix maculato, elytris nigro irroratis, striis disci punctatis. (Long. corp. 5 lin.)


Oblong-ovate, flavescent: head with the crown narrowly black, with two transverse testaceous spots: thorax generally immaculate, sometimes with two remote brownish spots on the posterior edge, which are rarely connected by a dusky margin: scutellum black, with the apex testaceous: elytra oblong-ovate, moderately convex; the entire disc thickly irrorated with black, the margin and a narrow line down the suture immaculate; each elytron has three irregular punctate striae: breast flavescent, with the sutures darker: abdomen deep rusty-testaceous: four anterior legs flavescent, posterior rather testaceous.

I have restored Forster’s names to this and some other species, agreeably to the just practice of adopting those proposed by the first describer, although in
my Systematic Catalogue I have unintentionally permitted them to occupy a secondary position*.

This is likewise not very abundant, but occurs sometimes near the metropolis, as well as in Norfolk. "Carlisle."—Dr. Leach. "Pools, Netley."—Rev. F. W. Hope. "Whittlesea Mere, plentifully."—Messrs. Chant and Bentley.


Rather larger than the last; oblong-ovate, above yellowish: thorax with the disc immaculate, the anterior and posterior margins in the middle with a narrow black edge: scutellum black: elytra oblong-ovate, moderately convex; the disc very thickly irrorated with black, the outer margin and a narrow streak down the suture immaculate, the disc of each with two longitudinal striae of impressed dots; and the entire surface under a strong lens very finely strigose, especially in the female: body beneath black, finely strigose; sternum with the apex ferruginous; the four hinder segments of the abdomen margined with ferruginous: the four anterior legs pale, the posterior deep ferruginous, the femora beneath with an oblong dusky spot.


Broader but not longer than Co. collaris; oval, above flavescent: head with the crown black, with two transverse testaceous spots: thorax entirely flavescent, with two very obsolete remote fuscous spots on the hinder margin, the surface very finely punctulate: scutellum pitchy-brown: elytra broad, oval, dilated towards the middle, rather convex, rather thickly irrorated with black, the outer margin and a narrow line down the suture immaculate; on the disc are three punctate striae: the breast smooth glossy black, sternum testaceous; abdomen shining black, with the base, apex, and margins of the segments testaceous: legs entirely yellowish.

* In accordance with the above, Stenolophus vespertinus, vol. i. p. 166, should be called St. lateralis, after Marsham, not St. placidus, Gyllenhall.—Marsham’s name did not recur to me at the time the observation in p. 183 was penned.
Also a rare species; I have one specimen which was caught in Norfolk, and another taken at Whittlesea Mere. "Clengre, Gloucestershire."—Rev. F. W. Hope.


Ovate, above yellowish: head anteriorly yellow, with two transverse ferruginous spots: thorax a little convex, obsoletely punctulated, with two round approximating black spots on the disc: scutellum testaceous-yellow: elytra broad, ovate, a little convex, finely punctulated, pale yellowish, with several scattered dusky-black streaks; the lateral margin, a narrow line down the suture, and a large spot behind the middle of the lateral margin immaculate-yellowish; the disc with three rather obsolete punctate striae: body pitchy-black beneath, the apex and margins of the segments ferruginous; the apex of the sternum also ferruginous: legs pale-testaceous.

The black spots on the thorax are sometimes nearly confluent, at others almost obliterated.


Sp. 15. subnebulosus. Ovatus, supra flavicans, pectore piceo-niger, abdomine testaceo, thorace immaculato, elytris atro-nebulosis, punctoque pallido intrà marginem. (Long. corp. 4 lin.)


Oval, above yellowish: head as in the last: thorax immaculate, with an obsoletefuscous cloud in the middle of the posterior margin: elytra oval, faintly clouded with dusky, with the outer margin and suture immaculate, and a large pale-yellowish spot behind the middle on the outer margin; on each elytron are three irregular punctate striae, and several scattered impressions towards the apex: the breast is pitchy-black, the abdomen testaceous; the legs are also testaceous.

My specimens of this species were taken near "Aldborough, Suffolk."—Rev. F. W. Hope.

Sp. 16. conspersus. PLATE XII. f. 4. Oblongo-ovatus, supra griseo-flavus, subtis niger, capite nigro, postici maculis duabus rubris, elytris obsolèissimì nigro irroratis. (Long. corp. 4—4½ lin.)


Oblong-ovate, griseous-yellow: head with the vertex broadly black, having two transverse rufous spots: thorax immaculate; elytra oblong-ovate, slightly
convex, very obsolete irrorated with black, with the outer margin and the
suture immaculate, and an indistinct paler spot on the outer edge beyond the
middle; the disc has three rather obsolete punctate striae at the base, and a
few scattered dots towards the apex: the body beneath shining black, with
the margins of the abdominal segments testaceous: the legs are pitchy-ferru-
rinous, with the femora pitchy-black.

Var. β. With the elytra immaculate testaceous-yellow.

The Dy. conspersus of Gyllenhal is synonymous with the Co. pulverosus before
described.

Taken sometimes near London; more frequent in the neigh-
bourhood of "Southend." — Rev. F. W. Hope.

Sp. 17. Sturmii. Ovatus, niger, subtilissime reticulato-strigosus, thoracis late-
ribus, antennis pedibusque ferrugineis, elytris fuscis pallido-marginatis. (Long.
corp. 4—4½ lin.)


Ovate, black, very finely reticulate-strigose: head black, with two ferruginous
spots placed transversely on the crown: labrum smooth, pale ferruginous:
thorax with the disc black, the lateral margins broadly ferruginous; within
the base and apex a transverse line of obsolete compressed dots: scutellum
pitchy: elytra large, ovate, rather convex, dusky-brown, the edges indeter-
minately ferruginous, and on each elytron three obsolete striae of minute im-
pressed dots: body beneath pitchy, finely strigose, with the margins of the
segments and the apex ferruginous: legs ferruginous, with the femora, espe-
cially the posterior, at the base and beneath, more obscure.

Var. β. With the margins of the thorax black, the edge itself obscure ferru-
ginous.

Common throughout the metropolitan district, and near Bristol.

Var. β I obtained from Devonshire. "Whittlesea Mere." — Messrs.
Chant and Bentley. "Very abundant everywhere in Cambridg-

Sp. 18. congener. Ovalis, subdepressus, niger, subtilissime punctulato-substri-
gosus, elytris fuscis, margine pallidiori, pedibus ferrugineis, femoribus nigro
maculatis. (Long. corp. 3¼ lin.)


Oval, subdepressed, black, very finely punctulate-strigose: head black, with the
mouth, labrum, and two transverse spots on the vertex, rufo-ferruginous:
thorax slightly convex, glossy-black, the lateral margins above somewhat
rufescent: elytra ovate, rather depressed, the back glossy dusky-black, the
base and margins indistinctly pale testaceous; each elytron with three distinct
striae of impressed dots, the inner regular interiorly, the outer, and all behind,
irregular and confused: body beneath pitchy-black, with the edges of the
hinder segments and the apex ferruginous: legs ferruginous, the anterior femora in the middle, on both sides, and the posterior nearly entirely black.

Rare: it occurs in Suffolk; and my specimen I obtained from a Norfolk collection.

Sp. 19. paludosus. *Ovalis, subdepressus, niger, laxis, thoracis lateribus pedibusque ferrugineis, elytris fuscis, basi marginque pallidis.* (Long. corp. 3—3½ lin.)


Oval, subdepressed, black, smooth, glossy: head black, with the mouth, labrum, and forehead, anteriorly testaceous-yellow; the crown with two transverse ferruginous spots: thorax moderately convex, glossy-black, sometimes brassy or bluish, very smooth, the lateral margins broadly rufo-ferruginous: scutellum testaceous: elytra ovate, punctate, as in Co. congener; but the interstices entirely smooth, glossy, the back dusky, the base and margins testaceous-yellow: body smooth glossy-black beneath: four anterior legs ferruginous, the base of the femora pitchy-black, the posterior piceous, with the joints ferruginous.

Var. 6. Paler, with the body testaceous beneath, probably immature.

Occasionally found in gently-flowing streams near London: it also inhabits Norfolk, the neighbourhood of Bristol, Swansea, and the hilly districts of Devonshire. "Very abundant in September, 1825, at Netley; and at Skipton and Larden, Salop, July, 1828."—*Rev. F. W. Hope.* "Bottisham, sparingly, always in running streams."—*Rev. L. Jenyns.* "Chevening, Kent, and Epping-forest."—*Mr. Ingpen.* "Middlemist, Dorsetshire."—*J. C. Dale, Esq.* "Very common near Kimpton."—*Rev. G. T. Rudd.*

Sp. 20. maculatus. *Ovatus, suprā niger, thorace fascia latā, elytris maculis, lineisque longitudinalibus pallidis.* (Long. corp. 3½—4 lin.)


Ovate, above black, finely punctulated: head anteriorly rufous, posteriorly black, with two transverse ferruginous spots: thorax slightly convex, pale-yellowish, the anterior and posterior margins black in the middle: elytra ovate, convex anteriorly, with three obsolete punctate striae on the disc, glossy-black, with the lateral margin pale or whitish; near the base, internally, a whitish spot; posteriorly bifid, the exterior branch running to the apex of the elytra; near the exterior margin two whitish spots, one before, the other behind the middle, both bifid on either side, and connected with the pale margin; within the apex is a round spot terminating in a line on the disc: these spots vary much in size and form: body rusty-brown beneath, the apex often obscure: legs rufo-ferruginous.

Var. 7. Thorax with an interrupted yellowish fascia; the elytra with very small simple spots.

Var. 8. Thorax with an interrupted yellowish fascia; the margin of the elytra above pale.

Many other intermediate varieties occur.


Sp. 21. abbreviatus. Ovatus, niger, capite rufo, elytris fasciis undulatâ abbre-
vitâ basaeis, maculisque duabus marginalibus pallidis. (Long. corp. 3 lin.)

Ovate, black, finely punctulate: head smooth, obscure-rufous, with a fuscous spot on the crown: thorax posteriorly subinsinuated with obtuse angles; above moderately convex, pitchy-black, with the lateral margins irregularly ferruginous; within the apex a continuous stria, and at the base another, interrupted in the middle, of impressed dots: elytra oblong-ovate, moderately convex, shining black, the lateral margin unequally ferruginous, the disc with three punctate lines; near the base a narrow waved, pale-testaceous, transverse fascia, united to the margin, but not reaching to the sutures; a little beyond the middle, near the margin, a duplex spot, sometimes divided, of the same colour, and within the apex a minute one: body beneath glossy-black, the segments of the abdomen and its apex margined with ferruginous: legs rufescent. The duplex spot near the middle of the margin is frequently united by a longitudinal streak to the anterior fascia, at the shoulder.

I believe this species has not been found nearer to London than Windsor, and even there but sparingly; it is sometimes found in Norfolk. "Windsor."—Dr. Leach. "Larden, Salop."—Rev. F. W. Hope. "Whittlesea Mere abundantly."—Messrs. Chant and Bentley.

Sp. 22. vitreus. Ovatus, niger, elytris lanceolatis nigro-ceneis, striis tribus simplici
seriis punctatis, macro laterali didymâ punctoque apicis albido fenestratis.
(Long. corp. 4 lin.)

Ovate, black, smooth: head generally rufo-testaceous anteriorly, with two reddish spots on the crown: thorax sinuated behind, moderately convex, slightly oeneus, with the lateral margin rusty-piceous: elytra oblong-ovate; moderately convex, smooth, glossy, brassy-black, with the margin concolorous; a little beyond the middle, near the outer margin, is a large duplex whitish spot, and near the apex a smaller simple one, entirely bifid, and both subpellucid; the disc of each elytron has three regular punctate striae: body beneath black, or
piceous: legs rufo-testaceous, with the femora beneath, and the base of the
tibia, especially the posterior, dusky.
The spot on the margin of the elytra is sometimes divided in two.

Not very common near London; more frequent in distant parts,
especially in Glamorganshire; and I believe not uncommon in Nor-

Sp. 23. chalconotus. Oblongo-ovatus, nigro-ceineus, depressus, subtilissime reti-
culato-strigosus, thoracis lateribus pedibusque rufo-piceis. (Long. corp. 4 lin.)

Oblong-ovate, brassy-black, depressed, very finely reticulate-stri'gose: head,
with the mouth, and edge of the forehead, ferruginous, with two transverse
rufous spots on the crown: thorax, posteriorly, slightly waved; rather convex,
with the lateral margin more or less reddish-pitchy: elytra oblone-ovate, sub-
depressed, immaculate blackish-brass, the lateral margins piceous; on the sides
are three rows of scattered impressed dots, most abundant towards the apex:
body pitchy-black beneath: four anterior legs pitchy-red, the posterior pitchy-
black.

Var. S. With the abdomen and legs rusty-red, the margins of the thorax
pitchy-red.

Extremely common in the spring, in ponds and ditches, round London: also found in Norfolk, Suffolk, and near Swansea. "York-
shire."—Dr. Leach. "Netley, abundant."—Rev. F. W. Hope. "Occurs occasionally near Bottisham, but is not plentiful."—Rev.
L. Jenyns.

Sp. 24. montanus. Oblongo-ovatus, nigro-aneus, subdepressus, subtilissime
coriaceus, thoracis lateribus concoloribus, pedibus nigro-piceis, elytris vix
striatis. (Long. corp. 3 lin.)

Oblong-ovate, brassy-black, somewhat depressed, finely coriaceous: head as in
the last species, but the transverse spots on the crown obsolete: thorax scarcely
waved posteriorly, rather convex, immaculate brassy-black: elytra oblong-
ovate, rather depressed, immaculate brassy-black, the lateral margin obscurely
piceous, the disc with three scarcely visible punctate striae: body beneath
pitchy-black, with the margins of the abdominal segments rufo-ferruginous:
legs pitchy-black, the anterior palest.

It appears to me that the above is a mere variety of Co. chalconotus, differing
in being a little smaller, in wanting the ferruginous margins to the thorax, and in having the sculpture more obsolete.

Found occasionally with the foregoing insect. "Dartmoor."—Dr. Leach. "Netley, Salop, in ditches."—Rev. F. W. Hope.

Sp. 25. nigro-aeneus. 

Dy. nigro-aeneus. Mariam.—Co. nigro-aeneus. 

Oblongo-ovatus, nigro-subaneus, depressior, punctulatus, thoracis elytrorumque lateribus dilutioribus, pedibus rufis. (Long. corp. 2½—3 lin.)

Dy. femoralis. 

Paykul.—Co. femoralis. 


Small: oblong-ovate, depressed, punctulated, brassy-black: head, with the mouth, labrum, and margin of the forehead, testaceous; and two transverse spots on the crown rufous: thorax moderately convex, shining blackish-brass, with the lateral margins indeterminately testaceous-red: elytra ovate, a little convex, brassy-black, with the margins and base indeterminately paler, the disc punctulated, and also having three irregular rows of deeper impressions on each elytron, and near the suture a fourth of rather obsolete dots: body pitchy-black beneath, or black: antenna and palpi black at the apex: legs pale rufescent, the hinder femora sometimes with a dusky patch in the middle; the anterior thighs thickened; the male with a dense pale fringe beneath, and in the female slightly ciliated.


Sp. 27. striolatus. 

Oblongo-ovatus, subdepressus, niger, longitudinaliter subtilissime striatus, striis anastomozantibus, antennis pedibusque rufis. (Long. corp. 3½ lin.)

Dy. striolatus. 

Gyllenhal.—Co. striolatus. 

Small, oblong-ovate, rather depressed, black, longitudinally finely striated, the striae frequently anastomozing, as in Co. bipustulatus: head glossy-black, with the mouth, labrum, and margin of the forehead, ferruginous; the crown
with two transverse rufous spots: antennae ferruginous: thorax rather convex, glossy-black; the margin above, especially anteriorly, ferruginous: scutellum pitchy-red: elytra oblong-ovate, rather depressed, immaculate shining black, each with three very irregular rows of impressed dots, sprinkled without order towards the apex, besides the anastomozing striae: body shining pitchy-black beneath, with the margins of the segments ferruginous: legs deep rufo-ferruginous, with the femora, especially the posterior, often pitchy-black at the base.

I am not aware of the locality of my specimen of this species (which is the only indigenous example I have seen), but suspect that it was taken near London several years ago.

Sp. 28. affinis. Ovatus, convexus, niger, subtilissime punctato-substrigosus, antennarum basi pedibusque rufts, elytris lineolis duabus pellucidis. (Long. corp. 3 lin.)


A small species: ovate, convex, black, very finely, but obsoletely, punctato-strigose: head shining black, with the mouth and labrum testaceous, and two rufescent transverse spots on the crown: antennae pale-rufescent, with the apex brown: thorax above convex, immaculate shining black, with a punctate continuous stria within the apex, and another, interrupted in the middle, at the base: elytra oblongate-ovate, not dilated in the middle, convex, glossy-black; a little beyond the middle, within the margin, as lender pale pellucid streak, and within the apex another, more distinct: on the disc of each elytron are three irregular rows of impressions, which become scattered towards the apex, where, towards the suture, is a regular stria of punctations: body glossy-black beneath, irregularly strigose: four anterior legs rufescent, with the base of the femora pitchy-black; the posterior pitchy-black.

Rare: I have two specimens, which I believe were captured in Norfolk. “Netley, Salop.”—Rev. F. W. Hope.

Sp. 29. uliginosus. Ovalis, convexus, niger nitidus, aut nigro-oeneus, subpunctatus, thoracis elytrorumque margine antennis pedibusque rufo-ferrugineus. (Long. corp. 3\(\frac{3}{4}\) lin.)


Oval, convex, shining-black, finely punctulate; head depressed, with the mouth, labrum, and margin of the forehead rufo-ferruginous, and two rather large transverse spots on the crown: thorax rather sinuated behind, above convex, glossy-black; with a brassy tinge, the lateral margins broad and rufo-ferruginous: elytra large, ovate, not dilated in the middle, very convex anteriorly, shining, somewhat brassy-black, with the lateral margins paler; on each are three very irregular rows of impressed dots towards the base, and a few impressions near the suture: body glossy-black beneath, with the segments of the abdomen edged with ferruginous: legs rufo-ferruginous, with the femora more or less dusky: antennae pale-rufescent, with the tip rather obsurse.
† Var. \( \beta \). Co. \textit{aeratus mihi}. \textit{Steph. Catal.} p. 51. No. 508. With the disc of the thorax and the elytra rich greenish-brass; in other respects similar to the above.

The Marshamian specimen of var. \( \alpha \) is the only indigenous example I have seen: I am not aware of its locality; and of var. \( \beta \), which is in the British Museum, I have also seen but one, which was captured near Windsor.


Ovate, convex, glossy, rusty-testaceous or ferruginous, very smooth: head rather depressed, rufo-testaceous, with sometimes a small black spot on the crown: thorax convex, rather sinuated behind, with the hinder angles thrown back and obtuse, bright rufo-ferruginous, immaculate; on the anterior and posterior margins, towards the angles, are a few impressed dots, placed in a row: elytra convex, deep rufo-ferruginous, immaculate, with the lateral margin and the base indeterminately paler or testaceous, and the suture rufescent; the disc with three obsolete rows of distant impressed dots: thorax beneath rufous: plurae and abdomen black: four anterior legs rufo-piceous, posterior nearly black, the tarsi piceous: antennae pale rufo-ferruginous, very short.

Of this insect, which is apparently nondescript, there are eight specimens in the collection at the British Museum; they were captured by Dr. Leach, in South Devon, in the spring of 1825.

Sp. 31. \textit{aterrimus}. \textit{Subovatus subaneo-niger, obscure-nitidus, immaculatus, antennis solis rufis}. (Long. corp. 4 lin.)


Subovate, somewhat brassy-black, obscurely shining, immaculate; beneath a powerful glass, somewhat finely striated, as in Co. \textit{bipustulatus}: head with the mouth and labrum pitchy: the vertex immaculate: thorax obsoletely sinuated behind, slightly convex; elytra somewhat ovate and convex, very finely but obsoletely striate, with three faint longitudinal rows of impressions at the base, and some scattered dots towards the apex; dull brassy-black, with the outer margin obscurely piceous: body pitchy-black, tinged with aeneous beneath, and thickly strigose: legs, especially the posterior, deep pitchy-black.

Co. \textit{niger} of De Jean is synonymous with Co. \textit{grapii}: I have therefore been compelled to change the name from that in my Catalogue.

I have only a single specimen, which was taken near London, in 1820.

Ovate, black, shining, depressed posteriorly, the entire surface thickly and evidently covered with slender longitudinal anastomosing striae; head with the labrum and mouth pale-ferruginous; the vertex with two elongate rufo-ferruginous transverse spots; thorax sinuated posteriorly, rather convex, glossy-black; elytra ovate, large, slightly convex anteriorly, depressed posteriorly, shining black, with a brassy tinge, the striae rather deeper than on the head and thorax, and the disc of each elytron with three irregular rows of impressions: body pitchy-black beneath, striated, the posterior segments with ferruginous edges; legs pitchy-black, the anterior tibiae and tarsi testaceo.

Var. α. *Steph. Catal. i. c.* With the anastomosing striae more deeply impressed.

Var. γ. *Steph. Catal. i. c.* With the elytra entirely more or less of a pitchy-brown or rufo-testaceous; probably immature.


Oval, subdepressed, black; head finely punctulate, the labrum and mouth ferruginous; the crown with two transverse rufo-ferruginous spots; thorax a little convex; finely punctulate, subsinuated behind, rather glossy and brassy-black, the lateral margins slightly rufescens; elytra large, ovate, not dilated in the middle, a little depressed, the back shining dusky-black, very smooth, the margins indeterminately pitchy-testaceous; each elytron with three rows of impressions, placed somewhat regularly at the base, but irregularly towards the apex; body deep-glossy black beneath, the posterior segments of the abdomen edged with ferruginous; legs pitchy-black, with the anterior tibiae and tarsi rufescens.

One specimen only of this species has come under my inspection: it is in my own cabinet, and was taken by myself, several years back, in the neighbourhood of London.


Oblong-ovate, narrow, convex, blackish-brass; the entire surface finely coriaceous; head with the mouth, labrum, and sometimes the anterior margin of
the forehead obscure ferruginous, with two transverse red spots on the vertex. Thorax black-brass: elytra very oblong, narrow, scarcely dilated in the middle, attenuated towards the apex, convex, immaculate blackish-brass, the margin concolorous, with three rows of irregular minute impressions on the disc: body glossy pitchy-black beneath: legs pitchy-black, with the joints and anterior tibiae rusty-piceous.

Var. β. With the four anterior legs entirely ferruginous.

Not common; taken in the metropolitan district.

† Sp. 35. vittiger. Oblongo-ovatus, nigro-canescens, palpis antennisque ferrugineis, pedibus rufo-piceis, elytris lineis unice lateralibus rufo-fenestratis. (Long. corp. 4\frac{1}{4} lin.)


Black or brassy above; and, with a powerful glass, the entire surface appears covered with net-like striæ: head with two transverse oblong rufescent spots on the vertex: the palpi ferruginous: thorax immaculate: elytra rather elongate, blackish-brass, with the margin concolorous; each with three rows of large distinct irregular impressions, and a reddish rather oblique, and sometimes nearly obsolete, line towards the middle of the lateral margin: body beneath brassy-black, obsoletely punctate: legs pitchy-red, anteriorly paler.

This species appears to be in the collection at the British Museum, unnamed; it was taken by Dr. Leach in Devonshire four years since.

Sp. 36. guttiger. Oblongo-ovatus, niger, subconcessus, subbis piceus, elytris lineolatibus punctisque fuscis, pedibus piceo-ferrugineis. (Long. corp. 4—4\frac{1}{4} lin.)


Oblong-ovate, black, somewhat convex, finely punctulated: head with the mouth and palpi rufo-ferruginous, with two transverse rufous spots on the crown: thorax rather convex, black, the anterior angles slightly ferruginous: elytra large, ovate, rather broader in the middle, anteriorly moderately convex, behind rather depressed, entirely black, with the margin concolorous; on the disc of each elytron are three rows of very obsolete minute impressions, very irregularly disposed; a little behind the middle, near the margin, is a narrow reddish-yellow transparent streak, and a round spot of the same colour within the apex: body beneath black, or pitchy-black, rather glossy: four anterior legs dull rufescent, the posterior pitchy-ferruginous.

Var. β. Co. immunis. Steph. Catal. p. 49. No. 484. With the rows of impressed dots on the elytra extremely obsolete; visible only with a powerful glass.

Not common near London; I have twice captured var. α. All the specimens that have come under my inspection of var. β. were taken as below. “Pools, Netley.”—Rev. F. W. Hope. Var. β. “Ponds in Bewdley-forest, Worcestershire.”—Messrs. Cooper and Ingpen.

MANDIBULATA. VOL. II. 1ST SEPT. 1828.
Sp. 37. fenestratus. *Oblongo-ovatus, convexus, nigro-enceus, posterius attenuatus, elytris lineolis duabus fenestratis, margine corporeque ferrugineis.* (Long. corp. 5—6 lin.)


Oblong-ovate, convex, brassy-black, attenuated posteriorly: head broadly ferruginous anteriorly, with the spots on the crown obsolete: thorax with the lateral margin more or less rufo-ferruginous: elytra convex, with the lateral margins broadly ferruginous, each with three longitudinal rows of irregularly dispersed impressions, and a little beyond the middle, within the margin, an obsolete narrow longitudinal streak, and a second less distinct within the apex: body glossy rufo-ferruginous beneath: legs ferruginous.

Var. 8. With the upper surface pitchy-black, beneath pitchy.


Sp. 38. ater. *Oblongo-ovatus, niger, convexus, posterioris attenuatus, elytris lineolis duabus fenestratis, antennis pedibusque anterioribus ferrugineis.* (Long. corp. 6—7 lin.)


Oblong-ovate, black, convex, posteriorly attenuated: head with the mouth dull ferruginous, and two more or less distinct ferruginous spots on the crown: thorax rather sinuated behind; above convex, the lateral margins obscurely pitchy-ferruginous: elytra large, oblong-ovate, slightly dilated in the middle, attenuated towards the apex, very convex, shining black, or dull ameous, with the outer margin anteriorly pitchy-brown; on the disc of each elytron are three irregular rows of minute impressed dots; a little beyond the middle, within the margin, is a narrow longitudinal transparent pale testaceous streak, and an indistinct oblique one towards the apex: body pitchy-black beneath, with the apex and the margins of the abdominal segments frequently rufescent: four anterior legs rufescent, posterior pitchy-black.

The colour of the upper surface varies in being somewhat piceous, and of the under by occurring of a pale testaceous: probably immature.

Not uncommon in ponds throughout the metropolitan district; also in Norfolk, Dorsetshire, &c. "Sundridge, Kent."—Mr. Ingpen.

Sp. 39. obscurus. *Oblongo-ovatus, niger, convexus, elytris maculis duabus fenestratis obsoletiusculis, corpore subtus, antennis pedibusque piceis.* (Long. corp. 6 lin.)


Oblong-ovate, deep black, convex: head and thorax as in Co. ater: elytra very convex, obsoletely striated, with two very indistinct fenestrated spots, one on the lateral margin, a little beyond the middle, the others at the apex: body beneath, antennae, and legs pitchy.
I cannot imagine the above insect to be specifically distinct from the foregoing; its smaller size, deeper colour, and apparent diversity of form, are the only distinctions; and I have taken both in the same ponds; but upon the latter subject I shall enlarge at some future period.

This appears synonymous with the Co. 4-guttatus, De Jean, according to specimens sent by him to Mr. Hope.

Also taken in the vicinity of the metropolis, in Norfolk, &c.


† Sp. 40. quadrinotatus. Suboblongo-ovatus, convexus, niger, nitidus, elytris punctis duabus rotundatis albis, antennis rufo-ferrugineis, pedibus nigris. (Long. corp. 4½ lin.)


Somewhat oblong-ovate, rather attenuated posteriorly, convex, black, shining: head and mouth black, the former rather convex, with two large rufous spots on the crown: thorax smooth, with a deep aruncate impression on each side, within the hinder angles: elytra oblong-ovate, glossy black, very smooth, a little beyond the middle, near the outer margin, a large round transparent white spot, and rather within the apex a smaller one of the same colour: on the disc of each are three rows of impressed dots, placed rather irregularly towards the apex: body deep glossy black beneath: legs also black, with the four anterior tarsi rufo-piceous: antennae rufo-ferruginous.

This differs from Co. guttatus by the superior convexity of its body, and more attenuated form, exclusively of the difference in the colour of its legs, &c.

Five specimens of the above-described insect are in the collection at the British Museum; they were taken by Dr. Leach in Devonshire in the spring of 1825:—they are apparently new; yet as nearly half the species of Colymbetes in the above collection are unnamed, and the species themselves are promiscuously arranged, it is a difficult matter to decide upon their identity or disparity; it is therefore with considerable hesitation that I venture to pronounce this, as well as other insects which I have described from the Museum specimens, under such disadvantageous circumstances, as novel.

Genus LXXXV.—Agabus, Leach.

Palpi, external maxillary with the second and third joints equal, the fourth longer and subulated: labrum bilobate: mandibles emarginate at the apex: mentum trilobate, the central lobe small. Antennae (of the males) with the seven basal joints obconic, the three following compressed, internally dilated, and serrated, the terminal small acuminate: head subovate: thorax elongate-transverse: scutellum distinct: elytra ovate, attenuated: legs natatorial: an-
terior femora compressed, dentate beneath in the males: posterior tibiae elongate: tarsi five-jointed, the anterior in the male coarctate, dilated: claws didactyle.

Agabus may be known from the following genera by the form and proportions of the external maxillary palpi, the compressed anterior femora, the superior convexity of the body, and other less conspicuous characters; the males are further discriminated by the form of their antennae, and of their anterior dilated tarsi: from the foregoing genera, excepting Colymbetes, from which the palpi, &c. distinguish it, the present differs by having a scutellum and swimming posterior legs.


Ovate, convex, obtuse; smooth pitchy-black: head anteriorly rufo-ferruginous, with two large reddish transverse spots on the crown: thorax deeply emarginate anteriorly, very convex, smooth, the lateral margins broadly reddish-pitchy; with an irregular continuous series of impressed dots, within the apex, and an interrupted one at the base: elytra very convex, the margin pale ferruginous; the superficies under a powerful lens finely but thickly punctulate, with three irregular striae of impressed dots on each elytron: body pitchy-red beneath: legs the same: the anterior femora of the male compressed, dentate beneath, the anterior tarsi coarctate, somewhat patellate. Female less, with simple antennae and anterior femora.

"*Netley, Salop, rare."—Rev. F. W. Hope.

**GENUS LXXXVI.—HYDATICUS, Leach.**

Palpi, external maxillary with the second joint somewhat shorter than the following, the third and fourth nearly equal, the latter subulated: labrum slightly emarginate: mandibles somewhat triangular, bifid: mentum trilobate. Antenna with the second and third joints shortest, the remainder of nearly equal length: head rounded: scutellum distinct: elytra ovate, convex, smooth in both sexes: posterior legs natatorial: tarsi five-jointed: anterior tarsi of the males patelliform and ciliated: intermediate dilated: claws didactyle: thorax a little rugose in the females.

Hydaticus was proposed as a genus by Dr. Leach, to discriminate those Dytiscidae that have the third and fourth joints of the external maxillary palpi nearly equal in length, with the latter subulated; the second and third joints of the antennae shortest; the body ovate and convex; the elytra smooth in both sexes; the anterior tarsi of the males patelliform, and the thorax somewhat rugose on the sides in the females.


Black: head with the mouth and forehead testaceous-yellow, with two transverse ferruginous spots, and sometimes a triangular one in front: thorax anteriorly and with the lateral margins testaceous-yellow, the posterior edge with a broad anteriorly rounded black patch: elytra rather convex, with the margin broadly yellowish, throwing off obliquely several interrupted dashes to the disc, which has three punctate striae; near the base of each elytron is a slender waved pale stripe, neither touching the suture nor the marginal band: body glossy-black beneath, with the apex and margins of the abdominal segments pitchy-ferruginous, and the sides of the latter frequently spotted with the same: legs ferruginous, the four anterior palest. Female with the thorax strigose, and the tarsi simple.

Var. α. With the abdomen entirely ferruginous beneath.

The transverse streak at the base of the elytra varies considerably in width, and in some individuals it is broken in two.

I once met with this species in a pond in Battersea-fields: it has since been taken abundantly in Yaxley-fens by Messrs. Chant, Bentley, and Weaver. "One specimen found in the pond in the Botanic-garden, Cambridge."—Rev. L. Jenyns. "Pools, Netley."—Rev. F. W. Hope.


Rather larger than the foregoing; deep black: head as in that insect: thorax moderately convex, with the anterior margin narrowly yellow, the sides broadly so, the base black in the middle: elytra slightly convex, glossy black, the exterior margin broadly yellow, posteriorly irrorated with black, the disc of each elytron with three strig of minute impressions, the outermost obsolete: body glossy black beneath: four anterior legs pale testaceous, posterior pitchy-black. Female with the thorax strigose, and the tarsi simple.

Far less common than the last, with which it has frequently been taken in company. "Whittlesea Mere."—Messrs. Bentley, Chant, and Dale. "Pools, Netley."—Rev. F. W. Hope.

