

# Revision of the genus *Menippus* Clark in Australia (Coleoptera: Chrysomelidae: Galerucinae)

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**Abstract** The genus *Menippus* is revised for Australia, with six species, three of which are new: *M. cynicus* Clark, *M. darcyi* **sp. nov.**, *M. ewani* **sp. nov.**, *M. fugitivus* (Lea), *M. sufi* **sp. nov.** and *M. yulensis* (Jacoby) **comb. nov.** (from *Diorhabda* Weise). *Menippus yulensis* was described from New Guinea. This species and *M. darcyi* were formerly confused in Australia with *M. fugitivus*, which is now considered endemic to Lord Howe Island. The species formerly considered *M. fugitivus* and protected under the Threatened Species Conservation Act, New South Wales, is now named *M. darcyi*. A key is provided for the Australian species of *Menippus* and a lectotype designated for *M. yulensis*. The composition of *Menippus* is discussed and three non-Australian species are transferred to this genus: *M. inconspicua* (Jacoby) **comb. nov.** (from *Diorhabda* Weise); *M. laterimaculata* (Jacoby) **comb. nov.**; and *M. marginipennis* (Jacoby) **comb. nov.** (from *Galerucella* Crotch). A revised checklist of *Menippus* species is given. The recorded foodplants of *Menippus* are species of *Celtis* (Ulmaceae).

**Key words** Australasia, *Celtis*, Chrysomelidae, conservation, Galerucinae, *Menippus*, south-east Asia.

## INTRODUCTION

There are estimated to be 3000 species of leaf beetle (Chrysomelidae) in Australia, the majority of which are in four subfamilies: Chrysomelinae, Eumolpinae, Cryptocephalinae and Galerucinae (Matthews & Reid 2002). Galerucinae show the lowest generic endemism. In the tribe Galerucini, there are about 22 native Australian genera, six of which are endemic (Wilcox 1971, 1972, 1973, 1975; Reid 2003).

Approximately one-third of the Australian species of Chrysomelidae are undescribed and many will remain so for years to come. In future, new species are likely to be described as a consequence of some need other than pure taxonomy. Here we describe three new species of Galerucini as an outcome of conservation legislation.

The genus *Menippus* Clark was erected in subfamily Galerucinae for a single Australian species, *M. cynicus* Clark (Clark 1864), from the central coast of Queensland. Several species of *Menippus* were subsequently described from widely scattered localities in south-east Asia (Wilcox 1971; Kimoto 1990) and one additional species from Australia, *M. fugitivus* (Lea). The latter was originally placed in *Adimonia* Lachairting (Lea 1926) and later transferred to *Menippus* (Wilcox 1971). *Adimonia* is now a junior synonym of *Galeruca* Muller,

a Holarctic genus (Wilcox 1971). *Menippus fugitivus* was described from Lord Howe Island and central and north Queensland. Hitherto, nothing has been published on the biology of any *Menippus* species.

In 1998, Brendan Graham, Bushcare Officer for Sutherland Shire Council, New South Wales, discovered a beetle defoliating *Celtis paniculata* (Ulmaceae) trees in a small patch of threatened littoral rainforest at Gray's Point, Sutherland, New South Wales. This patch of rainforest is listed as an endangered ecological community (Threatened Species Conservation Act, New South Wales 1995, largely because *C. paniculata* is almost at the southern limit of its range here. The beetle was identified by CAMR as *M. fugitivus* by comparison with named material in the Australian National Insect Collection, Canberra. At that time the Grey's Point population was the only known locality for '*M. fugitivus*' in mainland New South Wales. *Menippus fugitivus* (Lea) at Gray's Point was duly listed as an endangered population, on Schedule 1(2) of the Threatened Species Conservation Act, New South Wales (1995), because of its isolation from other known populations. It was the first species of beetle to be listed by application of the Act.

Further research on the identity of *M. fugitivus* led to the discovery that three species are confused under this name: *M. fugitivus* is endemic to Lord Howe Island, a second species, described from New Guinea, is widespread from Western Australia to north Queensland and south-east New Guinea, and an undescribed species is local in New South Wales but widespread in coastal Queensland. This last species, having been

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wrongly named *M. fugitivus* in various New South Wales government and press reports, requires description and a name, which is given below. The other Australian species of *Menippus* are also described and a key provided for their identification.

Abbreviations: AMS, Australian Museum, Sydney; ANIC, Australian National Insect Collection, Canberra; GUB, Griffith University, Queensland; MCZ, Museum of Comparative Zoology, Harvard; BMNH, Natural History Museum, London; NSW, New South Wales; NT, Northern Territory; Qld, Queensland; QDPI, Queensland Department of Primary Industry Insect Collection, Indooroopilly; QMB, Queensland Museum, Brisbane; SAM, South Australian Museum, Adelaide; WAM, Western Australian Museum, Perth.

## SYSTEMATICS

### *Menippus* Clark

**Type species.** *Menippus cynicus* Clark, by monotypy.

**Description.** **Length:** 4.5–12 mm. **Colour.** Pale brown to dark brown (note that this background colour is yellow or green in live specimens of at least three species), with or without darker areas on head, pronotum, legs, venter. **Sculpture.** Dorsum entirely densely pubescent, except anterior and median ridges of frontoclypeus, the setae short and recumbent, with additional scattered erect setae on elytra; venter with dense recumbent setae, except hypomeron, sides of prosternum, and midline of metaventricle glabrous. **Head.** Densely punctured posterior to antennae; postantennal tubercles weakly to strongly demarcated, with triangular anterior margins and distinct or obliterated posterior margins; interantennal space broad and longitudinally ridged, joining transverse anterior frontoclypeal ridge, the resultant inverse T-shape glabrous and impunctate, contrasting with adjacent areas; antennal sockets close to margin of eyes and situated between anterior half of eyes, separated by 1–2 socket-diameters; eyes prominent, evenly convex, separated by 2–2.5× width of eye (eyes smaller in females); gena short, minimum length <0.2× length of eye; buccal margin with prominent tooth between mandible and maxilla; antenna short 0.4–0.7× body length (female antenna shorter than male antenna), all antennomeres elongate, length of antennomere 4 > 3 > 2; first antennomere expanded from base to apex; last maxillary palpomere elongate-conical, similar in length to penultimate, but slightly narrower. **Thorax.** Pronotum strongly transverse, width approximately 2.5× length; sides of pronotum rounded or sinuate, anterior angles with small right-angled tooth, posterior angles evenly rounded, each with single trichobothrium; anterior and posterior of pronotum with or without borders; pronotal disc with sides depressed and usually shallow median longitudinal depression; procoxal cavities almost adjacent; prosternal process thin, either flat, hidden between coxae, or convex and visible between coxae, apex not expanded; hypomeral lobes elongate, coxal cavities varying from partly open, with gap shorter than hypomeral lobe, to closed by hypomeral lobes

