TWENTY FIVE NEW SPECIES OF Cisseis (Sensu Stricto) AND TWO NEW SYNONYMS (COLEOPTERA: BUPRESTIDAE: AGRILINAE)

S. Barker*

*Department of Entomology, South Australian Museum, Adelaide 5000.

Summary

Twenty five new species of Cisseis (sensu stricto) are described: Cisseis aenea; C. aenigma; C. aeruginosa; C. bili; C. borealis; C. chlorota; C. cupreata; C. erythrocephala; C. fritilla; C. furfurosa; C. goldingi; C. guttata; C. leai; C. minuta; C. miyama; C. montana; C. rubricata; C. rubriceps; C. storeyi; C. suehasenpuschae; C. tyleri; C. ustulata; C. wagneri; C. williamsi; C. wilsonensis. Two new synonyms of Cisseis (s.s.) are proposed: C. septuosa Barker 2001 = C. scabiosa (Boisduval, 1835) and C. spilota (Hope, 1846) = Pachycisseis bicolor (Gory & Laporte, 1839).

KEY WORDS: Coleoptera, Buprestidae, new species, Cisseis.

Introduction

The genus Cisseis Gory & Laporte (1839) has not been revised since Carter (1923) gave a synonymy and described new species. Since then many more specimens have become available, mainly through the activities of amateur collectors. Much of this material has been acquired by ANIC and is available for scientific study. Since 1997 I have been working towards a complete revision of the genus and for this purpose have examined all of the readily available type material. To date I have published a number of redressions, selected lectotypes, described twenty three new species and presented a check list of species and the location of type material (Barker 1998, 1999a, 1999b, 2001, 2002). Together with Dr C. L. Bellamy I have reassigned a number of species placed in Cisseis to a new genus Stanwatkinsius (Barker & Bellamy, 2001). In this paper I describe twenty five new species and recognise two synonyms.

Materials and Methods

Specimens examined were borrowed from or have been deposited in the following institutions and collections:

- AMSA- Australian Museum, Sydney.
- ANIC- Australian National Insect Collection, CSIRO, Canberra.
- CLBC- C. Bellamy, Department of Food & Agriculture, Sacramento, California.
- DPIQ- Department of Primary Industries, Mareeba, Queensland.
- GWLA- G. Williams, Lansdowne, NSW.
- HMOE- Hope Museum, Oxford.
- HUMB- Humboldt University Museum, Berlin.
- JHIQ- J. Hasenpusch, Innisfail.
- MGBA- M. Golding, Willagee, WA.
- MNHN- National Museum, Paris
- MHSA- T. M. Hanlon, Sydney.
- MPWA- M. Powell, Melville, WA.
- NMVA- Museum of Victoria, Melbourne.
- NMPC- National Museum, Prague.
- QMBA- Queensland Museum, Brisbane.
- SAMA- South Australian Museum, Adelaide.
- WAMA- Western Australian Museum, Perth.
All of the specimens were examined under a binocular microscope. They were photographed with a Nikon digital camera and manipulated by computer to form an illustration using Adobe Photoshop. Male genitalia were dissected, mounted on cards and displayed by the same method.

**New synonyms of Cisseis (sensu stricto).**

I have examined a male and female syntype from the type series of *Cisseis scabiosa* (Boisduval) held in MNHN and compared them with the holotype and allotype of *Cisseis septuosa* Barker held in SAMA and find that they are conspecific. The synonymy becomes:

*C. scabiosa* (Boisduval) 1835 Voy. Astrolabe Entom., 2, 96.

*C. septuosa* Barker 2001 *Trans. Roy. Soc. S. Aust.* **125**, 109 *syn. nov.*

I have examined the female holotype of *Cisseis spilota* (Hope) held in HMOE (no. 0957) and find that it is a specimen of *Pachycisseis bicolor* (Gory & Laporte). The synonymy becomes:

*P. bicolor* (Gory & Laporte) 1839 Mon. Bupr. 2, 3.

*C. spilota* (Hope) 1846 *Annls. Mags. Nat. Hist.* **17**: 64 *syn. nov.*

**Species Descriptions**

*Cisseis aenea* sp. nov.

(Figs 1k, 2u)

**Holotype**

♂, Heathcote, NSW, *Acacia longifolia*, 12.i.1987, S. Watkins, SAMA I 21 731.

**Allotype**

♀, same data as holotype, SAMA I 21 732.

**Paratypes**

NSW: ♂ & ♀, Royal National Park, 21.xi.1979, on *Acacia longifolia* ?, G. & T. Williams, GWLA; ♂ & ♀, Wyee, 30.xi.1979, on *Acacia longifolia*, G. & T. Williams, GWLA; ♀, Royal National Park, 6.xii.1979, on *Acacia longifolia*, G. & T. Williams, AMSA K111903; ♂ & ♀, Royal National Park, 14.xii.1979, on *Acacia longifolia*, G. & T. Williams, GWLA; ♀, Base of Lapstone Hill, 5.i.1980, G. & T. Williams, on *Acacia longifolia*, GWLA; 2 ♂♂, Crowdy Head, 28.ix.1980, on *Acacia longifolia* ? adjoining littoral rainforest, G. & T. Williams, GWLA; ♂, Crowdy Head, in heathland, 14.x.1980, G. & T. Williams, GWLA; 2 ♂♂, Manning Point, 27.x.1980, G & T. Williams, on low *Acacia* sp. adjoining littoral rain forest, GWLA; ♂ & ♀, 3 km SW Old Bar, on *Acacia* in dry sclerophyll forest, 27.x.1980, G. & T. Williams, GWLA; 3 ♀♀, Kurnell, 15.xi.1980, D.A. Doolan, AMSA, K111899, K111900, K111901; 2 ♂♂, Bonnie Hills, on *Acacia longifolia* behind beach dunes, 24.xi.1980, G. & T. Williams, GWLA; ♀, Manning Point approx. 12 km E Taree, 9.xi.1982, on *Acacia longifolia* var. *sophorae* on edge of littoral rainforest, G. & T. Williams, GWLA; 3 ♂♂, S end Dingo SF, NW Wingham, on *Acacia* foliage, 21.xi.1982, G. & T. Williams, GWLA; ♀, 3 km N Lansdowne via Taree, 23.xi.1982, on *Acacia melanoxylon* foliage, G. & T. Williams, GWLA; 2 ♀♀, 0.5 km N Old Bar, ex woodland, 25.x.1983, G. Williams, ANIC; 2 ♂♂, Manning Point E of Taree, on *Acacia sophorae* on margin of littoral rainforest, 2.xi.1983, G. Williams, GWLA; 2 ♂♂, 10 Bogon Street, Summer Hill, *Acacia longifolia*, 14.xii.1985, S. Watkins, SAMA; 3 ♂♂ & ♀, same data as holotype, SAMA; 3 ♂♂ & ♀, Heathcote, *Acacia*
TWENTY FIVE NEW SPECIES OF CISSEUS (COLEOPTERA: BUPRESTIDAE: AGRILINAE)

*C. longifolia*, 16.i.1987, S. Watkins, ANIC; ♂, Heathcote, *Acacia longifolia*, 21.i.1987, S. Watkins, ANIC; ♂ & ♀, Quibray Bay, Kurnell Peninsula, *Acacia longifolia sophorae*, 30.i.1987, S. Watkins, ANIC; ♀, Charity Creek via Kimbricki, Manning River, on *Acacia*, 29.x.1991, S. Watkins, ANIC; ♂ & ♀, Charity Creek Bridge via Mount George, Manning River, on *Acacia* sp., 31.x.1991, S. Watkins, ANIC; 2 ♂♂, Charity Creek Bridge via Mount George, Manning River, on *Acacia* sp., 4.xi.1991, S. Watkins, ANIC; ♂, Charity Creek Bridge via Kimbricki, Manning River, *Acacia*, 7.xi.1991, S. Watkins, ANIC; ♂, Charity Creek Bridge via Mount George, Manning River, on *Acacia* sp., 18.xi.1991, S. Watkins, ANIC; ?, Kelly’s Bush, Woolwich, 25.xii.1993, T.M.S. Hanlon, MHSA; ♀, Karaak Flat, Manning River, *Acacia longifolia*, 1.xi.94, S. Watkins, ANIC; ♂ & ♀, Dorrigo, W. Heron, SAMA, ANIC. Qld: ♀, 15 km W Samford, nr. Mt Glorious, 18-21.xi.1986, C. Reid, ANIC.

Male

**Size:** Holotype 3.6 x 1.4 mm. Range 3.3 x 1.3 mm – 3.8 x 1.4 mm.

**Colour:** head mostly green, coppery to bronze basally. Antennae green. Pronotum medially bronze, coppery between the dorsal and ventral carinae. Scutellum bronze with coppery reflections. Ventral surface bronze with coppery reflections. Legs: 1 & 2 green anteriorly, bronze posteriorly; 3 bronze.

**Shape & sculpture:** body dorso-ventrally flattened. Head punctured, shallow median sulcus, inter-antennal bridge 0.15 inter-ocular width. Pronotum striolate, apical margin projecting broadly medially, basal margin sinuate, large shallow fovea at each angle close to base, dorsal carina diverging from ventral carina basally and continuing until meeting anterior margin. Scutellum scutiform, unpunctured, anterior margin convex. Elytra scutellate, laterally more or less parallel-sided from base, rounded from post-medial to apex, with clumped setae forming the following faint patterns on each elytron, thick band at middle, four clumps across pre-apical area. Ventral surface faintly striolate laterally, glabrous medially, with sparse setae except laterally on abdominal segments clumps getting progressively smaller posteriorly. Legs: tarsal claws without inner tooth.