Sp. 3. stagnalis. Plate XII. f. 5.—*Niger, capite thoraceque antioe, pedibusque anterioribus luteis, elytris nigro, margine lineisque luteis.* (Long. corp. 6—9 1/2 lin.)


Black: head broadly yellow anteriorly, with the crown black, and bearing two transverse ferruginous spots: thorax moderately convex, reddish-yellow an-
teriorly, with a black patch in the middle of the base towards the sides, and
sometimes a narrow transverse black streak anterior to the latter: elytra rather
convex, above black, with the lateral margin broadly yellow, the disc of each
with five or six slender luteous streaks, of which the sutural ones are broadest,
and placed nearly parallel, the others are narrower, somewhat undulated, and
placed rather obliquely; the suture itself is black, and each elytron has three
stria of impressed dots: body pitchy-black beneath: four anterior legs luteous,
the posterior pitchy-black. Female with the thorax strigose, and the tarsi
simple.

Devonshire and Wilts are, I believe, the chief counties which
have produced this fine, and apparently rare, insect. “In a pond
near Exeter.”—Dr. Leach. “In a pond at Netley.”—Rev. F. W.
Hope.

† Sp. 4. cinereus. Luteo-testaceus, thorace antice posticeque nigro, elytris ovalibus
nigricantibus flavo-irrortatis. (Long. corp. 6 lin.)
No. 522.

Luteo-testaceous: head ferruginous, with the crown and two transverse waved
frontal lines black: thorax rather convex, with a black fascia on the anterior
and posterior edges, the disc with some delicate abrupt impressed striae: elytra
ovate, moderately convex, smooth, black, thickly irrorated with pale pellucid
spots, the margin testaceous-yellow, the disc of each elytron with three im-
pressed striae: body pale testaceous beneath, the sides of the abdomen obscurely
spotted: legs pale testaceous: the female has simple tarsi, and the thorax
more deeply lineated.

Two specimens, male and female, only of this insect have yet
been taken in Britain; they occurred “the beginning of June 1825,
at Whittlesea Mere.”—Messrs. Chant and Bentley.

**Genus LXXXVII.—Dyticus, Geoffroy.**

_Palpi, external maxillary,_ with the three last joints of nearly equal length, the
last with its apex obliquely subtruncated: _labrum_ obsolescently emarginate: _mandibles_ truncate, emarginate: _mentum_ trilobate, the central lobe bifid. _Antennae_
with the second joint very short, the basal longest: _head_ broad: _scutellum_ distinct: _elytra_ ovate, smooth, generally sulcate in the females: _legs_ natato-
rial: _anterior tibia_ short: _tarsi_ with five joints: _claws_ didactyle: _anterior
tarsi_ of the males patelliform, with suckers beneath; _intermediate_ dilated at
the base.

This conspicuous genus affords a remarkable example of the
attention which is now paid to our indigenous coleoptera: till
within these three years, when I first communicated the new acqui-
sitions to the Zoological Club of the Linnean Society *, three species alone were to be found in our cabinets, or had been recorded to inhabit Britain; the number has since been nearly trebled. Exclusively of their large size, which exceeds that of the other aquatics, excepting Hydroïd piceus, they may be known from the rest of the family by the nearly equal length of the three terminal joints of the external maxillary, palpi, and the oblique truncation of the last; the elongation of the first, and the brevity of the second, joint of the antennæ. The genus evidently contains several dissimilar forms, but as they are not readily discriminated without characters drawn from the disparities of sex, which are decidedly bad, I shall merely observe, that in the two first species both sexes have smooth elytra, in the remainder the females have them sulcated; again, the three first species are distinguished by considerable discrepancy in the size of the anterior claws in the respective sexes: the form of the furcate apex of the sternum differs according to the respective species.

A. With the margin of the elytra not dilated.

Sp. 1. conformis? Olivaceo-nigricans, subtus testaceus, suturis pectoris nigris, thoracis limbo vittâque elytrorum marginali luteis, elytris posterius latioribus, sterni laciniis lanceolato-acuminatis. (Long. corp. 1 unc. 4 lin.)

Olive-black, the elytra throughout finely punctulated, and dilated as in Dy. marginalis: head impunctate, with the mouth and labrum dull ferruginous, and an obsolete triangular rufous spot on the forehead: thorax finely punctulated, the hinder margin sinuated, the anterior with an interrupted row of impressed dots, and all bordered with luteous, the sides most deeply so; the disc with a longitudinal line: elytra with three rows of impressed dots, the spaces between punctulated, especially towards the apex, the lateral margin yellow at the base to a little beyond the middle: body deep testaceous or yellow beneath, the sutures of the breast, and some fasciae at the base of the abdomen, black; the laciniae of the sternum lanceolate-acuminate: legs pale testaceous; claws black. Female similar, with very obsolete rudiments of sulci.

This species has been taken in Devonshire, near Ipswich, and, I believe, in Cambridgeshire. "Whittlesea Mere, once taken."—Mr. Chant.

Sp. 2. circumcinctus. Plate XII. f. 6.—Subolivaceo-niger, subitus testaceus, immaculatus, thoracis limbo inequaliter elytrorumque margine luteis, elytris serie punctorum inter singulas striae ordinarias, sterni laciniis acutis. (Long. corp. 1 unc. 3—4 lin.)

Subolive-black, elytra scarcely dilated, with a series of remote impressions between the ordinary striae; head obsoletely punctulated, with a small obsolete frontal lunule, and the anterior margin luteous-red: thorax, with the entire margin luteous, the lateral broadly, and the anterior and posterior, the latter especially, narrowly edged; the disc impunctate, with an abbreviated dorsal line, the base and apex with an interrupted row of impressions, and the lateral margins with a continuous scattered one: elytra oblong, rather convex, with three continuous punctate striae, and a series of remote impressions between each; towards the apex more or less punctate, the lateral margin luteous: body beneath yellowish or deep ferruginous: the laciniae of the sternum very acute: legs testaceous. Female with the elytra smooth.

Several pairs of this insect have been taken, but the males are usually confounded, in most cabinets, with those of the following species; they may, however, be readily distinguished by their difference in form, and by their colour, both above and beneath.


Sp. 3. angustatus. Oblongo-ovatus, niger aut olivaceus, subtiis testaceus, suturis pectoris nigris, thoracis limbo angustius, elytrorumque margine latius flavo-testaceis, sterni laciniiis acutis, scutellum nigrum. (Long. corp. 1 unc. 2—3 lin.)


Oblong-ovate, black or olivaceous: elytra scarcely dilated: head as in the last: thorax also bordered as in it, with the posterior margin very narrow, and frequently obscured with fuscous clouds; the disc with a longitudinal line, and the margins punctured as in the foregoing: scutellum black: elytra oblong-ovate, not dilated, the lateral margins broadly testaceous or flavescent, the disc with three punctate striae, the spaces between obsoletely punctulate towards the apex: body testaceous or yellowish beneath, the sutures of the breast black, the laciniae of the sternum very acute: legs testaceous. Female with the upper surface of the thorax, and of the elytra, thickly but finely punctate; the base of the latter deeply sulcate beyond the middle.

The female is probably the Dy. dubius of Gyllenhal.


Sp. 4. circumflexus. Oblongo-ovatus, olivaceo-niger, subtiis flavo-testaceus, suturis pectoris marginebusque segmentorum abdominis nigris, thoracis limbo elytrorumque margine latius flavo-testaceis, sterni laciniiis acutis, scutellum medio flavo. (Long. corp. 1 unc. 1—4 lin.)

DYTICIDÆ.—DYTICUS. 89

Very similar to the preceding, but known at once by its yellowish scutellum, form of the sternal laciniæ, &c.: oblong-ovate, rich olivaceous, or olive-black: head as in the last, but the frontal lunule generally more distinct: thorax broadly margined throughout with yellowish, the posterior border rather undulated, and somewhat narrowed, the disc with an abbreviated dorsal line, and the anterior margin with a series of impressed dots, the lateral and posterior margins nearly impunctate: scutellum with its centre, and sometimes its apex, flavescent: elytra oblong-ovate, very little dilated, the lateral margin broadly flavescent; the disc with three punctate striae, the spaces between with a row of very remote, rather obsolete, impressions, and the apex with some scattered ones: body beneath bright testaceous-yellow, the sutures of the breast and the margins of the abdominal segments black: legs testaceous; the posterior, with the apex of the tibiae and the tarsi, pitchy-black. Female with the thorax and elytra above thickly punctate, the latter deeply sulcated beyond the middle.

Common in ponds round London; apparently rare elsewhere. "I never could detect this insect in Cambridgeshire."—Rev. L. Jenyns. "Lawrence Waltham."—Mr. Hanson.

Sp. 5. marginalis. Olivaceo-nigricans, thoracis limbo elytrorumque margine luteis, elytris postieis latioribus undique punctulatis, intra apicem lunulæ flavescentis, sterni laciniis subacutis. (Long. corp. 1 unc. 1—4 lin.)


Oblong-ovate, elytra dilated behind the middle: head smooth glossy-black, with the labrum and anterior edge luteous, a triangular mark on the forehead rufous, and a slightly-elevated line on the crown: thorax rather arcuate behind, moderately convex, the disc glossy-black, with an obsolete dorsal channel, the margins entirely luteous, with an impressed punctulate striae: scutellum black: elytra anteriorly convex, nearly smooth, posteriorly depressed and punctate, the disc with three punctate striae: shining olive-black, with the lateral margin broadly luteous at the base, and narrowly towards the apex: body testaceous-yellow beneath, with the edges of the segments and middle of the sternum dusky, the laciniæ of the latter broad, lanceolate: legs pale-testaceous. Female with the upper surface punctulated, the elytra deeply sulcated rather beyond the middle.

The most abundant species of this genus in Britain, occurring nearly in every pond and large expanse of water, throughout the year, in common with several other Dyticidæ. From the observations of Esper, this insect appears to possess considerable longe-
vity (unless life were protracted through celibacy in the instance recorded by him) : he tells us that he kept one in a vessel of water three years and a half, feeding it once a week, or oftener, with a piece of raw beef, the juice of which it devoured with avidity: it however occasionally fasted for a month." A specimen of Hydrous
piceus being introduced, the Dyticus quickly despatched it, although as big again as itself, by seizing it in the only vulnerable part, between the head and thorax. It was very susceptible of atmospheric changes, which it indicated by its movements.

Sp. 6. submarginatus. *Suboblongo-ovatus, nigricans, thoracis limbo elytrorumque margine angustius luteis, sterni laciniis subacutis.* (Long. corp. 1 unc. 1 lin.)


Closely allied to the preceding, but appears to differ in having the sides of the elytra less dilated, with a narrower luteous margin, and in having the under side very little obscured in the centre of the sternum, and on the abdominal segments; the lacine of the sternum appear rather more acute: in other respects similar. Female punctulated above, with the elytra deeply sulcated beyond the middle.

Probably not sufficiently distinct from Dy. marginalis.

Taken near London, but sparingly.

Sp. 7. punctulatus. *Undique niger, thoracis elytrorumque margine laterali luteo, sterni laciniis rotundatis.* (Long. corp. 11 lin.—1 unc. 2 lin.)


Black; head with the labrum and anterior edge luteous, and a rufo-ferruginous lunule on the forehead: thorax above convex, faintly channelled, the lateral margin alone broadly luteous, the anterior sometimes obscurely ferruginous: scutellum with the apex rufescent: elytra scarcely dilated, moderately convex, with the outer margin luteous, and three deeply-impressed punctate striae on the disc of each: body beneath with a few obscure ferruginous spots on each side; suture with its laciniæ rounded at the apex: legs pitchy-ferruginous. Female finely punctate above, with the elytra deeply sulcated beyond the middle.

Not so common as Dy. marginalis and circumflexus, though frequently taken in ditches and ponds in the neighbourhood of London, especially in Battersea-fields, during the early summer months. « Very common in Cambridgeshire.»—Rev. L. Jenyns.

Sp. 8. dimidiatus. *Niger, subtiis testaceus, suturis pectoris nigris, thoracis elytrorumque margine laterali flavo, sterni laciniis obtusis.* (Long. corp. 1 unc. 5—6 lin.)


Black, shining; head with the mouth and a broad fascia in front luteous; and a reddish triangular mark on the forehead: thorax rather sinuated behind, with an obsolete dorsal line, the lateral margins broadly yellow, and the anterior and posterior absolutely ferruginous: elytra large, ovate, smooth anteriorly,
towards the apex subpunctate, the disc with three striae of minute impressions, the lateral margin broadly luteous: body beneath testaceous, with the sutures of the breast black: sternum with the lacinia obtuse: legs pale-ferruginous. Female with the thorax and apex of the elytra punctate; the latter deeply sulcate at the base to the middle.

Discovered in June, 1824, in Yaxley-fens, by Messrs. Chant and Bentley: since taken in Whittlesea Mere, and in other parts. "In the pond in the Botanic garden, Cambridge; also in Bottisham-fen: the males appear to be more abundant than the females."—Rev. L. Jenyns. "Elsemere, and Bomere, Salop."—Rev. F. W. Hope.

Genus LXXXVIII.—Cybister, Curtis.

Palpi, external maxillary with the second and third joints of equal length, elongate-obconic, the fourth longer, slightly dilated externally, truncate: labrum slightly emarginate: mandibles truncate obliquely: mentum trilobate, the central lobe truncate. Antennae with the second joint extremely short, third longest: head rounded: scutellum distinct: elytra broad, ovate, smooth; strigulated at the base in the females: legs natatorial; tibia very short; tarsi five-jointed; posterior monodactyle: anterior tarsi patelliform in the males; intermediate simple.

The broadly-ovate and very depressed form of this genus well distinguish it from its affinities, but its chief characters are drawn from the form of the terminal joints of the palpi, and the brevity of the posterior tarsi; in this last particular, as well as by its depressed body, it is closely allied to Acilius; but from that, as well as the

B. Elytra with the margin dilated.

† Sp. 9. latissimus. Niger, subius brunneus, elytrorum margine dilatato, vittâ laterali, thoracisque limbo tuto luteis, sterni lacinii acuminatis. (Long. corp. 1 unc. 8 lin.)


Very broad, black above, shining; head as in Dy. dimidiatus: thorax truncate behind, with a dorsal line, smooth, the entire margin broadly luteous: scutellum ferruginous at the tip: elytra greatly dilated in the middle, the margin depressed and expanded; above convex anteriorly, depressed posteriorly, with a luteous streak within the margin, and a transverse one within the apex, the disc with two rows of impressions: body beneath glossy-brown, sternum with its lacinia acuminated at the apex: legs rusty-brown. Female with the elytra deeply and irregularly sulcate nearly to the apex. Berkenhout gives this fine species as British, but I know not on what authority.
four last genera, it is at once known by the posterior monodactyle tarsi; although, in Acilius, one claw is exceedingly minute.

‡ Sp. 1. Roeselli. *Olivaceo-niger, clypeo thoracis elytrorumque margine exteriori flavis, elytris obsolete striatis.* (Long. corp. 1 unc. 1 lin.)


Olive-black, rather glossy: head with the clypeus and anterior margin ochraceous-yellow: thorax with a faint dorsal channel, the base obsolescently striate; the lateral margin ochraceous: elytra a little convex, with three longitudinal striae of very remote impressed dots, the outer margin with a yellow or ochraceous streak, reaching from the base nearly to the apex, the margin itself olivaceous: body testaceous or ferruginous beneath: legs testaceous, the anterior palest; the posterior with the tibiae and tarsi pitchy. Female with the thorax thickly covered with irregularly-waved strigae; and the elytra with about five-sixths of the surface from the base with abbreviated, frequently anastomosing, longitudinal striae; the anterior tarsi simple; in other respects similar to the male.

Roesel having described the metamorphosis of this species, Fabricius, in commemoration thereof, named it after him.

The only indigenous specimen I have seen of this fine insect is a female, which was taken at the end of September, 1826, at Walton, in Essex: it is in the collection of J. H. Griesbach, Esq., who informed me, some time since, that a second example had occurred.

**Genus LXXXIX.—Acilius, Leach.**

*Pulpi, external maxillary* with the second joint shorter than the third, the terminal longer than the latter; swollen in the middle, attenuated and rounded at the apex: *labrum* very slightly emarginate: *mandibles* bifid at the apex: *mentum* transverse, scarcely emarginate anteriorly. *Antennae* with the first and third joints nearly equal in length, the second short: *head* small, rounded: *scutellum* distinct: *elytra* ovate, smooth, sulcate and hairy in the females: *legs* natatorial; *tibia* short: *tarsi* five-jointed; posterior didactyle, the inner claw very minute: *anterior tarsi* patelliform in the males; *intermediate* simple in both sexes.

The fusiform terminal joint of the external maxillary palpi, and the superiority of its length over the penultimate, and the different form of the mentum, well distinguish this genus from all the preceding: the females have the elytra sulcate, the sulci thickly clothed with hair; and the males the anterior tarsi alone dilated.
Sp. 1. sulcatus. *Nigricans, lunulis quatuor frontalibus, thoracis limbo fasciâque mediae abbreviati utrinque dilatatâ, luteis; corpore subitus nigro, lateribus ventris flavo maculatis, pedibus posticis nigris, femorum apice flavis. (Long. corp. 7—9 lin.)


Dusky-black: head with the mouth, labrum, anterior margin, an angular mark on the forehead, two lunules on the crown, and a bent mark before each eye luteous: thorax finely and thickly punctured; with the anterior margin griseous-yellow, the disc also with a yellow fascia, which is dilated on each side into an angulated spot, and frequently unites at the posterior angle with the yellow margin: elytra very little convex anteriorly, depressed posteriorly, throughout thickly and finely punctured, griseous, thickly irrorated with dusky, with a narrow line down the suture, and the lateral margin yellowish; a transverse, waved, black cloud towards the apex, and three rows of black dots, placed longitudinally; the disc of each has also three very obsolete elevated lines: breast deep-black, thickly punctate; thorax beneath with a large yellowish spot; abdomen dusky-black, with an ovate yellow spot on the side of each segment, and the margins of the latter ferruginous; the laciniae of the sternum rounded, pitchy: four anterior legs yellow, with the upper surface of the patelliform tarsi black; posterior black, with the trochanters and apex of the femora yellow. Female with a triangular patch on each side of the thorax, and four broad sulci on each elytron clothed with griseous hair; the anterior tarsi simple.

Var. 5. With the fascia on the thorax interrupted in the middle, the elytra rather more thickly irrorated with black than in var. α.

Var. γ. With the margin of the thorax above luteous; in other respects similar to var. α.

† Var. δ. Ac. varipes. Steph. Catal. p. 53. No. 534. Thorax as in var. γ, with the limb fuscescent: the anterior legs pitchy-yellow, with the base of the femora black: posterior black, with the apex of the femora clouded with rusty-pitchy and black.

† Var. ε. Ac. scoticus. Curtis MSS.—Steph. Catal. p. 53. No. 535. Thorax as in var. δ, elytra rather deeply irrorated with black on the dilated outer margin near the apex: legs with the tibiae clouded with pitchy-black; the anterior, in the male, with the patelliform tarsi also pitchy-black above: the abdomen with small luteous spots on its edge, its segments ferruginous.

Having been favoured with the examination of two pairs of this last variety (ticketed by Mr. Curtis as Ac. scoticus), I feel satisfied that they are referable to Ac. sulcatus from not being able to detect any characters of sufficient importance to warrant their separation as a species; the mere suffusion of colour, without any difference in sculpture, in my opinion, not being characteristic of specific distinction: yet this is by several persons considered a good species; but upon this point I must refer to the Introduction to my Systematic Catalogue.
Extremely common in most places, frequenting every large patch of water throughout the country; var. \( \delta \) (which upon a transient inspection I supposed to be a different species at the time my Catalogue was printing) was found in Worcestershire, and var. \( \epsilon \) appears to be not uncommon in Scotland.

Sp. 2. canalicularus. *Nigricans*, capite antice lineâ transversâ frontis, thoracis limbo fasciâque mediâ abbreviâtâ, utrique dilâtâtâ; ventre pedibusque flavis. (Long. corp. \( 6\frac{1}{2} - 7 \) lin.)


Ac. caliginosus. *Curtis,* ii. pl. 63.

Rather less than the preceding; head anteriorly luteous, posteriorly black, with a transverse yellowish streak: thorax with its entire margin, and an abbreviated transverse discoidal fascia, dilated on each side into a somewhat rounded spot, luteous: elytra dilated about the middle, very thickly irrorated with dusky, with a very obsolete transverse black cloud towards the apex, and the outer margin and a narrow line down the suture yellow: breast black, thickly rugose-punctate: abdomen with the first segment entirely yellow, the rest yellow, with an abbreviated dusky black fascia at the base: legs pale luteous, immaculate. Female with the thorax glabrous: the elytra with four villose sulci: tarsi simple.

This fine species was discovered four years since in the fens of Huntingdonshire by the two industrious collectors under mentioned. "Stilton and Yaxley-fens, in July, 1824."—Messrs. Chant and Bentley. "In Scotland, near Edinburgh."—Mr. Bainbridge.

**FAMILY IX.—GYRINIDÆ, Leach.**

*Antennae* very short, rigid, 9-jointed, the second with a lobate appendage, the rest forming a clavate cylindric mass: *body* oval, convex, or depressed, generally very glossy: *thorax* transverse, sinuated before and behind: *legs* unequal; the two anterior very long, gressorial; the four posterior short, compressed, formed for swimming: *eyes* apparently four, two above and two beneath the head; the latter deeply inserted into the thorax.

This family evidently contains several genera, but as they are for the most part exotic, I shall merely allude to them in this place: the generality of the species are of small size; the larger ones approximate to the Dyticidæ in form, but the structure of the antennæ and legs sufficiently distinguishes them. Their larva differ from those of the insects just named, by having on each side of the fourth, and seven following segments, a membranaceous conical appendage, which is flexible and bearded at the sides; these appendages com-
municate with the tracheae by means of a small air tube; the last joint of the body is very small, and terminates in four long parallel hooks: they live in the water, and towards the middle of summer prepare an oval cocoon, pointed at each end, resembling brown paper, and fixed to the leaves or roots of plants.

**Genus XC. — Gyrinus Auctorum.**

*Palpi, external maxillary* with the three first joints small, the terminal large, ovate; *internal* uniarticulate: *labrum* short, transverse, sometimes projecting, ciliated anteriorly: *mandibles* short, bifid at the apex; *mentum* large, bilobed. *Antennae* with the basal joint large, globose, produced externally in a triangular compressed lobe, the remaining joints forming the club: *head* trigonate: *body* convex: *elytra* generally covering the abdomen entirely: *anterior tarsi* of the males dilated.

The short, rigid antennae, and elongate anterior legs sufficiently distinguish the indigenous Gyrini from the other Hydradephaga; but the genus as now constituted evidently contains two dissimilar forms; the first comprising those species which have the labrum short, the body moderately convex, very glossy, striated and naked, its apex projecting semicircularly beyond the elytra, and the latter subtruncate; the others have the labrum projecting, the body very convex, punctured, and villose, with its apex not produced beyond the elytra, but somewhat pointed; the former appear to be more gregarious than the latter, and may be observed during fine weather upon the surface of the water in clusters, rapidly whirling about in all directions, whence their names of water-flea or whirl-wig: sometimes they are motionless, but upon the approach of any one they are instantly in motion again, and if alarmed dive quickly, carrying with them a bubble of air, resembling a globule of quicksilver: in the evening or in dull and cold weather they are rarely to be seen, being at such times sheltered under the banks, or beneath the roots of plants. They seize their prey by means of their elongate anterior legs; many of the species secrete a fluid of a most disagreeable odour, which they eject when handled, and the scent will remain for some time on the fingers.

**A. Elytra glabrous, punctate-striated.**

*Sp. 1. aneus.* *Oblongo-ovatus, caruleo-niger nitidissimus, subitus obscurè aneus, capite, thoracis elytrorumque limbo et margine reflexo suturgen nitido-aneus.*

(Long. corp. 3—3½ lin.)


Oblong-ovate, very glossy blue-black: head brassy, very smooth, with two im-
pressions on the forehead: thorax above convex, with a crenated stria on each side within the anterior margin, and two rather obsolete ones towards the middle; the lateral margin bright aeneous: scutellum brassy: elytra subovate, deeply punctate-striated, with the suture and outer margin bright-brassy, the reflected margin deep pitchy-black, with a bright brassy gloss: body of a blue or greenish tinge beneath, glossed with brassy: legs rufo-ferruginous; the four posterior femora somewhat obscured with dusky: antennæ blue-black.

Extremely abundant in ditches by the side of the Surry Canal, near its junction with the Croydon. "Duddingstone-loch, near Edinburgh; in a deep pool in the river Dart; and in a pond near the river, not far from Spitchweek."—Dr. Leach. "Common near Bottisham."—Rev. L. Jenyns.

Sp. 2. marinus. Oblongo-ovatus, nigro-ceruleus, nitidus, subtiis aneus, elytris fortisspunctato-striatis, margine inflexo aneco. (Long. corp. 2 1/2—3 lin.)

Oblong-ovate, blue-black, shining: head and thorax sculptured as in the last, but without the brassy tinge: elytra but little dilated, rather deeply punctate-striated, shining blue-black, with the suture and margin greenish-brass, and the inflexed margin glossy-brass: body beneath shining brass: legs pale rufescent.

Var. β. With the scutellum, suture, and upper margin of the elytra concolorous.
Var. γ. Steph. Catal. I. c. var. β. With the disc of the elytra more or less ferruginous.

Distinguished from the last by its smaller size and less brilliant colours.

As its name indicates, this species usually frequents waters in the vicinity of the ocean. "Abundant near Carlisle; in Lochend, Scotland; and near Saltcoats, Devonshire."—Dr. Leach. "Common at Bottisham."—Rev. L. Jenyns.

Sp. 3. minutus. Plate XIII. f. Oblongo-ovatus, supra ceruleo-virensens, nitidus, subtiis rufo-testaceus, elytris punctato-striatis margine inflexo pedibusque testaceis. (Long. corp. 1 1/2—2 1/2 lin.)

The least species of the genus: more elongate and slender than the next; deep glossy greenish-blue above: head and thorax as in Gy. aneus: scutellum short, sometimes aneous: elytra elongate, convex, rather deeply punctate-striate, deep blue-black, with the outer edges glossed with brassy; the inflexed margin pale-testaceous: the body beneath, and legs the same: the intermediate segments of the abdomen sometimes pitchy-black.

Rather a scarce species; not frequently met with near London, but more abundant near Bristol and Swansea. "Near Ashburton, Devon."—Dr. Leach. "Netley."—Rev. F. W. Hope.
Sp. 4. natator. _Ovatus, caeruleo-niger, glaberrimus, elytris subtilissimis punctato-striatis, margine subitus an pedibusque ferrugineis._ (Long. corp. $2\frac{1}{2}$—$3\frac{1}{2}$ lin.)


Ovate; glossy blue-black: head as in Gy. aneus, with the mouth rufescent: thorax anteriorly and posteriorly sinuated, above convex, with an arcuate crenated stria on each side within the anterior margin, and a simple obsolete one towards the middle of the disc: scutellum small: elytra subovate, attenuated posteriorly, above convex, very glossy, blue-black, greenish towards the margins, very finely punctate-striate, the inflexed margin pale testaceous: body shining brassy-black beneath, with the apex ferruginous, the breast testaceous, and the legs pale ferruginous.

Abundant in ponds and stagnant waters in several parts of the kingdom.

Sp. 5. substriatus. _Subovatus, caeruleo-niger, nitidus, elytris tenuissimis punctato-striatis, margine inflexo ferrugineo._ (Long. corp. 3 lin.)


Head and thorax as in Gy. natator: elytra deep blue-black, obscurely tinged with greenish on the outer margins, the disc very slightly striated, the stria composed of remote punctules; the inflexed margin deep ferruginous: body beneath as in Gy. natator.

Similar to the last, but differs in the very obsolete striation of the elytra: it may possibly be a mere variety, but I have seen many specimens.


Sp. 6. lineatus. Plate XIII. f. 1.—_Ovatus, supra aneo-niger, infra piceo-ferrugineus, elytris obsoletissimis punctato-striatis, lineis longitudinalibus subaneis ornatis, margine inflexo ferrugineo._ (Long. corp. 3—3$\frac{1}{2}$ lin.)


Ovate; deep brassy-black above, very glossy: head as in Gy. natator, with the labrum bright anecous: thorax and elytra also as in the last-named insect, but the latter with the stria nearly entirely obliterated, especially on the back, and their places occupied by several longitudinal rather obscure streaks or lines, appearing rufescent in certain lights; the outer margin is greenish-brass, and the inflexed one ferruginous: body beneath entirely pitchy-ferruginous, with the legs paler.

“Slapton Ley, near Dartmouth, middle of June, 1828.”—Messrs. Chant and Bentley.

Sp. 7. bicolor. _Oblongus, subcylindricus, nigro-caeruleus, glaberrimus, elytris subtilissimis punctato-striatis, margine inflexo, pedibusque ferrugineis._ (Long. corp. 3—3$\frac{1}{2}$ lin.)

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MANDIBULATA.—COLEOPTERA.


Elongate, subcylindric, very smooth blue-black: head, thorax, and scutellum exactly as in Gy. natator: elytra very much elongated, and slightly attenuated posteriorly; the disc very finely punctate-striate, and of a deep blue-black, with the margins aneuous, the inflexed one ferruginous: middle of the breast ferruginous; abdomen beneath blackish-brass, with the apex of the last segment pitchy: legs rufo-testaceus. Female rather broader, and longer in proportion than the male.

Not common; found in Norfolk and Suffolk. “Near Southend, and at Tenbury, Worcestershire.”—Rev. F. W. Hope. “Salt marshes and lakes in Devonshire, during the spring.”—Dr. Leach.

B. Elytra villose, punctate.

Sp. 8. villosus. Oblongus, supra, niger, griseo-pubescens, subtus flavus, elytris vagis punctatis. (Long. corp. 2½—3½ lin.)


Oblong, convex, subfusiform; above dusky-black, rather glossy, and thickly clothed with a short grayish down: head finely punctulatet, a little brassy; the margin of the labrum with elongate pale cilia: thorax very convex, faintly punctulated, and slightly tinted with aneuous: elytra elongate, very convex, arched, covering the abdomen, above thickly punctate, the lateral margin pale rufescens: the body testaceous-yellow beneath, the abdomen frequently yellow, the terminal segment narrow, conic, with a tuft at the apex: legs pale: antennæ pale at the base and apex, with the intermediate parts pitchy-black.

This species generally frequents rivers and running water, but is rare near London. “Common on the Dart, and in rivulets on Dartmoor.”—Dr. Leach. “Netley rare.”—Rev. F. W. Hope. “Slapton Ley, in June last.”—Mr. Chant.

Section II.—RYPOPHAGA,

Or Cleansers, may be characterized by having four palpi only, two labial and two maxillary; the internal maxillary being represented, according to the analytical views of Mr. Mac Leay, by the external lobe of the maxilla, which is generally dilated, and frequently articulated, though rarely palpiform: the antennæ clavate, or gradually thickening from the base to the apex.

This section, following the views of the last-named writer, is divisible into three others; of which the first that presents itself is

Subsection 3.—Philhyrida, Mac Leay,

Or such insects as have the mandibles rarely exerted: the maxillary palpi usually four-jointed: the maxilla with the outer lobe generally articulated: the elytra covering the abdomen: the body mostly short, convex, or rounded on the
back: the *posterior legs* in the typical families formed for swimming, but in the others gressorial: the *tibia* spinose, or simple: and the *tarsi* with the number of articulations various.

Notwithstanding the apparent discrepancy of structure among the insects of this group, the latter, in their perfect state, appear destined to cleanse the surface of nature from the decayed remains of vegetable matter, as those of the following subsections do from animal impurities; though the typical family, in the larva state, are decidedly carnivorous, and feed upon living aquatic mollusca, while the conterminous group of Anisotomidae subsist chiefly upon fungi, and the families of Parnidae and Heteroceridae are supposed to devour animal substances alone.

The insects of the typical family reside, in their first and final states, in the water, and swim well; whereas those of the four families preceding them generally prefer the banks, and may be said rather to walk in the water than swim: the succeeding insects frequent damp pastures, burrowing, by means of their spinous *tibiae*, into their pabulum, the dung of herbivorous mammalia, as the Anisotomidae do into fungi; and thus resemble the Heteroceridae, which also burrow by similar means.

It has ever appeared extraordinary to me that Latreille and others should have separated the insects of this group, by the intervention of totally dissimilar objects, from the Hydradephaga, with which they are evidently so intimately connected in habit: it therefore afforded me great satisfaction to find that the views of the learned author of Annulosa Javanica corresponded so nearly with my own on this point; though I fear that my limited knowledge of exotic forms may cause me to do violence to nature by proposing the following arrangement of the indigenous families contained in this subsection:

- **Antennae extrorsum crassiores**
  - **extrorsum**
  - **crassiores**
  - **haud serrata**
  - **moniliformes**
  - **plus minusve serrata**
  - **Tarsi**

- **Antennae**
  - **extrorsum**
  - **crassiores**
  - **moniliformes**
  - **plus minusve serrata**
  - **Tarsi**

- **Mandibula inermes**
  - **ad apicem**
  - **bidentata**

- **Tarsi**
  - **articulo primo**
  - **longiori**

- **Tarsi**
  - **articulo primo**
  - **longiori**

- **Hesperophila**
  - **inermes**

- **Sphecididae**
  - **inermes**

- **Hesperophila**
  - **inermes**

- **Anisotomidae**
  - **inermes**

- **Hesperophila**
  - **inermes**

- **Hesperophila**
  - **inermes**

- **Hesperophila**
  - **inermes**

- **Hesperophila**
  - **inermes**
**Family X.—HETEROCERIDÆ, Mac Leay.**

*Antennæ* short, 11-jointed, the two basal joints large, the remainder forming an obsoletely serrated mass; *body* rather depressed; *head* elongate, inserted up to the eyes in the *thorax*, the latter transverse, subovate; *legs* alike; *tibiae* compressed, spinose; *tarsi* four-jointed.