overlapping behind prosternal process; elytra covering abdomen, densely punctured, smooth and non-striate, non-rugose and non-carinate, without transverse median or post-humeral depression, broader than pronotum; sides of elytra vertical (convex species) to slightly explanate (depressed species), with or without partial ridge above epipleural margin; epipleuron almost as broad as mesepimeron at base, abruptly narrowed between mid and hind coxae and evanescent before apex of elytron; mesosternite process flat and pointed, or abruptly raised at apex, not covered by anterior lobe of metasternite; mid coxae separated by much less than width of coxa; fully winged, with typical galerucine venation (Jolivet 1959); tibiae without apical spurs in either sex, external (dorsal) faces medially ridged; first metatarsomere approximately as long as 2 + 3; tarsal claws bifid, inner tooth slightly shorter than outer. **Abdomen.** Ventrites not bordered; last ventrite of male with distinct V- or U-shaped excavation of hind margin, last ventrite of female shallowly excavated or with small U-shaped excision; penis parallel-sided in dorsal view, with triangular or mucronate tip, often slightly asymmetric, and pair of strongly recurved lobes at base; endophallus in repose visible in ostium, with smooth sclerite (endophallic sclerite) capping it and projecting to varying degrees; ovipositor with one-segmented palpi reduced to flat triangular or elongate lobes, fused at base, and sternite 8 with well-developed spiculum gastrale; bursa copulatrix without sclerotisation; spermatheca falcate, base of receptaculum swollen, spermathecal duct short (about length of spermatheca), swollen at junction with spermatheca and projecting into receptaculum.

**Notes.** The original description of *Menippus* (Clark 1864) did not include any significant diagnostic features, therefore a redescription is necessary.

The generic keys to Galerucinae of south-east Asia (Kimoto 1989) and New Guinea (Shute 1983) fail to identify most Australian species as *Menippus* and it may be considered that more than one genus is included under this name in Australia. The Australian species of *Menippus* show variation in some external characters that have been used to delimit chrysomelid genera, but we prefer to treat the species as belonging to a variable single entity rather than two or three genera. The principle variable, degree of closure of the procoxal cavity, is commonly used to delimit tribes or subtribes in the Chrysomelidae (Chapuis 1874), but some otherwise well-defined genera have diverse cavity closure, including *Lamprolina* Baly (Reid 2006) and *Platycolaspis* Jacoby (Reid 1994). The variation is greater in *Menippus* than these genera, but closure is by overlap of the hypomeral lobes behind the prosternal process apex, which suggests it is derived from the widely opened procoxal cavities typical of related genera (such as *Poneridia* Weise). The marginal elytral ridge, which is useful for separating some galerucine genera (Reid 2003), appears to be obliterated in the largest *Menippus* species by the great convexity of the elytra. The relatively uniform male and female genitalic morphology and shared hostplant genus support recognition of this group of species as one genus.

The few galerucine genera in Australia with pubescent dorsal surface, green or brown colouration and partly

depressed pronotal disc are: *Galerucella* Crotch, *Hoplostines* Blackburn, *Poneridia*, *Pyrrhalta* Joannis and *Trirhabda* LeConte (Reid 2003). *Menippus* is easily distinguished from these by the following: green colour ephemeral, absent in dead specimens; pronotum entirely pubescent and not transversely depressed; elytral epipleura abruptly contracted between base and hind coxa; claws bifid.

The non-Australian species of *Menippus* have not been examined and generic designations in this group are still unclear. However, the common southern Asian species, *M. cervinus* (Hope), has been well illustrated and seems correctly placed in this genus (Maulik 1936; Kimoto 1989). The genus *Issikia* Chujo, with three species from southern Japan to Sumatra, is feebly separated from *Menippus* (Mohamedsaid 1999) and is probably a junior synonym, but the type species has not been seen therefore we are unwilling to make any alteration to its status. Type specimens of many of Jacoby's poorly described Papuasian species, belonging to the same group of genera as *Menippus*, have been digitally illustrated (Perkins 2005), in most cases from dorsal, lateral, anterior and ventral aspect. It is therefore possible to make some taxonomic decisions without examination of original material, with the caveat that the illustrated material is syntypic (Jacoby did not nominate holotypes and lectotypes have not been designated). *Diorhabda yulensis* Jacoby is transferred to *Menippus* (**comb. nov.**). This species is redescribed below, as it is recognised from Australia for the first time. The following non-Australian species can confidently be placed in *Menippus*: *M. inconspicua* (Jacoby) **comb. nov.** (from *Diorhabda* Weise; Tenimbar Islands); *M. laterimaculata* (Jacoby) **comb. nov.** (from *Galerucella* Crotch; New Guinea); *M. marginipennis* (Jacoby) **comb. nov.** (from *Galerucella*; Halmahera). This action results in *Diorhabda* being excluded from east of the Wallace Line, restricting it to eastern Europe, north Africa, central Asia and China (Wilcox 1971). *Diorhabda brevicornis* Jacoby (Burma) was placed in *Menippus* by Medvedev (2001); the type photographs (Perkins 2005) do not provide enough information to support or reject this decision. The following species described by Jacoby in various other genera similar to *Menippus* and illustrated by Perkins (2005) can certainly be excluded from *Menippus*: *Galerosastra sumatrana* (Jacoby) (Sumatra) and *Galerucella hageni* Jacoby (Sumatra) are similar to *Pyrrhalta*, if not belonging to that genus; *Galerotella simplicollis* (Jacoby) (now *G. viridis* (Jacoby); South India) differs from *Menippus* by the gradually contracted epipleura, but is otherwise remarkably similar (see also Kimoto 2003).

A revised checklist of *Menippus* species is appended (Table 1).

**Distribution and biology.** With the above decisions and the revision of Australian species below, *Menippus* includes 16 described species: from mainland southern Asia (two species: Kimoto 1989; Medvedev 2001), the south-east Asian archipelago (six species: Wilcox 1971; Kimoto 1989, 1990; Mohamedsaid 1999), New Guinea (three species: Wilcox 1971) and Australia (six species, one shared with New Guinea). Specimens of three additional species have been