**Aedeagus:** parameres diverging from basal piece, rounded apically, penis pointed (Fig. 1k).

Female

**Size:** Range 3.4 x 1.4 mm – 4.2 x 1.6 mm.

**Colour:** head coppery. Antennae bronze with coppery reflections. Rest of body bronze.

**Shape & sculpture:** as in male.

**Remarks**

This species could be confused with *Cisseis patricia* Carter, described from WA but also occurring in NSW. It is a slightly smaller species than *C. patricia*, the dorsal surface is highly reflective in *C. aenea* while it is dull in *C. patricia*. Males of *C. patricia* do not have any green colouration. Male genitalia differ from those in *C. aenea*.

**Etymology**

The species is named for its colour *aeneus* L., brazen (of copper).
Cisseis aenigma sp. nov.

(figs 1a, 2a)

Holotype
♂, Big Desert NW Vic., 5.xi.1979, on Leptospermum sp., G. & T. Williams, SAMA I 21 733.

Allotype
♀, same data as holotype, SAMA I 21 734.

Paratypes
Vic.: 2 ♂♂, same data as holotype, GWLA; ♂ & ♀, Grampian Mtns, 29.xii.1985, Wilson, NMVA. S. Aust.: ♂, Ewens Ponds (SE), 6.ii.1977, by beating, A. Kowanko, SAM; ♂ & ♀, Robe, 15.xii.1978, by sweeping Leucopogon, P.J.M. Greenslade, SAMA; 4 ♀♀, 33.07 S 136.03 E Pinkawillinnie C. P., 10.x.1981, on Leptospermum coriaceum, J. & D. Gardner, SAM; ♀, Pintara, 7.xi.1989, mallee, SAM; ♂, Beachport, H.M. Hale, SAM; ♀, Lucindale, SAM; ♂ & ♀, Lucindale, Feuerheerdt, SAM.

Male

Size: Holotype 6.2 x 2.6 mm. Range 5.6 x 2.3 mm – 6.4 x 2.6 mm.

Colour: head green with yellow reflections. Antennae green. Pronotum and scutellum green with yellow reflections. Elytra black with white markings formed from clumped setae. Ventral surface and legs green.

Shape & sculpture: head punctured, median sulcus, inter-antennal bridge 0.15 inter-ocular width. Pronotum striolate, anterior margin projecting medially, basal margin sinuate, dorsal carina diverging from ventral carina basally, then more or less parallel-sided until meeting anterior margin, clumped setae forming a white band on each side from post-medial to pre-medial near dorsal carina, space between carinae filled with setae. Scutellum scutiform, punctured, anterior margin convex, sides prolonged laterally. Elytra scutellate, laterally angled out slightly from base, rounded at humeral callus, more or less parallel-sided until rounded post-medially and tapered to pre-apex, rounded at apex, apical margin sub-serrate, with the following white spots on each elytron: two at base, one closer to the margin than middle, the other closer to middle than margin; one close to margin at humeral callus; one posterior pre-medial closer to suture than margin; one medial close to margin; one post-medial close to margin; one pre-apical closer to suture than margin; the last four forming a semi-circle in the middle of which are several marks close to the suture. Ventral surface striolate, setae moderately long, laterally clumped at meta-coxae and on visible abdominal segments to form white spots. Legs: tarsal claws with inner tooth.

Aedeagus: parameres laterally gradually diverging until strongly rounded out medially then rounded to apex; penis pointed, prominently divided medially (Fig. 1a).

Female

Size: 5.9 x 2.4 mm – 6.4 x 2.6 mm.

Colour: head mainly coppery, black basally. Pronotum mainly black, coppery basally. Scutellum coppery. Elytra black with white markings. Ventral surface and legs green.

Shape & sculpture: as in male.

Remarks
Male genitalia of this species resemble those in Cisseis vicina Kerremans (Barker 2001, Fig. 1K). C. vicina is a much smaller species and it lacks setae on the pronotum.
TWENTY FIVE NEW SPECIES OF CISSEUS (COLEOPTERA: BUPRESTIDAE: AGRILINAE)

Etymology
The species remained unrecognised for more than fifty years and is named aenigma L. mystery.

*Cisseis aeruginosa* sp. nov.
(Figs 1b, 2b)

**Holotype**
♂, Beaconsfield, Vic., 22.xii.19, F.E. Wilson, NMVA.

**Allotype**
♀, Monbulk, Vic., 21.xii.31, F.E. Wilson, NMVA.

**Paratypes**
Vic.: 2 ♂♂ & ♀, prob. Nerrim South area, G. Leitch, NMVA; ♂, Gippsland, E.W. Ferguson, NMVA; ♂, Tidal R., ii.51, AB, ANIC; ♀, Wilson’s Prom. i.62, C. Watts, SAMA; 2 ♂♂ & 2 ♂♀, no data, HUMB; ♂ & ♀, Beaconsfield, same data as holotype, NMVA; ♂ & 2 ♀♀, no data, NMVA. NSW: 2 ♂♂, no data, SAMA. Qld: ♀, Maryborough, 5.xi.56, E. Smith, NMVA.

**Male**
*Size*: Holotype 5.1 x 2.1 mm Range 5.1 x 2.1 mm – 6.8 x 2.7 mm.

*Colour*: all dark green.

*Shape & sculpture*: head with basal impressed line projecting into shallow median sulcus; inter-antennal bridge 0.17 inter-ocular width. Antennae, antennomeres: 1-4 obconic; 5-11 toothed. Pronotum striolate; anterior margin projecting medially, basal margin sinuate; dorsal carina diverging from ventral carina at base, more or less parallel to it until diverging after the middle to meet anterior margin. Scutellum scutellate, punctured, lateral margins extending laterally at concave anterior margin. Elytra scutiform; without clumped setae; laterally more or less parallel-sided until rounded post-medially and narrowed to rounded apex. Ventral surface finely scutellate, with short setae. Legs: tarsal claws with prominent inner teeth.

*Aedeagus*: heavily chitinised. Parameres laterally diverging from basal piece, rounded medially and expanded, rounded apically. Chitin of apical margin transparent. Penis rounded.(Fig. 1b).

**Female**
*Size*: Range 6.4 x 2.3 mm – 7.4 x 3.0 mm.

*Colour*: as in male.

*Shape & sculpture*: as in male.

Remarks
In shape and texture this species is closest to *C. roseocuprea* (Hope). That species however is all bronze, the tarsal claws are without inner teeth and the male genitalia differ (Barker 2001, Fig. 1E). There is no definitive locality for the two specimens available from NSW.

**Etymology**
The species is named for its colour *aeruginosus* L. greenish-blue.
Cisseis bilyi sp. nov.  
(Figs 1c, 2c)

Holotype
♂, Yellowdine, 16.x.2001, S. Bílý, WAMA.

Allotype
♀, Peak Charles NP, 8.x.2001, S. Bílý, WAMA.

Paratypes
WA: ♂ & 2 ♀, Coolgardie, 18.x.2001, S. Bílý, NMPC, SAMA; ♀, Moir Rocks, 60 km S Norseman, 7.xi.2001, T.M.S. Hanlon & D. Knowles, MHSA.

Male
Size: Holotype 5.3 x 2.2 mm Range 5.3 x 2.1 mm – 5.6 x 2.3 mm.
Colour: head green. Antennae bronze. Pronotum and scutellum green. Elytra dark purple with coppery basal margin and base of suture. Ventral surface and legs green. Setae silver.
Shape and sculpture: head sparsely punctured, with faint median sulcus, inter-antennal bridge 0.23 inter-ocular width. Pronotum punctate-striolate, apical margin projecting broadly, basal margin sinuate, dorsal carina diverging from ventral carina at base and then more or less straight to apical margin. Scutellum scutiform, shallowly punctured. Elytra scutellate, laterally faintly rounded at humeral callus then almost parallel-sided until post-medially rounded and tapered, rounded at apex, apical margin sub-serrate, with clumps of setae forming irregular markings mainly in pre- and post-medial area with a single round pre-apical mark in the middle on each elytron. Ventral surface faintly scutellate with short setae, except clumps of pubescent setae on lateral coxae and abdominal sternites. Legs: tarsal claws with small inner tooth.
Aedeagus: elongate, parameres diverging apically; penis rounded (Fig. 1c).

Female
Size: 6.2 x 2.5 mm – 6.5 x 2.6 mm.
Colour: head, pronotum and scutellum blue-green, rest as in male.
Shape & sculpture: as in male.

Remarks
This species is closest to C. rubicunda Kerremans and about the same size. In C. rubicunda both sexes have a coppery head, pronotum and ventral surface; the elytra are coppery basally and mottled purple apically; male genitalia are different although of the same general form.

Etymology
The species is named to honour Dr S. Bílý, Coleopterist at NMPC.

Cisseis borealis sp. nov.  
(Figs 1d, 2d)

Holotype
♂, 15.17S 145.13E, 1 km N Rounded Hill, Qld, 5/6.x.1980, T.Weir, ANIC.