Of this family also there is but one indigenous genus, and, like the Parnidae, their history is unknown, though it is supposed, from the structure of their trophi, that they subsist upon animal matter: they inhabit damp situations, especially the muddy banks of rivers, and on the sands of the ocean, into which they burrow, by means of their fossorial legs.

**Genus XCI.—Heterocerus, Bosc.**

*Palpi* very short, three-jointed; *maxillary* with the terminal joint securniform; *labial* with the last joint conic, truncate; *labrum* hairy, semiorbicular; *mandibles* tridentate at the apex, with a membranous lobe internally; *maxilla* with the external lobe rhomboidal, the internal obtuse; *mentum* subcordate, deeply emarginate; *labrum* elongate. *Antennæ* with the basal joint very large, the second smaller, cup-shaped; the two following minute, the remainder forming a subserrated club; *body* oval, subconvex, pubescent. *Males* more slender and cylindrical than the *females*.

At least five species of this genus appear to inhabit Britain: they are remarkably variable, and much confusion has arisen through the various opinions of authors respecting the distinction of the species and varieties: they inhabit, as before stated, the muddy banks of rivers, and may be obtained by trampling on the ground, when the little animals, aroused by the sudden noise, shortly make their appearance, but if not quickly secured, soon burrow again beneath a fresh portion of the soil, or hide themselves in the crevices formed by the drying of the latter.

*Sp. 1. marginatus. Fuscus, pubescens, elytris pallide ferrugineo-maculatis, pedibus fuscis, tarsis testaceis.* (Long. corp. 13—2 in.)


Dusky or pitchy, pubescent, very finely punctulate; head and thorax immaculate, the latter sometimes with a ferruginous tinge at the anterior angle; elytra with the margin and several irregular spots on the disc, more or less confluent or obliterated, pale ferruginous: legs fuscous, with the tarsi testaceous; antennæ pale, with the club dusky.

“Near Aberystwith.”—Rev. F. W. Hope. “In a mud-bank near Tottenham.”—Mr. Stone.

Sp. 2. flexuosus. Fuscus, pubescens, elytris luteis, vittâ longitudinalâ flexuosis nigra, pedibus fuscis, tarsi piceis. (Long. corp. 2 lin.)
Fuscous, pubescent, finely punctured: head and thorax immaculate: elytra luteous, with a longitudinal flexible stripe, composed of irregular black spots, an elongate black patch at the humeral angle, and a rather obsolete one a little behind the middle towards the suture, the apex immaculate: body beneath, and legs, fuscous, the latter with the tarsi pitchy.

Taken on the banks of the Thames, beyond Gravesend.

Sp. 3. Marshami. Niger, puncto ad basin thoracis apicemque elytrorum luteo obscurâ, pedibus luteis.—Marsham MSS. (Long. corp. 1½ lin.)
Similar to the following, but less than var. β: the entire body dusky-black, tomentose: thorax with a small obscure luteous spot in the middle of the base; the elytra also, towards the apex, have a similar spot: body beneath dusky black: legs luteous.—Marsh. MSS.

The name obsoletus, which was obtained from my rough Catalogue, having been erroneously, though perhaps not inaptly, applied to another species of this genus, it has become necessary to change the one printed in the Catalogue itself, from the MSS. of Mr. Marsham, whose specific character and description, above given, evidently do not apply to the insect which has lately been published as the He. obsoletus of Leach MSS.; a name which neither occurs in the Doctor's MSS. nor in the collection at the British Museum.

I am not aware of the locality of this species, but as Mr. Marsham obtained it from Mr. Spence, I presume it inhabits the banks of the Humber.

Sp. 4. levigatus. Fuscus, pubescens, elytris maculis in fascias irregulares dispositis, pedibusque testaceis. (Long. corp. 1½—2½ lin.)
Fuscous, glossy, finely punctured, and slightly pubescent: head and thorax generally immaculate, the latter rarely with a pale spot at the anterior angle: elytra with the margin and several large, subquadrate, pallid spots, disposed in three irregular fasciae: these spots are very variable in form and size; they are sometimes nearly confluent, at others distinct; and are usually placed, two longitudinally towards the scutellum, two others behind these, near the suture, and a third pair towards the apex of each elytron; the pale outer margin of the latter is indented opposite the intermediate space: the body is frequently testaceous beneath; and the legs pale-testaceous, with the tibiae sometimes dusky.
Var. 2. He minutus? Steph. Catal. p. 55. No. 554. Rather less, and considerably more narrow, with the spots on the elytra somewhat distinct: probably the male.

More frequent near London than He. marginatus, and also found in Norfolk and Suffolk. "On Wandsworth-common, in the spring."

—Mr. Ingpen.

Sp. 5. obsoletus. Niger, hirtus, thorace antice macula luted utrinque, elytris circiter punctis septem pallide ferrugineis aut ochraceis, pedibus nigris. (Long. corp. 2—3 lin.)


Dusky-piceous or black, shining, very finely and thickly punctured, and pubescent: thorax with a luteous spot on each side, at the anterior angle: elytra with about seven or eight pale ferruginous or ochraceous spots on each, one near the scutellum, frequently obsolete, three placed somewhat triangularly before the middle, beyond these a larger lunate one near the suture, and finally three small ones, placed triangularly near the apex: the mandibles, spines on the tibiae, and apex of the tarsi castaneous.

This insect stands in the collection at the British Museum as He. marginatus: that it is the species thus called by Marsham, his character, "hirtus, niger, elytris punctis septem ferrugineis," as well as his habitats, "prope Harvici oppidum, Maio. Prope Sheerness copiosiss, Septembre," and one of his authentic specimens in my collection sufficiently testify.

In the utmost profusion on the shores of the Thames and Medway. "Plentiful near Rochester."—Professor Henslow. "The Isle of Sheppy, in June last."—Rev. F. W. Hope.

FAMILY XI.—PARNIDÆ, Leach.

Antennæ very short, 9-jointed; the second with a lobate appendage, the rest forming a clavate mass: body subcylindric, convex, margined: head deeply inserted into the thorax; the latter subquadrate, slightly narrowed anteriorly: legs similar, all formed for walking; tibiae cylindric, incurved: tarsi filiform, elongate, all five-jointed.

One genus only of this family has been found in Britain, which inhabits the borders of ponds and ditches during the spring; but although often found on the surface of the water, they are incapable of swimming: their food is unknown, but it is presumed to consist of animal matter, from the form of the maxillæ and mandibles.
GENUS XCII.—PARNUS, Fabricius.

Palpi short, maxillary four-jointed, subfiliform, the terminal joint largest, ovate-conic, apex acute; labial three-jointed, terminal joint oval; labrum slightly emarginate; mandibles bidentate at the apex, with two smaller teeth below; maxilla with the external lobe subquadrate, with a spine at the inner angle; the internal slender, acute, articulated near the apex; mentum transverse-quadrate; labium subquadrate. Antennae with the claws sub serrated, the dentations obtuse; thorax with a longitudinal impressed line on each side; legs moderate, anterior and intermediate of nearly equal length.

The habits of the Parni are evidently analogous to those of the Gyrini and Heteroceri, although their structure differs so remarkably, especially from the former group: their curious antennae readily discriminate them from all the other British genera excepting Gyrinus, to which they are remotely similar in form; but the clavate mass in that genus is cylindric and rigid, whereas in Parnus it is internally produced and serrated. The species have been but little attended to, and confusion, the usual consequence, has been the result.


Elongate; olivaceous, densely villose, minutely punctured: head dusky: thorax very convex, disc without a fovea: elytra thickly and finely punctured, very obsolletely striated, especially on the sides and towards the apex: body ashy-brown beneath, pubescent; legs dull-ferruginous, with the tibia dusky.

Very abundant in April at the roots of grass and subaquatic plants on the borders of a pond in Battersea-fields, and on Wandsworth-common: also on the banks of ditches on Ockham-heath, near Ripley, at Hertford, &c. “Near Epping.”—Mr. Doubleday. “Netley, Salop.”—Rev. F. W. Hope.

Sp. 2. sericeus. Elongatus, olivaceo-griseus, sericeo-tomentosus, subtilissime punctatus, elytris basi striati. (Long corp. 2½ lin.)

Elongate, olivaceous, clothed with rich silken down; minutely punctured, the elytra substriated at the base: thorax not foveolated.

This appears to me to be merely a variety of the foregoing, differing in having the pubescence on the body of a richer hue than usual.

Taken in Battersea-fields and elsewhere, not uncommonly, in the spring.
Sp. 3. impressus. *Elongatus, olivaceo-fuscus, villosus, subtilissimi punctuationis, thoracis disco bifoveolato.* (Long. corp. 2—2½ lin.)


"Olivaceous-brown, minutely punctured, villose: thorax with a fovea on each side, near the base, equidistant from the margin and each other: elytra with seven or eight obscure punctured striae on each: serrated mass of antennae, thighs at the base, apex of tibiae, tarsi, and claws, ferruginous: beneath ferruginous-olive, with ochraceous pubescence."—*Curtis, i. c.*

This also appears to be a variety of Pa. prolefericornis, as I have several specimens of that insect in which the thoracic foveae are more or less evident.

Taken near London; in Battersea-fields: and I believe in Norfolk.

Sp. 4. auriculatus. *Ovatus, niger, hirtus, crebre punctatus, pedibus rufo-piceis.* (Long. corp. 2—2½ lin.)


Ovate, black, hairy: head and thorax rather deeply punctured, a little glossed with fulvescent, the margins of the latter very narrow anteriorly; scutellum fulvescent: elytra rather shining, deeply punctured, and clothed with rather distant, erect, fuscous hair: body pitchy-black beneath, with fulvescent pubescence: legs rufo-piceous, the tibiae dusky.

Less abundant than Pa. prolefericornis; and seldom taken near London. "Wandsworth-common."—*Mr. Westwood.*

† Sp. 5. bicolor. *Niger, subtilissimis punctatis, elytris, pedibus antennisque ferrugineis.* (Long. corp. 2 lin.)


"Minutely punctured, with coarse, imperfect striae at the base of the elytra: head and thorax black; elytra, legs, and antennae, ferruginous."—*Curtis, i. c.*

Probably an immature state of one of the preceding species.

Taken, I believe, in Norfolk.

**Family XII.—Limniidae.**

*Antennae* rather long, nine or eleven-jointed, subfiliform, the last joints rather larger, and forming a club: *palpi* short: *body* ovate, or subglobose, convex above: *head* inflexed, deeply inserted in the *thorax*, which is more or less quadrate and margined: *legs* elongate, alike; *tibiae* slender, not spinose: *tarsi* elongate, four or five-jointed.

Without professing to be an adept in the doctrine of affinity and analogy, I consider that the insects of this family are far more closely allied to the other Philhydrida, notwithstanding their discrepancy of structure, than to the Byrrhidæ or Histeridæ, with
which they are usually associated; their habits are similar to those of the former insects, and unlike those of the latter: their location is, however, somewhat exceptionable; but I know not better where to place them, unless by approximating them to Heterocerus, through the medium of Georyssus, and to Parnus, by means of Elmis: the latter genus, in external characters, somewhat resembling Parnus; and Georyssus having also considerable affinity to Heleplorus in the structure of the maxillae and labium.

Two genera only occur in Britain; thus discriminated:

Antennarum capitulo  triarticulato:  93. GEORYSSUS.  
{ uniarcticulato:  94. ELMIS.}

Genus XCIII.—GEORYSSUS, Latreille.

Palpi short, subequal, with the last joint longer, stouter, ovate. Antennae nine-jointed, the first elongate, subcylindric; second globose, stout; third very short; fourth elongate, cylindric; the two following very short, the remainder forming a subsolid, or obsolescently perfoliated club: head greatly inflexed, hidden beneath the thorax, which is margined: body rather short and globose: legs moderate; tibiae slender, slightly excavated, laterally; tarsi elongate, filiform, four-jointed.

This anomalous genus may be distinguished from Elmis by having four joints only to the tarsi; by the antennae being nine-jointed only; by the superior robustness of the terminal joint of the palpi, and by the short, globose body.

Minute; black: head opaque, with the forehead unequally rugged: thorax rather shining, narrowed anteriorly, dilated on the sides beyond the middle, the base subsinuated, the disc nearly smooth posteriorly, with a transverse impression beyond the middle, and towards the sides a little rugged: elytra more glossy than the thorax, very convex, with the shoulders prominent, the disc striated with large deep impressions, the interstices finely coriaceous: body opaque black beneath, obsolescent punctate: legs black: antennæ fuscous.
Var. 6. The elytra dusky-pitchy.

Inhabits damp places in Norfolk and Suffolk, and is occasionally taken near London.

Genus XCIV.—ELMIS, Latreille.

Palpi very short, nearly filiform, the last joint slightly larger, ovate-cylindric. Antennæ 11-jointed, subfiliform, the joints nearly equal, the last rather larger,
MANDIBULATA.—COLEOPTERA.

Latreille drew up the characters of this genus by the name above employed in his Histoire Naturelle des Fourmis, published in 1802, giving as the type El. Maugetii; and in the same year Illiger, in the first vol. of his Magazin, applied the name Limneus to El. Volkmai, without characters, vide Ill. Mag. i. 297. I have therefore followed the former author (not from the mere circumstance of his having detailed the characters, but from the impossibility of determining to whom the priority of distinguishing the genus was due, as their respective works appeared simultaneously), in conformity to the generally received views of modern writers; though I have, perhaps inconsistently, used the term Limniidae to designate the family.

Elmis differs from Georyssus by its somewhat elongate, convex, body, the five-jointed tarsi, eleven-jointed antennae, and subfiliform palpi: the species all inhabit gently flowing pebbly brooks and rivers, and may be found beneath the stones.

A. Thorax with elevated lateral lines.

a. Thorax without a transverse elevated posterior fold.

Oblong-ovate, black, tinged with brassy, or greenish: head finely punctulate: antennae obscure brown, with the base paler; thorax subquadrate, more convex than the elytra, punctured, shining aeneous-black, with an elevated longitudinal line on each side, remote from the lateral margin, and approaching to each other anteriorly; when viewed laterally these lines nearly disappear: elytra rather shining, regularly and somewhat deeply punctate- striated, the striae about eight in number, the interstices finely punctulate, and clothed with a scanty down: body beneath and the legs of a dusky or cinereous-black, or pitchy, clothed with a yellowish down: tarsi ferruginous.

Not common; found in Norfolk, and sometimes near London. "In a mill-stream near Hatfield in June."—Mr. Westwood.

Sp. 2. tuberculatus. Oblongus, fusco aut piceo-aneus, antennis pedibusque rufesc centibus, thorace bilineato, nitido, coleoptris basi obsolete bituberculatis. (Long. corp. 1 1/4—1 3/4 lin.)
LIMNIIDÆ.—ELMIS.

Oblong; fuscous or pitchy-brassy: antennæ rufescent; thorax with an elevated line on each side, approximating in front, the intermediate space very glossy and punctulate, the exterior margin rather opaque: elytra slightly tuberculate at the base, and transversely impressed; the disc aeneous, rather obsoletely punctate-striated, the third stria from the margin rather elevated, and a little remote from the second; the interstices finely punctated: the body pitchy-brown, and punctulated beneath: legs rufescent.

Found in Suffolk, and, I believe, also in Norfolk and near Hull. "Clengre, Gloucestershire."—Rev. F. W. Hope.

Sp. 3. variabilis. Plate XIII. f. 4.—Angustior, nigro aut piceo-aneus, antennis pedibusque rufescensibus, thorace subnitido, bilineato, coleoptris basi simplicibus. (Long. corp. 1 lin.)


Oblong, rather narrow and depressed; black or pitchy-brass: antennæ and legs rufescent: thorax with an elevated line on each side, approximating considerably in front, the intermediate space rather opaque, and obsoletely punctulated: elytra with the base simple; the disc frequently rufescent, sometimes pitchy or brassy-black, rather faintly punctate-striated, the three marginal striae slightly elevated, the interstices obsoletely punctured: body pitchy beneath.

I believe this species chiefly frequents hilly districts. "Near Carlisle and Spitchweek."—Dr. Leach. "Netley, Salop."—Rev. F. W. Hope.

Sp. 4. lacustris. Brevior, ovatus, rufo aut piceo-aneus, antennis rufescensibus, thorace bilineato, coleoptris basi haud tuberculatis. (Long. corp. 3/4 lin.)


Shorter than the foregoing, ovate; rufous or pitchy-brass, with the antennæ and legs rufescent: thorax as in the last, but broader and more glossy, and the lateral striae less approximating anteriorly: elytra not tuberculated at the base punctate-striated, the third stria from the margin elevated, and rather remote from the second; the margin rather opaque, and the disc glossy, and frequently rufescent: body beneath pitchy.

Taken near Hull; my specimens I obtained from the Marshamian collection.

Sp. 5. fluviatilis. Brevior, ovatus, aneo-niger, antennis, tibias tarsisque rufescensibus, elytris obsoletissime punctato-striatis, haud tuberculatis. (Long. corp. 5/8 lin.)


Shorter and broader than El. lacustris; ovate, brassy-black; with the antennæ, tibiae, and tarsi alone rufescent: the thorax with the usual approximating lateral lines, with the intermediate space rather depressed, glossy, finely and
thickly punctulate, the margins rather opaque: elytra with the disc aeneous, very faintly punctate-striated, the three lateral striae elevated, the third being somewhat remote from the second; the base not tuberculated: body piceous, clothed with cinerescent down beneath.

My specimen of this species was taken in Norfolk.

Sp. 6. parallelipipedus. **Plate XIII. f. 5.** —*Lineari-oblongus, niger, nitidus, antennis pedibusque rufis, thorace quadrato, bilineato nitidior, corpore subdepresso.* (Long. corp. 8 lin.)


Oblong, linear, depressed, glossy black, with the antennae and legs rufescent: the thorax quadrate, very glossy, with a curved line on each side, scarcely approximating anteriorly; the intermediate space obsoletely punctulated, with a central impressed dot, the margin rather opaque, and considerably elevated laterally: elytra depressed, elongate; the disc distinctly punctate-striated, the lateral striae elevated, the third from the margin especially, the interstices impunctate, and very glossy: body pitchy-black beneath.

I have seen four examples only of this species, all of which were taken, I believe, near Exeter, by W. Spence, Esq., who kindly supplied me with a specimen.

b. **Thorax with a transverse elevated posterior fold.**

Sp. 7. *seneus.* **Niger, subaeneus aut aeneus, antennis tarsisque rufescetibus, elytris basi thorace latioribus.** (Long. corp. 1—1 1/2 lin.)


Blackish-brass, or bronzed, shining: head obsoletely punctate, dull black: thorax subquadrate, very convex, black, slightly glossed with aeneous, finely punctated; the disc anteriorly with an elevated straight line on each side, parallel with the lateral margin, behind the middle with an abbreviated transverse impression, connected with the lateral line, and the posterior margin, behind the impression elevated: elytra broader than the thorax at the base, oblong-ovate, very convex, slightly pubescent, deeply punctate-striated, the interstices finely punctulate, the alternate ones slightly elevated, and the sixth from the suture somewhat carinated: body beneath clothed with a dense golden down: legs pitchy-black, the base tomentose, and the tarsi rufescent: antennae rufescent, with the apex dusky.

The most abundant species of the genus, taken occasionally in streams in the marshes, by the junction of the Surry and Croydon canals. "Near Hatfield in June, copiously."—Mr. Westwood. "Netley, Salop."—Rev. F. W. Hope.

Sp. 8. *Maugetii?* **Ovatus, niger, antennis tarsisque ferrugineo-brunneis, elytris basi thorace subovatis.** (Long. corp. 1—1 1/2 lin.)

Ovate, black, shining: thorax as in El. aneus, with an elevated longitudinal line on each side, and a transverse abbreviated fovea posteriorly: elytra scarcely broader than the thorax, each with three elevated lines, and eight rows of impressions: body beneath, and femora at their base, clothed with a cinereous down: tarsi and antennae ferruginous-brown, or rufescent.

Probably the Li. obscurus of Müller, and not sufficiently distinct from El. aneus.

Found near Norwich, and in other parts of Norfolk. "Clengre, Gloucestershire."—Rev. F. W. Hope.

B. Thorax without elevated lateral lines.


Oval, coppery-black, shining, slightly pubescent: head finely punctulated: thorax very convex, rather opaque, brassy-copper, the disc without elevated lines, with an obsolete transverse impression on each side posteriorly: elytra oblong-ovate, rather broader at the base than the thorax, very convex, glossy aneous, deeply punctate-striated, the interstices finely punctulated, and the intermediate ones slightly elevated: body beneath, and legs at the base, clothed with a golden down; the latter pitchy-black, with the claws rufescent: antennae also rufescent.

"Spitchweek."—Dr. Leach. "In a paper-mill stream near Hatfield, in June."—Mr. Westwood.

Family XIII.—Helophoridæ, Leach.

Antennæ nine-jointed, rather abruptly perfoliate-clavate, the club serrated or subsolid: mandibles without teeth at their extremities: maxillary palpi very long: body oblong, rather depressed: thorax somewhat quadrate, nearly orbiculate, or slightly cordate-truncate: tibia a little spinous: tarsi filiform, not ciliated.

The Helophoridæ may rather be said to walk in the water and upon its surface than swim, the formation of the tarsi not permitting them to perform the latter operation; they generally inhabit ponds and ditches, and may be frequently observed walking on the muddy borders, or floating slowly on the surface upon their backs, and sometimes ascending upon aquatic plants, whence they occasionally take flight. In their first state they are carnivorous, but in their final they become herbivorous. The four following genera inhabit Britain.

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<td>graciilior, acuto; longissimi, articulo ultimo utrinque acuminato</td>
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Genus XCV.—Hydrochus, Germar.

Palpi with the last joint oval, stout: maxillary much shorter than the antennae: clypeus entire: mandibles rather stout, trigonate, obsoletely emarginate at the apex, acute: mentum rather large, subquadrate. Antennae with the four terminal joints produced into a slightly compressed elongate club: head porrect: eyes very prominent: thorax elongate-quadrate: body nearly linear.

The prominent eyes and elongate body well distinguish this genus from Helophorus, and its stout, ovate, terminal joint of the palpi at once discriminate it from Ochthebius and Hydrena.


Pitchy-black, sometimes slightly glossed with brassy: head porrect, rugose-punctate: thorax deeply punctated, with five impressed dots, three placed transversely and two oblong, towards the scutellum: elytra convex, dilated on the sides, deeply punctate striated, the interstices narrow, the second from the suture anteriorly, the third posteriorly, and the fourth, sixth, and eighth entirely, somewhat elevated: body pitchy-brown beneath: the abdomen rugose, foveolated: legs and antennae pitchy.

Taken occasionally in April and May on the banks of ponds in Battersea-fields and on Wandsworth-common. "Spitchweek."—Dr. Leach. "Netley, Salop, common."—Rev. F. W. Hope.


Brassy or greenish-black, shining: head porrect, thickly punctulated, with several elevated longitudinal lines on the vertex: thorax thickly punctured, with three transverse impressions anteriorly, and one on each side posteriorly near the hinder angle: elytra slightly dilated on the sides, deeply crenate-striated, the intermediate interstices scarcely elevated: body beneath punctulated: legs and antennae pitchy-red or testaceous, the latter with the tip of the club black.

Not uncommon on the muddy banks of ponds on Wandsworth-common, and on the borders of ditches on Ockham-heath, near Ripley, in April and May: also found near Hertford, and on the banks of the Orwell. "Netley, common."—Rev. F. W. Hope.

Sp. 3. brevis. Brevior, niger, thorace foveolato, antice latiori, elytris punctato-striatis, interstitiis alternis elevatis. (Long. corp. 1½—1¼ lin.)


Short, subovate, deep shining black: head broad, truncate: thorax broader an-
HELOPHORIDÆ.—HELOPHORUS.

teriorly than at the base, roughly punctate, with five larger impressions, placed as in Hy. elongatus: elytra ovate, much broader than the thorax, the sides dilated, deeply punctate-striated, the alternate interstices elevated, the suture and margin also elevated: body black beneath; abdomen transversely rugose: legs and antennæ pitchy-black.

Less abundant than either of the foregoing species; rarely, if ever, taken near London: it, however, occurs in Norfolk, and near Bristol. "Netley, common."—Rev. F. W. Hope. "Whittlesea Mere, in July last."—Mr. Weaver.

GENUS XCVI.—HELOPHORUS, Leach.

Maxillary palpi shorter than the antennæ, the last joint thick and oval: clypeus entire: mandibles stout, subtrigonate, a little emarginate at the tip, which is somewhat produced and acute: mentum large, subquadrate. Antennæ with the two basal joints elongate; the third, fourth, and fifth shorter, distinct; the four following produced into an elongate-ovate club: eyes sessile: thorax transverse, longitudinally sulcate: body elliptic or subovate.

Helophorus, as restricted by Dr. Leach, differs from Hydrochus externally, by having the eyes sessile, the thorax transverse, and the body subovate or elliptical: from Ochthiebius and Hydrochus, the thickened ovate terminal joint of the palpi and sulcated thorax form the more prominent distinctions.

A. Elytra without elevated lines.


Dull brassy-brown: head punctulated: thorax slightly convex, the lateral margins sinuated, slightly dilated anteriorly, and narrowed posteriorly; above punctulated, with five longitudinal sulci; the middle one straight, the others more or less flexuous: elytra large, elongate, rather convex, deeply punctate-striated, the interstices flat, smooth: griseous, with scattered obsolete dusky spots, the alternate ones faintly elevated, and the second from the suture with an abbreviated, punctate, striola, as in many Geodephaga: body beneath fuscous, with a cinereous pubescence: legs flavescent: palpi and antennæ testaceus.

Common in every stagnant pond and ditch throughout the metropolitan district; and I believe in most parts of the country.


Brown-brass, rather glossy: head aeneous or dusky, obscurely punctulated:
thorax more or less coppery or brassy, the lateral margins rounded, the disc
with five longitudinal sulci, as in the foregoing species: elytra oblong, slightly
convex, the back dusky-aneous, the margins griseous, rather deeply punctate-
striated, the interstices narrow, convex, without an abbreviated stria on the
second, towards the scutellum: body beneath black, pubescent; legs, palpi,
and antennae pale testaceous, the latter dusky at the tip.
This also varies greatly in size: the elytra are sometimes griseous, clouded with
dusky, and tinged with brassy, or nearly immaculate: the thorax also varies
considerably in tint, being occasionally fuscous or dusky-brass.

Very abundant in stagnant waters, not only in the metropolitan
district, but elsewhere.

Sp. 3. griseus. Oblongior, thorace viridi-cupreo nitido, lateribus subrectis,
elytris pallidis fusco-nebulosis. (Long. corp. 1 4/10 7/10 lin.)
Narrower and longer than the preceding; of a glossy cinereous: head shining
cupreous green: thorax short, rather convex, the sides nearly straight and
oblique, the disc with five sulci, generally of a shining green, with the sulci
cupreous, and the anterior and lateral margins pale: elytra elongate, punctate-
striated, the interstices flat, smooth, pale griseous, with several sprinkled fus-
cous spots: body beneath black: legs, palpi, and antennae entirely pale-
flavescent.

Far from uncommon in stagnant ponds and ditches throughout
the metropolitan district. "Paddington."—Rev. F. W. Hope.

Sp. 4. dorsalis. Plate XIV. f. 1.—Fuscus, thorace viridi, lateribus subrectis,
elytris punctato-striatis, testaceis, nigro-nebulosis. (Long. corp. 1 1/10 2 1/10 lin.)
Rather ovate, shining fuscous; head as in He. stagnalis: thorax green, with the
sides nearly straight, the disc with five sulci, the second from the margin on
either side curved outwardly, the rest nearly straight, the central one rather
deepest: elytra rather broad, punctate-striated, the interstices slightly elevated,
smooth; the disc testaceous, with a large common dusky-black patch, in
which are two testaceous spots placed towards the apex: antennae, palpi, and
legs pale: body dusky beneath.

Not common: taken occasionally near London; also at Hertford,
near Ripley; in Norfolk, Devonshire, &c.

Sp. 5. viridicollis. Fusco-aneus, nitidus, thorace viridi-aneo, lateribus subrotun-
datis, elytris aneo-nigris, profundi punctato-striatis. (Long. corp. 1 3/10 1 2/10 lin.)
Short and broad, shining brassy-brown; head finely punctulate: thorax sub-
quadrate, with the sides somewhat rounded, the disc greenish-brass, with five
irregular sulci: elytra deep immaculate brassy-black, rather deeply punctate-
striated, the interstices narrow, and a little elevated: body dusky black beneath; antennæ, legs, and palpi pale rufescent.

Taken near London, and in Suffolk, apparently not common.

Sp. 6. tuberculatus. *Niger obscurus, thorace obsolete sulcato, elytris punctato-striatis, interstitialis alternis tuberculis oblongis elevatis.* (Long. corp. 1 1/4—1 1/2 lin.)


Dull black: head punctulated: thorax sub-convex, the margins flat, broadest anteriorly, the sides nearly straight, oblique, the disc thickly punctate, with five rather obsolete sulci: elytra black, punctate-striated, the three alternate dorsal interstices with several oblong shining elevated tubercles: body and legs black: palpi and antennæ pitchy-brown.

The only specimens I have seen of this species were taken in the spring near “Southend.”—Rev. F. W. Hope.

B. Elytra with elevated lines.

Sp. 7. fennicus. *Fusco-ferrugineus, elytris griseis punctato-striatis, interstitialis alternis carinato-elevatis levibus.* (Long. corp. 2 1/4—2 1/2 lin.)


Dusky-ferruginous: head with the forehead obsoletely impressed: thorax broad, rather convex, broadest anteriorly, the lateral margins sinuated, the disc rugose-punctated with five sulci, the central one straight, the rest more or less flexuous: elytra somewhat convex, griseous, punctate-striated, the alternate interstices smooth; a little beyond the middle are some oblong elevated dusky or black spots on the carinae; and near the scutellum is an abbreviated punctate striola: body beneath pitchy-brown; the abdomen pale ferruginous; legs, palpi, and antennæ pale testaceous; the tip of the latter rather obscure.

Not common; taken occasionally in damp banks and hedges in Battersea-fields; also near Hertford, at Dover, and in Norfolk. “Ealing, Middlesex, and Netley.”—Rev. F. W. Hope. “Leith Hill.”—Mr. Waterhouse.

Sp. 8. nubilus. *Ovatus, griseo-testaceus, elytris punctato-striatis, nigro-nebulosis, interstitialis alternis elevatis, crenulatis.* (Long. corp. 1 1/4—2 lin.)


Griseous or testaceous-brown: head punctate; forehead with an impression: thorax short, convex, with the sides depressed, broadest in front, and bisinuated; above with the disc punctate, with five sulci: elytra moderately convex, griseous, with scattered brown clouds, punctate-striated, the alternate interstices elevated, and the carinæ obsoletely crenulated: body fuscosus: legs testaceous: antennæ and palpi pale, with the apex dusky.

**Genus XCVII.—Ochthebius, Leach.**

Maxillary palpi shorter than the antennae, the terminal joint small, gracile, subulated; the preceding thickened, with the apex tumid. Antennae with the basal joint long, slightly bent; the second short, subglobose, followed by an arcuated, slender, internally acute, process; the club elongate, six-jointed, the apical joints rather stoutest, the terminal the largest and ovate: head large; eyes slightly prominent; thorax short, with the sides more or less dilated; body elliptic.

The brevity of the palpi at once distinguishes this genus from the following, as their slender, acute, terminal joint does from the two preceding, from which the dilated margins of the thorax and the greater convexity of the elytra also remove it:—the want of longitudinal sulci on the thorax discriminates it from Helophorus, and the less prominent eyes and dilated thorax from Hydrochus.

A. Elytra punctate-striated.

Sp. 1. marinus. *Viridi-aneus nitidus, thorace transversim impresso, elytris obscurioribus punctato-striatis, pedibus pallidis.* (Long. corp. 2—1 lin.)


Glossy brassy-green: head obsolescently punctulated, with several larger punctures on the crown: thorax very finely punctulated, with two transverse arcuated impressions on the disc, which is rather elevated, and a bent obsolete fovea on each side; the lateral margins on each side behind and the anterior one have a kind of white membraneous appendage: the elytra are punctate-striated, slightly tinged with greenish-brass, with the apex paler: body black: legs and antennae pale.

Var. β. With the thorax pitchy-black.