**Table 1** Checklist of *Menippus* species

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<i>Menippus</i> Clark 1864: 257 (type species: <i>Menippus cynicus</i> Clark 1864)
<i>aneipennis</i> Weise 1892: 404 ( <i>Menippus</i> : Celebes)
<i>brevicornis</i> Jacoby 1889: 214 ( <i>Diorhabda</i> ; Burma); Medvedev 2001: 609 ( <i>Menippus</i> )
<i>cervinus</i> Hope 1831: 29 ( <i>Galleruca</i> ; India); Weise 1924: 84 ( <i>Menippus</i> ) = <i>canellinus</i> Fairmaire 1889: 374 ( <i>Menippus</i> ; Vietnam); Kimoto 1989: 13 (synonymy)
<i>cynicus</i> Clark 1864: 257 ( <i>Menippus</i> ; Port Dennison)
<i>darcyi</i> Reid & Nally (this work)
<i>ewani</i> Reid & Nally (this work)
<i>fugitivus</i> Lea 1926: 83 ( <i>Adimonia</i> ); Wilcox 1971: 61 ( <i>Menippus</i> )
<i>inconspicua</i> Jacoby 1894a: 307 ( <i>Diorhabda</i> ; Tanimbar) <b>comb. nov.</b>
<i>laterimaculata</i> Jacoby 1886: 105 ( <i>Galerucella</i> ; New Guinea) <b>comb. nov.</b>
<i>marginipennis</i> Jacoby 1894a: 306 ( <i>Galerucella</i> ; Halmahera) <b>comb. nov.</b>
<i>metallicus</i> Baly 1886: 37 ( <i>Menippus</i> ; Celebes)
<i>nigrocoeruleus</i> Jacoby 1894b: 192 ( <i>Menippus</i> ; Philippines)
<i>philippinensis</i> Jacoby 1894b: 192 ( <i>Menippus</i> ; Philippines)
<i>sufi</i> Reid & Nally (this work)
<i>viridis</i> Duvivier 1884: 315 ( <i>Menippus</i> ; Philippines)
<i>yulensis</i> Jacoby 1886: 107 ( <i>Diorhabda</i> ; Yule Island) <b>comb. nov.</b>

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from New Guinea (in collections AMS & GUB), probably undescribed.

At least three of the Australian species of *Menippus* feed on leaves of *Celtis* (Cannabaceae; Stevens 2005), which includes both native and exotic rainforest trees with wide distribution on the eastern and northern coasts (Hnatiuk 1990). The geographical ranges of the *Menippus* species without host information also fit the ranges of *Celtis* species in Australia (Hnatiuk 1990). *Celtis* is also a host for some species of *Diorhabda* in Asia (Maulik 1936). Species of other galerucine genera which appear to be related to *Menippus* (all subtribe Galerucina) feed on related families in the Rosales, as defined by Stevens (2005): Moraceae: *Ficus* (*Poneridia*); Rosaceae: *Crataegus* (*Lochmaea*), *Prunus* (*Tricholochmaea*), *Spiraea* (*Tricholochmaea*), *Filipendula* (*Galerucella*); Ulmaceae: *Ulmus* (*Pyrrhalta*); Urticaceae: *Cecropia* (*Coelomera*); *Dendrocnide* (*Hoplostines*) (Jolivet & Hawkeswood 1995; Clark *et al.* 2004). It is tempting to suggest therefore a coevolutionary history of the two groups, but there are several species in these beetle genera that do not feed on Rosales, e.g. *Poneridia macdonaldi* (Lea) (Loranthaceae), *Pyrrhalta viburni* (Paykull) (Caprifoliaceae), *Tricholochmaea* species (Ericaceae, Salicaceae) (Lea 1895; Clark *et al.* 2004). The wide range of hosts shown by some of these genera indicates that species of *Menippus* for which hosts are unknown may feed on something other than *Celtis*.

The larvae of two species of *Menippus* have been collected. These are typical of externally feeding galerucines (Boving & Craighead 1931; Reid 2000), with the following features: one stemma on each side of head; one-segmented antenna with large basiconic sensillum at apex; palmately toothed mandibles; two-segmented labial palp; large paronychial appendices on tibiae; abdomen without either ambulatory ampullae or pseudopoda but anus ventral and surrounded by a sclerotised pad. In both species there is a pair of prominent lateral lobes on

meso- and metathorax and abdominal segments 1–8, just below the spiracles, paired glands are absent, and abdominal segment 9 is flattened dorsally. The larva of *M. darcyi* Reid & Nally has dark green lateral stripes whereas that of *M. cynicus* is entirely dark green dorsally.

### Key to Australian species of *Menippus* Clark

- 1 Length 8.5–11.5 mm; strongly arched, without reflexed lateral elytral margins (Fig. 1), combined elytral height at least a third elytral length; elytra without ridge at lateral margin; prosternal process strongly convex between coxae; apex of mesosternal process abruptly raised (procoxal cavities almost closed; Qld)..... *cynicus* Clark
- Length 4.5–8.5 mm; more depressed, with reflexed lateral elytral margins (Figs 2–6), combined elytral height much less than a third elytral length; elytra with ridge along basal half of lateral margin; prosternal process flat, not raised between coxae; mesosternal process flat..... 2
- 2(1) Procoxal cavities closed (Fig. 12); scutellum entirely black (length 5–8 mm; postantennal tubercles distinct; pronotum as strongly punctured as elytra and vertex; apex of penis with short asymmetric lobe; Western Australian, NT, N Qld)..... *yulensis* (Jacoby)
- Procoxal cavities open, gap at least 0.25× width coxal cavity (Figs 8–11); at least apical half of scutellum pale brown or orange..... 3
- 3(2) Larger, length 7–8.5 mm; pronotum strongly and densely punctured throughout, discal punctures separated by one or less diameters (Figs 3,5); deep groove along posterior margin of postantennal tubercles, tubercles distinct; male last ventrite with shallow apical excavation, depth less than 0.3× length last ventrite (Figs 15,17)..... 4
- Smaller, length 4.5–5.5 mm; pronotum finely and relatively sparsely punctured on disc, large punctures, if present, separated by 2–3 puncture diameters (Figs 2,4); posterior margin of postantennal tubercles not grooved, tubercles poorly differentiated; male last ventrite deeply excavate, depth at least 0.5× length last ventrite (Figs 14,16)..... 5
- 4(3) Pronotal and elytral punctures similarly sized, with flat shining interspaces (Fig. 3); elytra dark brown, contrasting with orange-brown scutellum; middle and apical antennomeres with dark apices; apex of penis mucronate (Fig. 31) (N Qld)..... *ewani* sp. nov.
- Elytral punctures much smaller and denser than pronotal, without flat shining interspaces (Fig. 5); elytra and scutellum pale brown; middle antennomeres mostly dark, apical mostly pale; apex of penis not mucronate (Fig. 32) (NT)..... *sufi* sp. nov.
- 5(3) Apical lobe of penis longer, about width of penis (Fig. 30); dark areas of antennomeres brown; middle of pronotal disc without large punctures; scutellum entirely pale or base brown; apex female sternite 8

with deeper excision (Fig. 40) and spermatheca larger with narrower, shorter apex (Fig. 51) (Lord Howe Island)..... *fugitivus* (Lea)

– Apical lobe of penis shorter, about half width of penis (Figs 27–29); dark areas of antennomeres dark brown or black; middle of pronotal disc with scattered large punctures; basal half of scutellum black; apex female sternite 8 almost truncate or shallowly emarginate (Figs 36,37) and spermatheca smaller with broader, longer apex (Figs 48,49) (coastal NSW and Qld)..... *darcyi* sp. nov.