Allotype
♀, Mt Spec, NQ, 5/7.i.65, J.G. Brooks, ANIC.
TWENTY FIVE NEW SPECIES OF CISSEUS (COLEOPTERA: BUPRESTIDAE: AGRILINAE)

Paratypes
Qld: ♂ & ♀, Kuranda, i.1948, J.G. Brooks, ANIC; 3 ♂♂, Kuranda, i.1949, J.G. Brooks, ANIC; ♂, 11.45S 142.28E, Gunshot Ck, Cape York Pen. 12/15.viii.1975, G.B. Monteith, QMBA; 4 ♂♂ & 3 ♀♀, Mareeba, 24.i.1978, R.I. Storey, DPIQ, GWLA; ♀, 15.03S 145.09E, 3km NE Mt Webb, 30.iv/30.v. 1981, A. Calder, ANIC; 4 ♂♂ & 2 ♀♀, 16.54S 145.34E, Clohesy R. crossing, Kennedy Hwy, nr Kuranda, Atherton Tableland, 28.i.1995, J. Balderson & K. Christensen, SAMA; 6 ♂♂ & 2 ♀♀, 16 km W Paluma, 10.i.2000, on Jacksonia thesiodes, T.M.S. Hanlon & M. Powell, MHSA, MPWA; 2 ♂♂ & 3 ♀♀, 25 km N Mareeba, 13.i.2000, on Jacksonia thesiodes, T.M.S. Hanlon & M. Powell, MHSA, MPWA; 3 ♂♂ & ♀, 6 km S Irvinebank via Herberton, 13.i.2000, on Jacksonia thesiodes, T.M.S. Hanlon & M. Powell, MPWA; ♂, 10 km W Mt Garnet, 24.ii.2000, J. Hasenpusch, JHQA; 2 ♂♂, Irvinebank, 8.xi.2000, J. Hasenpusch, JHQA; ♂ & ♀, Clohesy R. Rd W Kuranda, 17.i.2001, J. & P. Hasenpusch, JHIQ; 2 ♂♂ & ♀, Cairns, J.G. Brooks, AMSA K111917; ♂ & 2 ♀♀, 30 km W Mt Carbine, 28.i.05, J. Hasenpusch, JHQA.

Male

Size: Holotype 5.6 x 2.1 mm. Range 4.8 x 1.9 mm – 6.4 x 2.4 mm.

Colour: head variably green, coppery at base. Antennae, antennomeres: 1-2 coppery; 3-11 yellow bronze. Pronotum and scutellum coppery. Elytra black with dark blue reflections and clumps of setae forming white spots. Ventral surface and legs yellow bronze.

Shape & sculpture: head flat, inter-antennal bridge 0.17 inter-ocular width. Pronotum striolate, apical margin projecting medially, basal margin sinuate, dorsal carina diverging from ventral carina at basal margin, more or less parallel then diverging before reaching apical margin. Scutellum scutiform, without punctures, medially excavated, anterior margin convex. Elytra scutellate, with short setae beneath each plate pointing posteriorly, apical margin sub-serrate, with following white markings on each elytron formed from clumps of pubescent setae: one in middle at base; one beneath humeral callus; four arranged in a semi-circle from pre-medial to pre-apical areas, anterior closer to suture than margin, two closer to margin than suture, most posterior largest, closer to suture than margin. Ventral surface striolate, sternum with deep punctures lying in striae, shallowly on abdomen with short setae projecting posteriorly except clumps of pubescent setae laterally on meta-sternal coxae and abdominal segments becoming progressively smaller, absent on last segment. Legs: tarsal claws with small inner tooth.

Aedeagus: parameres heavily chitinised; laterally rounded at pre-apex then narrowed to apex. Penis less heavily chitinised; pointed with an obvious medial division (Fig. 1d).

Females

Size: Range 4.8 x 1.9 mm – 6.7 x 2.6 mm.

Colour: head coppery, rest as in male.

Shape & sculpture: as in male.

Remarks

C. rubriceps sp. nov. has a similar but not identical colour combination. The structure of the male genitalia readily separates them (Fig. 1j).

Etymology

The species is named for its geographic occurrence, borealis L. northern.
S. BARKER

_Cisseis chlorota_ sp. nov.

(Figs 1w, 2e)

Holotype

♂, Officer Basin NE of Streich Mound, Great Victorian Desert, W.A., 24-28.ix.1991, on flowers of _Glischrocaryon roei_, R.P. McMillan WAMA.

Allotype

♀, Murchison, W.A., H. Brown, SAMA I 21 762.

Paratypes

W.A.: ♀, same data as holotype, WAMA; ♂, Cape Freycinet 34º.06’ S. 114º.59’ E., 15-16.xi.1985. T.F. Houston, WAMA; ♂, 25 S Coolgardie, 28.x.1958, E. Riek ANIC; ♂, Nth Dandalup, 20.xi.65, F.H. Uther Baker, NMVA; ♀, no data, NMVA.

Males.

Size: Holotype 5.7 x 2.3 mm. Range 5.7 x 2.3 – 6.9 x 3.0 mm.

Colour: head green, mostly with yellow reflections, coppery on inter-antennal bridge. Antennae green, antennomeres 1-2 with coppery reflections. Pronotum green with yellow reflections medially, coppery laterally. Scutellum green with coppery reflections. Elytra mainly green, yellow green along suture. Ventral surface and legs coppery.

Shape & sculpture: head closely punctured, median sulcus, inter-antennal bridge 0.11 inter-ocular width. Pronotum closely striolate; apical margin projecting medially, basal margin sinuate; dorsal carina not clearly defined, diverging from ventral carina basally and more or less parallel to apical margin. Scutellum scutiform, punctured closely. Elytra closely punctured, without setae and unmarked. Ventral surface closely punctured with short setae flattened and pointing posteriorly. Legs: setigeris absent; tarsal claws with small inner tooth.

Aedeagus: heavily chitinised; short and broad towards the apex (Fig. 1w).

Female

Size: range 5.8 x 2.4 – 6.9 x 2.9 mm.

Colour: as in male.

Shape & sculpture: as in male.

Remarks

This species is unlike typical _Cisseis_ species. The whole dorsal surface is densely punctured; the dorsal carina on the pronotum is indistinct; there are no clumps of setae forming marks or patterns on the elytra; there is no tibial setigeris on the legs; the median sulcus gives it the superficial appearance of members of the genus _Ethonion_.

Etymology

The species is named for its colour _chloros_ Gr. green.

_Cisseis cupreata_ sp. nov.

(Figs 1e, 2g)

Holotype

♂, Isla Gorge, Qld, on _Acacia_ leaves, 18.xii.1999, T.M.S. Hanlon, SAMA I21 735.

Allotype

♀, same data as holotype, SAMA I21 736.
TWENTY FIVE NEW SPECIES OF Cisseus (Coleoptera: Buprestidae: Agrilinae)

Paratypes
Qld: ♂, Brisbane, 18.xii.11, H. Hacker, QMBA; 2 ♂♂, One Tree Hill, Brisbane, 17.i.22, A. Musgrave, AMSA; ♀, One Tree Hill, Brisbane, 13.i.1923, A. Musgrave, AMSA; 6 ♂♂, 2 ♀♀, One Tree Hill, Brisbane, 12.xii.1925, A. Musgrave, AMSA, ANIC; 4 ♂♂, Brisbane, 12.x, H.J. C., ANIC; 2 ♀♀, Brisbane, O.W. Tiegs, QMBA; ♀, Brisbane, xii.59, J. K. Brooks bequest, ANIC; ♂ & 2 ♀♀, same data as holotype, MHSA; ♂ & ♀, White Rock, S.E., 17.xi.1999, S. Wilson, MHSA; ♂ & ♀, Stanthorpe, E. Sutton, QMBA.

Male
Size: Holotype 6.4 x 2.4 mm. Range 5.3 x 2.0 – 6.4 x 2.4 mm.

Colour: head mostly green, bronze at base. Antennae black with bronze reflections. Pronotum bronze-green, green or coppery. Scutellum black with bronze reflections. Elytra black with purple or blue reflections and white marks formed from clumped setae. Ventral surface and legs black with bronze reflections.

Shape & sculpture: head punctate, flat, inter-antennal bridge 0.2 inter-ocular width. Pronotum striolate, anterior margin projecting medially, basal margin sinuate, laterally bulbous, space between the two carinae visible from above for half its length from base, dorsal carina diverging from ventral carina at base, more or less parallel-sided until approaching but not meeting anterior margin. Scutellum scutiform, flat, without punctures, sides extended laterally and rounded, anterior margin convex. Elytra scutellate, laterally more or less parallel-sided from base, rounded and tapered post-medially, rounded at apex, with the following white marks formed from clumped setae: four on each elytron forming a semi-circular pattern, first pre-medial closer to suture than margin, the second and third medial and post-medial closer to margin than suture, the fourth pre-apical closer to suture than margin, several smaller marks in middle along the suture. Ventral surface scutellate with short setae. Legs: tarsal claws with very small inner tooth; meta-tibial setigeris with two raised clumps.

Aedeagus: heavily chitinised apically, laterally parameres diverging from basal piece, rounded post-medially, parallel-sided then rounded to apex, penis pointed (Fig. 1e).

Female
Size: Range 5.6 x 2.2 – 7.4 x 2.9 mm.

Colour: head coppery. Antennae black with bronze reflections. Pronotum coppery. Scutellum black. Elytra black with markings as in male. Ventral surface and legs as in male.

Shape & sculpture: as in male.

Remarks
This species could be confused with Cisseis cupreola Barker which is a similar colour to males of this species. However, the colour combination of the sexes, the bulbous shape of the pronotum and the structure of the male genitalia (Barker 2001, Fig. 1P) separate them.