Closely allied to the last, but differs in having the sides of the thorax more dilated; in colour, &c. Dusky-brass: head obscurely punctured, with some larger impressions on the crown: thorax with the sides considerably dilated, the disc with a longitudinal impressed line, terminating posteriorly in two
rather obsolete impressions placed transversely, the posterior angles with a
curved depression on each: elytra rather convex, punctate-striated, the striae
regular and rather deep: body dusky beneath: legs pitchy: antennae and
palpi pale.

Taken in Devonshire and near Swansea; also in the neighbourhood of London, and in Norfolk. "Spitchweek and Woodland, Devonshire."—Dr. Leach. "Southend."—Rev. F. W. Hope.
"Parley-heath."—J. C. Dale, Esq.

Sp. 3. pygmaeus. *Fusco-aneus, thorace unisulcato, elytris punctato-striatis, apice
pedibusque rufo-piceis.* (Long. corp. $\frac{3}{2}$—1 lin.)

Head punctate, dusky-brass, with a transverse impressed line, and two foveae on the
crown: thorax truncated anteriorly, with the sides rounded, above brassy-
brown, slightly convex, deeply punctured, with an abbreviated channel in the
middle, and an impressed bent fovea on each side: elytra ovate, slightly con-
 vex, brassy-brown, with the apex pitchy-red; the disc regularly but finely
punctate-striated; body pitchy-black: legs rusty-red: antennae and palpi pale, with the tips dusky.


Sp. 4. impressus. *Niger, thoracis lateribus utrinque foveâ magna impressâ,
pedibus testaceis.* (Long. corp. $\frac{3}{4}$—1 lin.)

Although this (so far as the original Marshamian specimens elucidate) appears
a distinct species from the foregoing, and may be distinguished by its colour,
as well as the magnitude of the lateral foveae on the thorax, it is nevertheless
possible that it may prove to be a mere variety: prevailing colour deep
shining black, sometimes obscurely glossed with anechous: head obsoletely
punctate; crown with larger impressions: thorax with the sides slightly di-
lated, the disc a little brassy and glossy, with a longitudinal channel in the
middle, and a deep fovea on each side near the margin: elytra deeply punc-
tate-striated: legs testaceus: antennae and palpi pale.

Not unfrequent in waters and ponds in the vicinity of London. "Southend."—Rev. F. W. Hope.

Sp. 5. bicolon. *Nigro-aneus, subnitidus, thoracis lateribus utrinque lifoveolato,
medio conalicolato, antennis pedibusque pallide testaceis.* (Long. corp. $\frac{3}{3}$—1 lin.)

Slightly glossy anechous-black: head very obscurely punctured anteriorly, the
crown with two or three foveae: thorax with a rather deep central channel and
two impressed foveae on each side between it and the margins, the latter de-
pressed, slightly rugose and reddish: elytra rather convex, deeply and some-
what coarsely punctate-striated, the striae regular; the body black beneath: legs and antennae pale testaceous, the latter palest.

I obtained a pair of this insect from the Marshamian cabinet named as above.

Also found near London, and I believe in Suffolk and Norfolk. I have one specimen from the west of England. “Habitat in Scotia.”—Germar.


The comparative brevity and superior width of this species sufficiently point out its distinction: it is of a pitchy-black: head glossy, obscurely punctured, with some larger impressions on the crown: thorax rather convex, the lateral margins broadly rufous; the disc with an abbreviated longitudinal channel and an obsolete transverse arcuated impression on each side towards the base; elytra slightly glossy-black, rather pitchy or rufescent toward the apex, moderately convex, and somewhat deeply crenate-striated, the stria reaching to the apex: legs rufous: antennae and palpi rufescent, with the tips dusky.


Very minute: deep obscure black; the head and thorax slightly glossy, the former nearly smooth anteriorly, foveolated on the crown; the latter with a slight dorsal channel and two shallow foveae on each side between it and the lateral margins: elytra faintly punctate-striated, the punctures somewhat remote: legs, antennae, and palpi testaceous, the former with a rufous tinge.

The locality of this minute insect I do not remember, but it was not found in the metropolitan district. “Southend.”—Rev. F. W. Hope.


Of a brilliant glossy brass, obscurely tinged with cupreous: head smooth anteriorly, with the crown somewhat rugose, and foveolated: thorax smooth, glossy, the disc with a dorsal channel, two foveae on each side parallel with the same, and one placed behind the hinder fovea and the lateral margin, which is considerably depressed and has another fovea placed anteriorly: elytra very glossy, smooth, obsolete punctate-striated, slightly pubescent: legs testaceous: antennae and palpi pale, with the tips dusky.

Taken near London, and also in Glamorganshire.
B. Elytra punctate, not striated.

Sp. 9. punctatus. Plate XIV. f. 2. Subelongatus, unco-nitens pubescens, thorax discus sulco dorsali foveisque plurimis impressis, elytris punctatis, hauö striatis. (Long. corp. 1½ lin.)

The largest and most remarkable species of the genus; somewhat elongate, glossy-brass: head with an elevation on the front, the crown with two deep fovee: thorax with a central channel and four impressions on each side, the two lateral ones united together by an arched impressed line: elytra slightly glossy, somewhat pubescent, thickly and minutely punctured throughout: legs pitchy-testaceous, with the tarsi dusky: antennae and palpi testaceous, the apex of the latter dusky.

I have little doubt that this will form the type of a new genus, as the form of terminal joint of the palpi appears to differ from that of the true Ochthebi; and the antennae are somewhat elongate. It may be the Och. exsculptus, Degean.

This singular insect, of which I have seen but two examples, was found either near Bristol or in Glamorganshire. "Netley."—Rev. F. W. Hope.

Genus XCVII.—Hydræna, Kugellan.

Maxillary palpi about three times as long as the antennae: the terminal joint thickened in the middle, attenuated at each end, the basal short, straight, the second very long, bent, slender, the apex rather thickened, the following about half the length of the second, obscurely thickened at the tip. Antennae with the first joint elongate, bent, incrassated at the apex, the following short, ovate, succeeded by a slender subulated process, to which the club, which consists of six joints, the terminal largest, is attached: head large, porrect: eyes small, immersed: thorax subquadrate: body oblong: legs rather elongate: tarsi long and slender.

The extraordinary length of the maxillary palpi at once distinguishes this genus from the other Helophoridae. It is most probable that we have more than three species in England, as there are several known on the continent; and among the speciemens which I possess there is considerable diversity of appearance, though I have not ventured to consider them distinct, from not being thoroughly acquainted with the actual localities of the individuals.


Proportionately more elongate than the other species of the genus, and of a superior bulk: head black, slightly convex, finely punctulate anteriorly, rather more deeply on the crown: thorax slightly convex; the sides a little
dilated, somewhat unequal; the disc thinly but finely punctured; elytra slightly convex, piceous or brownish-black, thickly punctate-striated; legs pale rufescent; antennae and palpi paler, with the tips dusky.

The size and colour vary considerably.


Sp. 2. pusilla. Plate XIV. f. 3. Subovata, saturate nigra nitida, elytris obsolete punctato-striatis, pedibus rujis. (Long. corp. $\frac{3}{5}$—1 lin.)


Broader and shorter than the preceding, of a darker colour, &c. Subovate; deep glossy black; head obscurely punctured, the crown slightly rugose; thorax very finely but thickly punctured, with a slight fovea near each posterior angle; elytra rather obsoletely but thickly punctate-striated; legs rufous; antennae and palpi rufescent, dusky at the apex.

This is probably the Hydrana nigrita of Muller. See Germar Coleopterorum Species Novae, &c. p. 93.


Sp. 3. minutissima. Ovata, nigro-picea, thorace canalicular, elytris levibus, antennis pedibusque pallidis. (Long. corp. $\frac{1}{5}$ lin.)


Ovate pitchy-black; head glossy, obtuse; eyes rather large, globose; thorax black, shining, convex, behind with a slight channel in the middle, and a minute fovea on each side; elytra ovate, convex, smooth, glossy pitchy-black, the apex paler; body black; legs, antennae, and palpi pale.

I have a single indigenous species agreeing with the above description.

I am not aware of the exact locality of this insect.

Family XIV.—Hydrophilidae, Leach.

Antennae generally nine- rarely six-jointed, perforolate-clavate, the club distinctly cleft. Mandibles bidentate at their extremities; maxillary palpi very long, usually filiform; body oval or somewhat rounded, frequently nearly globose; thorae short, transverse; tibiae slightly spinose; tarsi five-jointed, filiform, the posterior sometimes ciliated, the basal joint minute, the second longer than the rest.

The bidentate mandibles enable us with facility to discriminate
HYDROPHILIDÆ.—LIMNEBIUS. 119

this family from the foregoing: the species of which it is composed are more truly aquatic than the Helophoridæ, and the typical species swim with dexterity by means of their paddle-like tarsi: they prey upon small aquatic mollusca and insects, in their first and final states; but their voracity is far inferior to that of the Hydradeplaga.

The British genera, which have received no accession to their numbers since they were published by Dr. Leach, may be thus known:

\[
\begin{align*}
\text{integer} & \quad \text{Elytra } \quad \text{apice} \\
\text{Sternum -j Oculi} & \quad \text{simplex} & \quad \text{truncata} & \quad 99. \text{LIMNEBIUS} \\
\text{Sternum} & \quad \text{Elytra} & \quad \text{integra} & \quad \text{sessiles} & \quad 104. \text{HYDROBIUS} \\
\text{Clypeus -p spiniforme} & \quad \text{Antenna} & \quad \text{Acuminato} & \quad \text{obtuso} & \quad 100. \text{HYDROUS} \\
\text{emarginatus} & \quad \text{102. SPERCHEUS} & \quad \text{101. HYDROPHILUS} \\
\end{align*}
\]

GENUS XCIX.—LIMNEBIUS, Leach.

Maxillary palpi elongate, the basal joint minute, the rest of nearly equal length, the second and third somewhat thickened at the apex, the terminal rather slender, slightly attenuated at each extremity. Antennæ short, slender at the base, with an elongate six-jointed club: head ovate, moderate: eyes moderate: thorax short, transverse, slightly convex, dilated at the sides: body somewhat depressed: elytra rather oblong, truncate at the apex: scutellum broad; legs moderate: tibiae slightly spinous: posterior tarsi ciliated.

The truncate elytra and inferior bulk sufficiently point out this genus at first sight; but other very evident characters of discrimination may be remarked, such as the depressed body, which distinguishes it from Hydrobius and Berosus, and the simple sternum, by which it is known from Hydroïds and Hydrophilus; and the integrity of the clypeus, which separates it from Spercheus. The species have been much neglected, but from the examination of a considerable number of specimens, the following appear to be distinct.


Ovate obtuse: of a deep glossy pitchy-black, with the lateral margins of the
MANDIEULATA. COLEOPTERA.

Thorax and the edges of the elytra rufescent: the femora pitchy, with the tibiae and tarsi paler.

It varies in being of a paler or pitchy hue above; or sometimes approaching to castaneous.

Distinguished by its superior size, and the obtuseness of its posterior outline, as well as by the general intensity of its colour and glossiness.

Found near London; in Devonshire, Glamorganshire, Norfolk, and "Glanville's Wootton."—J. C. Dale, Esq. "Halifax."—Mr. Gibson.

Sp. 2. affinis. Oblongo-ovatus, postice subattenuatus, nigro nitidus, thoracis elytrorumque marginibus concoloribus, femoribus nigris, tibiis tarsiisque rufescentibus. (Long. corp. 1 1/2—1 3/4 lin.)


Oblong-ovate, acuminated behind; glossy black, with the margins of the thorax and of the elytra concolorous, the apex of the latter rounded: femora black, tibiae and tarsi rufescent.

The attenuated posterior outline and deep concolorous margin to the thorax and elytra sufficiently distinguish this species from the foregoing.

My specimens were captured in the metropolitan district.

Sp. 3. truncatellus. Brevis, ovatus, postice obtusus, lavissimus, ater, thoracis elytrorumque marginibus concoloribus, pedibus piceis. (Long. corp. 1—1 1/2 lin.)


Short, ovate, posteriorly obtuse, very smooth, deep black, with the lateral margins of the thorax and elytra concolorous; the legs pitchy; the palpi slightly rufescent.

The inferior size and brevity of this species, exclusively of the dissimilarity in form, sufficiently discriminate it from Li. affinis.

Perhaps the most abundant species of this genus; occurring in plenty in some ponds near London, and not unfrequent in Norfolk and Suffolk, judging from the number of specimens I have seen from thence. "Netley."—Rev. F. W. Hope.

Sp. 4. marginalis. Brevis, ovatus, niger, nitidus, thoracis angulis posticis elytrorumque marginibus piceo-testaceis, pedibus piceis. (Long. corp. 1 lin.)


Short, ovate, glossy black, with the posterior angles of the thorax and the lateral margins of the elytra pitchy-testaceous; the legs pitchy.

The apex of the elytra is sometimes slightly rufescent.

Smaller and somewhat more obtuse and broader than the last, from which it is also distinguished by the coloured margin to the thorax.

Sp. 5. nigricans. *Oblongo-ovatus, obtusus*, niger, lavis, nitidiusculus, pedibus piceis. (Long. corp. $\frac{1}{2}$–$\frac{3}{4}$ lin.)


Oblong-ovate, obtuse, smooth, slightly glossy-black, the margins of the thorax and of the elytra concolorous; the legs and antennae pitchy.

It varies in being of a pitchy testaceous hue, with the antennae and legs paler: probably immature.


Sp. 6. lutosus. *Oblongo-ovatus, nigro-fusceous, elytris obsoletissimis punctato-striatis*, pedibus piceis. (Long. corp. $\frac{1}{2}$ lin.)


Oblong-ovate, dusky-black, or brown, with elytra very obsoletely punctate-striated, the legs piceous: the thorax rugose, with transverse elevated flexuous lines.

The obsoletely punctate-striated elytra well characterizes this species; as well as the rugosity of the thorax.

This species I obtained from the Marshamian Cabinet. I am not aware of its locality.

Sp. 7. mollis. *Ater, nitidus, thorace elytris pedibusque fusco-testaceis*. (Long. corp. $\frac{1}{2}$ lin.)


Ovate, slightly acuminate, rather convex, black, shining, with the thorax, elytra, and legs testaceous brown, the margins of the former paler.

The black head and abdomen of this minute species, as well as its inferior size, distinguish it from all the foregoing.

Li. mollis is not uncommonly taken in the ponds about London. “Bottisham.”—Rev. L. Jenyns.

Sp. 8. picinus. *Ovatus, acuminatus, subconvexus, piceus nitidus, thoracis marginibus dilutioribus, pedibus pallide testaceis*. (Long. corp. $\frac{1}{2}$ lin.)


Ovate, acuminate, slightly convex, shining piceous, the margins of the thorax rather paler, the legs pale testaceous, or rufescent.

This is known by its small size, superior convexity, and the acumination of its posterior extremity.

Of this insect I have examined but one example, which I procured from the Marshamian Cabinet.
Sp. 9. nitidus. *Ovatus, depressus, ater nitidus, margine thoracis pedibusque pallidé rufis.* (Long. corp. $\frac{1}{3}$ lin.)


Ovate, depressed, glossy-black, with the margin of the thorax and the legs pale rufous, or piceous.

Distinguished by its depressed form and minute bulk from all the foregoing.

Of Li. nitidus I have also only seen my own pair, which were obtained from the same source as the preceding.

**GENUS C.—HYDROUS, Linne MSS.**

*Maxillary palpi* very long, the basal joint minute, the second very long, robust, subelavate, the third shorter and more slender, the terminal about half the length of the third, slenderer and elongate-ovate: *labrum transverse-oval, entire: mandibles large, emarginate at the apex, with several strong bifid teeth in their inner edges: Antennae nine-jointed; the basal joint robust, bent, attenuated at the base, the next oblong, the three following transverse, the remainder forming the club, of which the terminal joint is acuminate; head broad, obtuse: eyes not very large: elytra posteriorly attenuated: sternum terminating in an acute spine, reaching considerably beyond the insertion of the posterior legs; four posterior tarsi compressed, ciliated on the inner margin, and formed for swimming; claws bifid; and two anterior tarsi of the male with a triangular dilatation, and two robust simple unequal claws.

Hydrous is readily known by the integrity of the labrum, bifid posterior claws, attenuated elytra, and superior bulk; as well as from the magnitude and internal denticulation of its mandibles; and, like the Dytici, the males are remarkable for the great size of the terminal joint of the anterior tarsi.

Sp. 1. piceus. *Olivaceo-niger, nitidus, elytris octo striatis, interstitiis intermedii lineâ punctorum impressorum, antennis rufescentibus.* (Long. corp. 1 unc. 4—6 lin.)


With the exception of Lucanus Cervus and Melolontha Fullo, this is the largest of the indigenous Coleoptera: of a glossy olivaceous-black, the margins of the elytra purpurascent or greenish: head smooth, with a deep punctate impression above the eyes and on the forehead; thorax smooth, with some punctures on the lateral margins, and two more or less evident punctate fovee

*“Olivier remarks that the antennae of Hydrous piceus are in fact eleven-jointed, the eighth and tenth joints being very minute, their place being marked out by the distances which intervene between what are commonly considered the second and third, and the third and last joints of the clava.”—Mac Leay.*
HYDROPHILIDÆ.—HYDROPHILUS.

on the disc towards the anterior margin: elytra large, elongate, each with eight simple striae, the alternate interstices with a continuous series of irregularly-impressed dots, which, with the striae, are deepest towards the apex, and somewhat evanescent anteriorly: breast clothed with a yellowish pubescence; abdomen deep black, with luteous marginal spots; legs pitchy, with the tarsi rufescent towards the apex. Both sexes vary much in colour; the female is rather broadest.

The larva dusky, with smooth chestnut-coloured head, slender legs, and attenuated tail: it feeds voraciously on mollusca, and changes in June beneath dung, making a deep hole for the purpose: about August the imago appears: the female deposits her eggs symmetrically, in a nest composed of a gummy matter, which she spins out of her abdomen, in which receptacle they float about till they are hatched.


GENUS CI.—HYDROPHILUS AUCTORUM.

Maxillary palpi nearly as in Hydrous, but less robust, and the terminal joint subfusiform: labrum transverse, emarginate: mandibles ciliated on the inner edge, acute and bifid at the apex. Antennae nine-jointed; basal joint robust, abruptly bent, and attenuated near its origin; second elongate, and with the three following, which are transverse, rather slender; the remainder forming the club, the terminal joint of which is somewhat obtuse, and obliquely truncate: head ovate; eyes small, reniform: elytra convex, broad posteriorly: sternum terminating in a slightly acute spine, which scarcely reaches beyond the insertion of the posterior legs: legs not very stout; the four posterior tarsi compressed, ciliated on each side, and formed for swimming; anterior simple in each sex: claws dentate at the base, greatly incurved.

The genus Hydrophilus differs from Hydrous by having the labrum emarginate, the mandibles ciliated internally, without prominent teeth, the antennæ more obtuse at the apex, and the body obtuse and somewhat dilated behind: from Spercheus and the following genera the acuminate sternum distinguishes it. The larva somewhat resembles that of Gyrinus.


Entirely black or of a glossy violet, sometimes slightly greenish: head with a waved series of punctures on each side, and a deep fovea near the eyes: thorax with scattered punctures on the sides, and two oblique punctate foveae on the disc anteriorly: elytra elongate-convex, with five punctate stria; the two lateral ones somewhat confluent; between the striae are two very obsolete impressed lines: body slightly pubescent beneath; legs black; tibiae and tarsi piceous: antenna and palpi ferruginous; the club of the latter black.

Var. 5. Violaceous-brown, the elytra obsoletely sulcate; legs pale ochraceous. Apparently immature.

Larva pale ochraceous-brown, with the anterior segments darker; it has seven fascicles of hair down each side, and the caudal segment has two filiform processes:—the pupa is slightly hairy anteriorly, and the apex of the abdomen has a large and powerful bifid process.


**GENUS CII.—SPERCHEUS, Fabricius.**

Maxillary palpi as long again as the labial, the terminal joint elongate-ovate, attenuated at the base, acute at the apex; labrum transverse-quadrate: mandibles much bent externally, the apex acute, with acute divaricating teeth: maxilla with the external lobe palpiform, slender, subulated, the apex setose. Antennae apparently six-jointed, the basal joint longest, conic-cylindric; the remainder forming a cylindric club: head large: eyes prominent: clypeus emarginate: body ovate, gibbose: sternum simple: tibia angulated, smooth: tarsi with the four basal joints short, the terminal large, obconic; with two short equal claws.

The convex body and emarginate clypeus at once distinguish Spercheus from the other Hydrophilideae; but the more essential characters of the external palpiform lobe of the maxillae, and apparently six-jointed antennae, may be remarked. The species inhabit stagnant waters, adhering to the roots of plants.


Obscurely glossy-fuscous: head flat, unequal, punctate, dusky-black: eyes black: thorax slightly convex, rugose-punctate, the disc pitchy-brown, the lateral margins pale: scutellum elongate-acuminata: elytra gibbose, coarsely and
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rather irregularly punctate-striate; the alternate interstices more elevated, especially posteriorly, ashy-brown, with scattered dusky spots, especially towards the suture: body beneath flat, black; legs dusky-ferruginous, or pitchy, with the tibiae and tarsi paler; palpi and antennæ pale-testaceous; the club of the latter fuscous.

Hy. verrucosus* of Marsham is a mere variety of this species, being obscure above, and having the sides of the abdomen slightly verrucose.

This rare insect has not often been captured in England; specimens have however occurred at Windsor and near York; and Dr. Leach once picked up a fragment of one in Kensington-gardens.

“One pair taken in July, 1824, in Yaxley-fen.”—Mr. Chant.

GENUS CIII.—BEROSUS, Germar.

Maxillary palpi thrice as long as the labial, basal joint very minute, second elongate, clavate, third about half the length of the second, robust, attenuated at the base, terminal nearly as long as the second, subfusciform, truncate: labrum transverse, anterior margin rounded, entire, mandibles tridentate at the apex. Antennæ apparently eight-jointed, the basal joint stout, elongate, clavate, second slender, about half the length of the preceding, attenuated at the apex, the three following small, the remainder forming the club, of which the terminal joint is large and subglobose: head nutant, eyes slightly prominent: clypeus entire: thorax convex: elytra globose, broader than the thorax, the apex entire: sternum simple: tibiae slightly spinose: posterior tarsi natatorious, ciliated.

From the preceding genus Berosus differs in having the clypeus entire, the external lobe of the maxillae not palpiform, the antennæ distinctly more than six-jointed, and the thorax more globose and narrower than the elytra; and from Hydrobius by the prominence of its eyes, the different proportions of the maxillary palpi, the comparative smallness of the thorax to the elytra, and the obtuse terminal joint of the antennæ.


Oblong-ovate: griseous-yellow; head thickly and finely punctate, of a brilliant brassy-green; thorax also thickly punctured, with a subquadrate anteriorly narrowed brassy-green spot on the disc: elytra crenate-striated, the interstices finely and regularly punctulated, the striae with minute fuscecent spots, and several scattered larger spots on the disc, which are variously placed in
different specimens: legs pale, with the base of the four posterior femora and the tips of the tibiae and tarsi dusky, or black.


Sp. 2. aericeps. *Ovatus, ochraceo-flavescens, punctulatus, capite vittāque didymā thoracis cupreo-ant nigro-aneis. (Long. corp. 2.5—3 lin.)


Larger and more globose than the foregoing, of a more ochraceous hue, and the punctures on the head and thorax more remote and shallow: head cupreous or brassy-black, sometimes tinged with cupreous; thorax light ochraceous, with two longitudinal or parallel lines on the disc, divided by a ferruginous streak, and slightly rounded externally: elytra very globose, crenate-striated, the striae more or less fusescent, and the interstices punctured, the intermediate ones more deeply so, and more or less spotted in different individuals with dusky or black: legs pale, the four posterior dusky at the base.

Var. 5. With the spots on the thorax united.

Less frequent than the foregoing, but far from uncommon round London: also found in Norfolk and Devonshire. "Wandsworth-common, abundantly."—Mr. Ingpen. "Southend."—Rev. F. W. Hope. "Bottisham."—Rev. L. Jenyns.

Sp. 3. globosus. Plate XIV. f. 5. *Sub-oblungo-ovatus, griseo-flavescens, vagi punctatus, capite maculāque thoracis medio nigro-aneis, hac carinula longitudinalis ferruginea. (Long. corp. 2.5 lin.)


Subelongate, ovate, obtuse; griseous-yellowish, deeply punctured: head brassy-black, with sometimes a minute ferruginous spot on the forehead; thorax with an irregular, externally dentated, greenish or brassy-black spot on the disc, having an abbreviated longitudinal ferruginous carina in front: elytra deeply crenate-striated, and very dusky, the interstices thickly punctured, and more or less spotted with black: legs pale ferruginous, with the base of the four posterior dusky.

Probably *Hydrophilus signaticollis* of Megerle, an undescribed species.

I detected this species long since, and gave its locality to Mr. Ingpen, who published it by my MS. name in his useful "Instructions," and have captured a single specimen near London, I believe at Hertford, and obtained others from Whittlesea-mere. "Bottisham."—Rev. L. Jenyns. "Whittlesea-mere, June and July."—Messrs. Chant and Bentley.
Gena CIV.—Hydrobius, Leach.

Maxillary palpi considerably longer than the labial, the basal joint minute, the second elongate-clavate, third and fourth of nearly equal length, the latter elongate-ovate, obtuse: labrum transverse, entire. Antenna nine-jointed; the basal joint robust, elongate, clavate, the second shorter and more slender, attenuated at the apex; the following nearly of equal length, clavate; the two next short, transverse; the remainder forming the club, the terminal joint being acuminated: head ovate: eyes small, not prominent: clypeus entire: body more or less convex: elytra entire, obtuse: sternum simple: tibiae slightly spinose: posterior tarsi natatorium, ciliated: claws simple.

Hydrobius, the last of the aquatic genera, differs from the other Hydrophilidae by the greater convexity of the body, which is posteriorly obtuse: the clypeus is entire, the scutellum small, the sternum simple, the antennae nine-jointed, with the terminal joint large, somewhat compressed and acuminated. In the first subdivision of the second section of the genus, the maxillary palpi are very long, and the terminal joint is considerably shorter than the third; and in the succeeding subdivision they are abbreviated, and have the terminal joint longer than the third: they may probably form different genera hereafter.

A. Body more or less elongate. a. Elytra striated throughout.


Oblong, deep pitchy-black, or obscurely aeneous, shining; thickly and finely punctate: head with a few larger punctures on the sides and near the eyes: thorax also with some larger impressions on the lateral margins; and two slight fovee on the disc towards the anterior edge: elytra obsolete striated, the striae composed of remote impressions, the alternate interstices with an irregular line of larger punctures: body dull black beneath: legs piceous, with the tibiae and tarsi rufescent or rufo-ferruginous.

Var. e. Rather broader; more coarsely and thickly punctate, with the striae on the elytra more distinct; the palpi pale testaceous, with the apex black, and the legs pale rufo-testaceous with the femora dusky. Probably a distinct species.


Shorter but scarcely narrower than the last: oval, pitchy-black, thickly but not very coarsely punctulate, with some larger impressions on the head, and on the sides of the thorax: elytra rather faintly punctate-striate, the interstices thickly and finely punctulated, the alternate ones with some deeper impressions: body beneath dull black: legs piceous, with the tarsi rufescent: palpi ferruginous: antennae with the club black.

Var. With the legs pale rufo-testaceus, the base of the femora dusky.

Common in every pond and collection of water throughout the metropolitan district. “Southend and Kensington-gardens.”—*Rev. F. W. Hope.* “Bristol.”—*Dr. Leach.* “Glanville’s Wootton, and Scotland.”—*J. C. Dale, Esq.*

Sp. 3. chalcanotus. *Ovalis, cupreo- aut aeneo-niger, vel splendide viridi-aneus, vagae punctatus, elytris subcrenato-striatis, pedibus piceo-testaceis, tarsi dilutioribus.* (Long. corp. 3—3½ lin.)


More coarsely punctured than the last: colour very variable, coppery or brassy-black, or of a splendid greenish-brass, sometimes violaceous or bright green: head and thorax as in the preceding, but the punctures deeper: elytra more deeply striate, the striae slightly crenulate: legs pitchy-testaceus, with the tarsi paler, and the base of the femora dusky.

The difference in sculpture, and usually brilliant metallic colouring, discriminates this from the foregoing insect.

Also very common throughout the metropolitan district, and I believe in other parts. “Spitchweek, Devonshire.”—*Dr. Leach.* “Bottisham.”—*Rev. L. Jenyns.*


Short, subglobose, pitchy-black, coarsely and thickly punctate: elytra rather deeply punctate-striate, the interstices alternately with deeper impressions: body beneath dull black: legs pitchy-black.

The inferior size and short subglobose form, with the coarseness of the sculpture, distinguish this from all the preceding species.

Found near London by myself; I also obtained one specimen from the Marshamian Cabinet.
b. Elytra with one stria at the suture, or plain.

Sp. 5. melanocephalus. Ovatus, niger, thorace pallido, disco nigro, elytris pal-
lidis, stria suturali impressâ. (Long. corp. 2—3 lin.)

Ovate, black; finely punctured: head punctiated, black, with a pale marginal
lunule before each eye: thorax finely and thickly punctured, pale griseous-
testaceous, with a discoidal and two contiguous spots black: elytra oblong,
pale griseous, with a dusky humeral spot, and a deep stria parallel with the
suture: body dull black beneath, pubescent: legs pale ferruginous; femora
generally pitchy-black.

Var. β. Rather larger, with the thorax obsoletely spotted with dusky; the crown
darker, and frequently a longitudinal fuscous stria on the forehead.

Var. γ. Steph. Catal. l. c. With the head immaculate black; the thorax with its
disc black; its margins and the elytra castaneous-red.

Plentiful in Battersea-fields during April and the beginning of
May; and far from uncommon in other places round London at the
same season, and in Norfolk. “Bottisham, not common.”—Rev.

Sp. 6. torquatus. Supra griseo-testaceus, vertice thoracisque disco obsotelius
infuscati, elytris subtilius punctulatis, stria suturali profundi impressâ.
(Long. corp. 2¹⁄₄—3¼ lin.)

Much larger than the last, the colour paler, less glossy, the punctures on the
thorax and elytra smaller in proportion, &c. Above griseous-testaceous; head
more or less clouded with fuscous: thorax with an obsolete brown cloud in
the middle: elytra rather paler, very finely punctulated, with a deep stria on
each near the suture, sometimes sprinkled with blackish dots towards the base,
the apex generally immaculate: body punctulated beneath and black: femora
at the base and beneath black; the apex above with the tibiae and tarsi pale
testaceous. This is the Hydrophilus grisescens of Gyllenhal, which I con-
ceived might be a variety of the foregoing insect when my Catalogue was
printed. I am now of a different opinion.

Found near Hertford and Ripley in the spring.

Sp. 7. testaceus. Ovatus testaceus, vertice corporeque nigris, pedibus pallidis,
elytris striâ suturali impressâ. (Long. corp. 2¹⁄₄ lin.)

Closely allied to the foregoing, of which it may possibly prove to be a variety:
rather smaller: the body beneath dull black; the crown glossy-black; the
head anteriorly, thorax, and elytra immaculate testaceous; the legs pale; the
upper surface very finely and thickly punctulate.

Taken occasionally near London in the spring.

Mandibulata. Vol. II. 1st February, 1829. K
Sp. 8. ochropterus. Oblongo-ovatus, niger, elytrorum thoracisque lateribus luridis, maculæ ante utrumque oculum lurida; elytris striā suturali impressā. (Long. corp. 2 lin.)


Still less than the foregoing, which it greatly resembles: oblong-ovate, thickly and finely punctulated; black, with the lateral margins of the thorax and elytra lurid; the head black, with a lurid spot before each eye: body dull black beneath: legs pale testaceous, with the tarsi rufescent.

This is apparently very distinct from all the preceding species of this genus:—I obtained one specimen from Mr. Marsham’s cabinet, and possess others captured near London:—it also occurs in Norfolk.


Allied to Hy. melanocephalus: black: head punctate, fulvous, or dusky: eyes black: thorax yellowish or fulvous, disc immaculate, sometimes dusky anteriorly: elytra fulvous or flavescent, with obsolete longitudinal dusky lines, and a deep stria parallel with the suture: abdomen dull black, pubescent: legs testaceous with dusky femora.

The Hy. fulvus of Marsham, which I formerly supposed to be synonymous with Hy. bicolor of Paykul, proves, upon a re-examination of the authentic Marshamian specimens, to be totally distinct; I have therefore restored the name of the former author.

Not uncommon during the spring throughout the metropolitan district. “Glanville’s Wootton, Dorset.”—J. C. Dale, Esq. “Southend.”—Rev. F. W. Hope.

Sp. 10. lividus. Oblongo-ovatus pauli depressus, supra griseo-flavescens punctatissimus, striā suturali nullā, palpēs longissimis. (Long. corp. 2 1/2 lin.)


Rather more oblong and less convex than the preceding: above pale griseous-yellow or ochraceous, very finely and delicately punctulated: head with the crown rather dusky: thorax sometimes with obsoletefuscous clouds: elytra griseous, thickly punctulated throughout, but not striated; sometimes with a few dusky longitudinal streaks: body beneath dusky-black: legs ferruginous, with the femora dusky: palpēs extremely long, pale, with the apex black, or dusky.