## SPECIES DESCRIPTIONS

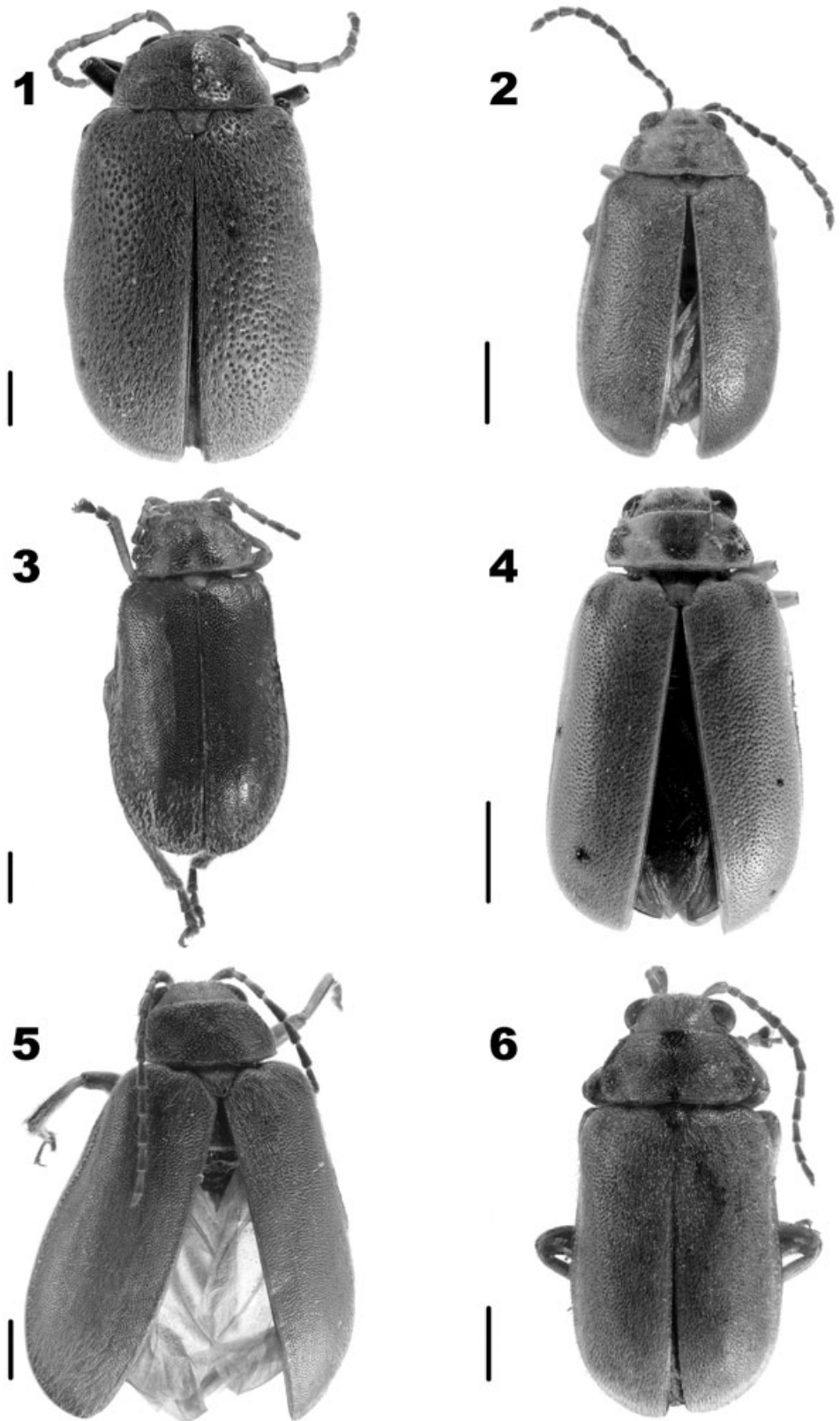
### *Menippus cynicus* Clark (Figs 1,7,13,19,26,35,41,47,53)

*Menippus cynicus* Clark 1864: 257; Wilcox 1971: 61.

**Material examined. Queensland:** 2/no data (AMS, QMB); 1/Brisbane, i.1960, J.K. (ANIC); 1, ditto, *Celtis sinensis*, i.1997, G. Monteith (QMB); 1/Bundaberg, 30.ix.1928 (QMB); 1/Burleigh, ii.1941, H. Jarvis (QDPI); 1/Deception Bay, xi.1946, A.M. (QDPI); 15/Gayndah, *C. sinensis*, 27.x.1948, R.C.C. (QDPI); 1/Kuranda, F. P. Dodd (SAM); 2/Mackay (SAM); 3/Newmarket, *C. sinensis*, i.1997 (QMB); 2/Palm Island WAT, Summerville, 23–30.v.1925 (QDPI); 1, ditto, v.1926 (QDPI); 1/Port Denison, Masters (AMS); 1/Shiptons Flat, 15.47S 145.14E, malaise trap, 16–18.v.1981, A. Calder (ANIC); 6/St Lucia, *C. sinensis*, 10.xii.1999, G. Monteith (AMS, QMB); 1/Weipa, 3–5.ii.1976, G. B. Monteith (QMB).

**Description (Male). Length:** 8.5–10.0 mm.

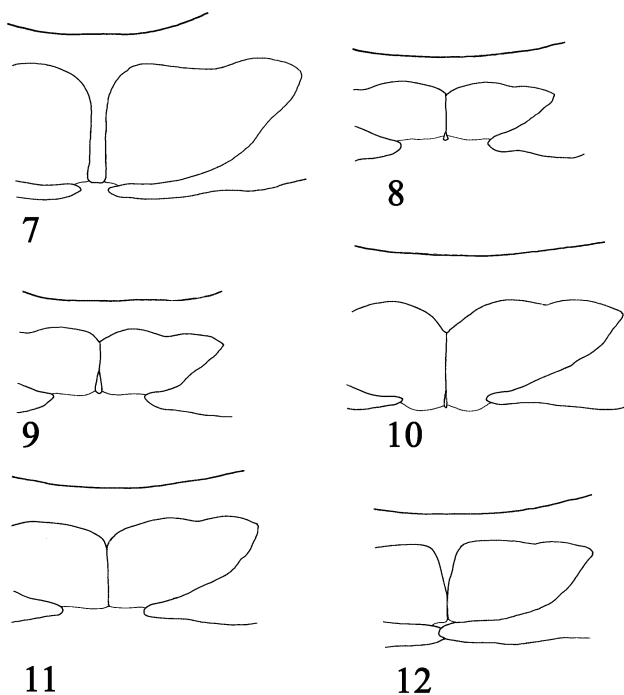
**Colour:** darkest specimens: head (with appendages) and pronotum reddish-brown, with poorly defined black areas on pronotal disc and slightly darkened apical antennomeres; elytra brown with darkened sides; venter mostly black, prothorax, mesoventrite and pair of spots on last ventrite reddish-brown; legs black; palest specimens: entirely reddish-brown, except femoral apices, tibiae & tarsi black. **Sculpture:** dorsum with additional sparsely scattered short erect setae on elytra; head, pronotum and elytra with large, moderately dense punctures, separated by 1–2 puncture diameters, size increasing from head to elytra, diameters on latter approximately equal to width of first antennomere at narrowest point; upper surface also with dense minute punctures, therefore dull despite absence of microreticulation; outer faces of tibiae setose. **Head:** median ridge narrow, terminating in an acute point, *c.* 60°, defined by deep grooves of anterior borders of postantennal tubercles; postantennal tubercles flat and poorly defined, posterior and lateral margins obliterated, anterior deeply grooved; eyes separated by 2–2.2× eye-widths; antennae inserted 1.2 socket-diameters apart, 0.3 socket-diameters from eyes (gap deeply pitted); antennae short, reaching mid-point of body if reflexed, all antennomeres elongate, relative lengths 1 = 4 = 11 > 3 = 6 = 7 = 8 = 9 = 10 > 5 > 2, length first *c.* 3× width, second short, 0.4× first, length *c.* 1.5× width, third expanded to concave apex, length *c.* 2× width; apex



