

## What is *Alloxysta fulviceps* (Curtis, 1838) (Hymenoptera: Cynipoidea: Figitidae: Charipinae)?

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### Abstract

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The validity of *Alloxysta fulviceps* (Curtis, 1838) and its synonymies have been examined. After studying the type series and the taxonomic history of this species, we conclude that the lectotype was wrongly designated. A new lectotype is designated and *A. fulviceps* is synonymised with *A. victrix* (Westwood, 1833).

### Keywords

Hymenoptera, Figitidae, Charipinae, *Alloxysta fulviceps*

### Introduction

The Charipinae (Hym., Figitidae) species *Alloxysta fulviceps* (Curtis, 1838) has been a troublesome species since its description. Curtis (1838, p. 688) described it as a species of *Cynips* with the following features: ‘27. *fulviceps* Curt. Shining black, head and legs bright ochre; antennae longer than the body, fuscous, base ochreous, 2 basal joints ovate, 3rd slender, scarcely longer than the following, wings very ample: 2/3 long. Bred from female Aphides by the late Mr. T. Carpenter’.

Later, it was transferred to *Allotria* by Kieffer (1900, p. 114). According to Kieffer (1902, p. 76), this species was considered as doubtful and insufficiently described. It was kept in *Allotria* by Dalla Torre and Kieffer (1902, p. 41), and finally it was transferred by Dalla Torre and Kieffer (1910, p. 288) to *Charips*.

Quinlan and Fergusson (1981) mentioned that the type series deposited in Museum Victoria (Australia) was studied by Kerrich in 1948. According to these authors, this type series consisted of three specimens, and Kerrich defined one of them as ‘type of *Cynips fulviceps* = *Alloxysta fulviceps*’. These data were not published and Fitton (1978, p. 65) was the first to consider Curtis’s species in *Alloxysta*.

According to Quinlan and Fergusson (1981), the type series of *A. fulviceps* grouped two distinct morphologies: 1 ♀ with Kerrich’s notes (with open radial cell) and 2 ♀ without Kerrich’s notes (with closed radial cell). These two specimens were labelled by Quinlan with the following notes: ‘*Alloxysta*

*minuta*? (Hrt.) ♀ det. Quinlan 1986’ and ‘this specimen has not type-status’. Since then, Curtis’s species has been a species with an open radial cell (a feature not mentioned by Curtis in his description).

In the same study, Quinlan and Fergusson (1981) synonymised *Alloxysta erythrothorax* (Hartig, 1840) with *A. fulviceps*. This synonymy has two problems: (1) the choice as lectotype of the specimen with an open radial cell, when Curtis did not mention the morphology of the radial cell, and (2) the distinct chromatic features that are mentioned in the original description of *Alloxysta fulviceps* (Curtis) and *A. erythrothorax* (Hartig). Hartig (1840, p. 200) defined *Xystus erythrothorax* as follows: ‘5) *X. erythrothorax* m.: niger, capite rufo; facie flava, pectore rufo; antennis pedibusque rufis. Male’.

### Results and discussion

None of the aforementioned authors did a redescription of Curtis’s species, so we borrowed the type material from Museum Victoria. Only one of the three original specimens remains (Catriona McPhee, Collection Manager Terrestrial Invertebrates (Mon-Wed) of the Museum Victoria, pers. com. on 21 Feb. 2011); one of the two of the original series (before Kerrich’s study) that has a closed radial cell. We are not able to determine how Kerrich chose a lectotype of *Cynips fulviceps*, but after Quinlan’s study and the synonymy proposed by Quinlan and Fergusson (1981), this specimen would have to have a reddish yellow mesoscutum. Therefore, it cannot be the lectotype of *A. fulviceps* because Curtis



**Figure 1.** Lateral view of the designated lectotype of *Alloxysta fulviceps* (Curtis).

stated that the mesoscutum is completely black. For these reasons, we must consider that the specimen that was chosen as lectotype does not fit the original description by Curtis. On the other hand, we have examined the one remaining specimen of Curtis's type series, which corresponds exactly with Curtis's description. In summary, we designate here a new lectotype for *Alloxysta fulviceps* (= *Cynips fulviceps* Curtis), which has the following labels: '*Alloxysta minuta?* (Hrt.) ♀ det. Quinlan 1986' (white label), 'this specimen has not type-status' (white label), 'MUS. VIC. ENTO 2011-4-L' (green label), 'this specimen has type status JP-V, 2011', '27 *Cynips fulviceps* bred from Aphides female by Aphidius? T.C. 13 July 26 — [unreadable] Dorset. Bred from aphids of Willows and Cow Parsnip Hal' (photocopy of Curtis original annotations of his notebook), 'lectotype of *Cynips fulviceps* Curtis, 1838 ♀, designed J.P-V 2011' (red label), '*Alloxysta victrix* (Westwood, 1833) Ferrer-Suay det-2011 (white label).