Plentiful during April in ponds in Battersea-fields, at Hertford,
HYDROPHILIDÆ.—HYDROBIUS.


Sp. 11. marginellus. Oblongo-ovatus, ater nitidus, thoracis elytrorumque margine griseo-rufo, striä suturali unicä. (Long. corp. 1 lin.)


Oblong-ovate, deep glossy-black, thickly punctate, with the lateral margins of the thorax and of the elytra griseous-red: head with a fovea over each eye: thorax with too larger impressions on the disc anteriorly: elytra with a single stria on each parallel with the suture: body and legs obscure black: tarsi rufescent: palpi and antennæ pale testaceous, the latter with the club dusky.

Var. B. With the anterior margin of the thorax broadly griseous-red.


Size and form of the preceding insect: head thickly punctate, black; thorax black, with the lateral margins broadly testaceous-brown, the disc punctulate throughout: elytra oblong, thickly and finely punctate, obscure griseous or testaceous brown, with the suture darker, and a single stria on each, not reaching to the base, parallel with the suture: body beneath and femora dull black: tibiae and tarsi ferruginous.

Var. B. With the head alone black, the thorax and elytra pale testaceous.

This variety is the Hydrophilus margipallens of Marsham, of which I possess an authentic specimen. In Entomologia Britannica its length is stated to be 1½ line by a typographical error, which the author has corrected in his MS. copy; and without the assistance of the latter the species intended could never have been ascertained.

Also taken occasionally near London, but far from common. "Southend."—Rev. F. W. Hope.

B. With the body subglobose.


Body and head black, the latter with a lurid or fulvous lunular spot on each side before the eyes; the thorax and elytra immaculate lurid-testaceous, thickly but finely punctulated; the latter with a rather deep stria parallel with
the suture, and towards the apex somewhat absolutely punctate-striated: palpi
and antennæ testaceous, the latter with a black club.

Var. s. With the elytra absolutely clouded with dusky towards the lateral mar-
nings, near the apex.

This species is the Hydrophilus bicolor of Paykul, v. i. p. 184; a name which
cannot be retained, Fabricius having previously applied it to a different
species of this genus; I have therefore employed that by which it has been so
long known in this country, in preference to coining a new one, and thereby
unnecessarily add to the nomenclature.

I have occasionally captured this insect during the spring in
Copenhagen-fields and near Hertford, and once at Ripley, but it
is not very abundant near London. " Wandsworth-common."—
Mr. Ingpen. " Near Norwich in April 1803, by Rev. W. Kirby."
Marsham’s MSS. " Southend, rather plentifully."—Rev. F.
W. Hope. “ Lawrence Waltham."—Mr. S. Hanson.

suturali unicō. (Long. corp. 2—2½ lin.)

Rather less than the preceding; nearly hemispherical: entirely of a deep
glossy-black; thickly and regularly punctured throughout: head rather large:
thorax very convex, the lateral margins rounded and sometimes a little piceous:
elytra gibbous, with a single impressed stria near the suture, not reaching to
the base: body clothed beneath with a cinereous pubescence: legs deep pitchy-
black: tarsi rufescent: tibiae sometimes paler.
The trophi of this species approximate rather closely to those of Cercyon.

Occasionally found in ponds in the metropolitan district, and in
Norfolk. " In Kensington-gardens, and on Wandsworth-com-
mon."—Mr. Ingpen. " Glanville’s Wootton."—J. C. Dale, Esq.
" Southend."—Rev. F. W. Hope.

Sp. 15. bipunctatus. Niger, thoracis lateribus pedibusque pallidis, elytris griseis
creberrime punctato-striatis, obscuri nigro-pulverulentis. (Long. corp. 1½—
1¾ lin.)

Black, finely punctulated: head with a small pale spot on each side before the
eyes: thorax with the lateral margins broadly pale-yellowish: scutellum
black: elytra pale griseous, very convex, rather strongly punctate-striated, the
stria composed of distinct fuscous impressions, and giving the appearance of
being irrorated with dusky or black; the margins paler: legs entirely pale.

A very common species in the neighbourhood of London; in
Norfolk, Suffolk, and I believe in most parts of the kingdom.

Sp. 16. striatulus. Ater, thoracis margine elytrisque substriatis griseis. (Long. corp. 1½—1¾ lin.)


Larger than the foregoing, the striae and punctures less profound, the elytra less clouded with dusky, &c.; nevertheless it may be merely a variety: the head is black, with a very minute pale spot on each side: the palpi grisseous: the thorax black, with a broad grisseous margin: the elytra pale grisseous, and very obscurely striated: the body obscure black: the legs pale grisseous.

Less common than the last, but found throughout the metropolitan district.


Allied to the two last, but of a darker colour, the lateral margins of the thorax narrowly pale, &c. Deep black, finely punctulated; head with a very minute pale spot on each side; thorax with a narrower pale-yellowish lateral margin: the disc glossy-black: elytra dusky or brownish-grisseous, very finely punctate-striated, the disc more or less clouded with a deeper tinge, and near the suture towards the apex two round whitish spots: the lateral margins, and sometimes the base, pale: legs pale grisseous.


Glossy-black: head with two fulvous spots before the eyes: thorax testaceous, with three more or less confluent dusky spots on the disc, the lateral margins pale yellowish: elytra testaceous, obsoletely marked with interrupted black lines, each with a single impressed stria towards the suture: abdomen black: legs pale rufous.

The clouded thorax and pale hue, added to the small size of the insect, distinguish this from the following.


Closely allied to the foregoing, and different in form from Hydrop. globulus of Paykul hereafter described. Subovate, glossy pitchy-black, very faintly punctulated throughout: the margins of the thorax narrowly pale: elytra with a single stria on each towards the suture, the lateral margins pale testaceous: body beneath and legs pitchy-black.

Very abundant, not only throughout the metropolitan district; but in other places; in Norfolk, Suffolk, Devonshire, &c. "Bottisham."—Rev. L. Jenyns.

Sp. 20. ochraceus. Subovatus, nigror, thoracis lateribus pallidis, elytris ochraceis immaculatis, stria suturali unica. (Long. corp. 1—1½ lin.)


Allied to the last, but smaller; of a different colour and more deeply punctured: head immaculate black, finely punctured: thorax black, with the lateral margins pale yellowish, the disc finely punctulated: elytra very pale immaculate ochraceous, rather deeply punctured throughout, with a deep natural stria on each: body beneath and legs pale griseous.

It is possible that this may be only an immature state of the foregoing, but the impressed dots seem larger and deeper.

Taken near London, and in the New Forest, Hants.

Sp. 21. lutescens. Subovatus, nigro-piceus, thoracis angulis anticis elytrorumque marginibus pallida lutescentibus. (Long. corp. 1—1½ lin.)


Of a deeper colour, but of similar form to the preceding: above glossy piceous; the head black, immaculate: the thorax with the anterior angles alone pale lutescent: elytra obscurely punctured; with a faint stria near the suture, the lateral margins lutescent: body beneath and legs piceous.


Sp. 22. foveolatus. Nigror, thorace postico foveolato, elytris striis unica impressis. (Long. corp. 1—1 lin.)


Smaller than the foregoing: glossy black: head immaculate: thorax with the lateral margins pale, with several minute foveole on the disc, sometimes confluent: elytra pitchy-black, very finely punctulated, with a slight stria on each near the suture: legs dull ferruginous.

Taken from April to June in ponds near London; "on Hampstead-heath," &c.—Mr. Ingpen.
**FAMILY XV. — SPHERIDIIDÆ, Leach.**

*Antennae* scarcely as long as the thorax, nine-jointed, the basal joint very long, nearly straight, the four following small, the remainder forming a compressed perfoliated club. *Maxillary palpi* as long as the antennæ; the second joint

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**Sp. 23. aeneus.** Ovalis, convexus, aeneus, punctatissimus, palpis tarsisque ferruginosis. (Long. corp. 1½ lin.)


Rather narrower than the following, oval, convex, above densely and rather deeply punctured, of an obscure greenish-brass, rather glossy, beneath black: the femora piceous, the tibiae and tarsi ferruginous; the palpi the same; antennæ piceous.

Apparently rare. I have one specimen, found I believe near Ripley, in the summer of 1827;—two specimens are also said to have been obtained from the New Forest.

**Sp. 24. globulus.** Convexus, fusco-nigricans, subtilissime punctulatus, thoracis lateribus pallidis, elytris unistriatis. (Long. corp. 1½—1¾ lin.)


More convex than the foregoing; of a very glossy black: head very finely punctulated, immaculate: thorax delicately punctured, very convex, the disc black, the lateral margins broadly pale griseous: elytra black, nearly gibbous, thickly and finely punctulated throughout, with a single stria on each near the suture, the lateral margins and apex sometimes piceous: legs brownish-red, or pitchy.

Very distinct from the authentic Marshamian specimens of Hydrobius minutus, before described.


**Sp. 25. Seminulum.** Niger nitidus, laevis, elytris striā sutureali unica, pedibus rufo-piceis. (Long. corp. ¾ lin.)


The smallest insect of the genus; of a very glossy black, very gibbous: head convex, obtuse: thorax very convex, with the lateral and posterior margins rounded, smooth: elytra very convex, with a single stria on each near the suture, not touching the base; very smooth, with some obsolete impressions towards the apex, that are only visible with a powerful lens; the apex rather acute, and dull pitchy: body beneath pitchy-black: legs pitchy-red; tibiae compressed, ciliated with spines.

Rare: I possess specimens taken near London; and I believe the insect occurs also in Norfolk.
incrassated: head rounded anteriorly; body more or less hemispheric; thorax transverse: legs formed for walking; tibiae compressed, spinose, with spurs at the apex:—tarsi five-jointed, filiform, the basal and terminal joints elongated, the latter with two unequal claws.

The passage from the last family to the present is doubtless most natural, and the habits of the insects are not widely dissimilar; the Hydrobii subsisting in a great measure upon decaying vegetable matter, and the Sphaeridiae upon putrescent matter of a similar nature, that has previously passed through the bodies of animals. Again, many of the species of Cercyon are found only in damp places that are inundated in the winter, while others affect places of greater aridity. Their larvae are unknown.

This family embraces two very distinct genera; which were divided by Dr. Leach; and may be known by the following succinct characters.

Antennae clava

Genus CV.—Cercyon, Leach.

Maxillary palpi four-jointed, the basal joint minute, the following elongated, slender at the base and greatly incrassated at the apex, the third nearly as long, slender, the terminal much shorter, rather stouter, ovate, attenuated at the apex. Antennae very slender at the base, the four terminal joints forming an abrupt compact imbricated club: body very convex: thorax short, transverse: scutellum abbreviated: wings ample: elytra entire, striated, acute at the apex: legs moderate: tibiae compressed, setose exteriorly; tarsi short, the anterior simple in both sexes.

The globose form and comparative minuteness of the insects of this genus well discriminate them from the Sphaeridiae, from which they were separated by Dr. Leach: they are unquestionably very closely allied to the Hydrobii: their pabulum chiefly consists of horse-dung; and they are most abundant during the early summer months. The species have been greatly neglected; but from a careful examination of the original Marshamian specimens, as well as of a vast number obtained by myself from various sources, I cannot but consider those recorded in the following pages as distinct, with the exception of such as are given with doubt*. The genus

* I may here take occasion to remark, that the new species in this genus, as well as in most other instances, are rarely introduced upon the examination of
is evidently capable of being subdivided, but I have not succeeded in detecting any satisfactory characters.

Sp. 1. ruficorne. *Nigrum, depressiusculum, elytris apice pallidis rufis, marginibus piceis, antennis palpisque rufo-ferrugineis.* (Long. corp. 1/2—1 1/2 lin.)

Body somewhat depressed, above deep black, finely punctured, beneath rather obscure: palpi and antennae totally of a rusty-red: thorax immaculate, the margins a little dilated, and in some specimens obscurely piceous: elytra rather faintly punctate-striated; black, with the lateral margins piceous, the apex pale rufous, or testaceus: legs pitchy-black; tarsi sometimes rufescent.

This and the four following species differ from the rest of the genus by having the sides of the thorax more or less dilated, and the body somewhat depressed.


Sp. 2. littorale. *Nigro-piceum, depressiusculum, elytris apice pallidis, basi ad scutellam puncto rufo.* (Long. corp. 1 1/2—1 1/2 lin.)

Body rather depressed, above pitchy-black, most minutely punctured, beneath obscure black: palpi and antennae pitchy-red, the club of the latter dusky: thorax pitchy, with the lateral margins paler, and slightly dilated: elytra finely striated, the striae punctate, with the apex pale, the margins rufescent, and an obscure red spot at the base near the scutellum: legs castaneous.

Found occasionally near London in damp places. “Beneath Zostera marina in the river Orwell, near Ipswich.”—*Marsham MSS.*

Sp. 3. binotatum. *Nigrum depressiusculum, elytris lurido-testaceis, maculis duabus exustis ad suturam versus apicem.* (Long. corp. 1 1/2—1 1/2 lin.)

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*single specimens, but upon the collation of extensive series of varieties, each specimen retaining its own peculiar, though minute, characteristic difference; and that I possess many other specimens of such minute insects which I have not ventured to give as distinct species. I may here also reiterate the observation at the foot of page 126 of my first volume, not only so far as regards species, but genera: as amongst numerous other novelties which have recently been communicated to me may be enumerated *Masoreus luxatus*, *Nothiophili 4-punctatus* et *fulvipes*, an extraordinary Geodéphagous genus allied to the Seariidae? which I propose to call *Sphaeroderus*—another more remarkable one allied to *Macronychus*, and apparently connecting that genus with *Ochthebius*; several new *Hydropori* and *Colymbetes*, &c.: all of which I shall in due time describe.*
Body somewhat depressed; above pitchy-black or deep black; thorax with the margins rather paler or castaneous; elytra of a lurid testaceous, with two brown subquadrate spots varying in magnitude near the suture towards the apex; legs pitchy-red, with the femora dusky; palpi dusky.

**Var. β.** With a slight brown cloud at the base of the elytra near the suture; the suture itself rather dusky.

It is probable that this is merely an immature state of the foregoing.

Taken near Barham in Suffolk by myself, in September 1821.—“South Creak, Norfolk.”—Rev. T. Skrimshire.

**Sp. 4. dilatatum.** *Nigro-piceum, depressiusculum, capite atro, thorace elytrisque lurido-testaceis.* (Long. corp. 1½ lin.)


Rather depressed; of a pitchy-black; with the head jet-black, immaculate: thorax with the margins dilated, very glossy-smooth livid testaceous; elytra rather faintly punctate-striated, immaculate livid-testaceous; legs testaceous-red, with the base of the femora dusky: palpi pitchy-red.

Whether this be also an immaculate state of *Ce. littorale* time alone can determine.

Found with the foregoing insects.

**Sp. 5. depressum.** *Nigro-piceum, depressum, thoracis lateribus elytrisque castaneo-piceis, his apice pallidioribus.* (Long. corp. 1—1½ lin.)


Greatly depressed; pitchy-black, finely punctured throughout: head immaculate; thorax very glossy, with the disc pitchy-black, the margins castaneous and dilated; elytra rather faintly punctate-striated, the striae vanishing on the margins, which are of a pitchy-chestnut; and the apex pale testaceous; legs pitchy-black: antennae and palpi rufescent, the club of the latter dusky.

Taken near Brockenhurst in the New Forest. “Southend, in damp places.”—Rev. F. W. Hope.

**Sp. 6. aquaticum.** *Aterrimum, convexum, nitidissimum, elytris obsoletissime striatis, apice tibiisque ferruginosis.* (Long. corp. 4—½ lin.)


Convex; very deep glossy-black: head and thorax very smooth, shining, immaculate, black: elytra very obscure ferrugineous: legs pitchy-black, with the tibiae ferrugineous: palpi and antennae rufescent, the club of the latter dusky.

**Var. β.** With the legs entirely pitchy-red.


**Sp. 7. flavipes.** *Convexum, atrum, elytris substriatis, apice flavescentibus, pedibus rufis.* (Long. corp. 2—1 lin.)
Convex, deep glossy-black, very minutely punctulated above: head and thorax immaculate: elytra rather faintly striated, the lateral margin slightly rusty, the apex yellowish: legs castaneous-red: antennae and palpi rufous.
The deep extended yellow apex of the elytra discriminates this from the preceding species.

This species was first observed in Norfolk by Professor Hooker; it has however since occurred in Suffolk, and near London not uncommonly.

Less convex than the preceding: body black, very glossy: elytra black, striated, the striae beautifully and thickly punctated; with a large pale ferruginous spot at the apex, extending laterally nearly to the base: antennae and legs pitchy-red.
The less convex form, and broad lateral ferruginous patch at the apex of the elytra, distinguish this from the foregoing insects.

Where the Marshamian specimen was taken I am not aware; I have however found specimens near London.

Convex, rather acute posteriorly, very deep glossy-black: head and thorax immaculate: elytra very faintly striated, the apex generally concolorous: legs pitchy-chestnut; antennae and palpi the same.
Var. y. Steph. Catal. 1. c.—With a minute rufescent spot at the apex of the elytra, and the club of the antennae dusky.
The attenuated posterior extremity discriminates this species from the foregoing.
Var. y. may be distinct.

Found in Suffolk and near London; sometimes occurring in Agarics and Boleti.

Sp. 10. Calthae. Subconvexum, atrum, nitidum, elytris striatis apice obsoletè ferrugineis, pedibus piceis. (Long. corp. 1 lin.)
Less convex than the last; very deep glossy-black: head and thorax immaculate, faintly punctured; elytra distinctly punctate-striated, the interstices finely punctured; the apex obsoletely ferruginous: legs, antennae, and palpi pitchy-red.
The inferior convexity and obtuseness of the body, and minute apical spot of the elytra, and superior bulk, distinguish this insect from Ce. acutum.
Taken in marshy districts near London, frequenting the flowers of Caltha palustris.

Sp. 11. bolitophagum. Valde convexum, nigrum, antennis pedibusque rufo-piceis, elytris striatis, apice fuscis, interstitiis striarum punctulatis. (Long. corp. 1 lin.)


More convex and smooth than the last: of a very glossy, deep, immaculate black: the elytra very faintly and delicately striated: the interstices finely punctured, dusky, with the apex fuscous: the antennae and legs rufo-piceous.

The glossiness and convexity of the body, and faintly striated elytra, form the chief difference between this and the foregoing species.

Not common: found near London; occasionally in Boleti.


Convex, shining black; head and thorax immaculate: elytra very obsoletely striated, the strise composed of minute impressions; the interstices smooth, the apex slightly piceous: antennae and legs rusty-testaceous.

The very faint and nearly obsolete striae on the elytra, and the nearly immaculate apex of the latter, are the principal characters of discrimination between this species and all the foregoing. It has been called in some cabinets by the name of Sphaeridium leve.

Found in Norfolk and Suffolk, and occasionally near London.


Glossy black, very convex, head and thorax immaculate; elytra rather faintly striated, the interstices impunctate, black, with the apex rather obscurely pale or pitchy: antennae and legs pitchy-red: palpi and club of the antennae dusky.

The smooth interstices between the striae on the elytra, and the superior bulk of the insect, distinguish it from Ce. bolitophagum, which it most resembles.

Also found in Norfolk and Suffolk, and sometimes near London; at Hertford and Ripley.


Ovate: head and thorax glossy pitchy-black, immaculate, the entire surface beautifully and thickly punctured; elytra deep piceous, with the apex casta-
neous, the disc thickly punctured, and rather faintly punctate-striated: femora
black: tibiae and tarsi castaneous-red: palpi pitchy.
Differs from Ce. levigatum by its punctured surface, castaneous apex to the
elytra, coloured tibiae, and tarsi, and dissimilar form.
Found near London.

Sp. 15. obsoletum. Rotundato-ovatum, nigrum, piceum, convexum, elytris tenué
punctato-striatis, apice pedibusque rufescensibus. (Long. corp. 1½—1¾ lin.)

Rounded-ovate, slightly depressed, deep black; above finely punctured through-
out, head and thorax immaculate: elytra very faintly punctate-striate, the
interstices flat, thickly punctulate, black; the apex and posterior margins inde-
terminately and obscurely rufo-piceous: body black: legs rufescent, the fe-
морa piceous; palpi pitchy-black, with the joints paler: antenna rusty-pitchy,
with the capitulum dusky.
The largest species of the genus: differs from all the foregoing by being less
glossy, and from Ce. piceum by its size, the less punctate striae on the elytra,
and the coloured apex of the latter, &c.

Not very common: taken occasionally on Hampstead heath; at Hertford and Ripley. "Bottisham."—Rev. L. Jenyns. "Net-
ley."—Rev. F. W. Hope.

Sp. 16. piceum. Ovatum, nigrum, glaberrimum, elytris pedibusque piceis.
(Long. corp. 1½—1¾ lin.)

Ovate, head and thorax of a pitchy-black, immaculate, very smooth and glossy:
elytra entirely piceous, with the apex rather paler; the entire surface mi-
nutely punctulated, and the disc very obsoletely striated: the legs also en-
tirely piceous.
Distinguished by its ovate form, and nearly uniform piceous elytra.
In size and tinge of colour this species varies considerably.

Very abundant during May and June near London: also found
in Norfolk, Suffolk, and Cambridgeshire.

Sp. 17. picinum. Subovatum, atrum, glaberrimum, nitrum, abdomen subtés
nigro-testaceum, elytris pedibusque piceis. (Long. corp. 1½ lin.)

Subovate, very smooth, glossy; antennæ, head, and thorax immaculate black:
elytra piceous throughout, the apex concolorous, striated, the striae composed
of impressed dots: abdomen beneath testaceous-black: legs piceous.
The somewhat greater bulk, uniformly coloured and pale elytra and testaceous-
black abdomen distinguish this species from the foregoing.

Taken near London; and in Suffolk, not uncommonly.

Sp. 18. simile. Subovatum, atrum, glabrum, elytris totis, pedibusque rufo-
castaneis. (Long. corp. 1—1¾ lin.)
MANDIBULATA.—COLEOPTERA.


Less than the last; subovate: head and thorax glossy pitchy-black, with the margins rather paler: elytra castaneous-red, rather deeply punctate-striated, the interstices slightly convex and impunctate: abdomen and legs pale castaneous-red.

The plain immaculate rufescent elytra, and pale legs, distinguish this from the foregoing: of which the specimens examined may possibly prove to be immature examples.

Also found near London; not common.

Sp. 19. suturale. Subovatum, atrum nitidum, elytris rufo-castaneis sutura nigra, pedibus rufescentibus. (Long. corp. 1\(\frac{1}{2}\)—1\(\frac{1}{2}\) lin.)


Subovate, glossy: head and thorax immaculate black, minutely punctured: elytra rather faintly punctured, and slightly punctate-striated, the interstices slightly convex; the disc bright rufo-castaneous; the suture deep black, nearly to the apex: abdomen deep glossy-black; legs rufescent, with a dusky cloud in the middle of the femora.

The castaneous elytra with a jet-black suture distinguishes this from the foregoing, exclusively of other differences.

Inhabits the neighbourhood of London; and I have obtained specimens from Norfolk.

Sp. 20. laterale. Subovatum, piceum, glaberrimum nitidum, thoracis lateribus pallidoribus, elytris obsoletestriatis. (Long. corp. lin.)


Subovate: very smooth, glossy-piceous, except the sides of the thorax, which are paler, and the apex of the elytra, which is slightly rufescent: the entire surface is thickly and rather deeply punctured throughout, and the elytra are rather obsoletely punctate-striated: abdomen black: legs pitchy-red.

From Ce. suturale this differs by the distinctly coloured lateral margins of the thorax, and from Ce. simile by the colour of the elytra and sculpture.


Sp. 21. hæmorrhoidale. Convexum, nigrum nitidum, elytris apice castaneo-rufis, antennis pedibusque nigris. (Long. corp. \(\frac{1}{2}\) lin.)


Rather larger than the foregoing: subovate; of a deep glossy-black, finely punctured; head and thorax immaculate: elytra with the apex alone castaneous-red, the rest black; rather faintly punctate-striated; the abdomen, antennæ, and legs black.

The black antennæ and legs, combined with the bright castaneous-red apex of the
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eytra, distinguish this species from the preceding, and its less convex form from the following, which it somewhat resembles in colour.

Found near London and in Suffolk.

Sp. 22. femorale. Valdè convexum, atrum nitidum, elytris lateribus castaneo-rufis, pedibus rufis, femoribus nigris. (Long. corp. 1½ lin.)


Allied to the last, but more convex: very deep shining black: head and thorax immaculate, finely punctured: elytra also finely punctured, deep pitchy-black, with the lateral margins rufo-castaneous; the disc punctate-striated: femora black; tibiae and tarsi rufous.

Known by the rufous lateral margin to the elytra, black femora, and convexity.

Also found near London and in Suffolk.

Sp. 23. hemorrhoum. Valdi convexum, ovatum, nigrum nitidum, elytris striatis apice determinati rufis, pedibus piceis, tibiis tarsiisque dilutioribus. (Long. corp. 1½ lin.)


Somewhat larger than the last; very convex, and obtuse: deep glossy black: head and thorax thickly punctured, the latter especially, and very gibbous: elytra distinctly striated, the striae punctated, the interstices finely but obsoletely punctulated; the apex with a distinct large pale rufous patch, with the suture black: beneath black: legs pitchy-black, with the tibiae and tarsi paler.


Rather less and of a deeper colour than the last: very convex, ovate, deep jet-black, shining: head and thorax thickly punctured, immaculate: elytra deep black, slightly striated, the interstices punctured, the apex rufous: femora and tibiae pitchy-black: tarsi rufous.

Probably a variety of the foregoing.

Inhabits the same places as the preceding.

Sp. 25. xanthocephalum. Valdi convexum, ovatum, atrum nitidum, elytrorum apice capiteque rufo-rufis. (Long. corp. 1½ lin.)


Size of the last, and resembling it in form, but differing in the colour of its head: of a deep shining black, finely punctured on the head and thorax, the former of a pitchy-red; the latter immaculate: elytra finely striated, the interstices
faintly punctured; the apex pitchy-red: legs pitchy-black, with the tibiae and tarsi paler.

Found occasionally in Norfolk and Suffolk, and near London.

Sp. 26. *infuscatum*. **Convexum, atrum, opacum, thorace gibbose pulvinato, elytris piceo-nigris, apice paulo dilutiori.** (Long. corp. \(\frac{3}{4}\) lin.)


Similar in form to the three last, but much smaller: of a deep obscure black; head and thorax immaculate, thickly punctulated, the thorax very gibbous; elytra very obsoletely striated, the interstices scarcely punctured and rather flat; deep opaque pitchy-black, with the apex rather paler: legs entirely of a castaneous-red.

This and the three last are of a more convex form than the rest of the genus: they may be readily known from each other by the characters above given.

Not common: found near London.

Sp. 27. *impressum*. **Ovatum, atrum nitidum, capite thorace maculâque triangulâri ad scutellum nigris, elytris pedibusque rufo castaneis.** (Long. corp. \(1\frac{1}{2}\)—\(1\frac{3}{4}\) lin.)


Larger than the following: ovate, glossy: head and thorax deep black, immaculate; elytra deep rufo-castaneous, with a large triangular black patch at the scutellum: the disc punctate-striated, the striae rather deep, the interstices thickly punctate; legs also bright rufo-castaneous: antennæ pale testaceous; palpi dusky.

Considerably larger than the following species, and without the lateral black streak at the base of the elytra, as in that and Ce. conspurcatum.

Also somewhat rare: taken near London, and in Hampshire.

Sp. 28. *melanocephalum*. **Oblongo ovatum, nigrum, elytris rufo-testaceis, maculâ baseos communì triangulâri alterâque laterali nigris.** (Long. corp. \(\frac{3}{4}\)—1 lin.)


Oblong-ovate, shining: head and thorax deep immaculate black, punctured: elytra rufo-testaceous, with a large triangular common black spot at the base, and another smaller one at the outer anterior angle; the surface finely and thickly punctured, and rather faintly punctate-striated: legs rufo-testaceous: antennæ and palpi dusky-black.

**Var. 6. Steph. Catal. l. c.—With the femora deep black.**

The smaller size, more elongate form, dark antennæ and palpi, and black patch at the lateral angle of the elytra, sufficiently distinguish this from the foregoing; and the former characters discriminate it from the following.

Found copiously from April to June in meadows and pastures, throughout the metropolitan district.
Sp. 29. conspurcatum. Oblongo-ovatum, nitidum nigrum, elytris pallidi rufo-testacea, elytris macula haseos communis triangularis humerisque nigris, antennis pedibusque pallidis testaceis. (Long. corp. 2 3 lin.)


Oblong-ovate, shining: head and thorax black, immaculate: elytra pale rufo-testaceous, finely punctured, and rather delicately punctate-striated, the base with a large common triangular black spot, and the lateral margin with an elongate black streak: legs pale rufo-castaneous; antennae the same; palpi dusky, sometimes pale-testaceous.

This minute species varies considerably in size: it differs from the last in its smaller size, paler antennae and legs, and the dissimilarly formed streak at the base of the elytra.

Apparently very abundant near Lyndhurst in the New Forest, but less so near London.

Sp. 30. atomarium. Ovatum, nigrum, obscurum, punctatissimum, elytris profundi crenato-striatis, apice pedibusque ferrugineis. (Long. corp. 2 3 lin.)


Small: ovate, black, obscure, thickly punctured: palpi and antennae piceous: head and thorax immaculate: elytra broad, dilated at the sides, slightly depressed, striated, the striae very deeply crenate-punctate, the interstices elevated, thickly punctulated, black, obscure, the apex more or less rufescent: legs rusty-red; the femora sometimes piceous.

The deeply crenate stria on the elytra of this species discriminate it from all the other species. It varies greatly in size.

Extremely common in the neighbourhood of London.

Sp. 31. sordidum. Ovatum, obscu-ro-piceum, capite nigro, elytris rufo-piceis, punctato-striatis, pedibus piceis. (Long. corp. 1 lin.)


Ovate: head black: thorax pitchy-black, punctulated: elytra pitchy-red, punctate-striated, the interstices finely punctured: breast black, punctulated; abdomen beneath rufo-ferrugineous, or piceous: legs piceous: antennae black, rufous at the base.

Allied to the last in form, but the striae less impressed, the colour different, &c.

The Marshamian specimens alone are the only ones that I have hitherto examined; I am ignorant of their locality.

Sp. 32. convexium. Rotundo-ovatum, atrum, obscurum, antennis pedibusque piceo-castaneis. (Long. corp. 2 3 lin.)


Rounded-ovate, deep obscure black: head and thorax thickly punctured, immaculate: elytra opaque black, the apex slightly margined with piceous;
faintly punctate-striated, the interstices impunctate: legs and antennae pitchy-
chestnut: palpi dusky.

Broader and of a deeper colour than the next species, which greatly resembles
it:—they are both somewhat similar in form to Ce. hemorrhæum and its
affinities, but considerably smaller.

I obtained a single example of this insect from Mr. Marsham’s
collection; and have since procured others that were taken near
London.

Sp. 33. convexior. Oblongo-ovatum, atrum, nitidum, elytris apice tarsisque
rufo-castaneis. (Long. corp. 4—7 2 lin.)


Oblong-ovate; deep glossy-black: head and thorax immaculate, finely and
thickly punctured: elytra rather deeply punctate-striated, the interstices a
little elevated and punctulated; deep shining black, with the apex distinctly
bright castaneous: femora and tibiae dusky piceous, the latter palest, or some-
times rufescent: tarsi light castaneous-red: antennae and palpi rufous.

Not so broad as the last, more glossy, the elytra more deeply-striated, and the
interstices punctured.

I also obtained this species from the Marshamian cabinet; and
have since procured other specimens captured near London.

Sp. 34. convexiusculum. Oblongo-ovatum, subconvexum, atrum, nitidum, elytris
tenus punctato-striatis apice obscure piceos. (Long. corp. 3 3 lin.)

No. 660.

Oblong-ovate, slightly convex, deep shining black: head and thorax immaculate,
punctulated: elytra rather depressed, faintly punctate-striated, the interstices
nearly flat, obscurely punctuated; deep pitchy-black, the apex obscurely
piceous: legs dull castaneous-red, the femora rather dusky: club of the an-
tenna and palpi black.

Somewhat less than the last, the elytra more depressed, faintly striated, the
interstices nearly flat, scarcely punctulated, and palpi black.

From the Marshamian cabinet: it occurs near London.

Sp. 35. nigrinum. Subconvexum, obscuré subaneum, elytris obsoletissimé striatis,
interstitiis obsoléet punctatis pedibusque nigris. (Long. corp. 4 3 lin.)


* This insect is not the Dermestes nigrinus of Entomologia Britannica, which
has been erroneously given as a synonym for Hydrobius Seminulum: the De.
nigrinus of Marsham, of which I possess the original specimens, being Lim-
nebius nigrinus of my Catalogue; the species described as De. nigricans, in
p. 121, by a typographical error.
Subconvex, obscure dull aeneous, the elytra very obsoletely striated: the interstices obsoletely punctulated, the apex concolorus: antennæ and legs dull black.

The obscure brassy hue of the upper surface of this species, and the obsoleteness of the striae on the elytra, with the black legs and antennæ, well distinguish it from the rest of the genus.