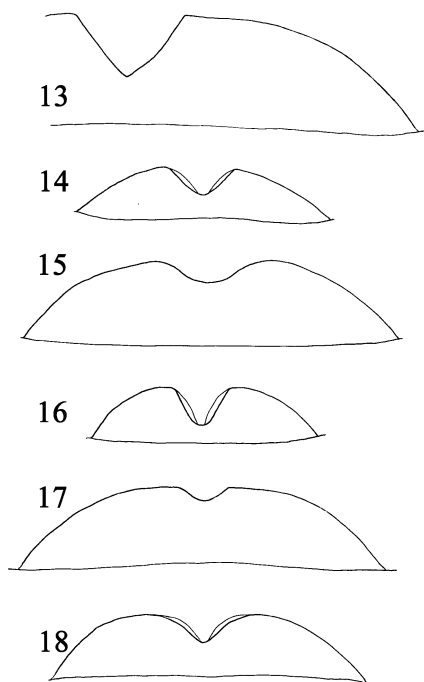
**Figs 1–6.** Dorsum of *Menippus* species: (1) *M. cynicus* Clark; (2) *M. darcyi* sp. n.; (3) *M. ewani* sp. n.; (4) *M. fugitivus* (Lea); (5) *M. sufi* sp. n.; (6) *M. yulensis* (Jacoby). Scale bar = 1 mm.

labrum almost truncate. **Thorax** (Figs 1,7): pronotum broadest at base and/or middle, with finely raised borders at lateral but not anterior or posterior margins; pronotal disc with pair of deep circular depressions and narrow median longitudinal

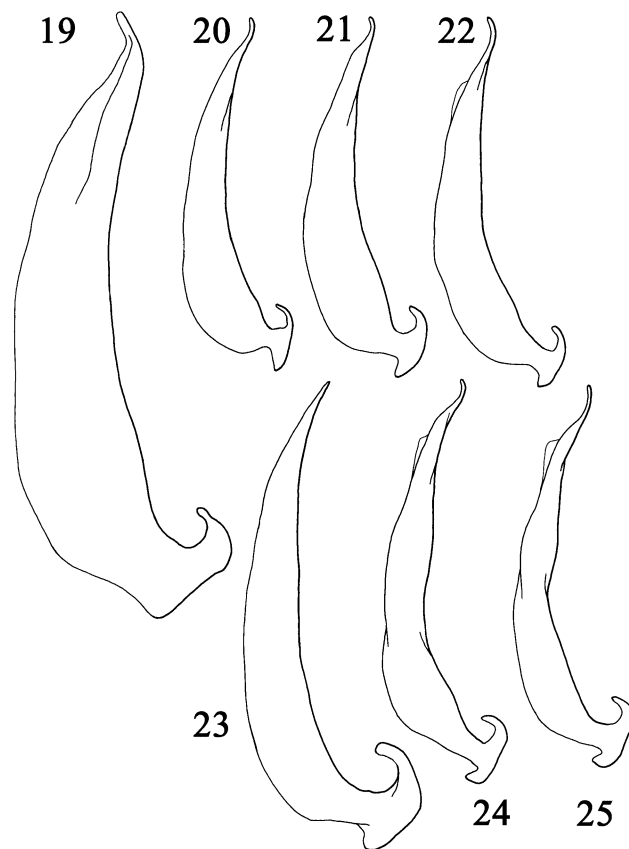
groove, also irregular depressions near lateral margins; lateral margins sinuate, hind margin slightly medially concave; prosternal process reduced to a narrow convex ridge between coxae, parallel-sided from base to apex; procoxal cavities



**Figs 7–12.** Prothoracic venter of *Menippus* species: (7) *M. cynicus* Clark; (8) *M. darcyi* sp. n.; (9) *M. fugitivus* (Lea); (10) *M. sufi* sp. n.; (11) *M. ewani* sp. n.; (12) *M. yulensis* (Jacoby). Drawn to scale.



**Figs 13–18.** Apex male sternite 7 of *Menippus* species: (13) *M. cynicus* Clark; (14) *M. darcyi* sp. n.; (15) *M. ewani* sp. n.; (16) *M. fugitivus* (Lea); (17) *M. sufi* sp. n.; (18) *M. yulensis* (Jacoby). Drawn to scale.

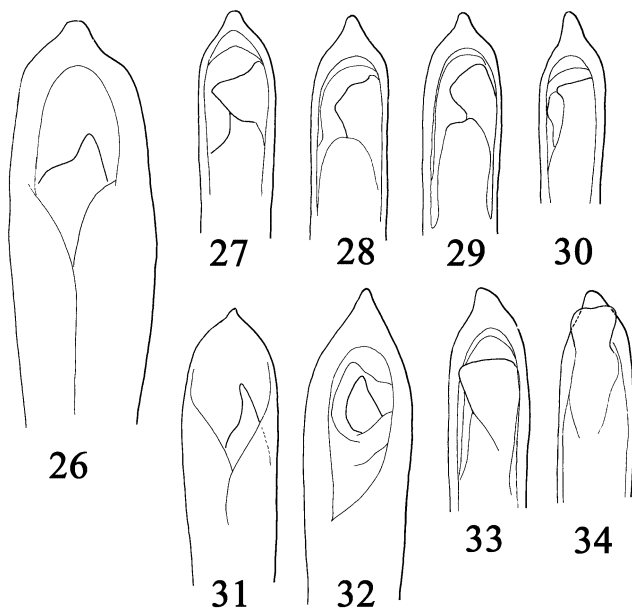


**Figs 19–25.** Lateral of penis of *Menippus* species: (19) *M. cynicus* Clark; (20) *M. darcyi* sp. n., North West Islet; (21) *M. darcyi* sp. n., Grays Point; (22) *M. fugitivus* (Lea); (23) *M. sufi* sp. n.; (24) *M. yulensis* (Jacoby), Katherine; (25) *M. yulensis* (Jacoby), Lizard Island. Drawn to scale.

