XLIII.—Notes, &c. on the genus of Insects *Anthonomus*; with a description of one new species. By JOHN WALTON, F.L.S.

Fam. CURCULIONIDÆ.

Genus ANTHONOMUS, Germ., Schönh., Steph., Curt.

THERE is the greatest imaginable confusion amongst the species of this very pretty and interesting genus of insects; ten have been catalogued and described as specifically distinct, but I must confess my inability to distinguish out of that number more than four; notwithstanding all the care I have taken, it is very possible I may have erred or blundered; should this be the case, I must plead the infirmity of human judgement, from which the most skilful cannot claim exemption, and I can only say I shall feel truly obliged if any entomologist will have the kindness to point out any errors I may have inadvertently committed, and thus give me an opportunity of correcting them before the conclusion of my notes on this family of insects.

§ A. *Anterior femora strongly dentate.*

1. *Anthonomus Pomorum*, Linn. sec. ej. Mus. et Auctor. alior.
— *incurvus*, Steph. sec. ej. Mus., non Panz.

There are foreign specimens of *Ant. incurvus* in the collection of Kirby from Gyllenhal, and others in my possession from Schönherr; it is a small insect (length $1\frac{1}{2}$ line), about one-third the size of *Ant. Pomorum*, from which it only differs by being much less and inhabiting a different plant; according to the opinion of Gyllenhal, 'scarcely a distinct species,' and to Germar, 'obsoletely distinct;' in Sweden it inhabits the bird cherry (*Prunus Padus*), and possibly may be found on that plant in this country, where it grows wild in the mountainous districts of the north of England and in Scotland. I have not yet seen an indigenous specimen.

I may refer to some very interesting observations relative to the habits and œconomy of *Ant. Pomorum* in Mr. Curtis's 'British Entomology,' vol. ii., and in the 'Ent. Mag.' vol. i. p. 33.

Found on the blossoms of the apple- and pear-tree from about the 25th of May to the 15th of June, and under the bark in winter; the late Mr. Bainbridge reared many specimens, either from the larvæ or pupæ, I forget which, obtained from the buds or the rust-coloured blossoms of the apple.

2. *A. Ulmi*, DeGeer, Marsh., Gyll., Steph., Schönh., Kirb. MSS.
— *pedicularius*, Germ. Mag. iv. p. 322.
— *Druparum* var., Steph. sec. ej. Mus., non Linn.
— *fasciatus*, Kirb. MSS.

The form, sculpture, and general habit of this insect approxi-

mate very closely to the following, and being subject to considerable variation of size and colour, its varieties, without a careful comparative examination, are extremely liable to be mixed, as I have noticed in many cabinets, with the next species; it may however be satisfactorily discriminated by its having the rostrum evidently longer, more slender, with the antennæ inserted further from the apex; the tooth of the anterior femur distinctly longer and more robust; the basal half of the tibia curved and more dilated within in the middle; the posterior femora each with their tooth excessively minute, and scarcely perceptible without a powerful lens.

There are foreign specimens of *Curc. Druparum* in the Linneæan and British Museums, in the collection of Mr. Kirby from Gyllenhal, and in my possession from Schönherr: *Curc. Druparum* is incorrectly recorded to have been found near London and in Somersetshire, but a variety of the insect now under consideration appears to have been mistaken for it, nor has it hitherto been discovered as an inhabitant of this country; in Sweden it occurs copiously on the leaves of the bird cherry, and will probably be found in Britain if that plant is diligently searched.

Found plentifully on the leaves of elms (*Ulmus campestris*) near Gravesend in July, and in many other localities throughout Great Britain, but never, as far as my experience goes, in company with the following.

3. *Anthonomus pedicularius*, Linn. sec. ej. Mus., Marsh., Kirb. MSS., Steph. Ill.

Curc. fasciatus, Marsh.

Rhynch. Ulmi var., Gyll., var. γ . Schönh.

A. Pomonæ, Germ. Mag. iv. p. 323.

— *Pomorum*, Steph. sec. ej. Mus.

— *Ulmi* var. ?, Steph. sec. ej. Man.

— *maculosus et rubescens*, Kirb. MSS.

I have frequently examined the insect in the cabinet of Linneæus labelled '*pedicularius*,' which agrees with his description, and which is, beyond all doubt, specifically identical with this insect; I have therefore followed Marsham and Kirby in adopting the name given by that illustrious naturalist.

Much doubt has hitherto existed as to the distinction of this from the preceding insect: Gyllenhal, Schönherr and Stephens think they are the same; whilst Marsham, Kirby, Germar and Curtis have separated them into distinct species, but without distinguishing characters: it appears that Gyllenhal, from his descriptions of the varieties of colour, has confounded this with the preceding insect, and that by depending too much on the inconstant character of colour he has overlooked specific differences

which are constant. I have a Swedish insect sent me by Schönherr as *Ant. Ulmi* var. γ , which undoubtedly belongs to this species, and which it is evident he has also confounded with the preceding.