I have but one example of this species, which I procured from the Marshamian cabinet by the above name; not as the De. nigrinus of Entomologica Britannica, which was also in the collection.

Sp. 36. immaculatum. *Ovatum, convexum, piceum, nitidum, elytris piceo-nigris immaculatis, obsoletissimis striatis, pedibus piceis.* (Long. corp. ⅞ lin.)


Ovate, convex; glossy pitchy-black; head black: thorax piceous, thickly punctuated: elytra of an immaculate pitchy-black, very obsoletely striated, the interstices scarcely punctulated; legs piceous: antennæ and palpi rufescent.

This minute species is distinguished by having the apex of the elytra concolorous, and the elytra scarcely striated or punctured.

Found near London and in Suffolk.


Minute: oblong-ovate; deep glossy-black; head and thorax immaculate; elytra very obsoletely striated, the interstices thickly punctulated, the apex piceous: femora pitchy-black: tibiae and tarsi rufescent; antennæ with the club, and the palpi, dusky.

Less than C. minutum, which it greatly resembles, but differs in having the apex of the elytra pitchy, and slightly in form:—from Ce. merdarium it differs in having the tibiae and tarsi rufescent.

Found near London and in Suffolk.

Sp. 38. merdarium. *Oblongo-ovatum, aterrimum, subnitidum, elytris obsolete striatis, apice rufescente.* (Long. corp. ½ lin.)


Oblong-ovate, rather shining: head and thorax deep black, immaculate; elytra rather faintly striated, the interstices obscurely punctured; deep black, the apex pale rufescent; legs, antennæ, and palpi entirely of a deep black.

The nearly jet-black hue of this minute species, which has merely the apex of the elytra coloured, sufficiently points out its distinction from its congener: it is probably the Sph. merdarium of Sturm, but his figure is without the setæ on the tibiae, which, if correct, would seem to indicate a generic difference.
Inhabits the metropolitan district, not common.

Sp. 39. pygmaeum. *Ovatum, nigrum, elytris obsolete striatis, castaneis basi saturatioribus, femoribus piceis, tibis tarsisque nigris.* (Long. corp. ½ lin.)


Minute: ovate; black, shining; head and thorax immaculate, punctulated: elytra thickly punctured; rather obsolete striated, deep castaneous, with the base darker: the femora pitchy; the tibiae and tarsi rufous.

The pitchy femora, and more deeply coloured elytra, distinguish this from *Ce. erythropum*; which may however be only an immature state of the present insect.

Far from uncommon in the neighbourhood of London: also found in Norfolk.

Sp. 40. erythropum. *Ovatum, nigrum, elytris obsolete striatis, piceo-castaneis apice rufo, pedibus omnino rufo.* (Long. corp. ½ lin.)


Closely allied to the last; very minute: ovate, black; head and thorax pitchy-black, immaculate, finely punctured: elytra pitchy-chestnut, with the apex rufous; the surface finely punctured and faintly striated; the legs entirely rufous.

The totally rufous legs and paler colour serve to distinguish this from the foregoing.

Taken in Norfolk, Suffolk, and near London.

Sp. 41. lugubre. *Ovatum, nigrum, elytris punctato-striatis, interstitionibus sublaxibus, apice pedibusque rufo-piceis.* (Long. corp. ½ lin.)


Very minute: ovate, black; head immaculate: thorax with the lateral margins obsolete piceous: elytra shining pitchy-black, the apex more or less rufescent; convex, punctate-striated, the interstices nearly smooth: legs, palpi, and antennae dull pitchy-red.

Closely allied to the foregoing, but smaller, and differs in having the legs of a darker hue, and the punctures on the elytra fainter, with the striae more distinct. It must not be confounded with the Dermestes lugubris of Marsham, which is many times larger.

Inhabits the same counties as the last.

Sp. 42. minutum. *Ovatum, nigrum, elytris tenuis punctato-striatis, apice lavibus piceis, interstitionibus sublaxibus, pedibus concoloribus.* (Long. corp. ½ lin.)


Ovate, black; head and thorax immaculate: elytra faintly punctate-striated, the apex smooth and pitchy, the interstices nearly smooth: legs pitchy or deep black; sometimes rufescent.

Rather larger than the last, and the legs generally concolorous with the body:
the specimens with paler legs generally having the prevalent colour pitchy-black or somewhat castaneous, and are probably immature.

Common throughout the metropolitan district.

Sp. 43. obscurum. *Ovatum, obscurum-piceum, margine thoracis elytrorumque apicibus rufis, pedibus piceis.* (Long. corp. ½ lin.)

Ovate; dull piceous, glossy: head pitchy; thorax piceous, the margin rufous; elytra rather flat, very obsolutely striated, piceous, with the apex rufous; legs piceous: palpi dusky: antennae pale rufous, with the club of a deeper hue.

The rufescent margin of the thorax, bright rufous apex to the elytra, which are most obscurely striated, and dull-pitchy colour, distinguish this species. Its habit is very dissimilar to that of the rest of the genus.

From the Marshamian collection.

Sp. 44. contaminatum. *Ovatum, convexum, piceo-nigrum, elytris obsoletissimis striatis castaneis, apice pallidior.* (Long. corp. ½ lin.)

Ovate, very convex, slightly attenuated behind: head pitchy-black, immaculate: thorax rather glossy, pitchy-black, with the lateral margins obscurely rufous anteriorly: elytra very obscolutely striated, the interstices impunctate, deep pitchy chestnut, with the apex slightly paler: legs, antennae, and palpi rufocastaneous.

The ovate, slightly attenuated posterior extremity of this minute convex species, with its deep pitchy colour, and castaneous obscurely striated elytra, discriminate this insect from its congeners.

Taken near London, and in Suffolk: also I believe in Norfolk.

Sp. 45. concinnum. *Ovatum, atrum, nitidum, thoracis margine elytrisque piceo-testaceis, pedibus rufis.* (Long. corp. ½—¾ lin.)

Ovate, shining: head black, immaculate: thorax black, with its anterior and lateral margins testaceous: elytra deep pitchy-testaceous, rather faintly punctate-striated; the interstices impunctate: legs rufous: antennae and palpi the same.

Closely allied to the last, but rather larger; the black head, coloured margins of the thorax and pitchy-testaceous elytra, however, sufficiently distinguish it therefrom.

Occasionally found near London; in Norfolk and Suffolk.

Sp. 46. ferrugineum. *Ovatum, nitidum, saturate rufo-ferrugineum, immaculatum.* (Long. corp. ¾—1 lin.)
Larger than the preceding: ovate; glossy, entirely of a deep rusty-red: elytra punctate-striated, immaculate: legs, antennae, and palpi paler testaceous-red. Known by its ovate form, deep immaculate ferruginous colour, and rather greater bulk, from the preceding species.

One of my specimens was contained in the Marshamian cabinet, the others were taken near London.

Sp. 47. stercorarium. *Ovatum, convexum, atrum, nitidum, antennis pedibusque rujis.* (Long. corp. $\frac{3}{4} - \frac{2}{3}$ lin.)
Ovate, very convex, deep glossy-black: head and thorax immaculate; elytra gibbous, faintly punctate-striated, the interstices punctate, deep black, with the apex concolorous: legs, antennae, and palpi rufous.
This differs from the three last-mentioned insects, by its smaller size, more elongate form, and deep-coloured elytra.

Not uncommon near London: also found in Norfolk, Suffolk, Devonshire, &c.

Sp. 48. fuscescens. *Oblongo-ovatum, subdepressum, piceo-nigrum, nitidiusculum, elytris fuscescentibus, tenuè punctato-striatis, pedibus pallidis.* (Long. corp. $\frac{3}{4}$ lin.)
Ce. fuscescens mihi.—Steph. Catal. p. 64. No. 674.
Oblong-ovate, slightly depressed, and shining: head black: thorax pitchy-black, the margin broadly testaceous: elytra somewhat fuscescent, the outer margin rather pieceous, the apex pallid, faintly striate, the stria; punctate: the interstices impunctate: antennae, palpi, and legs pale.
The oblong depressed form and pallid hue of this insect are the chief characters which distinguish this from the other minute dark-coloured species.

I found this insect near London several years since.

Sp. 49. immundum. *Ovatum, convexum, latum, nitidum, castaneo-brunneum, thoracis margine pallido, elytris striatis, interstitionibus obsoléssimis transversim strigosis.* (Long. corp. $\frac{3}{4} - \frac{2}{3}$ lin.)
Ovate, convex, broad, glossy chestnut-brown; with the margins of the thorax pale: elytra rather paler, immaculate, faintly striated, the interstices under a powerful glass appearing very obsoletely striated transversely: antennae, legs, and palpi pale rufo-castaneous.
The transverse striae on the elytra, which can only be observed by a powerful lens, sufficiently characterize this species.

The only indigenous example I have hitherto seen was in the Marshamian collection unnamed. Its locality is unknown to me.
Sp. 50. nigriceps. Ovatum, atrum, nitidum, thoracis lateribus, antennis, elytris, pedibusque rufo-ferrugineis. (Long. corp. 3/4 lin.)


Ovate, shining: head black, immaculate; thorax with the disc black, the sides piceous or rufo-ferruginous: elytra pale ferruginous, obsoletely punctate-striated, the interstices convex: body deep black beneath: antennæ and legs ferruginous: palpi luteous.

The black patch on the disc of the thorax, and the pale ferruginous elytra and legs, at once distinguish this from the following species.

Two specimens of this insect I procured from the Marshamian collection: of their locality I am ignorant.


Ovate, glossy: head pitchy-black: thorax bright rufo-testaceous: elytra pale testaceous, very obsoletely striated: abdomen rufo-testaceous beneath; antennæ and legs pale testaceous; the club of the former dusky.

This differs from the preceding by having the disc of the thorax immaculate, and from the following by the paler hue of the head and its slightly dissimilar form.

Also obtained from the Marshamian cabinet, without a knowledge of its exact locality.

Sp. 52. atriceps. Ovatum, nitidum, piceum, capite atro, elytris rufo-testaceis striatis, antennis pedibusque rufo-luteis. (Long. corp. 3/4 lin.)


Ovate, shining, pitchy: head black: thorax bright glossy pitchy: elytra rufo-testaceous, rather deeply punctate-striated, the interstices rounded and obsoletely punctulated: antennæ, legs, and palpi of a reddish-luteous.

Differs from Ce. atricapillum by the deeper colour of the head and thorax, the rufescent deeply striated elytra, and pale capitulum of the antennæ. It is not unlikely that this and the two foregoing insects may be the same species in different degrees of maturity.

Taken near Barlam, where I had the pleasure of capturing my specimen in September, 1821, when on a visit to my kind friend the Rev. W. Kirby for the purpose of examining his collection, &c.; and taking notes for this work and my Catalogue.


Ovate, slightly shining: of a deep castaneous, with the head nearly black:
elytra punctate-striated; the interstices slightly elevated and smooth: antennae, legs, and palpi pale castaneous.

Rather larger than the last, narrower, and the prevalent colour of a deeper hue; the elytra faintly clouded with dusky, with smooth interstices between the striae.

The Marshamian specimen is the only one I have examined: its locality is unknown to me.

Sp. 54. testaceum. *Ovatum, corpore omnino piceo-testaceo capite saturatiori, antennarum capitulo fusce, elytris obsolete striatis. (Long. corp. \( \frac{1}{2} \) lin.)


Minute, ovate; slightly glossy: the entire body deep pitchy-testaceous, with the head rather darker: the elytra obsoletely striated: the legs and palpi testaceous, the base of the antennae the same, the capitulum fusceous.
The fusceous capitulum of the antennae of this minute insect, and its deep testaceous colour, are its principal distinctive characters.

Found in Suffolk and Norfolk.

Sp. 55. inustum. *Ovatum, nigrum, nitidum, coleoptris striatis testaceis, maculis tribus fusce, pedibus testaceis. (Long. corp. 1 lin.)


Ovate, shining: head black, immaculate: thorax black, with the margins rufous: elytra striated, testaceous, with a triangular common brown patch at the base, and a large brown spot on each elytra near the apex: legs and antennae testaceous.

From the Marshamian cabinet: also taken near London.—"South Creak, Norfolk."—Rev. T. Skrimshire.

Sp. 56. ustulatum. *Oblongo-ovatum, nigrum, nitidum, coleoptris striatis testaceis nebula posticis ustulata. (Long. corp. 1 lin.)


Oblong-ovate, shining black, head and thorax immaculate; elytra striated, testaceous, each with an ustulated cloud towards the apex: legs pitchy-black: antennae testaceous.

This differs from Ce. inustum by having the margins of the thorax concolorous; and from Ce. bimaculatum by the difference of the position and the form of the maculations on the elytra, which are irregularly defined in this species.

Found in Suffolk.

Sp. 57. bimaculatum. *Oblongo-ovatum, nigrum, nitidum, coleoptris striatis testaceis maculis duabus fusce pone mediam. (Long. corp. 1 lin.)


Oblong-ovate, shining: head black, immaculate: thorax black, very glossy, the lateral margins concolorous: elytra testaceous, striated, the interstices
slightly convex and faintly punctulated, each with a deep round brown spot near the suture towards the apex; body deep pitchy-black beneath; legs black; antennae and palpi pale testaceous.

The two distinct spots on the elytra and concolorous lateral margin of the thorax sufficiently distinguish this from Ce. quisquilium; as the former character does from Ce. ustulatum.

Taken near London.

Sp. 58. quisquilium. Oblongo-ovatum, nigrum, nitidum, thoracis lateribus elytris striatis pedibusque pallidis: femina elytris maculâ communi cardatâ nigrâ. (Long. corp. \( \frac{2}{3} - \frac{1}{2} \) lin.)


Oblong-ovate; head convex, punctulated, black, immaculate; thorax thickly punctate, black, with the lateral margins very narrowly pale in the male, and broadly so in the female; elytra distinctly, but rather faintly, punctate-striated, the interstices thickly but finely punctulated, pale luteous, immaculate in the male, and with a large common subcordate patch on the suture a little beyond the middle in the female; body pitchy-black beneath; legs pale ferruginous. The male is also much smaller and considerably narrower.

Linnaeus in his latest work places the sexes of this insect in different genera!—Upon this point see observations in the introduction to my Catalogue.

Extremely abundant in the spring throughout the metropolitan district; flying abroad in roads, paths, and meadows, towards afternoon every sunny day.

Sp. 59. flavum. Oblongo-ovatum, atrum, glabrum, thoracis lateribus elytrisque pedibus luteis. (Long. corp. \( \frac{1}{2} \) lin.)


Oblong-ovate, glossy; head black, immaculate; thorax black, very shining, the lateral margins broadly luteous; elytra punctate-striated, pale spotless luteous; legs, antenna, and palpi pale-testaceous.

As large as the female of Ce. quisquilium, but without the sutural black patch, and with the lateral margins of the thorax broadly luteous. It is not unlikely to prove a variety of the female of the foregoing insect, without the patch.

Found near London, flying in May.

Sp. 60. scutellare. Breu-ovatum, subnitidum, capite thoraceque nigris, elytris testaceis, maculâ baseos communi elongato-triangulari nigrâ. (Long. corp. \( \frac{1}{2} \) lin.)


Minute; short, ovate, slightly glossy; head and thorax black, immaculate; elytra pale-testaceous, with an elongate-triangular black spot at the base on the suture common to both elytra; the latter punctate-striated; the legs, palpi, and antennae pale luteous, the club of the latter dusky.

The black patch at the base of the suture, concolorous lateral margins to the thorax, and minute size, distinguish this from the rest of the genus.

Taken near London.

Genus CVI.—*Sphæridium, Fabricius.*

*Maxillary palpi* four-jointed, the basal joint minute, the following robust, incrassated at the apex, the third and fourth of nearly equal length, the former being slightly clavate, and the latter a little acuminate. *Antennæ* rather slender at the base, the four terminal joints forming a somewhat abrupt compact club: *head* orbiculate, rounded anteriorly: *body* slightly convex: *scutellum* elongated: *elytra* not striated: *wings* ample: *legs* rather stout: *tibiae* very spinose, with powerful spurs at the apex: *tarsi* rather slender, the anterior with the terminal joint dilated in the male.

*Sphæridium,* as at present restricted, contains such insects only as have the *tibiae* very strongly compressed and furnished with powerful spines, the body very broad and considerably depressed, the *elytra* not striated, and the club of the *antennæ* somewhat elongate. The species regard the dung of oxen in preference to that of horses, although occasionally found in the latter; thus differing in habit from the *Cercya,* which affect the latter in preference to the former. Like the insects of the preceding genus, the species, which are extremely variable, considerably resemble each other; and in describing the following as distinct, I cannot but remark, that, although some of them rest upon doubtful points, it appears to me that modern writers have fallen into the error of confounding a genus consisting of variable individuals with a species.


The largest species of the genus: deep-black, shining; the entire surface finely and thickly punctulated: *head* immaculate: *thorax* black, with the lateral margins concolorous: *elytra* with a single stria near the suture, anteriorly evanescent, each at the base with an oblique acuminate deep-red spot at the shoulder, and a large transverse yellowish one at the apex: *legs* black, variegated with testaceous: *spines* black.

In some specimens the spot at the shoulder of the *elytra* is nearly evanescent, and in others the apical one is nearly obliterated; the margin of the *elytra* has sometimes a narrow anteriorly abbreviated luteous streak.
Marsham's De. Scarabeoides differs by having the margins of the thorax flavescent.

Very abundant in cow-dung throughout the metropolitan district: also found in plenty in Devonshire, Norfolk and Suffolk, and near Swansea and Bristol. "Netley."—Rev. F. W. Hope.

Sp. 2. bipustulatum. *Atrum, nitidum, elytris macula humerali rubra obsolete, apicis rubescente lunato, pedibus piceis.* (Long. corp. $\frac{2}{3}$—3 lin.)


Deep shining black; finely punctulated; head and thorax immaculate: elytra with a more or less obsolete rounded humeral reddish spot, and an obscure paler lunate one at the apex, the suture with a single abbreviated stria: legs piceous, with the base of the femora testaceous.

Rather less than the last; from which it differs in having the humeral spot nearly evanescent, the apical one reddish, and the legs piceous.

This is also very common in the neighbourhood of London, and I believe in Norfolk, Suffolk, Devonshire, &c.

Sp. 3. quadrimaculatum. *Niger, nitidum, thoracis elytrorumque margine luteo-testaceis pedibus testaceis, femoribus macula nigra.* (Long. corp. $\frac{1}{2}$ lin.)


Glossy-black, finely punctured: head immaculate: thorax with the lateral margin narrowly edged with pale luteous-testaceous: elytra with the outer margin testaceous-yellow, each with a round pale-red spot at the base and another at the apex, and an obsolete stria near the suture: legs testaceous, with a black spot on the femora.

Smaller than the last, with the margins of the thorax pallid and the apical spot on the elytra distinct.

Less common than the preceding species, though far from rare throughout the metropolitan district; on Hampstead-heath, Copenhagen-fields, &c.

Sp. 4. lunulatum. *Atrum nitidum, thoracis margine luteo-testaceo, elytris lunulâ apicali flavo-testaceo, pedibus testaceis, femoribus macula nigra.* (Long. corp. $\frac{1}{2}$ lin.)


A small species: shining black, punctulated; head immaculate: thorax with its lateral margins very narrowly luteous-testaceous: elytra with the outer margin slightly edged with reddish towards the apex, the apex itself with a testaceous-yellow lunule: legs testaceous; femora with a black spot.

The small size, narrow coloured edge of the thorax, spotted tip, and absence of the humeral spot on the elytra, and conceleous outer base of the latter, distinguish this from Sp. marginatum, which it most resembles.
I obtained this species from the Marshamian cabinet by the above name. I have, however, taken the insect myself, but the exact locality I do not remember.

Sp. 5. lunatum. *Atrum nitidum, thoracis margine concolor, elytris macula apicis lunata margineque exteriore rubris.* (Long. corp. $2\frac{1}{4} - 2\frac{3}{4}$ lin.)


Less than *Sc. Scarabaeoides*: deep shining black: head and thorax immaculate above, with a large testaceous spot on each side beneath: elytra with a faint sutural stria, a lunate spot at the apex, and the outer margin red: legs piceous, femora clouded with black.

Differs from Sp. bipustulatum by wanting the humeral spot entirely, and having the exterior margin of the elytra testaceous: the legs piceous, with the femora clouded with black.

Not uncommon near London, at Hertford, Ripley, &c.; also found near Swansea, and Bristol, in Devonshire, Norfolk, Suffolk, &c.

Sp. 6. marginatum. *Atrum nitidum, thoracis elytrorumque margine flavo-testaceis, pedibus ferrugineis, femoribus fasciis nigris.* (Long. corp. $2$—$2\frac{3}{4}$ lin.)


Shining black, finely punctured: head immaculate: thorax, with the outer margin narrowly edged with testaceous-yellow: elytra immaculate, with the lateral margin slightly bordered with yellowish, or luteous: legs ferruginous, with a black fascia on the femora.

Closely allied to Sp. quadrimaculatum, but differs in having the elytra spotless, the exterior margin alone being slightly flavescent.

Also frequent near London, but less so than *Sc. bipustulatum*.


Shining black, head and thorax immaculate: elytra immaculate, with the outer margin slightly edged with reddish towards the tip: legs piceous, femora with a black patch.

The inferior size, and totally immaculate elytra, with the concolorous outer margin to the thorax, well distinguish this insect from its congeners.

Found in Yorkshire, but not, I believe, near London: one of my specimens was in the Marshamian collection by the above name. The insect appears distinct from its congeners.
Family XVI. Anisotomidae

Antenna usually moniliform, somewhat elongate, rather slender at the base, and in general gradually thickening to the apex, the terminal joint forming an elongate club, varying in the number of its articulations. Palpi various, usually filiform, not elongated: head usually small, ovate; thorax more or less gibbous: body mostly convex, orbicular, short, sometimes globose, never linear: elytra entire, rarely truncate: tibiae spinose or simple, occasionally compressed: tarsi various, rarely pentamerous, most frequently tetramerous; sometimes heteromeric, the four anterior being five-jointed, and the posterior four-jointed, or monomerous?

This family not only exhibits a remarkable example of the importance of selecting characters from every part, but clearly shows the great disadvantage resulting from an adherence to such characters as are derived from particular organs, and especially from the number of joints of the tarsi; as amongst the following genera we find heteromeric, tetramerous, and monomerous insects; which has induced Latreille and the advocates for the tarsal system to place them far apart, in the so-called natural arrangement, notwithstanding they are so closely allied in habit and in general structure. They all have the antennae somewhat elongated, and more or less clavate, the clava varying in the number of joints of which it is composed, and the eighth joint of the antennae from the base is frequently minute, especially in the typical genera; a structure which also obtains in some of the insects at the commencement of the next subsection. The trophi vary somewhat in the different genera; but as many of the species are extremely minute, slight notice has been taken of such distinctions in the following pages, as they cannot be discriminated without the aid of the microscope, and although highly important for the purposes of generalization, little practical utility can result from such investigations: and, moreover, external characters, which, it has been well observed, necessarily exhibit a corresponding difference in internal organization, can be detected with greater facility, and are consequently more useful for the investigation of species.

The usual pabulum of these insects consists of decaying vegetable matter, usually fungi, boleti, agarici, and similar plants, though some of them are found upon flowers;—the indigenous genera which have come beneath my observation may be thus known.
MANDIEULATA.—COLEOPTERA.

MANDIEULATA. COLEOPTERA.


107. TRITOMA.

108. PHALACRUS.

110. LEIODES.

111. AGATHIDII.

112. CLAMBIUS.

113. SERICODERUS.

GENUS CVII.—TRITOMA, Fabricius.

Maxillary palpi with the last joint large, transverse, compressed, lunate; labial subclavate: maxilla with a minute tooth at the apex. Antenna short, moniliform, with an ovate perfoliated three-jointed club; head subtriangular: thorax elevated in the middle behind: body gibbous: elytra ovate, attenuated behind, convex: legs moderate; tibia compressed, broad, elongate-triangular, not spinose: tarsi four-jointed, the penultimate joint bifid.

The short, ovate, 3-jointed, obtuse club of the antennæ, slightly gibbous body, and lunate terminal joint of the palpi, distinguish this genus from Phalacrus and Ephistemus, with which it agrees in having the penultimate joint of the tarsi bifid: and by this last character it is known from all the other genera in this family, with which however it ill associates. One species only inhabits Britain: its larva is not known to me.


Size variable: black, shining: head deeply punctate; mouth piceous: thorax slightly narrowed anteriorly, the sides margined, posteriorly dilated in the middle, the disc punctured: elytra very glossy-black, faintly punctate- striated, the interstices punctulated, each with a large quadrate bright red spot on the outer basal angle, frequently marked with a dusky spot on the shoulder: body beneath glossy-black, punctate: legs black: tarsi rufous: antennæ rufous, with the club dusky or black.

This pretty insect is occasionally taken in May and June in Coombe and Darenth woods:—I have also found it at the former place, and at the roots of oaks in Richmond-park, during the winter.

GENUS CVIII.—PHALACRUS, Paykull.

Palpi filiform; maxillary with the terminal joint elongate; labial very short:
Pl. XV.

[Image of beetle illustrations]
maxilla with the apex strongly bidentate: Antenna rather slender, distant at the base, a little elongate, the capitulum oblong, tri-articulate, the terminal joint ovate-conic: head small, triangular: thorax gibbous, with the hinder angles ovate: body hemispheric-ovate, or ovate: elytra entire: legs short, compressed; tibia short, straight, not spinous; tarsi slender, the penultimate joint bifid.

Like Cercyon, and in fact most genera composed of minute species, this genus has been greatly neglected, especially in Britain; few persons, until lately, troubling themselves with collecting other than a few of the more remarkable or finely coloured species: by the valuable assistance derived from the possession of Mr. Marsham's cabinet, and the authentic specimens contained therein of his and the species named by those justly celebrated entomologists, Messrs. Kirby and Spence, as well as from other specimens discovered by myself, I hope in this as in other genera to introduce many novelties. The Phalacri are usually rather brilliant insects, and are very frequently adorned with metallic colours, unlike the other genera of this family: their body is generally very convex, and incapable of being contracted into a ball, as in Agathidium; the club of the antenna is three-jointed, and the penultimate joint of the tarsi bilobed: the species are mostly found in flowers.


The largest species of the genus: of a deep brassy-black; head impunctate, with an impressed line down the front: thorax with the anterior angles smooth, the disc thickly and irregularly punctate, the punctures rather deep: elytra rather deeply punctate-striated, the sutural stria oblique and abbreviated, the interstices thickly and deeply punctured, with irregular impressions: body beneath shining black; breast deeply punctured; legs, antenna, and palpi deep black.

The superior bulk and deep jet-black legs, antenna, and palpi, with the size and depth of the impressions in the thorax and elytra, and the deep excavation in the forehead, well distinguish the species.

Taken by myself in profusion in June, 1819, at the base of the cliffs between Dover and St. Margaret's Bay: I have never seen it elsewhere.

Oblong-ovate, greenish-brass: head very glossy, smooth; mouth pitchy: thorax very shining and extremely smooth: elytra as broad as the thorax at the base, slightly attenuated posteriorly, moderately convex, very glossy, with two rather faint striae towards the suture, which do not reach to the base; body and thorax beneath deep pitchy-black: legs stout, pitchy-black or brownish: antennae ferruginous at the base, dusky or black at the apex.

The brilliant greenish-brass colour and bistriated elytra distinguish this species.

Very abundant in hedges in the neighbourhood of London, especially in the spring: found in the winter, beneath moss, &c. occasionally, and sometimes in the autumn.

Sp. 3. ovatus. Oblongo-ovatus, nigro-anecus politus, posterius attenuatus, elytris obsoletissime striatis. (Long. corp. ¾ lin.)


Oblong-ovate, deep very shining brassy-black: head very smooth: thorax obscurely punctured: elytra as broad as the thorax at the base, the apex greatly attenuated, with two deep striae parallel with the suture, and several faint ones on the rest of the surface, the interstices finely punctured: antenna, palpi, and legs piceous.

Differs from the last in being more attenuated behind *and* smaller, *with* the elytra faintly striated throughout, and the interstices between the striae being punctured.

Not uncommon near London.

Sp. 4. cognatus. Anco-niger, nitidus, ovatus, postice haud attenuatus, elytris obsoletissime striatis. (Long. corp. ¾ lin.)


Ovate, not attenuated posteriorly: glossy shining brassy-black: head and thorax impunctate: elytra faintly punctate-striated, the two striae nearest the suture deepest, the interstices punctured: legs, antenna, and palpi black.

The dissimilar form and deep brassy-black hue distinguish this from the foregoing, of which it is not very unlikely that it may prove to be a variety of the female.

My specimens were taken near London.

Sp. 5. corticalis. Oblongo-ovatus, piceo-testaceus, glaberrimus, capite, thorace marginibusque elytrorum saturioribus, elytris bistriatis. (Long. corp. 1—1½ lin.)


Oblong-ovate, above entirely of a pitchy-testaceous, with the head, thorax, and suture, apex, and lateral margins of the elytra, of a deeper, or pitchy-black, tinge: eyes black: antennae rufescent: the disc of the elytra is slightly punctulated, and near the suture are two abbreviated rather faint striae; the body beneath and legs are pale pitchy-testaceous. The colours vary considerably, but all the varieties of the insect may be known by the characters above given, as the other species of the genus are of darker colours.
Extremely abundant throughout the metropolitan district, during the greater portion of the year, but most so in the autumn. "Rivelstone-wood, near Edinburgh, under the bark of firs, in the winter."
—Dr. Leach.

Sp. 6. coruscus. *Brevior ovatus, valde convexus, niger, nitidissimus, elytris lavibus, ad suturam unistratias, pedibus nigris.* (Long. corp. 1—1\(\frac{1}{2}\) lin.)


Short, ovate, very convex, very glossy black: head very obscurely punctured: thorax very convex, the disc most obsoletely punctulated: elytra scarcely punctulated, very convex, with an impressed stria on each near the suture, abbreviated anteriorly, head pitchy-black beneath, scarcely punctate: legs black; clothed with ashy-down: antennae black, with the terminal joint rather elongated and very acute.

The deep black colour, smooth elytra, with a single stria on each, and very acutely terminated antennae, distinguish this from the following species.

Far from uncommon on flowers in the neighbourhood of London. "On the flowers of Ranunculi, in Devonshire."—Dr. Leach.

Sp. 7. picipes. *Brevior ovatus, convexus, niger, nitidissimus, elytris lavissimis, strié suturali unicō, pedibus piecis.* (Long. corp. 1 lin.)


Less than the last: short, ovate, convex, black, very shining, head and thorax as in Ph. coruscus: elytra very smooth, with a single sutural stria, not abbreviated at the base: legs and antennae pitchy-black, the former palest.

I obtained this insect by the above name from Mr. Marsham's cabinet: it may not possibly be more than a variety of the foregoing, with the legs paler, and the sutural striae rather deeper and longer than usual.

The locality is unknown to me, although I have captured the insect myself.

Sp. 8. substratiatus. *Brevior ovatus, valde convexus, niger, nitidissimus, elytris obsoletē punctato-sutriae.* (Long. corp. 1 lin.)


Short, ovate, very convex, deep glossy black: head and thorax as in Ph. coruscus: elytra impunctate, obsoletely but regularly punctate-striated, the striae anteriorly vanishing: body beneath and legs pitchy-black, the latter with an ashy pubescence: antennae black, with the terminal joint rather large, narrower towards the apex, and somewhat obtuse.

The comparative obtuseness of the antennae and obsoletely striated elytra at once discriminate this from Ph. coruscus.

Found near London, and in Suffolk: also in Glamorganshire and Norfolk.

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MANDIBULATA.—COLEOPTERA.

Sp. 9. nigrinus. Subelongatus, depressiusculus, subineo-niger, paulò nitidus,
elytris obsolete uni-striatis, pedibus nigris. (Long. corp. 1 lin.)

Rather elongated and depressed; black, slightly shining, and a little tinged with
aeneous: head and thorax impunctate: elytra with a very obsolete stria near the
suture, the rest of the surface impunctate: legs black.
The elongated, slightly depressed, and somewhat opaque colour, with a brassy
tinge, distinguish this from the preceding insect. Two specimens of this insect
were placed with Dermestes nigrinus of Marsham, above described under the
name of Cercyon nigrinum, in his cabinet.—Vide page 146.

Taken near London; in the New Forest, and near Swansea.

Sp. 10. Caricis. Ovatus, depressiusculus, aterrimus, elytris obsolete punctato-
striatis. (Long. corp. $\frac{2}{3}$—1 lin.)

Ovate, slightly depressed, rather obtuse behind: very deep shining black: head
and thorax impunctate: elytra obsolete striated, the strie composed of delicate
impressed points: body beneath, legs, and antennae deep black.
The ovate obtuse form of this species at once distinguishes it from the fore-
going; from the following it differs in being rather more depressed, and in
the sculpture of the elytra.

Frequent throughout the metropolitan district, especially in
places where Carices abound. “On Carex acutus, in Devonshire.”
—Dr. Leach.

Sp. 11. Millefolii. Brevior ovatus, paulò convexus, niger, nitidus, subius piceus,
elytris subtilissime, et crebre, punctato-striatis. (Long. corp. $\frac{3}{4}$—1 $\frac{1}{2}$ lin.)