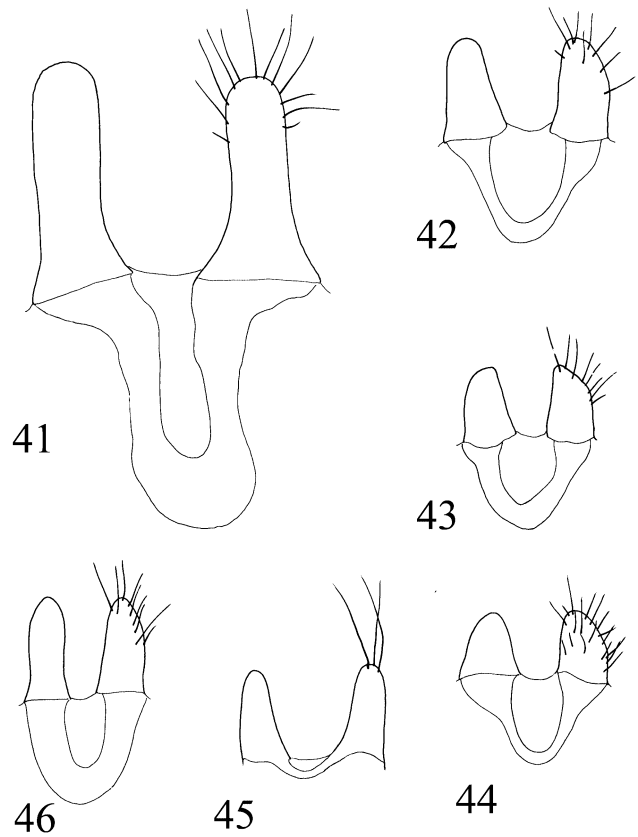
closed or almost closed, long thin hypomeral lobes reaching or almost reaching apex of prosternal process; scutellum trapezoid, apex concave; elytra in combination strongly and evenly convex in cross-section, elytral height at least a third elytral length, without explanate margins and without ridge along lateral margins; apex of mesosternal process abruptly raised; tibial external face with slight median and lateral ridges; length hind tarsus  $c. 0.75 \times$  length hind tibia. **Abdomen** (Figs 13,19,26): apex of last ventrite with a V-shaped excision; tegmen with basal hook; penis in lateral view with thin abruptly curved tip, in dorsal view mucronate with blunt tip; endophallic sac with short triangular projection.

**Female** (Figs 35,41,47): as male, except: larger, length 10.0–11.5 mm; eyes slightly smaller, antennae slightly shorter; apex of last ventrite with shallow V-shaped excision; sternite 8 with deeply emarginate apex and long spiculum at base; vaginal palpi slightly flattened, setose at apices only; spermathecal receptaculum with large globular base, internally spirally grooved, and broad curved apex, spermathecal duct slightly projecting into receptaculum.

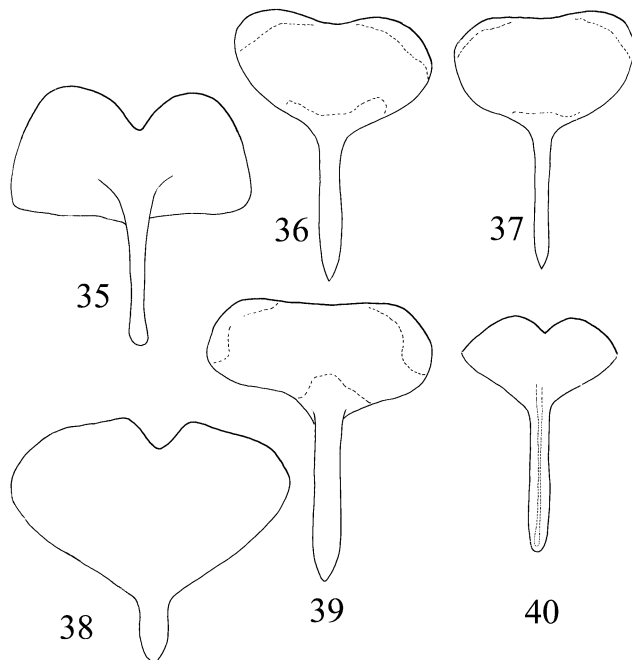
**Distribution and biology.** This species is widespread in coastal and near-coastal Qld, from Cape York Peninsula to



**Figs 26–34.** Ventral of apex of penis of *Menippus* species: (26) *M. cynicus* Clark; (27) *M. darcyi* sp. n., Grays Point; (28) *M. darcyi* sp. n., Yeppoon; (29) *M. darcyi* sp. n., Mission Beach; (30) *M. fugitivus* (Lea); (31) *M. ewani* sp. n.; (32) *M. sufi* sp. n.; (33) *M. yulensis* (Jacoby), Katherine; (34) *M. yulensis* (Jacoby), Lizard Island. Drawn to scale.



**Figs 41–46.** Vaginal palpi of *Menippus* species: (41) *M. cynicus* Clark; (42) *M. darcyi* sp. n., Grays Point; (43) *M. darcyi* sp. n., Mission Beach; (44) *M. fugitivus* (Lea); (45) *M. ewani* sp. n.; (46) *M. yulensis* (Jacoby). Drawn to scale, only large setae shown, on one palp.



**Figs 35–40.** Sternite 8 of female *Menippus* species: (35) *M. cynicus* Clark; (36) *M. darcyi* sp. n., Mission Beach; (37) *M. darcyi* sp. n., Grays Point; (38) *M. ewani* sp. n.; (39) *M. yulensis* (Jacoby); (40) *M. fugitivus* (Lea). Drawn to scale, except Figure 35 reduced by 50%.

Brisbane (Fig. 53). It was rarely collected in the past but has recently occurred commonly in suburban Brisbane, where it feeds on an introduced shade-tree, *C. sinensis* (G Monteith pers. comm. 2005), which is now considered a serious weed (Ensbey 2002). *Celtis sinensis* is from eastern Asia and the native host of *M. cynicus* is unknown. The larva is briefly described above, under the generic description.

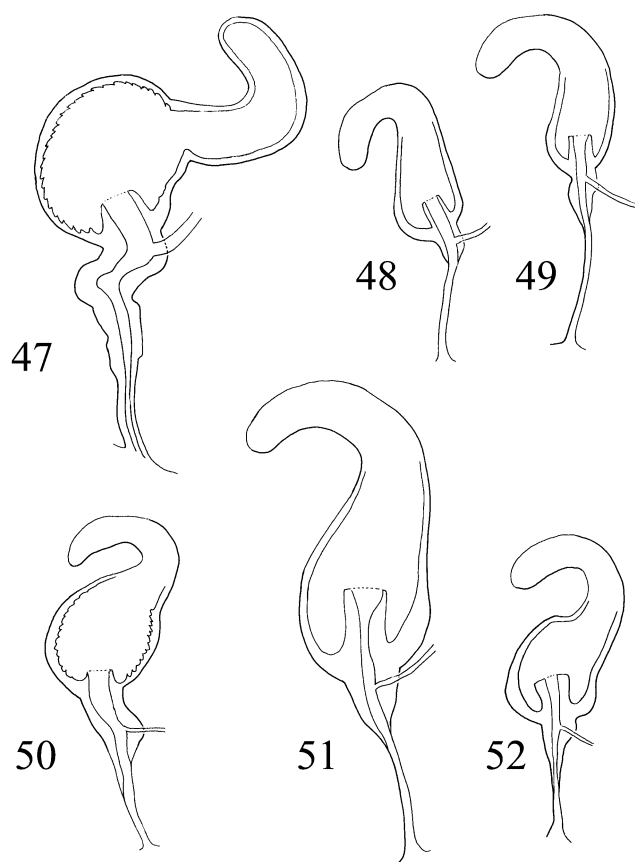
The living adult is dark green.