Etymology
The species is named for its colour cuprum L., copper.
Cisseis erythrocephala sp. nov.  
(Figs 1f, 2f)

Holotype  
♂, Grafton, N.S.W., 7.xii.1952, F. S. Paul, ANIC.

Allotype  
♀, same data as holotype, ANIC.

Paratypes  
N.S.W.: ♂ & ♀, same data as holotype, ANIC. Qld: 2 ♂♂ & 2 ♀♀, Stanthorpe, 10.xi.28, E. Sutton, QMBA; 2 ♀♀, Fletcher, 11.xi.32, E. Sutton, ANIC; 2 ♂♂ & ♀, Fletcher, xi.32, E. Sutton, ANIC; 3 ♂♂ & ♀, Fletcher, xi.32, E. Sutton, ANIC, SAM; 2 ♂♂, Stanthorpe, xii.1944, A. Gemmell, ANIC; ♂ & 2 ♀♀, E. Sutton, QMBA.

Male  
Size: Holotype 5.3 x 2.3 mm. Range 4.9 x 2.0 - 6.0 x 2.4 mm.  
Colour: head red with blue reflections. Antennae, antennules: 1-6 coppery; 7-11 bronze. Pronotum and scutellum bronze. Elytra black with blue and purple reflections and with white spots. Ventral surface and legs coppery.  
Shape & sculpture: head closely punctured with an impressed line at base, inter-antennal bridge 0.25 inter-ocular width. Pronotum striolate, anterior margin projecting medially, posterior margin sinuate, laterally parallel-sided from base rounded pre-medially to anterior margin, dorsal carina diverging from ventral carina basally then more or less parallel-sided until ending just before the anterior margin. Scutellum scutiform, with few punctures, anterior margin convex. Elytra scutellate, laterally more or less parallel-sided from base, rounded post-medially and tapered to rounded, sub-serrate apices. Ventral surface faintly striolate with sparse, short setae except laterally on meso- and meta-coxae and abdominal segments, dense clumps of setae form white spots decreasing in size posteriorly. Legs: tarsal claws without inner tooth.  
Aedeagus: heavily chitinised except on rounded out apical edge, laterally parameres diverging from basal piece, rounded at apex. Penis pointed (Fig.1f).  

Female  
Size: Range 5.3 x 2.0 – 6.8 x 2.7 mm.  
Colour: head coppery, rest as in male.  
Shape & sculpture: as in male.  
Remarks  
This species has the same coloration as Cisseis cupreola Barker except that the male head differs. Cisseis erythrocephala sp. nov. can be distinguished by being smaller, elongate and the male genitalia differ (Barker 2001, Fig. 1P).  
Etymology  
The species is named for the head colour of the male erythros Gr. red, kephale Gr. head.
Figure 1. Male genitalic photographs of the following new Cisseis species: a. C. aenigma b. C. aeruginosa c. C. bilyi d. C. borealis e. C. cupreata f. C. erythrocephala g. C. goldingi h. C. guttata i. C. leai j. C. rubriceps k. C. aenea l. C. minuta m. C. montana n. C. furfurosa o. C. wagneri p. C. williamsi q. C. ustulata r. C. fritilla s. C. miyama t. C. rubricata u. C. storeyi v. C. suchasenpuschae w. C. chlorota x. C. tyleri y. C. wilsonensis. Scale bar = 1 mm.
Figure 2. Habitus photographs of the following new Cisseis species: a. C. aenea b. C. aeruginosa c. C. bilyi d. C. borealis e. C. chlorota f. C. erythrocephala g. C. cupreata h. C. goldingi i. C. guttata j. C. leai k. C. williamsi l. C. miyama m. C. ustulata n. C. rubricata o. C. rubriceps p. C. furfurosa q. C. wagneri r. C. tyleri s. C. fritilla t. C. storeyi u. C. aenea v. C. minuta w. C. montana x. C. suehasenpuschae y. C. wilsonensis. Scale bar = 1 mm.
TWENTY FIVE NEW SPECIES OF CISEUS (COLEOPTERA: BUPRESTIDAE: AGRILINAE)

_Cisseis fritilla_ sp. nov.
(Figs 1r, 2s)

Holotype
♂, Balgo Hills, W.A., on _Acacia_, 20.ii.86, M. Golding, SAMA I 21 737.

Allotype,
♀, 76 km NE Port Hedland, W.A., on _Acacia_ leaves, 2.v.88, M. Powell, SAMA I 21 738.

Paratype
WA: ♂ Balgo Hills, on _Acacia_, 18.ii.86, M.Golding, CLBC; ♀, same data as allotype, MPWA. NT: ♂, 12.23S 132.56E, 7 km NW, by N, of Cahills Crossing, East Alligator R., 4.xi.1972, K. H. L. Key et. al., ANIC.

Male
_Size:_ Holotype 7.6 x 2.9 mm. Range 7.6 x 2.9 - 8.0 x 3.2 mm.

_Colour:_ head green with purple reflections. Antennae purple. Pronotum green with coppery reflections, laterally coppery. Scutellum green. Elytra dark red with purple reflections and white marks formed from clumped setae. Ventral surface and legs coppery. Setae silver.

_Shape & sculpture:_ head shallowly punctured, faint median sulcus, inter-antennal bridge 0.2 inter-ocular width. Pronotum shallowly striolate, anterior margin projecting medially, posterior margin sinuate, laterally dorsal carina angled away from ventral carina at base then running more or less parallel to it until just after the middle where it ends, wide interval between carina densely covered with setae. Scutellum scutiform, with few punctures, anterior margin convex. Elytra scutellate, laterally angled out from base, rounded at humeral callus, more or less parallel-sided, rounded after middle then tapered, rounded at apex, apical margins serrate, with following prominent white spots on each elytron formed from clumped setae: one in middle near anterior margin, one directly posterior to it, four in semicircle, first pre-medial closer to suture than margin, second pre-medial closer to margin than suture, third post-medial closer to margin than suture, fourth pre-apical closer to suture than margin, with smaller irregular spotting around middle close to suture and one small spot behind humeral callus close to margin, absent in holotype but present in two other specimens. Ventral surface scutellate with short setae, laterally with white spots formed from clumped setae on metacoxae and abdominal segments. Legs: tarsal claws with small inner tooth.

_Aedeagus:_ heavily chitinised, laterally parameres diverging from basal piece, rounded before apex, sides at apex with thin transparent band. Penis pointed (Fig. 1 r).

Female
_Size:_ Range 8.6 x 3.2 - 9.6 x 3.6 mm.

_Colour:_ as in male, except that the elytra are brighter red.

_Shape & sculpture:_ as in male.

Remarks
This is one of a number of species with heavily spotted elytra. The colour is similar to that of male _C. derbyensis_ Barker, which is larger with different male genitalia (Barker 2001, Fig. 1AB).

Etymology
The species is named for its prominent spotting _fritillus_ L., spotted.
Cisseis furfurosa sp. nov.
(Figs 1n, 2p)

Holotype
♂, 1st Moonbi Hill, NEast Tamworth, NSW, on Acacia, 22.xi.85, S. Watkins SAMA I 21 754.

Allotype
♀, 1st Moonbi Hill, NEast Tamworth, NSW, on Callitris, 5.i.1989, S. Watkins SAMA I 21 755.

Paratypes
NSW: ♂, same data as holotype, ANIC; ♂ & ♀, Palm Beach, 22.x.33, J. G. Brooks bequest, ANIC. Qld: ♀, Peninsula Road, Lansdowne State forest, 30.x.1980, in Euc. Woodland, G. & T. Williams, GWLA; ♂, Moonbi lookout approx. 10 km SW Bendemeer, 23.xi.1981, G. & T. Williams, GWLA; ♂, approx. 0.5 km SW Bonny Hills, Acacia sp. in woodland, 1.xi.1985, G. Williams, GWLA; ♀, Henry Kendall Res. Laurieton, ex. Acacia in dry sclera. forest, 1.x.1985, G. Williams, GWLA. Qld: ♂, Peel Island, SAMA; 3 ♂♂ & 2 ♀♀, Cooktown [Yorktown (sic)], PMCE.

Male
Size: Holotype 5.9 x 2.2 mm. Range 4.6 x 1.7 mm – 6.4 x 2.4 mm.

Colour: head mostly bronze, coppery basally. Antennae bronze. Pronotum and scutellum coppery. Elytra brown with coppery reflections basally. Ventral surface dark with coppery reflections. Legs dark with coppery and green reflections.

Shape & sculpture: head closely punctured, with median fovea; inter-antennal bridge 0.28 inter-ocular width. Pronotum striolate, broadly projecting medially, dorsal carina diverging from ventral carina at base, then more or less parallel-sided, diverging just before reaching anterior margin. Scutellum scutiform, with few punctures, expanded laterally, anterior margin convex. Elytra scutellate, with clumps of short setae not defined into definite patterns except in the pre-apical area where they form a broad fascia from margin to suture and a posterior clump, apical margin rounded and sub-serrate. Ventral surface faintly scutellate moderately setose, more so laterally than medially. Legs: tarsal claws with prominent inner tooth.

Aedeagus: parameres heavily chitinised with elongate accessory structure on each side; penis elongate, pointed apically (Fig. 1n).

Female
Size: Range 5.2 x 1.8 – 7.2 x 2.7 mm.

Colour: head coppery. Antennae bronze. Pronotum and scutellum coppery. Elytra dark with coppery reflections. Ventral surface and legs dark with coppery reflections.