Oblong-ovate, slightly convex, deep glossy black: head and thorax impunctate:
elytra very slightly attenuated behind, finely punctate-striated, the punctures
rather deep: body beneath and legs pitchy-black: antennae black, with the
terminal joint not very acute.
Var. $\beta$. Steph. Catal. l. c.—Body beneath pitchy-black, with the antennae
piceous.

Shorter, broader, and more obtuse behind than the last, of a deeper hue, and
more convex and strongly punctuated.

Found in the flowers of the Achillea Millefolium: not common.
“ In sandy places near Halseworth.”—Dr. Leach.

$\frac{3}{4}$ lin.)

Small, ovate, pitchy-black, with a brassy tinge: head and thorax extrememly smooth
and glossy: elytra with a stria near the suture: body dusky-piceous beneath:
legs piceous; antennae deep black.
ANISOTOMIDÆ.—IHALACRUS.

Allied to the last, but considerably smaller, and distinguished by its brassy tinge.

"Taken in the flowers of the Achillea Millefolium in June, 1804, near Barham."—Marsham MSS. I possess one specimen, from the neighbourhood of Bristol.

Sp. 13. aeneopiceus. Brevis, ovalis, aeneo-piceus, lavissimus, antennis pedibusque piceis. (Long. corp. \( \frac{7}{8} - \frac{3}{4} \) lin.)


Less than the last, which it closely resembles, and of which it may possibly prove a variety; differing from it chiefly in the uniform colour of its antennæ and legs. Short, ovate, convex, pitchy-brassy, very glossy: head and thorax impunctate: elytra as in the preceding species: body dull pitchy beneath: legs and antennæ rufo-piceous.

Found near London, and in Norfolk and Suffolk.

Sp. 14. bicolor. Oblongo-ovatus, niger, nitidissimus, antennis pedibus corporeque subtiis rufo-testaceis, elytris bistriatis, maculâ ante apicem ferrugineâ. (Long. corp. \( \frac{2}{3} - 1 \) lin.)


Size variable: oblong-ovate, very glossy black: head short, smooth: mouth ferruginous: thorax smooth: elytra rather broad at the base, attenuated at the apex, each with two striae towards the suture, and uniting near the tip; a little within the apex of each elytron is an obscure ferruginous spot, varying in form and intensity, and is sometimes nearly obsolete: body beneath dull rufo-testaceous, or pale ferruginous, finely punctulate and slightly pubescent: legs and antennæ pale testaceous.

The red spot towards the apex of the elytra, and the pale under surface of the body, with the jet-black polished upper surface, distinguish this species.

Not common: found near London in flowers.

Sp. 15. affinis. Ovatus, atro-piceus, aeneo-nitens, elytris apice rufo-testaceis, subtiis pedibusque flavis. (Long. corp. \( \frac{3}{4} \) lin.)


Ovate, deep pitchy-black, glossed with aeneous; the head and thorax impunctate: elytra with the apex of a reddish or lutescent-testaceous, faintly punctate-striated: the body beneath, antennae, and legs pale reddish-yellow.

The pale legs and antennae, and the coloured apex to the elytra, with the aeneous tinged head and thorax, discriminate this species from its congeners.

Not common: my specimens were captured near London.


Oblong-ovate, deep fuscous, very glossy: head and thorax smooth, nearly black:
elytra blackish-brown, glossy, not very broad at the base, the apex testaceous, each with a single obscure stria towards the suture: antennae and legs testaceous-red; body pitchy-red beneath. The single stria on each elytra at once distinguishes this from the two last species, which are its nearest allies.

I have captured this species near London. "Bristol, by Mr. Miller."—Dr. Leach, who first supplied me with specimens.


Ovate, glossy black, head and thorax smooth, elytra immaculate-black, with the apex sometimes slightly pitchy, and a single stria on each towards the suture: body beneath pitchy-ferruginous or testaceous-red: legs the same, but of a bright or castaneous hue: antennae pale yellowish.

The short, ovate, form of this species, with its concolorous apex to the elytra, and dissimilarly coloured antennae and legs, discriminate this from the foregoing, which it somewhat resembles.

Found near London, and also near "Bristol, by Mr. Millard."—Dr. Leach.


Slightly elongate-ovate, of a deep shining brown, verging to castaneous, and somewhat glossed with aeneous, with the under surface piceous: head and thorax smooth immaculate: elytra with the apex rather pale or pitchy-red, with a very faint stria on each near the suture: antennae and legs very pale testaceous.

The concolorous pale testaceous legs and antennae, with the pitchy abdomen, slightly bronzed elytra, and somewhat elongate form, exclusively of other characters, distinguish this from the foregoing species.

Taken near London, and at Hertford, by myself. "Lambeth."—Dr. Leach.


Short, ovate, shining testaceous-brown; head smooth, mouth concolorous: thorax pitchy-brown, with the margin pale rufo-testaceous: elytra short, broad pitchy-brown, with the apex very pale testaceous, with a faint stria near the suture: body beneath and antennae pale testaceous; legs rusty-red.

Closely allied to the three following species, with which it agrees in being less acuminated behind, but apparently distinct, from its greater width, the hue of
its legs and concolorous mouth, and the absence of stria on the humeral angle of the elytra.

Found near London. "Near Bristol."—Dr. Leach.

Sp. 20. geminus. Ovatus, brunneo-testaceus, nitidissimus, antennis pedibus elytrorumque apicibus pallidis, elytris stria unica suturali, et versus humerum altera rudimenta. (Long. corp. 8"—1½ lin.)


Ovate, testaceous-brown, very glossy, head smooth, reddish-chestnut, with the mouth pale testaceous, and the eyes black: thorax glossy castaneous, with the margins usually paler: elytra rather obtuse behind, very convex and smooth, glossy chestnut, with the apex more or less pale flavescens, each with a faint stria near the suture, and one or more obsolete rudimentary ones towards the shoulders: body pale castaneous beneath: antennae and legs pale testaceous.

The obsolete humeral stria distinguish this from the preceding and following species.

Not uncommon near London: also found in Norfolk, Devonshire, and near Swansea.

Sp. 21. consimilis. Ovatus, fusco-ferrugineus, nitidissimus, antennis elytrorum apicibus ferrugineis. (Long. corp. 1—1½ lin.)


Ovate, deep rusty-brown, very glossy: head deep castaneous brown, with the mouth pale and the eyes black; thorax with a narrow pale margin: elytra short, ovate, moderately convex, smooth, and very glossy, with a single faint stria towards the suture, and an obsolete one towards the shoulders; the apex ferruginous: body beneath, legs, and antennae, ferruginous.

Similar to the last, but of a deeper colour. I suspect that it is merely a variety, in rather a more mature state, of the foregoing insect: it however is generally of a larger size, and the form appears somewhat different.

Not uncommon beneath the bark of trees and on flowers near London. "Netley, Salop."—Rev. F. W. Hope.

Sp. 22. piceus. Brevis, subovatus, postice obtusus, brunneo-piceus, nitidus, thoracis marginis elytrorumque apicibus concoloribus, subtius piceus, antennis pedibusque rubro-testaceis. (Long. corp. 2½—1 lin.)


Short, somewhat ovate, obtuse posteriorly: pitchy-brown, shining: head and thorax smooth, the anterior margin of the former slightly testaceous, the margins of the latter concolorous: elytra deep pitchy-brown, with the apex faintly paler, each with a single stria near the suture, but none towards the shoulders: body pitchy beneath: antennae and legs testaceous-red.

The form of the three last but differs in the colour, by having the margins of the thorax and apex of the elytra concolorous: the body pitchy beneath, and
the legs and antennae testaceous: it also wants the obsolete stria towards the shoulders of the elytra.

Taken near London and in Devonshire: I obtained specimens, by the above name, from Dr. Leach, from the latter county.

Sp. 23. Ulicis. *Oblongus ovatus, convexus, niger, nitidissimus, posterius subangustatus, subtilis piceus, elytris laevissimis, versus suturam bistriatis.* (Long. corp. \( \text{\textfrac{3}{4}} \) lin.)


Minute, oblong ovate, glossy black, slightly attenuated behind: head very glossy, with the mouth pitchy: thorax convex, immaculate shining black: elytra slightly attenuated behind, very convex anteriorly, deep glossy black, smooth, each with two faint striae towards the suture, vanishing anteriorly: the disc, also, in certain positions, appears to have obsolete rudiments of stria: body beneath and legs either pitchy-black or pale reddish-brown: antennae rufo-testaceous at the base, with the apex dusky.

Smaller than any of the foregoing; from which it may be known by its slightly acuminated posterior extremity, convex anterior, and its colouring.

Found in Suffolk and Norfolk, on the Ulex Europæus.


Minute: oblong ovate, of a slightly glossy deep black; head and thorax immaculate, elytra also black, with the apex rufescens, each with two or three faint abbreviated striae at the base near the suture: body beneath and legs pale pitchy-brown: antennae dusky.

Differs from the last, in having the apex of the elytra rufescens, the legs pale testaceous, and the body beneath paler: it is also of a smaller size, and the elytra less attenuated behind.

Found near London.

Sp. 25. globosus. *Suborbiculatus, convexiusculus, rufo-brunneus, pedibus flavescensibus, antennarum capitulo nigricanti.* (Long. corp. 1 lin.)


Minute, suborbiculate, slightly convex, reddish-brown, or dull chestnut, glossy, impunctate: elytra not striated, rather obtuse posteriorly: legs pale reddish-yellow: antennæ pale reddish-yellow at the base, dusky at the apex.

Distinguished by its suborbicular form and minuter bulk, as well as by its pale colour and want of punctures or striae.

Taken near London; and apparently the Ph. globosus of Sturm.

Minute: oblong-ovate, slightly convex, and a little attenuated posteriorly, smooth, shining black; head and thorax immaculate; elytra with the apex more or less piceous, or flavescent, their surface impunctate: legs pitchy-red or piceous; antennae pale testaceous, with the club dusky.
Known by the distinct patch of colour at the apex of the elytra; by its minute size and the immunity of its elytra: from the next species it differs in the colour of its upper surface and by its pale antennae.

Found near London; also in Norfolk, Suffolk, and near Bristol.

Sp. 27. pulchellus. Ovatus, nitidus, capite thoraceque atris, elytris fusco-castaneis, apieibus dilutioribus, pedibus antennisque rufis. (Long. corp. ½ lin.)
Very minute: ovate, glossy; the head and thorax black, with the anterior margin of the latter slightly castaneous; elytra of a castaneous-brown, with the apex paler; smooth, not striated: legs and antennae pale rufous.
The smallest species of the genus; differs from the foregoing by the deeper colour of its antennae, smaller size, and dissimilar colouring, the diluted patch at the apex of the elytra being small, and not distinctly indicated, as in that insect: from the following it differs by its pale antennae, and by wanting the striae on the elytra.

My specimens of this minute insect I obtained from the Marshamian cabinet.

Sp. 28. nitens. Oblongiusculus, niger, nitidus, elytrorum apieibus pallidis, pedibus ferrugineis, antennis nigris, elytris substriatis. (Long. corp. ¾ lin.)
Minute; rather oblong, black, shining: head and thorax immaculate: elytra faintly striated, pitchy-black, with the apex paler: legs ferruginous: antennae dusky or black.
The small bulk, deep shining black body, with faintly striated, pale tipped elytra, ferruginous legs, and dusky antennae, sufficiently distinguish this species from all the foregoing.

Found in Suffolk and Norfolk.

GENUS CIX.—EPHISTEMUS, Westwood MSS.

Palpi not filiform; maxillary with the basal joint robust, the terminal elongate, subulate; labial very short. Mandibles rather prominent, with the apex entire. Antennae rather elongate, approximating at the base, the two basal joints robust, the third more slender than, but not so long as, the second, the five following very short, globose, the remainder forming a triarticulate club, with the terminal joint obtuse: head minute: thorax slightly gibbous,
a little narrowed anteriorly: elytra entire, slightly attenuated behind, rounded at the apex: body elongate-ovate, acuminate at each end, somewhat convex: legs short; tibiae slender, not spinose; tarsi very slender, all five-jointed, the penultimate joint simple.

This genus, which consists of very minute species, may be at once known from Phalacrus, by the approximation of the antennae at the base, which in that genus are remote; there are other essential distinctions, as may be observed by the above characters. In several respects, Ephistemus approaches towards the genus Atomaria, especially in the structure and insertion of the antennae; but the ovate, subconvex body, exclusively of other characters, appear to point out the present family as its proper station; as amongst the Necropliaga (to which group Atomaria belongs) the body is generally more or less linear: the affinity therefore appears to me to result from the peculiar situation of the two genera in their respective circles.


Shining, glabrous: head black, impunctate, with the mouth testaceous: thorax black, without punctures; the anterior margin slightly castaneous: elytra also black, very convex, and rather wide anteriorly, impunctate, the apex obscurely margined with piceous: antennae and legs pale testaceous.

Less than the following species, and known by the uniformity of the colouring of the antennae and legs: and differs from Ep. confinis, by wanting the castaneous apex to the elytra.

The generic peculiarity of form is well pointed out by Marsham in his concise description of the species: "De. niger, nitidus, utrinque acutiusculus, antennis pedibusque testaceis."

I possess a pair of this insect; one of which I obtained from the Marshamian cabinet; the other I received from Glamorganshire; and Mr. Westwood has captured two near London.

Sp. 2. nigriclavis. Niger, nitidus, glaber, pedibus testaceis, antennarum capitulo nigricanti. (Long. corp. $\frac{4}{8}$ lin.)


Shining, glabrous: head black, impunctate, mouth pitchy-testaceous, thorax black, the anterior margin concolorous: elytra deep pitchy-black, with the apex somewhat paler: legs rufo-testaceous: antennae pale-testaceous at the base, with the club dusky.

The superior bulk and dusky capitulum of the antennae at once distinguish this species.
My specimen of this species occurred in the New-Forest; Mr. Westwood possesses one taken near London.

Sp. 3. confinis. Plate 15. f. 2. Niger, nitidus, subpubescent, elytris glabris, elytrorum apicibus antennis pedibusque castaneis. (Long. corp. ½ lin.)


Glossy black, slightly pubescent: head impunctate, with the mouth testaceous: thorax with the anterior margin narrowly edged with castaneous: elytra glabrous, impunctate, deep pitchy-black, with the apex more or less castaneous; antennae and legs castaneous.

Differs from the foregoing in the pubescence of the head and thorax, and concolorous antennae; from Ep. gyrinoides by the colour of the antennae and legs, and by the large castaneous patch at the apex of the elytra.

The Ep. Histeroides, Westwood MSS., appears to be a dark variety of this species.

I have one of this species from the neighbourhood of Bristol. "Putney."—Mr. Westwood.

Genus CX.—Leiodes, Latreille.

Palpi scarcely filiform; maxillary with the terminal joint subcylindric, acuminate, the preceding minute; labial rather shorter, with the apical joint subovate; mandibles somewhat exserted, acute. Antennae with the three basal joints subcylindric, the third rather longest, the three following short, subglobose, the remainder forming a five-jointed club, the second joint of which, or the eighth of the antennae, is very minute, and the terminal, or eleventh, large and subovate: head small; thorax transverse, the sides rounded; body ovate or subhemispheric, above convex, glabrous; elytra margined, entire; legs moderate; femora sometimes dentate; tibiae compressed, externally spinose; posterior sometimes bent; tarsi, four anterior five-jointed, slightly dilated in the males, two posterior four-jointed.

Latreille, and the followers of the tarsal system, place this genus very remote from Phalacrus; but I conceive that the present location is more natural, as the habits of the insects are not dissimilar to those of the other Rypophaga, but totally unlike those of the genera with which they must necessarily be associated, if the number of tarsal joints alone is to guide us in our arrangements. The genus is rather an extensive one, and the species are far from abundant in Britain; they differ considerably among themselves, and it might facilitate the investigation of the species, were the genus subdivided more than I have attempted; but the only characters that seem available appear to be sexual: from the other genera of this family.
Leiodes may be at once distinguished by the minute eighth joint of the antennae, or the second of the capitulum:—the species are found in Boleti, Agarici, beneath the bark of trees, putrid wood, damp banks, &c.

A. Body more or less ovate, not subhemispheric.


Elongate-ovate, luteous yellow, shining: head rufescent: thorax covered with faint remote punctures: elytra thickly punctured throughout, the punctures rather deep and coarse, with an obscure stria near the suture: legs pale flavescent; antennae reddish-yellow at the base, with the three terminal joints of the capitulum dusky.

Distinguished from the other indigenous species of this section by the absence of punctate striae on the elytra, by the pallid hue of its legs, and by the colour of its antennae, the three last joints alone being dusky.

I have taken this species near London; in which district it has also been captured by Mr. Westwood.

Sp. 2. aciculata. Brevis, ovata, capite thoraceque rufo-testaceis, elytris satura-tioribus subtiliter transversim strigosis, striis suturali unica. (Long. corp. ½ lin.)


Minute, short, ovate: head and thorax rufo-testaceous, impunctate: eyes black: elytra somewhat castaneous, finely strigose transversely throughout, with a rather deep simple stria on each towards the suture; and with a powerful gloss the rudiments of one or two others may be observed on the disc: body beneath and legs pale rufo-testaceous, the posterior femora obsolescently dentate towards the base: antennae pale testaceous.

The minuteness of this insect, united to the pale hue of its impunctate head and thorax, dark transversely strigulose elytra, with simple striae, and pale antennae, sufficiently distinguish it from the two following species, which alone have three elytra transversely strigose.—It is probably the Anisotoma spinipes.—Gyllenhal, v. iii. 709.

The locality of one of my specimens, which I obtained from Dr. Leach by the above name, is unknown to me; the other was taken near “South Creek, Norfolk.”—Rev. J. Skrimshire.

Sp. 3. dentipes. Globoso-ovata, rufo-testacea, antennarum clavâ concolore, oculis nigris, elytris subtilissimâ punctato-stratiatis, interstitialibus obsolete transversim striatis. (Long. corp. ¾—1 lin.)

Globose-ovate: head broad, shining, testaceous-red: eyes black, thorax smooth, rufo-testaceous: elytra slightly attenuated behind, very convex, glossy testaceous-red, and very faintly punctated striate, the interstices finely strigose transversely: body pale testaceous beneath; legs stout, pale testaceous; hinder femora with a large subacuminate tooth at the apex, and a smaller one near the middle; hinder tibiae slightly arcuated: antennae pale testaceous, the eighth joint scarcely less than the preceding: paler, without the denticulations on the posterior femora.

Known from the last by the elytra being concolorous with the head and thorax, and punctate striated; and from the next by the pale clava of the antennae.

Taken in a bank near Coombe-wood.

Sp. 4. brunnea. Globose-ovata, rufo-brunnea, antennarum clava oculisque nigris, elytris subtiliter punctato-striatis, interstitiis obsoletissime transversaliter sub-strigosis. (Long. corp. \(\frac{2}{3}\)-1 lin.)


Small: globose-ovate: head glossy rufo-brunneous, smooth: eyes black: thorax very convex, polished rufo-brunneous, impunctate: elytra rather attenuated behind, very convex, glossy rufo-brunneous, regularly but finely punctate-striated, the interstices obsolescently strigose transversely: body pale rufo-testaceous beneath: legs stout, rufo-testaceous: antennae ferruginous at the base, the five apical joints black, or fuscous: the eighth joint distinctly smaller than the seventh.

Distinguished by the black clava of the antennae from the two preceding species: and from all the rest by the transverse strigae on the elytra.

Found near London: at Darenth-wood, beneath the bark of an old pollard oak.

Sp. 5. badia. Globose-ovata, castaneo-brunnea, oculis nigris, antennis pedibusque pallidis, elytris punctato-striatis, interstitiis impunctatis. (Long. corp. \(\frac{2}{3}\)-1 lin.)


The deep castaneous hue of this small insect, and the simple interstices between the striae on the elytra, and pale legs and antennae, distinguish it from its congeners.

Gyllenhal considers Sturm's An. badium to be referrible to the preceding insect; but the absence of the transverse striae, and concolorous clava of the antennae, appear to militate against his opinion.

Taken in the metropolitan district; once found near Coombe-wood.

Sp. 6. pallens. Oblongo-ovata, depressiuscula, corpore toto pallide luteo, oculis
MANDIBULATA.—COLEOPTERA.

nigris, antennarum capitulo nigricanti, elytris punctato-striatis. (Long. corp. 1 lin.)


Oblong-ovate: entirely of a pale luteous or ochraceous, with the under side and legs paler, the eyes black, and the club of the antennae dusky: head and thorax impunctate: elytra punctate-striate, the interstices smooth.
The elongate and depressed form, and pale ochraceous hue of this species, with its dark eyes and dusky club of the antennae, are its chief characters.

A single specimen taken by myself in the hedge leading to Darenth-wood from the village.

Sp. 7. multistriata. Oblongo-ovata, ferruginea nitida, capite thoraceque saturatioribus, subtilliter punctulatis, elytris confertissimi striato-punctatis. (Long. corp. 1 lin.)


Oblong-ovate; glossy-ferruginous, the head and thorax darker; the former finely, but not very thickly, punctate: eyes brown: mandibles dusky at the apex, smooth pale castaneous: thorax finely punctured: elytra convex, attenuated posteriorly, pale rusty-red; thickly punctate in striae, the alternate rows of punctures being somewhat less than the other, and the striae placed rather confusedly on the shoulders: body beneath, and legs testaceous; the latter palest, with the hinder tibia a little bent: antennae ferruginous, with the club dusky.
The close approximation of the striae on the elytra at once distinguish this species.
The only specimen I have seen of this species was captured by myself near Hertford.

† Sp. 8. punctatissima. Plate 15. f. 3. Oblongo-ovata, depressiviuscula, aterrima, nitida, antennarum basi, ore, tibias tarsisque pallide testaceis, thorace elytrisque vago et creberrime punctatis. (Long. corp. 1 lin.)

Oblong-ovate, rather depressed; of a deep glossy black: head rather faintly punctured: thorax with the disc thickly, but rather confusedly, punctate: elytra thickly and deeply punctate, the punctures somewhat confused, and forming several irregular striae, those on the sides of the elytra united by a faint impression, and forming transverse strigae or wrinkles: body beneath deep black, finely punctured: femora pitchy; posterior nearly black; tibiae and tarsi pale testaceous; mouth the same: antennae with the seventh, ninth, tenth, and eleventh joints pitchy-black; the remainder pale-testaceous.
The intense black colour of this conspicuous insect, with its deeply punctured elytra, and depressed elongate form, at once distinguish it from its congers.

One example only of this very distinct species has come under
my observation; it was casually found floating in a pond near Kimpton, in November last (1828); since when, another but smaller specimen has occurred."—Rev. G. T. Rudd.


Oval, pitchy-black, shining; slightly attenuated posteriorly: head and thorax faintly punctured; the margins of the latter rufescent: elytra glabrous, immaculate, with the margins slightly rufescent; thickly punctured throughout, the punctures placed very irregularly in double striae, with dispersed intermediate smaller ones, the stria more evident towards the apex: body beneath and legs rufo-testaceous: antennae ferruginous, with the club dusky.

Distinguished by the pale margins of the dark-coloured thorax and elytra, and by the irregular punctulations of the latter, united to the pale rufous abdomen and dusky club of the antennae.

My specimens I captured in a fir-plantation near Hertford, feeding on fungi.


Globose-ovate; glossy ferruginous, thickly punctured: head pitchy-black: thorax shining castaneous or rusty-brown: elytra ferruginous, with the suture rather dusky; regularly and rather deeply punctate-striate, each interstice with a continuous row of minute impressions: body beneath shining ferruginous, with the breast darker: legs pale testaceous: antennae ferruginous at the base, with a dusky clava.

Known by the row of minute impressions placed between each of the ordinary stria.

Taken by myself near Hertford.


Ovate, slightly depressed, very smooth and glossy: head and thorax deep fuscous, finely punctured: elytra castaneous, very faintly punctate-striated; the interstices rather obscurely punctured: antennae and legs dusky.

The dark head and thorax, and dusky legs and antennae, with the slightly depressed body and very faintly striate castaneous elytra, characterize this species, which I have named in memory of its late possessor; the name cas-
Mandibulata.—Coleoptera.

Tanane having been used by Illiger for one of the foregoing species, previously to its adoption by Marsham for the present.

Taken near London and in Suffolk.


Globoso-ovate; pitchy-chestnut, shining: the thorax globose, extremely glossy, very thickly but faintly punctured: scutellum castaneous or dusky; elytra pale chestnut-red, rather deeply punctate-striate, the punctures distinct, the interstices impunctate: body beneath and legs pale ferruginous; hinder femora with a tooth at the apex, tibiae very slightly bent: antennae ferruginous at the base, the clava dusky.

The abbreviated subglobose body very glossy, convex, and faintly punctured thorax, and pale elytra, with the distinctness of the impressions which compose the striae on the latter, and the smooth interstices, are the prominent characters of this species.

Found by myself in the lane leading to Combe-wood.


Globose-ovate, castaneous; very glossy, the thorax especially: thorax faintly but minutely punctured throughout: elytra deeply punctate-striate, the interstices convex, with a few scattered impressed dots on each, especially towards the apex: body beneath and legs pale testaceous: antennae rufo-testaceous, with the clava rather dusky.

Allied to the last in form, but differs in having the thorax less punctured, the interstices between the striae on the elytra more elevated, and furnished with a few scattered impressions. The above description was made from Marsham's original specimens, which I possess.

I have occasionally taken this species in various parts of the metropolitan district.


Larger than either of the foregoing: oblong-ovate, of a deep ferruginous-chestnut, slightly glossy: head faintly punctured: thorax rather deeply and thickly punctate, with two larger impressions on the disc anteriorly: elytra faintly punctate-striate, the interstices somewhat depressed and impunctate: body pitchy beneath: legs and antenna testaceous, the latter with a dusky club.
The two foveae on the thorax distinguish this from any of the other species.

Found near London.

Sp. 15. maxillosa. Suboblongo-ovata, testacea, maxillis exsertis, elytris punctato-striatis, abdomen fusco. (Long. corp. 1 4 lin.)


Rather less than the last; somewhat oblong-ovate, entirely testaceous, with the eyes brown and the abdomen reddish-fuscous; the legs yellowish; the maxilla exserted; the thorax finely but faintly punctured, and the elytra punctate-striate; the interstices slightly convex and impunctate.

The somewhat exserted maxilla, oblong-ovate form, testaceous upper surface, and fuscous abdomen, seem to be the principal characteristics of this species.

Taken near London, and in Suffolk.

Sp. 16. testaceus. Subgloboso-ovata, pallide testacea, capite thoraceque conflatto punctatis, elytris tenuis punctato-striatis, antennarum capitulo fusco. (Long. corp. 1—1 ½ lin.)


Subglobose-ovate, pale testaceous: eyes black: head and thorax finely, but thickly punctured throughout: elytra with the suture a little castaneous, very faintly punctate-striate, the punctures minute, the interstices flat, smooth: body beneath and legs rather paler: antennae rufous at the base, with the capitulum dusky.

The pale testaceous colour, black eyes, thickly but finely punctured head and thorax, faintly striated and impunctate elytra, and dusky clava of the antennae, are the chief distinctions of this subglobose species.

Inhabits the south coast of Wales near Swansea, and the county of Norfolk.


Subglobose-ovate: reddish-brown, with the thorax impunctate: the elytra punctate-striated, the interstices smooth: the legs pale testaceous: the antennae rufescent, with the club dusky.

This is probably the An. brunneum of Sturm: a name which must fall, from having been previously employed by Gyllenhal: the above character sufficiently identifies the species.

My specimen was taken near London.

Sp. 18. ferruginea. Subgloboso-ovata, rufo-ferruginea, elytris profunde punctato-striatis, tibinis spinosisimissen. (Long. corp. 1 ½ lin.)

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Somewhat globose-ovate; rufo-ferruginous; very glossy: head rounded, slightly, punctulated, the mouth somewhat paler: thorax finely but thickly punctured, very glossy: elytra rather convex, deeply punctate-striated, the interstices moderately convex, each alternate one with a series of minute impressions: body and legs stout, tibiae very spinous, the hinder ones slightly bent. The rows of impressed dots on the alternate interstices of the elytra, with the very spinose tibiae and deep striae, constitute the leading peculiarities of this species.

Taken in Norfolk and Devonshire. “Cheltenham, in June.”
—Dr. Leach.


Globose-ovate, shining; head pitchy-black, finely punctulated, mouth ferruginous, mandibles piceous at the apex: eyes brown: thorax glossy pitchy-black, with the margins slightly ferruginous, the disc a little punctulate: elytra ferruginous, deeply punctate-striated, with some remote impressed dots on each alternate interstice: body beneath glossy pitchy-black, the abdomen pale rufo-piceous: legs rufo-ferruginous: hinder tibiae elongated and much curved: antennae ferruginous, with the clava pitchy-black.

The dark pitchy-black head and thorax, with ferruginous elytra, and distinct elongate, bent, hinder tibiae distinguish this species.

Not uncommon: it has been captured in hedges at Coombe and Darenth; and I once found a specimen near Hertford.

Sp. 20. cinnamomea. Oblonga, rufo-ferruginea, thorace convexo, nitido, punctatissimo, elytris punctato-striatis, interstitiis alternis punctis majoribus remotis impressis. (Long. corp. 2—3½ lin.)


The largest species of the genus, but extremely variable in size: oblong-ovate; glossy rufo-ferruginous; head finely and thickly punctured, with two larger impressions on the forehead: thorax very convex, glossy, thickly and minutely punctured throughout, with a transverse row of larger punctures at the hinder angle: elytra not very deeply punctate-striated: the interstices very minutely punctulate: with some irregularly placed larger impressions on each alternate one: body beneath dull rufous; legs paler, the posterior femora in the male subclavate, with two or three denticulations towards the apex, and a strong tooth at the tip itself; the posterior tibiae very much elongated, incurved, and denticulate internally: antennae ferruginous at the base; the club dusky. Female with the posterior legs short, simple, and not curved.

This species is known from all the preceding by its larger size, and from the following by its pale rufo-ferruginous colour and thickly punctured thorax.
Rare near London; probably arising from its subterranean habits, occurring chiefly in Truffles (*Lycoperdon Tuber*): it has been found in Devonshire and Cornwall. “At Lord Braybrook’s, Audleyend, in Essex.”—Rev. W. Kirby, and Professor Henslow. “Common in the summer near Kimpton.”—Rev. G. T. Rudd.


Short, ovate; rusty-chestnut, rather glossy, with the eyes black; the antennae with a dusky club; head rather coarsely and thickly punctate; thorax the same, with a row of still coarser impressions placed transversely at the hinder angles, as in *Le. cinnamomea*: elytra short, ovate, rather deeply punctate-striated, the interstices very obscurely punctured, with a few larger remote impressions on each alternate one, as in the preceding insect: body dull pitchy-chestnut beneath; hinder femora not elongated, with a single tooth in the middle; posterior tibiae short, scarcely bent.

The shorter, ovate, form of this species, and its deep castaneous hue, nearly simple and not elongated posterior femora and tibiae, well distinguish it from the last, with which it agrees in having a transverse row of impressions on the thorax behind.

Rare: once captured near London. “Luss, in Scotland, beneath a stone.”—Dr. Leach.


Nearly as large as *Le. cinnamomea*: oblong, deep ferruginous; head and thorax rather pale, a little glossy and impunctate; elytra punctato-striate; the alternate interstices with a few somewhat regularly placed remote impressed dots, the rest of the surface impunctate; body dull testaceous beneath: legs paler; the hinder thighs but little thickened, with one large tooth near the middle, and a second towards the apex; the posterior tibiae scarcely elongate, and but slightly arcuate: antennae ferruginous.

The smaller size, and rather more elongate form, with the impunctate head and thorax, shorter and less denticulated posterior femora, and nearly straight hinder tibiae, well distinguish this from *Le. cinnamomea*.

One of my specimens was found near Hereford, the other two in the west of England, either Devonshire or Cornwall.

Sp. 23. *armata*. *Brevis, subgloboso-ovalis, rufo-ferruginea, capite thoraceque im-
Mandibulata.—Coleoptera.


Short, subglobose-ovate: deep glossy rufo-ferruginous: head and thorax impunctate: elytra rather dilated anteriorly, faintly punctate-striate, the interstices thickly but finely punctured throughout, but without larger impressions on the alternate ones: body ferruginous beneath: legs pale rufo-testaceous; the hinder femora elongate, subclavate, slightly dentate; posterior tibia elongate, much bent; antennae pale at the base, with the club dusky.

The short and broad subglobose form of this insect, which approaches towards that of the following section, with its impunctate thorax, and thickly punctured elytra, with elongated posterior legs and dentate femora, at once distinguish it from any of the foregoing.

"Mousliould-heath, near Norwich."—The late M. J. Griffin, Esq.; from whose collection I obtained my specimen. "Near Carlisle."—*T. C. Heysham, Esq.*

*Sp. 24. rugosa.* *Brevis, subgloboso-ovalis, rufo-ferruginea, capite thoraceque punctulatis, elytris punctato-striatis, intersticios transverso rugosis.* (Long. corp. 1/2 lin.)


Short, subglobose-ovate; rather glossy rufo-ferruginous; head and thorax thickly but minutely punctured: elytra regularly though somewhat faintly punctate-striate, the punctures very distinct, the interstices transversely rugose; legs pale rufo-testaceous: eyes dusky: antennae rufo-piceous; the three terminal joints very large.