**Notes.** Clark's type material of *M. cynicus* should be in the collection of the BMNH (Horn & Kahle 1937), but is missing. The identity of this widespread species is clear from the original description, the type locality Port Denison is at the centre of its range, and the concept of this species has been stable for almost 150 years. There is therefore no requirement to designate a neotype (Article 75, International Commission on Zoological Nomenclature 1999).

***Menippus darcyi* sp. nov.**

**(Figs 2, 8, 14, 20, 21, 27–29, 36, 37, 42, 43, 48, 49, 54)**

**Material examined.** **Types:** Holotype: male/Grays Point, on *C. paniculata*, i.2000, S. Nally (AMS); Paratypes: **New South Wales:** 9/Grays Point Reserve, on *C. paniculata*, litt. rf, 9.ii.1998, B. Graham (AMS, ANIC); 5/ditto except i.2000,



**Figs 47–52.** Spermathecae of *Menippus* species: (47) *M. cynicus* Clark; (48) *M. darcyi* sp. n., Mission Beach; (49) *M. darcyi* sp. n., Grays Point; (50) *M. ewani* sp. n.; (51) *M. fugitivus* (Lea); (52) *M. yulensis* (Jacoby). Drawn to scale.

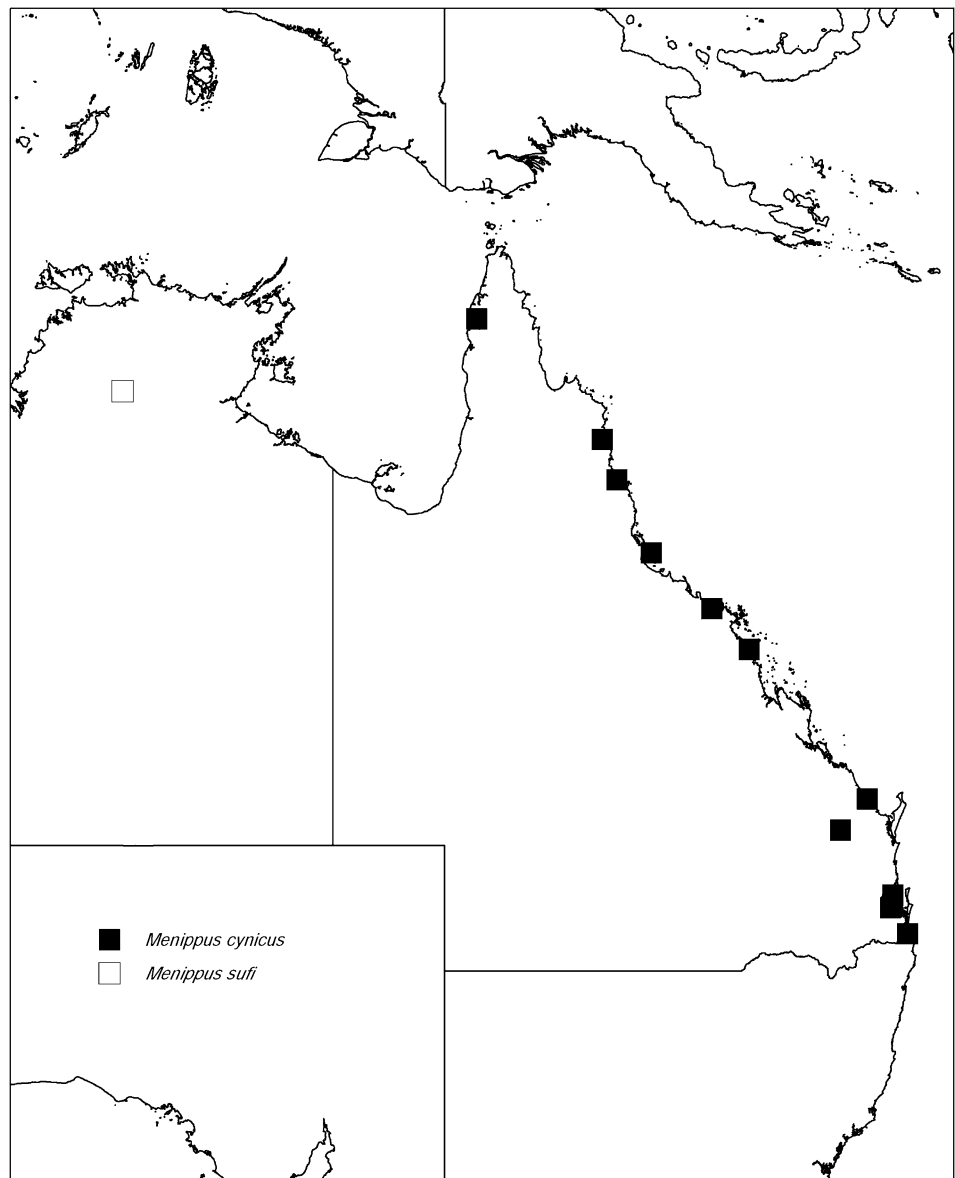
S. Nally (AMS); 3, ditto except 9.ii.2002, C. Reid (AMS); 1/Harrington, E. Taree, 24.iii.1993, S. G. Watkins (ANIC); 1/Iluka, Clarence R., 18.i.1971, D. K. McAlpine (AMS); 2/Manning Pt, E of Taree, ex littoral rainforest, on foliage, 8.iv.1989, G. Williams (AMS); **Queensland:** 1/N. Queensland Blackburn coll. [syntype of *M. fugitivus* Lea] (SAM); 1/Bamaga, xii.1983, J. H. Sedlacek (QMB); 2/Barron Falls, Kuranda, 12.xii.1964, J. G. Brooks (ANIC); 1/Barron Gorge lookout, Kuranda, 27.i.1989, A. Sundholm & J. Bugeja (AMS); 2/west slope Bluff Range, via Biggenden, by sweeping, 22–24.viii.1975, H. Frauca (ANIC); 1/Bundaberg (SAM); 1/Cairns [syntype of *M. fugitivus* Lea] (SAM); 1/Cairns (QMB); 2/ditto, ii.1950, J. G. Brooks (ANIC); 1/Cairns dist. E. Allen/cotype [syntype of *M. fugitivus* Lea] (BMNH); 1/ditto, attracted to light, A. M. Lea (SAM); 3/Cannonvale, 1.iv.1967, M. S. Upton (ANIC); 1/Cape Hillsborough, via Mackay, 15–16.iv.1979, G. B. Monteith (QMB); 1/Cape Tribulation, 16:07:30S 145:26:30E, canopy light trap C1, 22.iii.2000, R. L. Kitching (GUB); 1/12mi S Coen, Holroyd R., 29.xi.1974, M. S. Moulds (AMS); 1/Heron Island, Great Barrier Reef, 10.xi.1967, H. Heatwole (AMS); 1/14 km NW Hope Vale Mission, 15.16S 144.59E, 8–10.x.1980, T. Weir (ANIC); 1/Hutchison Ck, nr Daintree R., mv lamp, 8.i.1967, D. K. McAlpine & G.