Shape and structure: as in male.

Remarks
This species is closest to Cisseis trimentula Barker which also has accessory structures on the parameres (Barker 2001, Fig. 1G). That species is much smaller and darker and occurs only in NSW. Either Jan Obenberger or one of his collectors mis-named many specimens from Cooktown, Queensland 'Yorktown.' This was commented on by Carter (1940) who stated incorrectly that a Yorktown didn't exist, thus ignoring Yorketown, South Australia.

Etymology
The name is derived from furfurcos L., brownish.
Cisseis goldingi sp. nov.
(Figs 1g, 2h)

Holotype
♂, 92 km W Coolgardie, on Acacia, 12.iii.1987, M. Golding, SAMA I 21 739.

Paratype
W.A.: ♂, same data as holotype, MGWA.

Male
Size: Holotype 5.2 x 1.9 mm. Range 4.9 x 1.9 – 5.2 x 2.0 mm.

Colour: head coppery-red. Pronotum blue-green with coppery-red reflections. Scutellum and elytra dark blue-green with coppery-red reflections. Ventral surface and legs coppery-red.

Shape & sculpture: head closely punctured, flat, inter-antennal bridge 0.2 inter-ocular width. Pronotum striolate, anterior margin slightly projecting medially, basal margin sinuate, dorsal carina diverging from ventral carina basally then more or less parallel to it, converging slightly then diverging to meet anterior margin. Scutellum scutiform, few punctures, anterior margin convex. Elytra scutellate, laterally tapering post-medially to rounded sub-serrate apex, with the following very faint white marks formed from small clumps of setae: circle formed from four spots on each elytron around middle, one pre-medial closer to suture than margin, second medial closer to margin than suture, third post-medial closer to margin than suture, fourth pre-apical closer to suture than margin, fifth in centre close to suture. Ventral surface faintly scutellate, with lateral white spots formed from clumped setae on each segment commencing with largest on meta-sternum, becoming progressively smaller along abdomen. Legs: tarsal claws without inner tooth.

Adedeagus: parameres mainly heavily chitinised, transparent along apical edge, flared outwards apically then rounded (Fig. 1g).

Remarks
This species is distinct from all others found in WA being small and green and with distinctive male genitalia.

Etymology
Named to honour the collector M. Golding, Willagee.

Cisseis guttata sp. nov.
(Figs 1h, 2i)

Holotype
♂, 5 km SW Nannine, W.A., 14.ii.90, G. Harold, SAMA I 21 740.

Allotype
♀, L. Austin, W.A., H. W. Brown, SAMA I 21 741

Paratypes
2 ♀♀, same data as allotype, MHSA.

Male
Size: Holotype 5.1 x 2.1 mm.
**Colour:** head, antennae, pronotum and scutellum bronze. Elytra black with white spots. Ventral surface and legs green with bronze reflections.

**Shape & sculpture:** head with median sulcus, inter-antennal bridge 0.16 inter-ocular width. Pronotum striolate, anterior margin projecting medially, basal fovea with pubescent setae on each side, dorsal carina diverging from ventral carina basally then more or less parallel-sided reaching anterior margin, with two patches of pubescent setae between carina and two matching patches on the dorsal side of the dorsal carina. Scutellum extended laterally at convex anterior margin, punctured. Elytra scutellate, apically sub-serrate, with the following white marks on each elytron: two at base, one beneath the humeral callus, four forming a semicircle from pre- to post-medial, the first and the last closer to the suture than margin, the second and third closer to the margin than suture, the third elongate the rest more or less circular, with several small obscure marks in the centre close to the suture. Ventral surface faintly scutellate, with short setae except laterally with clumped setae on meta-tibial coxae and abdominal segments becoming progressively smaller posteriorly. Legs: tarsal claws with inner tooth.

**Aedeagus:** moderately chitinised, elongate, parameres diverging laterally at apex, penis medially divided, tips separated (Fig. 1h).

**Female**

**Size:** Range 5.3 x 2.2 – 5.8 x 2.4 mm.

**Colour:** head blue-green. Antennae, antennules: 1-2 blue-green; 3-11 bronze. Pronotum and scutellum blue-green. Elytra black with white spots. Ventral surface and legs blue-green.

**Shape & sculpture:** as in male.

Remarks

This species is distinguished by the dichromatic colour and very distinct spotting on the upper surface. It is unlike any other known W.A. species.

**Etymology**

The species is named for its elytral marking *guttata* L., spotted.

* *Cisseis leai* sp. nov.

(Fig. 1i, 2j)

**Holotype**

♂, Pinjarra, W.A., Lea, SAMA I 21 742.

**Allotype**

♀, same data as holotype, SAMA I 21 743.

**Paratypes**

W.A.: 2 ♀, same data as holotype, SAMA.

**Male**

**Size:** Holotype 4.4 x 2.0 mm.

**Colour:** head dark blue with bronze and coppery reflections. Pronotum bronze with coppery and purple reflections. Scutellum, elytra, ventral surface and legs black with blue and coppery reflections.
**Shape & sculpture:** head punctured with medial sulcus, setose, inter-antennal bridge 0.11 inter-ocular width. Pronotum striolate, anterior margin projecting medially, posterior margin sinuate, setose, dorsal carina gradually diverging from ventral carina at base to anterior margin. Scutellum scutiform, without punctures, anterior margin convex. Elytra scutellate, laterally more or less parallel-sided from base, rounded post-medially and narrowed until rounded at sub-serrate apex. Ventral surface faintly scutellate, moderately setose except laterally longer clumped setae forming white spots on coxae and abdominal segments, decreasing in size posteriorly. Legs: tarsal claws without inner tooth.

**Aedeagus:** parameres heavily chitinised, penis lightly chitinised. Parameres rounded at middle and gently curved to apex, penis pointed (Fig. 1i).

**Female**

**Size:** Range 4.6 x 1.9 - 4.8 x 2.2 mm.

**Colour:** as in male.

**Shape & sculpture:** as in male.

**Remarks**

This species could be confused with *Cisseis rubicunda* Kerremans which is of a similar size, has somewhat similar colour and occurs in W.A. However, the specimens in the type series of *C. leai* sp. nov. are old and may have been preserved in alcohol which tends to distort colour. Male genitalia are dissimilar.

**Etymology**

The name honours the collector the late A. M. Lea, entomologist at the South Australian Museum from 1911-1932.

---

**Cisseis minuta** sp.nov.

(Figs 1l, 2v)

**Holotype**

♂, Karratha, W.A., 14.viii.1986, R. P. McMillan, WAMA.

**Allotype**

♀, Enderby Island, W.A., 2.viii.1985, R. P. McMillan, WAMA.

**Paratypes**

W.A.: 2 ♂♂, ♀, same data as allotype WAMA; 2 ♂♂, ♀, Karratha, 14.ix.1985, R.P. McMillan WAMA; 4 ♂♂, Karratha, 10.viii.1987, R.P. McMillan, WAMA, SAMA.

**Male**

**Size:** Holotype 2.9 x 1.1 mm. Range 2.9 x 1.1 – 3.6 x 1.5 mm.

**Colour:** head mainly green, bronze and coppery at base. Antennae black with coppery reflections. Pronotum brown medially with bronze reflections laterally. Scutellum brown with bronze reflections. Elytra brown with bronze reflections and faint white marks formed from clumped setae. Ventral surface and legs brown with bronze reflections.

**Shape & sculpture:** head punctured, with shallow median sulcus, inter-antennal bridge 0.2 inter-ocular width. Pronotum striolate, anterior margin projecting medially, basal margin sinuate, laterally dorsal carina diverging from ventral carina at base then gradually diverging until it reaches anterior margin. Scutellum scutiform, with few punctures, anterior margin convex. Elytra scutellate with moderately long setae scattered over basal half except for two glabrous...
areas in pre-medial area, post-medial zig-zag fascia formed from clumped setae. Ventral surface with shallow punctures, sparse short setae. Legs: tarsal claws with small notch.

**Aedeagus:** lightly chitinised; laterally parameres barely diverging from basal piece, rounded at apex; penis pointed (Fig. 1l).

**Female**

*Size:* Range 3.3 x 1.2 – 4.0 x 1.6 mm.

*Colour:* head coppery-red, rest as in male.

*Shape & sculpture:* as in male.

**Remarks**

This is one of the smallest species of *Cisseis* to be recognised so far. The colour combination does not resemble any of the other small species known.

**Etymology**

The species is named for its small size *minutus* L., small.

*Cisseis miyama* sp.nov.

(Figs 1s, 2l)

**Holotype**

♂, Miyama, New Guinea, xii.1971, H. Ohlmus, ANIC.

**Allotype**

♀, same data as holotype, ANIC.

**Paratypes**

New Guinea: 3 ♀♀, Bulolo, 26.xii.1971; ♂, ♀, same data as holotype, SAMA; ♀, Bosaul, i.1976, H. Ohlmus, ANIC.

**Male**

*Size:* Holotype 6.4 x 2.6 mm. Range 5.9 x 2.4 mm – 6.4-2.6 mm.

*Colour:* head mostly green, bronze at base. Antennae bronze. Pronotum background colour black, striae coppery. Scutellum bronze. Elytra black with setae forming white patterns and marks. Ventral surface: prosternal process green; dorsal surface of first femora green; remaining legs and ventral surface coppery.