Our study of this material also shows that *A. fulviceps* is the same species as *A. victrix*. Therefore, in this study, the synonymy of *A. fulviceps* and *A. erythrothorax* is removed, a

new lectotype for *A. fulviceps* is established, this species is synonymised with *A. victrix* and the validity of *A. erythrothorax* (Hartig) is re-established.

The taxonomic changes we propose restructure the list of synonyms and valid species implied, so we present it here:

***Alloxysta erythrothorax*** (Hartig, 1840) Dalla Torre and Kieffer, 1902

*Xystus erythrothorax* (Hartig, 1840, p. 200). Synonymised by Quinlan and Fergusson (1981, p. 254). Type: ZSBS (according to Evenhuis, 1982, p. 23).

*Xystus defectus* (Hartig, 1841, p. 352). Synonymised by Fergusson (1986, p. 10). Type: ZSBS (according to Evenhuis, 1982, p. 22).

*Allotria nigriventris* (Thomson, 1862, p. 409). Synonymised by Fergusson (1986, p. 10). Type: MZLU (according to Andrews, 1978, p. 87).

**Comments:** Hellén (1963) redescribed *A. erythrothorax* and *A. defecta*. The latter was synonymised with the former by Fergusson (1986). The two species match chromatically. Fergusson (1986) also synonymised *A. nigriventris* (Thomson)

with *A. erythrothorax*, and according to Kieffer (1902), the mesosoma of *A. nigriventris* is reddish; this also matches *A. erythrothorax*.

### *Alloxysta victrix* (Westwood, 1833) Hellén, 1963

*Allotria victrix* (Westwood, 1833, p. 495). Type: OXUM (according to Andrews, 1978, p. 92).

*Cynips fulviceps* (Curtis, 1838, p. 688). Type: NMVM n. syn.

*Cynips ruficeps* (Zetterstedt, 1838, p. 410). Synonymised by Giraud (1860, p. 127). Type: MZLU (according to Evenhuis and Kiriak, 1985, p. 16).

*Xystus erythrocephalus* (Hartig, 1840, p. 199). Synonymised by Giraud (1860, p. 127). Type: ZSBS (according to Evenhuis, 1972, p. 211).

*Allotria tritici* (Fitch, 1861, p. 841). Synonymised by Menke and Evenhuis (1991, p. 147). Type: USNM (according to Menke and Evenhuis, 1991, p. 147).

*Allotria (Allotria) macrocera* (Thomson, 1877, p. 814). Synonymised by Dalla Torre and Kieffer (1910, p. 285). Type: MZLU (according to Hellén, 1963, p. 4).

*Allotria curvicornis* (Cameron, 1883, p. 366). Synonymised by Fergusson (1986, p. 11). Type: BMNH (according to Quinlan, 1978, p. 124).

*Allotria (Allotria) luteicornis* (Kieffer, 1902, p. 15). Synonymised by Evenhuis and Barbotin (1987, p. 217). Type: NHM, Amiens (according to Dessart, 1969, p. 193).

*Allotria (Allotria) victrix* var *luteiceps* (Kieffer, 1902, p. 16). Synonymised by Evenhuis and Barbotin (1987, p. 217). Type: NHM, Amiens (according to Dessart, 1969, p. 194).

*Allotria (Allotria) luteicornis* var *lateralis* (Kieffer, 1902, p. 70). Synonymised by Evenhuis and Barbotin (1987, p. 216). Type: NHM, Amiens (according to Dessart, 1969, p. 193).

*Charips areolata* (Kieffer, 1909, p. 481). Synonymised by Menke and Evenhuis (1991, p. 145). Type: USNM (according to Menke and Evenhuis, 1991, p. 145).

*Sarothrus io* (Girault, 1932, p. 3). Synonymised by Paretas-Martínez and Pujade-Villar (2010, p. 355). Type: QM (according to Paretas-Martínez and Pujade-Villar, 2010, p. 355).

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