Exclusively of colour, it may at once be distinguished by a comparative examination of the following characters: the rostrum is shorter, thicker, and the antennæ inserted nearer the apex; the tooth of the anterior femur evidently shorter and not so stout; the tibia of a different form, being nearly straight, except at the base which is a little bent, and much less dilated within in the middle; the posterior femora each with the tooth larger, and distinctly visible with a lens of an inch focus.

I have found this insect on the leaves of the white-thorn (*Mespilus Oxyacantha*) in hedges on the west side of Turner's Wood, Hampstead, sparingly in April of dark colours, and abundantly in September of pale colours; and also in many other localities in the south of England, but never on any other plant, or in company with *Ant. Ulmi*.

§ B. *Femora minutely dentate.*

4. *Anthonomus pubescens*?, Payk., Gyll., Germ., Schönh.

Ovate, testaceous, cinereo-pubescent. Head small, round, testaceous, punctulated and pubescent; eyes globose, brown-black; rostrum rather longer than the head and thorax, slender, a little curved, punctulated, deep rufous, shining, and more or less fuscous at the apex. Antennæ rather long, slender, rufo-testaceous, clava elongate and fuscous. Thorax transversely impressed and constricted anteriorly, a little rounded at the sides, bisinuated at the base, moderately convex above, testaceous, closely and deeply punctured and pubescent. Scutellum small, elevated and densely pubescent. Elytra ovate, very convex above, testaceous, deeply punctate-striate, interstices narrow, convex, indistinctly punctulated and sparingly pubescent. Legs long, testaceous; anterior femora minutely dentate, posterior femora scarcely or very obsoletely dentate. Length $1\frac{2}{3}$ line.

The form of the rostrum, with the place of insertion of the antennæ, and the form of the tibiæ, are very similar to *Ant. pedicularius*; but the absence of a fascia on the elytra, and the minute tooth on each of the femora, at once distinguish this insect from the pale varieties of the two preceding, to which it is allied.

This insect agrees in all its essential characters with Gyllenhal's description of *Rhynch. pubescens*; there is however a difference in the colour of the head, that of the former being testaceous, and of the latter black or fuscous; but colour is so extremely variable in these insects that I consider it of very little value as a subsidiary specific character.

Three specimens of this, with other British insects, taken in Herefordshire by Mr. Doubleday, were given by him to Mr. Smith, one of which was kindly presented to me by the latter gentleman: it occurs on pines in the north of Sweden.

5. *Anthonomus Rubi*, Herbst, Gyll., Germ., Steph., Schönh.
Curc. ater et melanopterus, Marsh. sec. Mus. Steph. et Kirb.
A. obscurus var., Steph. sec. ej. Mus.
 — *brunnipennis* var., Curt. Ann. Nat. Hist. v. 280.

This insect greatly varies in magnitude (length $1\frac{1}{3}$ —2 lines) and in colour, which two circumstances have led to its being separated into different species: the varieties may be subdivided as follows:—

- a. Black, with the basal joint of the antennæ, the base and apex of the femora, the tibiæ and tarsi fusco-piceous or fusco-ferruginous: *Curc. Rubi* of Herbst, and *melanopterus* of Marsh.: very common.
- b. Entirely black; or black, with the basal joint of the antenna fusco-piceous: *Curc. ater* of Marsh.: not uncommon.
- c. With the head, rostrum and thorax piceous black or piceous; the elytra and legs fusco-testaceous or fusco-ferruginous: *Ant. obscurus* of Steph., and *brunnipennis* of Curt.: not of frequent occurrence.

I have examined the original specimen of *Curc. clavatus* of Marsham in the cabinet of Mr. Stephens, and I have no doubt it is a large female specimen of *Balaninus* (*Rhynch.*) *Brassicæ* of Fab., with the apex of the rostrum morbidly tumefied and the palpus exposed*: Mr. Curtis gave me a specimen of *Ant. brunnipennis*, which I sent to M. Schönherr, who returned it as a variety (γ) of *Ant. Rubi*, accompanied by Swedish examples which agree with it: there are similar specimens of this variety in the cabinet of Mr. Stephens, under the name of *Ant. obscurus*, which I have carefully examined, but not being able to discover sufficiently distinctive characters, I am compelled to consider them, as well as *Ant. brunnipennis*, merely as immature varieties.

Widely dispersed throughout Great Britain, and found on various plants in many localities.

* I beg to return my sincere thanks to Mr. Stephens, not only for the invaluable privilege of inspecting his rich indigenous collection of insects (that of the late Mr. Marsham being now incorporated with his own), but for the facilities he has invariably afforded me in examining its rarities, which have been the means of enabling me to rectify many mistakes, originating in most cases from the great difficulty of distinguishing species from varieties.

1848. "XLIII.—Notes, &c. on the genus of insects *Anthonomus*; with a description of one new species." *The Annals and magazine of natural history; zoology, botany, and geology* 1, 416–419.

<https://doi.org/10.1080/03745485809494641>.

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DOI: <https://doi.org/10.1080/03745485809494641>

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