*Shape and sculpture:* head punctured, prominent median sulcus, inter-antennal bridge 0.14 interocular width. Pronotum prominently striolate, anterior margin projecting broadly, posterior margin sinuate, dorsal carina diverging from ventral carina basally then more or less parallel to it, diverging towards the anterior margin but not reaching it. Scutellum scutiform, punctured, anterior margin convex. Elytra basal half striolate, apical half scutellate, with clumps of white setae forming a variable pattern across the middle and a wavy line across the pre-apical area, apex rounded and sub-serrate. Ventral surface laterally faintly scutellate, medially glabrous, with sparse short setae adpressed to plates and pointing posteriorly. Legs: tarsal claws with prominent medial tooth.

**Aedeagus:** heavily chitinised, with prominent folded brush at lateral apex of parameres; penis pointed (Fig. 1s).
Female

Size: Range 6.4 x 2.6 mm – 7.5 x 2.8 mm.

Colour: head mainly coppery-red, bronze at base, labrum green. Rest of upper surface as in male. Ventral surface black, legs black with faint purple reflections.

Shape and sculpture: as in male.

Remarks

This species can be distinguished by the male genitalia. It does not resemble any of the described species from Australia.

Etymology

The species name is derived from the type locality.

*Cisseis montana* sp. nov.

(Figs 1m, 2w)

Holotype

♂, Hazelbrook, Blue Mountains, NSW, 1933, Stoyles, SAMA I 21 744.

Allotype

♀, Hazelbrook, on wattle, ii.1935, G.M. Stoyles, SAMA I 21 745.

Paratypes

NSW: 4 ♂♂ & 4 ♀♀, Hazelbrook, ii.1935, G.M. Stoyles, MHSA; ♀, same data as allotype, MHSA; ♂, Hazelbrook, xii.1935, MHSA; 2 ♂♂ & ♀, Hazel., 16.i.37, G. M. Stoyles, MHSA; ♂, Hazelbrook, 2.i.1939, G.M. Stoyles, MHSA.

Male

Size: Holotype 3.5 x 1.2 mm. Range 3.3 x 1.3 – 3.8 x 1.6 mm.

Colour: head green. Antennae bronze with coppery reflections. Pronotum, scutellum, elytra, ventral surface and legs dark brown with bronze and coppery reflections.

Shape and sculpture: cylindrical. Head punctured, flat, inter-antennal bridge 0.12 inter-ocular width. Pronotum striolate, anterior margin projecting medially, posterior margin sinuate, laterally widest near base then tapering to anterior margin, dorsal carina gradually diverging from ventral carina basally until it meets anterior margin. Scutellum scutiform, with few punctures. Elytra scutellate, laterally more or less parallel-sided from base, rounded post-medially then tapered until rounded at apex, with faint, irregular spotting medially formed from clumps of setae and two on each elytron in pre-apical area, first closer to margin than suture, second posterior, closer to suture than margin. Ventral surface faintly scutellate with sparse, short setae. Legs: tarsal claws without inner tooth; metatibial setigeris from middle to distal end.

Aedeagus: parameres laterally diverging from basal piece rounded outwards post-medially, rounded to apex; penis pointed (Fig. 1m).

Female

Size: 3.2 x 1.2 - 4.3 x 1.7 mm.

Colour: head coppery. Rest as in male.

Shape & sculpture: as in male.
Remarks
This species could be confused with other small brown species particularly *C. patricia* Carter. However, *C. patricia* is dorsoventrally flattened while *C. montana* is cylindrical and the male genitalia differ.

Etymology
The name of this species refers to its distribution in the Blue Mountains and is derived from *montanus* L., of mountains.

*Cisseis rubricata* sp. nov.

(Figs 1t, 2n)

Holotype
♂, 13 km N Lake Barlee Hstd, W.A., Acacia, 17.i.1992, M. Powell, SAMA I 21 746.

Allotype
♀, 47 km N Galena Brdg., W.A., on *A. campestris*, 26.ix.93, Golding & Powell, SAMA I 21 747.

Male
Size: Holotype 5.3 x 2.2 mm.

Colour: head, antennae, pronotum and scutellum coppery. Elytra coppery at base merging into black with coppery reflections pre-medially. Ventral surface: pro-sternum coppery, meso- and meta-sternum bronze, abdomen green with bronze reflections. Legs bronze. Setae silver.

Shape & sculpture: head closely punctured, no median sulcus, inter-antennal bridge 0.13 interocular width. Pronotum striolate, anterior margin projecting medially, basal margin sinuate, laterally dorsal carina diverging from ventral carina at base, then more or less parallel-sided not quite reaching the anterior margin. Scutellum scutiform, punctured anterior margin barely convex. Elytra scutellate, laterally more or less parallel-sided from base, rounded post-medially and tapered, rounded at apex, apical margin sub-serrate, with following white spots formed from clumped setae: one obscure medially at anterior margin; one obscure pre-medial closer to suture than margin; one distinct pre-medial closer to margin than suture; one distinct post-medial closer to margin than suture; one obscure pre-apical closer to suture than margin. Ventral surface shallowly punctured, short sparse setae. Legs: tarsal claws without inner tooth.

Aedeagus: parameres heavily chitinised, laterally diverging from basal piece, rounded post-medially then more or less parallel-sided, angled to apex. Penis lightly chitinised, blunt (Fig. 1t).

Female
Size: 5.3 x 2.2 mm (1).

Colour: dorsal surface as in male. Ventral surface and legs coppery.

Shape & sculpture: as in male.

Remarks
This species could be confused with *C. rubriceps* sp. nov. However, the elytral markings are less prominent and male genitalia are very different (Fig. 1j).

Etymology
The species is named for its colour *rubicundus* L., ruddy.
TWENTY FIVE NEW SPECIES OF CISSEUS (COLEOPTERA: BUPRESTIDAE: AGRILINAE)

Cisseis rubriceps sp.nov.
(Figs 1j, 2o)

Holotype
♂, 9 km S Pingelly, W.A., on Acacia leaves, 2.i.89, M. Powell et al., SAMA I 21 748.

Allotype
♀, 4.8 km E Merredin, 11.xii.56, S. Barker, SAMA I 21 749.

Paratypes
W.A.: 2 ♂♂, Lake Grace, 10.xii.1973, K. & E. Carnaby, ANIC; 3 ♂♂, 2 ♀♀, Summit Mt Barker, Mallee, 15.i.1976, S. Barker, SAMA; 2 ♀♀, 4 km W Zanthus, on Acacia leaves, 26.i.87, Golding & Powell, MPWA; 3 ♂♂, 40km N Murchison R., Grevillea, 13.xii.88, M. Golding, MGBA; 5 ♂♂, 9 ♀♀, same data as holotype, MGBA & MPWA; 7 ♂♂, ♂, 92km W Coolgardie, Acacia, 12.iii.1987, Acacia, M. Golding, MGBA; 2 ♂♂, ♀♀, 92 km W Coolgardie, 12.iii.87, Acacia, D. Knowles, MGBA; 3 ♀♀, Boulder Rock, Brookton Hwy, 20.i.1999, D. Knowles, MHSA; 3 ♂♂, ♂, Perth, H. W. Brown, MHSA; ♀, Beverley, Lea, SAMA; ♀, Culham, 24.xi.50, R.P. McMillan, SAMA;

Male

Size: Holotype 5.0 x 1.9 mm. Range 5.0 x 1.9 – 5.9 x 2.3 mm.

Colour: head cupreous red. Antennae, antenomeres: 1- 6 cupreous red; 7-11 black with blue reflections. Pronotum and scutellum cupreous red. Elytra dark purple with cupreous reflections and clumps of white setae forming regular spots. Ventral surface and legs cupreous red.

Shape & sculpture: head with median impressed line from middle to base, inter-antennal bridge 0.2 inter-ocular width. Pronotum striolate, apical margin projecting medially, dorsal carina diverging from ventral carina at base then more or less parallel to it until diverging just before reaching apical margin, white setae along dorsal edge of dorsal carina and in clump between carinae at apical margin. Scutellum scutiform, extending laterally at convex basal margin, punctured. Elytra with apical margin sub-serrate, with following white spots on each elytron formed by clumps of setae: two along anterior margin; four forming semicircle comprised of large round anterior spot in middle of pre-medial area close to suture, two smaller spots closer to margin than suture, one medial other post-medial, one elongate in pre-apical area closer to suture than margin; two smaller spots close to suture, one behind other in medial area which may have small accessory spots. Ventral surface faintly scutellate with very short setae except dense clumps of pubescent setae at lateral margins, largest on metathoracic sternite, becoming progressively smaller on abdominal sternites. Legs: short metatibial setigeris from post-medial to distal end; tarsal claws with no inner tooth.

Aedeagus: heavily chitinised, expanded and rounded out apically, testaceous at apex; penis divided medially (Fig. 1j).

Female

Size: Range 5.5 x 2.1 – 6.9 x 2.6 mm.

Colour: head coppery, rest as in male. One female specimen has green head and pronotum.

Shape & sculpture: as in male.

Remarks
The Mount Barker specimens were collected on the flowers of Eucalyptus sp. Of the specimens examined, females had more conspicuous spotting on the elytra than males. Cisseis rubricata sp.
nov. and *Cisseis modesta* Kerremans are both small red species also found in W.A., both are smaller than *Cisseis rubriceps* sp. nov. and male genitalia differs (Fig. 1t).

**Etymology**

The species is named for its colour *ruber* L., red; *caput* L., head

*Cisseis storeyi* sp. nov.