The size of the foregoing species, which it greatly resembles, except in having the head and thorax thickly punctured and the elytra transversely rugose throughout, by which characters it may be known from its congeners.

Taken near London.

B. With the body nearly hemispherical.

*Sp. 25. humeralis.* *Nigra subitus rufo-ferruginea, elytris fulvo pubescentibus, confusi punctato-striatis, interstitialibus conflerissime punctulatis, macula humeralis rubra.* (Long. corp. 1/2—1/3 lin.)


Above black, beneath rufo-ferruginous: head deflexed, smooth; mouth testaceous; eyes bruneous: thorax very convex and shining, delicately and sparingly punctured, with the anterior and lateral margins and posterior angles castaneous: elytra black, with a large transverse quadrangular red spot at the shoulder; clothed with a fine fulvous pubescence, and thickly though rather faintly punctate throughout, and obscurely striated, the striae placed without order: body rufo-piceous beneath, with the abdomen testaceous: legs rufo-ferruginous, the femora sometimes dusky: antennae ferruginous at the base, with the club dusky.
Known by the rufous humeral spot, and the irregular striae on its thickly punctate elytra.

I once met with this insect abundantly in an Agaric, at the end of June, in a wood near Greenhithe, Kent: it has been taken in Norfolk, Devonshire, the New Forest, &c. "Netley."—Rev. F. W. Hope.

Sp. 26. abdominalis. Nigra, nitida, subtiis rufo-picea, elytris regulariter punctato-striatis, interstitiis sublaceis. (Long. corp. 1\frac{1}{2}—1\frac{3}{4} lin.)


Above glossy-black, beneath rufo-piceous: head small, smooth; mouth testaceous; eyes brown: thorax very convex, faintly and sparingly punctured throughout, with the lateral and posterior margins externally ferruginous, pellucid; elytra entirely of a glossy black, regularly and distinctly punctate-striated, the interstices throughout finely and obsoletely punctulated: body beneath shining pitchy-red, punctured, abdomen rufo-testaceus: legs moderate, rufo-ferruginous.

Known from the preceding by the absence of the red spot at the base of the elytra, and by the regularity of the stria on their disc.

The only indigenous specimen I have hitherto seen of this species I obtained from the north of England, since my Catalogue was printed off. I believe it was captured in Cumberland.

GENUS CXI.—AGATHIDUM, Illiger.

Palpi filiform; maxillary with the last joint conic: labial small: mandibles with the apex acute. Antennae short, with a subovate, triarticulate, club: head rather large, inflexed: thorax with the angles rounded, large, the sides inflexed: body globose-hemispheric, contractile into a ball: elytra entire, laterally inflexed: legs short; tibie setose; tarsi tetraromous, the joints entire.

Agathidium, which resembles Leioides in several respects, may be readily known by the difference in the structure of the antennae,—the eighth joint not being smaller than the seventh, and the three last forming a subovate club; which, however, varies a little in the different species;—and from the facility these insects possess of rolling themselves up into a ball when alarmed: they inhabit putrid wood and fungi, and may be occasionally found in sand and gravel pits, into which they fall by accident.

Sp. 1. ruficole. Globosum, nigrum, thorace antennis pedibusque rufo, elytris obsoletae vageque punctulatis. (Long. corp. 1—1\frac{1}{2} lin.)

Subglobose, glossy black, with the antennae, thorax, and legs rufous; the elytra and thorax obsoletely but dispersely punctulate; body black beneath. The rufous antennae and legs distinguish this from the following species, with which it agrees in having a rufous thorax.

Rare. I possess one specimen from the Marshamian cabinet, and another taken at Colney-hatch wood in June.

Sp. 2. globus. Plate xv. f. 4.—Globosum, nigrum nitidum vagé punctulatum, thorace rufo, antennis pedibusque rufo-piecis. (Long. corp. 1½ lin.)


Subglobose, shining black, irregularly punctulate, the punctures distinct; thorax very convex, bright shining red, and finely punctured: legs pitchy-red, with the apex of the tibiae and the tarsi palest: body pitchy-black beneath, with the apex pale testaceous: antennae deep rusty-brown, with the terminal joint bright ferruginous.

Differs from the last by the darkness of the legs and antennae; by the terminal joint of the latter being paler than the rest;—the body being piceous below, and the anus testaceous.

Not common; found occasionally in woody places, in rotten trees, or amongst putrid leaves.

Sp. 3. ferrugineum. Globosum, rufo-ferrugineum, nitidum, tenue punctulatum, antennis pedibusque pallidioribus. (Long. corp. 1½ lin.)


The globose form of the preceding: above of a glossy testaceous or ferruginous-red, with the eyes fuscous: the thorax very shining and scarcely punctured, broad, the lateral and hinder margins greatly dilated, so that when the insect is in a walking position the thorax appears remote from the elytra: the latter finely punctured throughout, with a single stria near the suture, abbreviated anteriorly: body pale testaceous beneath: legs very short and pale testaceous: antennae ferruginous: the eighth joint rather larger than the seventh, the remainder considerably larger and a little dusky.

Distinguished by its pale head and elytra from the two preceding insects, and from the following by the same characters, the smallness of its scutellum, and larger size.

My specimen of this species was captured at Coombe-wood, beneath the bark of an old ash.

Sp. 4. atrum. Atrum nitidum, subtilissime punctulatum, antennis pedibusque rufo-piecis, scutello magno. (Long. corp. 1—1½ lin.)


Deep shining black, very thickly and finely punctulate: head large, rather smooth, mouth dull testaceous: thorax with its lateral margins considerably dilated, above very convex, scarcely punctulated, black, with the lateral and sometimes the posterior margin pellucid and rufescent: scutellum large, glossy,
ANISOTOMIDE.—AGATHIDIUM. 181

smooth; elytra retuse at the base, very convex, finely punctured, with a single stria near the suture, abbreviated anteriorly; body piceous beneath; legs pitchy, with the tibiae and tarsi pale ferruginous.

Differs from Anisotoma nigrinum of Sturm, hereafter described, by the bulk of its scutellum, the abbreviated sutural stria, and its larger size: from all the preceding by its dark thorax; from Ag. seminulum by its piceous abdomen and black elytra; and from all the rest by its large scutellum.

Found occasionally in the sand-pits at Hampstead, and in the gravel-pits at Coombe-wood. "Norfolk."—Dr. Leach. "Captured in a Boletus growing on a fir in Thorp-wood, near Norwich, in April 1803, by the Rev. W. Kirby."—Marsham MSS.

Sp. 5. seminulum. Nigro-piceum nitidissimum laeve, subts rufum, elytris apice ferrugineis, striae suturali abbreviatae. (Long. corp. 1+ lin.)


Extremely glossy pitchy-black; mouth pale testaceous; eyes black; thorax large, above very convex and shining, the margin pale ferruginous; scutellum large, triangular, smooth, piceous; elytra above convex, smooth, pitchy-black, with the apex pale ferruginous; very obsolesely punctulated; with a single anteriorly abbreviated sutural stria on each; body pale testaceous-red beneath; legs and antennae rufo-testaceous.

Differs from the former by its smooth glossy surface and dissimilar colour, and from the following by the abbreviated sutural stria.

Found occasionally beneath putrescent bark and in fungi, near London.

Sp. 6. orbiculare. Nigrum nitidum laevissimum, antennis pedibusque rufo-piceis, elytris striis suturali nullis. (Long. corp. 3—1 lin.)


Smooth glossy black; head large, smooth; mouth ferruginous; thorax deeply emarginate anteriorly, the lateral and posterior margins, which are narrowly edged with ferruginous, forming a semicircle; the disc very convex, smooth glossy black; scutellum moderate, smooth; elytra rounded at the tip, above globose-convex, smooth, shining black, without a sutural stria; body beneath pitchy-black, a little shining; legs piceous, with the tibiae and tarsi ferruginous; antennae ferruginous; with part of the club sometimes pitchy.

Differs from the two last in wanting the sutural stria on the elytra, in being considerably smaller and of a different colour.

Inhabits the metropolitan district.

Sp. 7. mandibulare. Atrum, nitidum, thoracis lateribus pedibusque rufo-testaceis, mandibula sinistra magna. (Long. corp. 1 lin.)

Glossy, smooth, black: thorax short, suborbiculate, slightly emarginate in front, its lateral and posterior margins rufo-testaceous, the latter concealing the scutellum: elytra very convex, rather acuminated behind, deep black, impunctate, with a faint stria near the suture posteriorly: body black beneath; legs rufo-testaceous; antennae the same, with the club dusky; mandibles pitchy, the left one large and prominent.

The large horn-like left mandible at once characterizes this species.

I possess a single example of this remarkable species, taken near London.


Pitchy-black, smooth, glossy: with the sides of the thorax and its hinder margin, the body beneath, and the legs rufous-brown; the antennae pale, with a dusky fascia; the apical joint being coloured as the base: the scutellum minute.

The pale underside of this insect, with the smallness of its scutellum, the banded antennae and smooth elytra, serve to distinguish this species.

Frequently taken in the metropolitan district.

Sp. 9. affine. *Atrum nitidum, thoracis lateribus marginalibus ad apicem, antennis pedibusque rufo-testaceis.* (Long. corp. $\frac{3}{4}$—1 lin.)


Black, very glossy, impunctate, with the sides of the thorax, and of the elytra towards the apex, pale rufo-testaceous; the antennae and legs deep rufo-testaceae; the latter with pitchy femora.

The pale rufo-testaceae margins of the thorax and elytra at once point out this from its congeners; and the piceous femora offer a strong point of dissimilarity to the following.

I obtained my specimens from the Marshamian cabinet by the above name.

Sp. 10. carbonarium. *Atrum, nitidum, antennis femoribusque pallidis, elytris punctulatis stria suturali unica.* (Long. corp. $\frac{3}{4}$ lin.)


Shining black; thorax impunctate, with the margin concolorous: elytra convex, deep black, finely punctulate, with an abbreviated stria on each near the suture: body pitchy-black beneath; femora pale testaceous; tibiae and tarsi pitchy: antennae pale testaceous. The pale antennae and femora, and deep black upper surface, distinguish this species.

One of my specimens was taken near London; the other I obtained from the Marshamian cabinet.
Sp. 11. minutum. Obovatum, nigrum, nitidissimum, leve, thoracis limbo laterali rufo-testaceo, elytris postice acuminatis, disco rufo-piceis. (Long. corp \(\frac{1}{4}\) lin.)


Minute: obovate, very glossy-black, smooth: head broad convex; mouth piceous: thorax very convex, with the sides deflexed, and broadly ferruginous, the hinder margin narrowly bordered with the same colour: elytra ample, rather narrowed behind, black, the disc pitchy-red; very smooth, without an abbreviated sutural stria: legs pitchy-black; tarsi testaceous.

The red patch on the disc of the elytra at once serves to distinguish this species from its congeners.

Found near London, and in "Norfolk."—Dr. Leach.

Sp. 12. nanum. Suborbiculatum, nigrum, nitidissimum, thoracis limbo laterali anguste testaceo, elytris postice obtusis, strid suturali nulæ. (Long. corp. \(\frac{1}{4}\) lin.)


Very minute: head broad, convex, smooth: thorax very convex, the sides considerably deflexed and narrowly edged with testaceous: elytra ample, obtuse posteriorly, very smooth, glossy, without a sutural stria, deep black, the apex sometimes picaceous: body and legs black, the legs a little paler.

The smaller size and greater obtuseness of the elytra, with the black disc of the latter, sufficiently point out the distinction of this species.

Not uncommon in sand and gravel pits in the metropolitan district. "Edinburgh: Dartmoor, in March."—Dr. Leach.

Genus CXII.—Clambus, Fischer.

Trophi minute. Antennae as long as the thorax, slender, pilose, the two last joints large, oblong, forming a club: head large, nearly or quite as broad as the thorax, rounded anteriorly: thorax transverse, the lateral margins more or less attenuated: elytra very convex, and gibbous anteriorly, attenuated, and declining posteriorly, the apex rounded: body contractile into a ball: legs short: tibiae slender, slightly pilose: tarsi obscurely articulated.

Like Agathidium the species of this genus have the power of contracting themselves into a ball when alarmed. From the genus just mentioned they may be known by the great width and bulk of the head, and by the club of the antennæ being composed of two joints only, a structure which also obtains in the genus Orthoperus: but in that genus the head is small, the elytra but slightly gibbous, and somewhat truncate posteriorly. As in the kindred genera, the
species are found beneath putrid leaves and wood, or in fungi, and in sand and gravel pits, &c. Owing to their extreme minuteness, and the want of specimens, I have not been able to detail their generic characters so completely as could be wished.

**Sp. 1. Armadillus. Plate xv. f. 5.** *Gibboso-ovatus, niger nitidus lavissimus, thoracis marginibus antennis pedibusque pallidis.* (Long. corp. \(\frac{1}{2}\) lin.)


Glossy black, very smooth: head convex, rounded anteriorly, with the lateral margins angulated posteriorly: thorax convex, with the sides rounded, and pale, somewhat pellucid: elytra very convex, above shining black, impunctate, with a few short scattered hairs, the apex sometimes with a ferruginous tinge: body pitchy-black beneath: legs slender, pale: antennae also pale, and slightly pilose.

Known from the next by wanting an abbreviated sutural stria, and from *Cl. enshamensis* by its colour and form.

Not common; found in the metropolitan district. "Hackney, in April last." — Mr. G. Waterhouse.

**Sp. 2. coccinelloides.** *Gibboso-ovatus, ater, nitidus lavissimus, thoracis marginibus concoloribus, antennis pedibusque piceo-testaceis, stria suturali abbreviata.* (Long. corp. \(\frac{3}{4}\) lin.)


Shining black; head convex, smooth; thorax very convex, the sides margined and concolorous with the disc, which is black and impunctate: elytra deep black, very convex; sparingly punctate, each with an abbreviated stria at the apex near the suture: antennae and legs pitchy-testaceous, the femora palest.

Much larger than the foregoing, and distinguished by the concolorous margins to the thorax, and the abbreviated sutural stria.

I possess a single example of this insect, which was kindly given to me by the Rev. W. Kirby, who captured it near Barham.

**Sp. 3. enshamensis.** *Rufo-testaceis, elytris saturatioribus, capite latissimo, maximo, thoracis lateribus attenuatis subacuminatis.* (Long. corp. \(\frac{1}{2}\) lin.)


Ovate, shining, pubescent: head pale rufo-testaceous, very large and broad, slightly convex, the front rounded, the lateral margins produced into a lobe, in which the eyes are placed: thorax pale rufo-testaceous, slightly convex, the sides attenuated, somewhat acuminated, and pale testaceous: elytra convex anteriorly, somewhat depressed towards the apex, deep rufo-testaceous, or slightly piceous, impunctate, very pubescent: legs very slender, pale.

This extraordinary insect may be known by the immense size of its trilobe.
head, compared with the rest of the insect, by its singular shuttle-shaped thorax, anteriorly gibbous elytra, and rufo-testaceous hue.

I found a specimen of this curious insect in a bank near Ripley, in June, 1827; but a pair had been previously taken at "Ensham, in Oxon."—Mr. Westwood; whose name, although now evidently inappropriate, I have retained, as a name once given ought not, without powerful reasons, to be changed. “Bottisham.”—Rev. L. Jenyns.

Genus CXIII.—Clypeaster, Andersch.

Trophi very minute. Antenna rather slender, the three terminal joints forming an elongate-ovate compressed club: head minute, concealed beneath the anterior margin of the thorax, which is produced, and semicircular: the thorax itself semi-oval, pubescent: scutellum minute, rounded: elytra ovate, slightly convex, the apex obtusely rounded, pubescent: legs slender, the posterior pair remote from the intermediate; tarsi slender, four-jointed, posterior with the terminal joint very long and curved.

The minute head of the insects of this genus, which is concealed beneath the thoracic shield, distinguishes it from Clambus, from which genus it also differs by its depressed body, triarticulate clava of the antennae and semi-oval thorax; from Sericoderus, which has also the capitulum triarticulate, the rounded apex of the elytra removes it; and Orthoperus has the head minute, not concealed beneath the thorax, and a biarticulate capitulum. The only indigenous species is found beneath the bark of trees, &c.


Piceous, shining, impunctate; with the margins of the thorax pellucid and pale, the antennae and legs ferruginous.

The thorax is sometimes entirely rufo-ferruginous, at others it has a dark centre; the margins of the elytra are occasionally paler than the disc; and in some examples the elytra are nearly piceous, with a rufescent patch on the hinder portion of the suture near the apex.

Not uncommon in the neighbourhood of London: frequently taken at Darenth-wood "Near Spitchweek and Ashburton, Devon."—Dr. Leach.
Genus CXIV.—Orthoperus * mihi.

Tropha very minute. Antennæ short, rather slender, the two last joints forming the capitulum: head minute, narrow; not concealed beneath the thorax: thorax ample, subovate, slightly convex; the sides not much deflexed: elytra slightly convex, subovate, the apex somewhat truncate: legs slender, tibiae simple; tarsi obscurely articulated.

The minute species of this genus may be known from those of the following, by the biarticulate capitulum of the antennæ; by which they may also be distinguished from Trichopteryx and Atoma, in the next group, which they resemble by their minuteness: from Clambus their small narrow head discriminates them, as well as their somewhat depressed form, and their incapability of rolling themselves into a ball.

Sp. 1. Punctum. Livido-testaceus, lavissimus, capite saturatiore, antennis pedibusque pallide testaceis. (Long. corp. 7\text{ lin}.)


Slightly convex; livid-testaceous, very smooth, glabrous; the head rather piceous, eyes dusky: thorax glossy: elytra somewhat pale towards the apex; antennæ and legs pale testaceous.

The bright glossy testaceous colour of this species is its most striking character.

Found under rotten wood near London and in Suffolk.

Sp. 2. picea. Piceo-testaceus, lavis, antennis pedibusque pallide testaceis. (Long. corp. 7\text{ lin}.)


Upper surface of a glossy pitchy-testaceous, impunctate, the antennæ and legs entirely pale testaceous.

Differs from the last in being of a darker colour and rather larger; and from the next by having the antennæ and legs entirely testaceous.

Taken in the neighbourhood of Ipswich.

Sp. 3. picatus. Piceus, lavissimus nitidissimus, antennarum basi palpisque rufis. (Long. corp. 7\text{ lin}.)


Rather gibbous; piceous, very smooth and shining, with the base of the antennæ and the palpi rufous.

* Qs\text{r}er, rectus; \Pi\text{es}, terminus.
Its smaller size and more elevated body distinguish this insect from the preceding and following, which it somewhat resembles in colour.

Found in Suffolk.

Sp. 4. truncatus. \textit{Nigro-piceus, laevis, thoracis marginibus antennis pedibusque rufo-testaceis.} (Long. corp. $\frac{7}{12}$ lin.)


Somewhat depressed, smooth; pitchy-black, the thorax glossy, with its lateral margins, the antenna, and legs testaceous-red; elytra distinctly truncate at the apex.

The pale margins to the thorax and more distinctly truncated elytra serve to discriminate this species from its congeners.

Found in Suffolk and near Bristol.

Sp. 5. nigrescens. \textit{Piceo-niger, laevisimus, antennis pedibusque piceo-testaceis.} (Long. corp. $\frac{3}{4}$ lin.)


Deep pitchy-black, very smooth and glossy; the margins of the thorax concolorous: the antenna and legs pitchy-testaceous.

Smaller, and of a much darker colour than either of the foregoing, and differs from the last in having the margins of the thorax concolorous.

Taken beneath rotten wood near London.

Sp. 6. Atomos. \textit{Niger nitidus, antennis pedibusque piceis.} (Long. corp. $\frac{1}{4}$ lin.)


Very minute; smooth, black, shining, with the antenna and legs piceous.

The smallest Rypophagous insect: known from the preceding by the greater intensity of its colours, and its minute bulk:

From the Marshamian cabinet:—taken, I believe, in Suffolk.

\textbf{Genus CXV.}—\textit{Sericoderus} * miki.

\textit{Trophi} very minute. \textit{Antennae} rather elongate, slender, the three last joints forming an elongate capitulum: head small, concealed beneath the anterior margin of the thorax, which is slightly produced: \textit{thorax} sericeous, broad, subtriangular, the hinder angles somewhat acute: \textit{elytra} sericeous, slightly gibbous anteriorly, a little depressed behind, the apex distinctly truncate: \textit{legs} slender; \textit{tarsi} obscurely articulated.

This genus is at once known from the rest of the family by its truncate elytra, combined with the triarticulated capitulum of its antennae, minute head, and projecting anterior margin of the thorax, exclusively of other characters.

* \textit{Σερικόδερος, σερίκον; Ατομος, κολλωμ.}

Rufo-fuscous, slightly glossy, smooth, with the thorax and tips of the elytra pale, the former with a dusky spot on its anterior margin: antennae and legs pale testaceous.

Taken occasionally in damp banks near London.

APPENDIX.

Page 1. *Bembidiide.* It may be added to the first paragraph that Latreille forms this family into a distinct section from the other geodephaga.


Above of a rich shining brassy green: mouth pitchy: palpi dusky: antennae rufescent, with the terminal joints dusky: thorax with a faint dorsal channel and a deep fovea on each of the hinder angles: elytra, with the suture, rather piceous; the disc brassy green; rather deeply punctate striate, the striae fainter on the sides, and reaching to the apex of the elytra: legs very pale testaceous.

I possess specimens of this insect from the north of England, but I am not positive of its identity with the *Pe. assimilis* of Mr. Heysham's MSS., not having a typical example to guide me.


Page 14. *Peryphus ustus?—" Rare: only two specimens taken in June, 1828, near Sandsfield."— T. C. Heysham, Esq.


I regret being compelled to remain silent regarding *Peryphus viridis, Heysham MSS.,* of which two examples were taken by that gentleman recently near Carlisle, which I have not seen.


Page 28. *Tachypus bipunctatus. " Common on the banks of the Esk, below the iron bridge at Garries-town."*


Page 32. Sp. 1. *Notiophilus aquaticus. *This species may be known by the striae on the elytra being rather distant, faint, and not reaching to the apex;
the elytra of an uniform tint; the disc of the thorax smooth; the legs usually
deep bronzed-black, with the tibiae slightly rufescent.

“Common near Newcastle.”—G. Wailes, Esq.

† Sp. 2. Notiophilus rufipes. Curtis, v. pl. 248.—Cupreus, capite latissimo,
fronte profunde striato, elytrorum apice pallescente, antennarum basi pedibusque
pallide ferrugineis. (Long. corp. 2½ lin.)

Above glossy cupreous: head very broad, the forehead very deeply sulcated:
thorax rather narrower than the head, the margins very deeply and coarsely
punctured, the disc smooth, with the dorsal channel transversely wrinkled;
on each hinder angle is a very deep fovea: elytra very smooth, with an ab-
tracted punctate stria near the suture, a rather faint one on each side
of the suture, and six very deeply punctate ones closely approximating to
each other towards the outer margin, which is smooth; these striae reach to
the apex, which is obscurely paler than the rest of the elytra: legs bright fer-
ruginous: base of antennae the same, the apex dusky.

“Only a single specimen has occurred to me, taken on the south side of Tarn
Wadling, High Hesket.”—T. C. Heysham, Esq. “Devonshire, 1828.”—
Messrs. Bentley and Chant.

Page 32. Sp. 3. Notiophilus biguttatus. This differs from the following in
wanting the second dorsal impression between the second and third striae.

“Extremely common at Marton Lodge.”—L. Rudd, Esq. “Not very common
in Hants and Wilts.”—Rev. G. T. Rudd. “Common at Newcastle.”—
G. Wailes, Esq.

† Sp. 4. Notiophilus quadripunctatus. De Jean.—Cupreus, capite angusto,
elytris tenue punctato-striatis, plaga longitudinali nitidissimae, punctis tribus
impressis inter striae secundam et tertiam. (Long. corp. 2½ lin.)

Of a bright shining copper: head narrow, forehead moderately sulcated: thorax
with the margins punctate, the disc transversely, but faintly, rugose: elytra
rather faintly punctate-striated, the striae as in the foregoing species, and be-
tween the second and third two deep impressions on the back, and one towards
the apex, which is pale yellowish: base of the antennae and of the tibiae some-
what pale.

“A solitary specimen taken near the Canal reservoir.”—T. C. Heysham, Esq.
The impressed dots on the elytra differ on the two sides; whether this or
No. rufipes be truly distinct from the other species, time alone can decide;—
they appear different, Mr. Heysham having kindly sent me his specimens for
examination: and I have observed other examples in collections which also
seem to differ from either of the above, but time has not permitted me to in-
vestigate them properly.

Page 33. Elaphrus uliginosus. “Cambridge, in plenty, 1829.”—C. Darwin,
Esq. “Not uncommon, but local at Fyfield, Hants; the only species hitherto
detected by me at Kimpton.”—Rev. G. T. Rudd.

Page 34. Elaphrus cupreus. “Very abundant at the sides of ponds, at Marton
Lodge, Yorkshire.”—L. Rudd, Esq. “Newcastle.”—G. Wailes, Esq.


Page 51. HYDROPORUS 9-lineatus. Supra pallide testaceus capite saturatiore subitus niger, macula thoracis rhombea, elytrorum basi sutura lineisisque quatuor nigris. (Long. corp. 2 lin.)

Hyd. 9-lineatus. Rudd MSS. Much smaller than Hy. nigrolineatus, which it somewhat resembles: the upper surface is pale testaceous, the head rather fulvous: on the disc of the thorax is a black rhomboid spot: elytra pale, with the suture and four distinct lines black, united at the base by a transverse streak of the same, and continued to the apex of the elytra, where the black suture and the second streak are united by a transverse narrow black line; the external line is remote from the margin, and is dilated towards its apex; body beneath black: legs pale testaceous.

"Two specimens only, one of which escaped by accident, found in the flooded gravel-pits, Weyhill, end of October, 1828."—Rev. G. T. Rudd.


Page 53. Sp. 10.** HYDROPORUS latus. Ovatus, brevis, niger, vagè punctatus, capite postico elytrorum basi antennis pedibusque piceo-ferrugineis. (Long. corp. 2 1/2 lin.)

Short, ovate, very broad: obscure black: head punctured, with the vertex transversely ferruginous: thorax with its lateral margins slightly ferruginous: the disc irregularly covered with impressed dots, with an obsolete transverse elevation: elytra with the base transversely pitchy-ferruginous: the disc irregularly and thickly punctured throughout, the lateral margins piceous: legs and antennae rusty-piceous: body obscure black beneath.

"Marton Lodge, Yorkshire."—L. Rudd, Esq.—Communicated to me by my friend the Rev. G. T. Rudd:—whether the insect be the same as the Hydroporus latus of Curtis I am not positive, having seen but the one specimen here described, which was taken last autumn. When my Nomenclature was printing, I conceived that it was synonymous with Hy. opatrinus, but upon comparison the difference was very obvious.

Page 53.† Sp. 10.** HYDROPORUS opatrinus. Oblongo-ovatus ater, subpubescens, obscurè punctatus, antennis pedibusque piceis. (Long. corp. 2 1/2 lin.)

Somewhat resembling Hy. dorsalis; but of rather a different form: deep black, slightly pubescent; the thorax somewhat cordate; with a bent transverse impression, the margins punctured; elytra oblong-ovate, with irregular punctures on the disc, which has several slightly elevated costae: legs and antennæ pitchy-black, the latter palest. “Netley, Salop.”—Rev. F. W. Hope.


Hydroporus ferrugineus. Rudd, MSS.—Steph. Nomenclature, p. 4. Depressed; of a deep pitchy ferruginous, the head and thorax brightest, the margins of the latter somewhat dilated and rufous, the disc smooth; the anterior margin with a faint series of impressed dots, and the hinder margin with a curved thickly punctured impression: elytra much depressed, piceous, with the base irregularly testaceous, and the apex pale; the disc regularly but not very deeply punctate throughout, with two longitudinal striae of deeper impressions: body beneath black, antennæ and legs ferruginous; hinder tarsi very long. “Near Collingbourne-wood; once in 1828, and several in a stream at Kimpton during last spring.”—Rev. G. T. Rudd.


Page 60. HYDROPOrus erythrocephalus. “Same as the last, abundantly.”—Rev. G. T. Rudd.


Page 64. LACCOPHILUS minutus. “Common at Marton.”—L. Rudd, Esq.


MANDIBULATA. VOL. II. 15TH JUNE, 1829.
MANDHULATA.—COLEOPTERA.


GENUS XCV. b.—ENICOCERUS mihi.

Palpi short; maxillary rather stout; the basal joint more slender than the following, which is somewhat clavate, tumid, with the apex obtuse. Antennae with the basal joint elongate, slightly bent, incrassated at the apex; second joint short, somewhat quadrate: third large, cup-shaped; fourth minute, subglobose, two following gradually larger, the remainder forming an elongate five-jointed club, the first joint of which is large, subglobose, the two following smaller and of equal size; the next large, transverse, the terminal one small, semi-ovate, obtuse: head triangular: eyes slightly prominent: thorax subcordate: elytra broad, depressed: legs moderate: tarsi with large claws.

The singular structure of the antennae of this remarkable genus, with its broad, somewhat depressed body, large claws and abbreviated palpi well distinguish it from others of the Helophoridae, to which family it appears to belong.


Above of a rich shining green: head with a transverse frontal channel, and two deep impressions on the vertex: thorax with its lateral margin much dilated anteriorly, the disc somewhat convex, with a dorsal channel, and an oblique deeper groove on each posterior angle: the anterior angle depressed, slightly punctate: elytra very deeply punctate-istrate; beneath black; legs dusky piceous, with the joints and tarsi sometimes black.

The accompanying figure of this singular insect will sufficiently illustrate its peculiar characters: the insect was taken at "Hebden-bridge, Yorkshire, in October 1828."—Mr. Gibson; to whom I am indebted for my specimens.


Page 113. Place division B, above HELOPHORUS tuberculatus.


Ochthebius hibernicus. Curtis, vi. pl. 250.—"Dull cupreous, sometimes inclining to black; sparingly covered with long whitish hairs: palpi and antennae ochreous, rather fuscous at their tips. Head and thorax punctured, the
former with three foveae on the crown, one close to the base; the latter with the anterior margins and the posterior angles membranous and transparent; a deep channel between two long foveae on the back, and a large depression on each of the angles. Elytra not striated, but covered with large deep punctures, appearing rather regular under a weak lens, but scattered under a high power; legs ferruginous, the tarsi piceous at their tips."—Curtis, l. c.

Taken at Belfast in Ireland, by Mr. Haliday.

Page 121. LIMNERBIUS picinus. "Wimbledon-common."—Mr. Waterhouse.

Page 122. LIMNERBIUS nitidus. "Wimbledon-common."—Mr. Waterhouse.


Page 127. HYDROBIUS picipes.—Hydrobius chalconotus. Curtis, vi. pl.

Page 135. HYDROBIUS aneus. "Wimbledon-common in April last, several specimens."—Mr. Waterhouse.


Page 157. ANISOTOMIDÆ. An inspection of Paykul's Fauna Suecica, vol. iii. p. 435—437. (published in 1800), Fabricius's Systema Eleutheratorum, vol. i. p. 92—106. (published in 1801), or Schonherr's Synonymia Insectorum, vol. i. p. 100—109. (published in 1806), while it tends to show the opinions of those writers upon the evident affinity between the various members of this group, as quoted in the synonyms to my Catalogue, will at the same time exemplify the originality of Sturm's arrangement, published in 1807, and the historical correctness of those who, in order to oppugn particular views, care not how far they mislead their readers. Sturm's arrangement in this, as in other places, being merely a copy of that of the Systema Eleutheratorum, with the adoption of some few genera, proposed subsequently to the publication of that work.

Page 159. PHALACRUS maritimus. Upon a re-examination of this insect I have my doubts whether it be placed in its proper location; as in many points it approximates to the Byrrhida, though in others it departs therefrom.


Page 169. EPHISTEMUS confinis. "Old Brompton, several specimens, in 1829." Mr. Waterhouse.

Page 171. For LEIODES brunnea, read Le. Gyllenhalii; and page 175, for LEIODES Sturmi, read Le. brunnea: the description, &c. of Sturm having appeared in 1807, and that of Gyllenhal in 1810.

*** I have recently obtained several evidently distinct species of Hydrana, Hydrobius, &c.; as well as of Hydradephaga and Bembidiide, which, from want of time, it is impossible for me to introduce into the present Appendix.
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ERRATA.

Page 52, line 23, for stria, read stria.
64, 14, for Halliprus, read Haliprus.
75, 4, for above, read alone.
87, 40, for Abrens, read Ahrens.
91, 24, for tarsi, read tibiae.
96, 30, for Plate XIII. f. 1., read Plate XIII. f. 2.
97, 27, for Plate XIII. f. 2., read Plate XIII. f. 1.
114, 10, for apicia, read apica.
117, 16, for Degen, read De Jean.
121, 1, 3, for nigricans, read nigrinus.
137, 35, for Nothiophili, read Notiophili.
138, 17, for immaculate, read immature.
148, 5, for nigris, read rafts.
168, 1, for maxilla, read mandibles.
170, 27, for gloss, read glass.
—, 35, for three, read the.

END OF VOL. II.

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