(Figs 1u, 2t)

**Holotype**

♂, Davies Ck, E of Mareeba, 10.ii.1991, D. Larson, QMBA.

**Paratype**

Qld: ♂, Emerald Ck via Mareeba, 5.i.1981, I.C. Cunningham, DPIM.

**Male**

**Size:** Holotype 7.5 x 3.0 mm. Range 7.5 x 3.0 – 7.7 x 3.0 mm.

**Colour:** head purple. Antennae, antennomeres: 1-2 purple; 3-11 bronze. Pronotum and scutellum coppery. Elytra black with clumped setae forming white spots. Ventral surface and legs bronze.

**Shape & sculpture:** head very closely and deeply punctured with median sulcus, inter-antennal bridge 0.14 inter-ocular width. Pronotum deeply striolate, dorsal carina more or less straight from base, diverging from ventral carina for its whole length but not quite reaching anterior margin. Scutellum scutiform, punctured, sides extended laterally and rounded to meet anterior margin. Elytra heavily scutellate, laterally angled out from basal margin, rounded at humeral callus, more or less parallel-sided until post-medially rounded and narrowed to rounded apex, apical margins sub-serrate, with the following white markings on each elytron formed from clumped setae: one at base closer to margin than middle, one at humeral callus, four in semicircle the first pre-medially close to suture, the second posterior to first and closer to margin, the third post-medial and posterior to second close to margin, the fourth pre-apical and close to suture, one in middle close to suture. Ventral surface heavily striolate, moderately setose, setae moderately long, laterally clumped to form white marks on meta-coxae and all visible abdominal segments. Legs: meta-tibial setigeris raised in two places; tarsal claws with small inner tooth.

**Aedeagus:** parameres heavily chitinised, laterally diverging from basal piece, rounded post-medially, angled inwards, rounded at apex then approaching penis at right angles, chitin transparent at lateral apex; penis heavily chitinised, medially divided, sides separated, pointed (Fig. 1u).

**Remarks**

This species could be confused with *Cisseis borealis* sp. nov. but it is larger and male genitalia are quite different (Fig. 1d).

**Etymology**

This species is named to honour R.I. Storey, Entomologist, D. P. I. Mareeba.
TWENTY FIVE NEW SPECIES OF CISSEUS (COLEOPTERA: BUPRESTIDAE: AGRILINAE)

Cisseis suehasenpuschae sp. nov.
(Figs 1v, 2x)

Holotype
♂, ‘Garradunga’, Innisfail, Qld, 27.ii.1990, J. Hasenpusch, SAMA I 21 750.

Allotype
♀, ‘Garradunga’, Innisfail, Qld, 2.i.1993, J. Hasenpusch, SAMA I 21 751.

Paratypes
Qld: ♂, Polly Creek, ‘Garradunga’, Innisfail, 2.i.1993, J. Hasenpusch, MHSA; 6 ♀♀, Polly Ck, ‘Garradunga’, 6-14.xii.2001, J. Hasenpusch, JHQA

Male
Size: Holotype 8.2 x 3.2 mm.

Colour: head mostly green, coppery-red basally. Antennae bronze with copper-red reflections. Pronotum dark blue. Scutellum dark blue with coppery-red reflections. Elytra black. Ventral surface and legs black.

Shape & sculpture: Body convex in lateral profile. Head punctured, flat, inter-antennal bridge 0.25 inter-ocular width. Pronotum striolate, anterior margin projecting broadly, basal margin sinuate, dorsal carina diverging from ventral carina basally, more or less parallel to it, diverging just before meeting anterior margin. Scutellum scutiform, unpunctured, anterior margin convex. Elytra scutellate, laterally tapered post-medially to rounded, sub-serrate apex. Ventral surface faintly scutellate, with minute setae adpressed to surface and pointing posteriorly. Legs: meta-tibial setigeris with one section raised; tarsal claws with inner notch.

Aedeagus: parameres heavily chitinised, laterally angled outwards from basal piece, rounded to apex, transparent along apical edge; penis rounded (Fig. 1v).

Female
Size: Range 9.0 x 3.4 – 9.8 x 3.8 mm.

Colour: head and antennae coppery-red. Pronotum, scutellum, ventral surface and legs bronze.

Shape & sculpture: as in male.

Remarks
There is no other described species of Cisseis which is this shape, reminiscent of Stanwatkinsius (Barker & Bellamy, 2001) and without dorsal markings. Male genitalia resemble C. albosparsa Gory & Laporte, but that species has elytral spotting and is all coppery on the upper surface, except green head of male.

Etymology
The species is named after Sue Hasenpusch, ‘Garradunga’, Innisfail.

Cisseis tyleri sp. nov.
(Figs 1x, 2r)

Holotype
♂, 23 km N Mitchell Plateau, W.A., 28.i.1978, M.J. Tyler, SAMA I 21 752.

Allotype
♀, King Sound, NWA, SAMA I 21 753.
Paratypes
WA: 6 ♂♂, same data as holotype, SAMA; ♂, same data as allotype, SAMA.

Male
Size: Holotype 7.3 x 2.9 mm. Range 7.2 x 2.9 – 7.8 x 3.0 mm.
Colour: head green with yellow reflections. Antennae coppery. Pronotum and scutellum green with yellow reflections. Elytra black with white spots formed from clumps of pubescent setae. Ventral surface and legs green with yellow reflections.
Shape and sculpture: head with median sulcus, inter-antennal bridge 0.15 inter-ocular width. Pronotum striolate, apical margin projecting medially, dorsal carina diverging from ventral carina at basal margin then more or less parallel, reaching apical margin, space between with flat, white setae. Scutellum scutiform, punctured, anterior margin convex. Elytra scutellate, apical margin sub-serrate, with following white spots on each elytron: two basally, four medially forming half circle and one central on sutu re. Ventral surface scutellate except at edges of abdominal segments, with single short setae except along lateral margins which have clumps of pubescent setae on all sternal segments and all but terminal abdominal segment. Legs: meta-tibial setigeris with two raised areas along edge of tibia; tarsal claws with prominent inner tooth.
Aedeagus: heavily chitinised. Parameres laterally diverging from basal piece, rounded at apex; penis lightly chitinised, two halves pointed, diverging apically (Fig. 1x).

Female
Size: 7.4 x 2.9 mm (1).
Colour: as in male.
Shape and sculpture: as in male.
Remarks
There are no other similarly coloured and marked species known from the Kimberley region of W.A. Host plant unknown. Cisseis albertisi Gestro from Cape York, Queensland has a green morph that slightly resembles this species. Male genitalia are quite different.
Etymology
Named to honour the collector, M.J. Tyler, Adelaide.

Cisseis ustulata sp. nov.
(Figs 1q, 2m)
Holotype
♂, Cooktown[Yorketown (sic)], Qld, A. Jung, 1.ii.99, QMBA.
Allotype
♀, same data as holotype, QMBA.
Paratypes
Qld: 2 ♂♂, same data as holotype, QMBA, SAMA; ♂, Cooktown [Yorketown (sic)], PMCE.
Male
Size: Holotype 6.2 x 2.4 mm. Range 6.2 x 2.4 – 6.4 x 2.4 mm.
Colour: Head mainly green, brown at base, rest of body brown.
**Shape & sculpture:** head closely punctured, inter-antennal bridge 0.18 inter-ocular width. Pronotum striolate, apical margin projecting medially, basal margin sinuate, laterally dorsal carina angled away from ventral carina at base then more or less parallel-sided until joining anterior margin. Scutellum scutiform, few punctures, anterior margin convex, elongate at sides. Elytra scutellate, laterally angled out from base, rounded at humeral callus, more or less parallel-sided until rounded after middle, tapered then rounded at apex, apical margins sub-serrate. Ventral surface with shallow punctures, short sparse setae. Legs: tarsal claws without an inner tooth.

**Aedeagus:** heavily chitinised, laterally parameres diverging from basal piece, rounded to apex, apical edge transparent. Penis heavily chitinised, prominently divided (Fig. 1q).

**Female**

**Size:** Range 6.9 x 2.7 – 7.0 x 2.7 mm.

**Colour:** head mainly coppery, brown at base, rest brown.

**Shape & sculpture:** as in male.

**Remarks**

This species is unique and very easy to identify because of the colour difference between the sexes, size difference and male genitalia. The collector consistently misnamed Cooktown, calling it Yorketown, there is no such place in Queensland (see Remarks under *C. furfurosa*).

**Cisséis wagneri** sp. nov.

(Figs 1o, 2q)

**Holotype**

♂, Finsch Haven, New Guinea, Rev. L. Wagner, SAMA I 21 756.

**Allotype**

♀, Wareo, Finsch Haven, New Guinea, Rev. L. Wagner, SAMA I 21 757.

**Male**

**Size:** Holotype 6.3 x 2.6 mm.

**Colour:** head mainly bright green, bronze basally with coppery reflections. Antennae, antennomeres: 1-4 bronze with green reflections; 5-11 bronze. Pronotum black, bottoms of striae with coppery reflections; space between carinae coppery with green and bronze reflections. Scutellum bronze. Elytra black with coppery and bronze reflections and clumps of silver setae forming patterns. Ventral surface black, sternal segments with green reflections medially. Legs: 1 & 2 with dorsal surface of femora green, ventral surface black; 3 all black.

**Shape & sculpture:** head shallowly punctured from apex to middle then shallowly striolate to base, broad medial sulcus, inter-antennal bridge 0.22 inter-ocular width. Antennae, antennomeres: 1-3 obconic; 4-11 triangular. Pronotum striolate, apical margin projecting broadly medially, basal margin sinuate, with a broad basal fovea on each side, laterally dorsal carina diverging from base then more or less parallel to ventral carina until diverging just before it ends, not reaching apical margin. Scutellum scutellate, punctured, basal margin expanded laterally. Elytra scutiform, laterally more or less parallel-sided from base, rounded post-medially and tapered, rounded at apex, apical margin sub-serrate, with the following white pattern formed from clumps of setae: irregular marks from pre- to post-medially; pre-apical zig-zag fascia. Ventral surface: sternal segments striolate; abdominal segments shallowly punctate, whole surface with sparse, very short setae. Legs: tarsal claws with small inner tooth.
**Aedeagus:** wedge-shaped, parameres expanded laterally with colourless chitin; penis and medial section of parameres heavily chitinised, pointed (Fig. 1o).

**Female**

Size: 6.6 x 3.0 mm (1).

Colour: head mainly red, bronze basally. Pronotum as in male. Scutellum and elytra bronze. Ventral surface and legs black.

Shape & sculpture: as in male.

Remarks

This species resembles *C. miyama* sp. nov. but male genitalia are different (Fig. 1s).

Etymology

The species is named to honour the collector, the late Rev. L. Wagner.

**Cisseis williamsi** sp. nov. 

(Figs 1p, 2k)

**Holotype**

♂, vic. of Breakneck Lookout approx. 11km SSW of Taree, NSW, ex dry rainforest ex dead *Elattostachys nervosa* branch, 6-14.xii.1991, G. & T. Williams, SAMA I 21 758.

**Allotype**

♀ same data as holotype, SAMA I 21 759.

**Paratypes**

NSW: 2 ♀♂, 32-64 km S Singleton, 17.i.1975, H & A Howden CBUS; 2 ♂♂, same data as holotype, GWLA; 2 ♀♀, approx. 24 km NNW Gloucester, on *Acmena smithii* ex rainforest, 25.xi.1990, G. & T. Williams, GWLA; 2 ♀♀, vic. of Breakneck Lookout approx. 11 km SSW of Taree, emerged dead branch *Elattostachys nervosa*, 13-24.xi.1991, G. & T. Williams, GWLA; ♀, Kiwarrak St. Fo. S Taree, 18-26.xii.1991, G.A.Williams, CLBC; ♂ & ♀, vic. of Breakneck Lookout approx. 11 km SSW of Taree, emerged dead branch *Elattostachys nervosa* ex. Dry rainforest, xii.1992, G. & T. Williams, GWLA; 3 ♂♂, ♀, vic. of Breakneck Lookout approx 11 km SSW of Taree, ex dry rainforest ex dead *Elattostachys nervosa* branch, 10-14.xi.1993, G. & T. Williams, GWLA. Qld: ♀, 20.5 km Tablelands rd. SW Many Peaks jct, nr Calliope, swept from foliage vine scrub, 2.xi.1999, G. Williams, GWLA.

**Male**

Size: Holotype 4.4 x 1.6 mm. Range 4.2 x 1.7 – 4.6 x 1.8 mm.

Colour: head green, black basally. Antennae green. Pronotum black with bronze reflections except ventral carina green. Scutellum bronze with green reflections. Elytra black with bronze reflections pre-medially and clumps of setae forming irregular white patterns. Ventral surface: prosternum green, rest bronze. Legs: dorsal femora green ventral femora and tibiae bronze. Setae silver.

Shape & sculpture: head closely punctured, deep median sulcus with a medial indentation on each side, inter-antennal bridge 0.25 inter-ocular width. Pronotum striolate with a large fovea on each side closer to basal margin than anterior margin, anterior margin projecting medially, basal margin sinuate, laterally dorsal carina angled away from ventral carina at base, more or less parallel-sided until reaching anterior margin. Scutellum scutiform, punctured, excavate. Elytra scutellate, laterally angled out from base, rounded at humeral callus and then more or less parallel-sided until rounded post-medially and tapered to rounded apices, apical margin
TWENTY FIVE NEW SPECIES OF CISSEUS (COLEOPTERA: BUPRESTIDAE: AGRILINAE)

sub-serrate, with the following markings formed from clumped white setae: diffuse marks from pre-medial to post-medial, broad post-medial fascia from margin to suture, narrow pre-apical fascia from margin to suture. Ventral surface with shallow punctures and short, sparse setae. Legs: tarsal claws with small inner tooth.

*Aedeagus*: moderately heavily chitinised except at apex, laterally parameres diverging from basal piece, rounded post-medially then parallel-sided, rounded at apex; penis moderately chitinised, prominently divided, two sides pointed (Fig. 1p).

**Female**

*Size*: Range 4.4 x 1.7 - 5.4 x 2.2 mm.

*Colour*: head coppery. Antennae black with coppery reflections. Pronotum and scutellum coppery. Elytra black with white markings. Ventral surface black. Legs black with coppery reflections on dorsal surfaces.

*Shape & sculpture*: as in male.

Remarks

This species could be confused with two others namely *C. trimentula* Barker and *C. watkinsi* Barker which are about the same size and colour except for the colour of the head, black in *C. trimentula* and dull green or blue in *C. watkinsi*. The structure of the male genitalia is different in all three species (Barker 2001, Fig.1).

Etymology

Named after the collector G. Williams, Lansdowne.

*Cisseis wilsonensis* sp. nov.

(Figs 1y, 2y)

*Holotype*  ♂, Lighthouse nr. Tidal River, Wilson's Promontory Nat Pk, Vic., 7.ii.1990, R. De Keyzer, G. Clark, AMSA.

*Allotype*  ♀, same data as holotype, AMSA.

*Paratypes*  5 ♂♂, same data as holotype, AMSA, SAMA & CLBC.

*Male*

*Size*: Holotype 7.9 x 2.9 mm. Range 6.0 x 2.2 – 8.6 x 3.2 mm.

*Colour*: head green. Antennae yellow-green. Pronotum green with yellow reflections. Scutellum green. Elytra black with white markings formed from clumped setae. Ventral surface: sternites and fused abdominal segments green with yellow reflections; last three abdominal segments black with yellow reflections. Legs green with yellow reflections.

*Shape & sculpture*: head punctured, median sulcus, inter-antennal bridge 0.27 inter-ocular width. Pronotum striolate, apical margin broadly projecting medially, basal margin sinuate, dorsal carina more or less straight from base and gradually diverging from ventral carina, meeting apical margin. Scutellum scutiform, without punctures, sides elongate along basal margin. Elytra striolate, laterally more or less parallel-sided rounded post-medially, tapered towards then rounded at apex, apical margin sub-serrate, with a few small, irregular white marks. Ventral surface faintly striolate with sparse, short setae. Legs: tarsal claws with prominent inner tooth.
Aedeagus: moderately chitinsed, laterally diverging from basal piece, rounded post-medially then parallel-sided until rounded at apex; penis moderately chitinised, prominently divided, pointed (Fig. 1y).

Female
Size: 8.1 x 3.2 mm.
Colour: head, antennae and pronotum dark brown with coppery reflections. Elytra dark brown with bronze and coppery reflections. Ventral surface and legs dark brown.
Shape & sculpture: as in male.
Remarks
This species could be confused with *Cisseis marmorata* Gory & Laporte but they differ in the following. *C. marmorata* males have brown elytra while they are black in this species. The females of *C. marmorata* have a bulbous pronotum not found in the female of this species. Male genitalia differ.

Etymology
Named for the type locality.

Acknowledgements
I wish to thank the following for assistance: M. Moulds, AMSA; S. Bílý, NMPC; the late J. Balderson, Queanbeyan; T.M.S. Hanlon, Perth; M. Powell, Melville; M. Golding, Willagee; J. Hasenpusch, Innisfail; T. Lander, Geneva; D.J. Mann, Oxford; R.P. McMillan, Perth; G.B. Monteith, QMBA; M.J. Tyler, Adelaide; K. Walker, NMVA; G. Williams, Lansdowne; M. Uhlig, HUMB; T.A. Weir, ANIC.

References
Barker, S. (1998) Selection of lectotypes and redescriptions of three *Cisseis* (Coleoptera: Buprestidae) species. *Records of the South Australian Museum* 31, 21-23.
Barker, S. (1999a) Designation of a lectotype and descriptions of four new species of Australian Buprestidae (Coleoptera). *Ibid.* 32, 45-49.
Barker, S. (1999b) Designation of lectotypes of three species of *Cisseis* (Coleoptera: Buprestidae). *Transactions of the Royal Society of South Australia* 123, 155.
Barker, S. (2001) Descriptions of twenty one new species of *Cisseis* (sensu stricto) Gory & Laporte 1839 (Coleoptera: Buprestidae: Agrilinae). *Records of the South Australian Museum* 35,
Barker, S. & Bellamy, C.L. (2001) Stanwatkinsius, a new genus of Australian jewel beetles (Coleoptera: Buprestidae: Agrilinae) with a key to known species. *Transactions of the Royal Society of South Australia* 125, 1-14.
Carter, H. J. (1923) Revision of the genera *Ethon*, *Cisseis* and their allies (Buprestidae). *Proceedings of the Linnean Society of New South Wales* 48, 159-176.
Gory H. & Laporte, F.L. (1839) "Histoire naturelle et iconographie des insectes coléoptères, publiée par monographies séparées." Vol 2. livraisons 25-35 (P. Duménil, Paris).