Holloway (AMS); 1/Kuranda, x.1964, J. G. Brooks (ANIC); 2, ditto, 7.xi.1964 (ANIC); 1, ditto, 14.xi.1964 (ANIC); 1/Kuranda Ra SF, mv lamp, 10.i.1967, D. K. McAlpine, G. A. Holloway (AMS); 2/Lizard Is., NNE Cooktown, 16.xi.1974, M. S. & B. J. Moulds (AMS); 2, ditto, except 18.xi.1974 (AMS); 2, ditto, except 19.xi.1974 (AMS); 1/Mission Beach, 31.viii.1990, G. O'Reilly (AMS); 4, ditto except 11.ix.1990 (AMS); 1, ditto, except 12.ix.1990 (AMS); 2, ditto except 16.ix.1990 (AMS); 4, ditto except 10.ix.1991 (AMS); 3, ditto except 11.ix.1991 (AMS); 2, ditto except 17.ix.1991 (AMS); 7, ditto, except at light, 27.ix.1991 (AMS); 1/Mount Gipps, 23.iv.1930, H. Hacker (QMB); 2/Nanango dist., 26.iii.1928, H. Hacker (QMB); 1/North West Islet, Capricornia Group, xi–xii.1925, G. P. Whitley (AMS); 1, ditto, except i.1932, F. A. McNeill (AMS); 1/7.8mi NW Paluma, 2600', 5.xi.1973, J. G. Brooks (SAM); 1/Port Denison, Masters/Adimonia *fugitiva* Lea cotype Queensland/ex Macleay Museum/(ANIC); 1/32 km S Ravenshoe, 17.38S 145.29E, 13.ii.1966, K. Hyde (ANIC); 1/5 km NW Rounded Hill, 15.17S 145.10E, 7.x.1980, T. Weir (ANIC); 1/Somerset (SAM); 1/Stradbroke Id, 23.iii.1924, H. Hacker (QMB); 2/The Caves, 16mi N Rockhampton, 3.iv.1967, M. S. Upton (ANIC); 1/Tin Creek, x.1950, G. Brooks (ANIC); 1/Yeppoon, x.1924, H. J. Carter (ANIC); 2, ditto except 14–18.xii.1964, I. F. B. Common & M. S. Upton (ANIC).

**Description (Male).** Length: 4.5–5 mm.

**Colour:** almost entirely pale brown: darkest specimens with base of head, middle and sides of pronotal disc, apices of antennomeres, inner margin of foretibiae, base of scutellum and metaventrite black; palest specimens with base of head, apices of apical antennomeres, the three pronotal spots and base of scutellum dark brown. **Sculpture:** outer faces of tibiae with glabrous median strip; frons and vertex densely punctured and microsculptured, dull; pronotum with dense (coalescent) large punctures at sides and in depressions, but smooth and mostly minutely punctured in middle (large punctures separated by 1–3 diameters); elytra densely punctured, interspaces < puncture diameters, punctures tending to coalesce transversely on disc, and microsculptured, dull. **Head:** median ridge terminating in almost 90° point defined by shallow grooves of anterior margins of postantennal tubercles; postantennal tubercles slightly elevated, entire, with truncate basal margins; eyes separated by 2× eye-widths; antennae 1.2 socket-diameters apart, almost touching eyes; antennae reaching midpoint of body if reflexed, relative lengths 1 = 4 = 5 = 6 > 7 = 8 = 9 = 10 = 11 > 3 > 2, length first antennomere c. 2× width, second short, 0.6× first, length c. 1.3× width, third expanded to obliquely truncate apex, length c. 1.8× width; apex labrum strongly emarginate; **Thorax** (Figs 2,8): pronotum broadest at middle, with finely raised borders on all margins; pronotum with depressions medially, laterally and marginally, lateral depressions transverse; lateral margins evenly convex, hind margin slightly medially concave; prosternal process reduced to a sharp keel between coxae, not convex; procoxal cavities open, gap from triangular hypomeral lobes to apex of





**Fig. 53.** Distribution map of *Menippus* species: (■) *M. cynicus* Clark; (□) *M. sufi* sp. n.

prosternal process about  $0.3\times$  coxal cavity width; scutellum trapezoid, apex truncate; elytra in combination flat at middle, elytral height less than a quarter elytral length, with narrow explanate margins and swollen ridge above epipleuron in basal half; mesosternal process flat; entire tibial external face with slight median and lateral ridges; length hind tarsus about  $0.75\times$  length hind tibia. **Abdomen** (Figs 14,20,21,27–29): apex of last ventrite with a U-shaped excision; tegmen without basal hook; penis with thin curved tip in lateral view, apex mucronate in dorsal view, narrowed tip usually sharp and slightly asymmetric and length about half width of penis; endophallic sclerite with laterally lobed apex.

**Female** (Figs 36,37,42,43,48,49): as male, except: larger, length 5–5.5 mm; eyes slightly smaller, antennae slightly shorter; apex of last ventrite with shallow U-shaped excision; sternite 8 with feebly emarginate apex and long spiculum at base; vaginal palpi approximately triangular, broad, flat, setose

in apical half; spermathecal receptaculum with feebly swollen base, internally smooth, apex broad and curved, spermathecal duct strongly projecting into receptaculum.

**Distribution and biology.** *Menippus darcyi* is widespread on the east coast of Australia, from Sutherland to Bamaga, including offshore islands (Fig. 54). It occurs as far inland as ‘Nanango district’, about 120 km from the coast. This distribution is similar to the known hostplant, *C. paniculata*, common in rainforest throughout the east coast of Qld from sea-level to 800 m (Hyland & Whiffin 1993) and present in littoral rainforest as far south as Kiama, NSW (Floyd 1989; Hnatiuk 1990). Adults are active from August to April and commonly come to light.

Adults and larvae are abundant at Grays Point, Sutherland, where they cause extensive damage to the small population of *Celtis*, removing new shoots and scalloping the edges of many leaves. Beetle and hostplant are at or near the southernmost

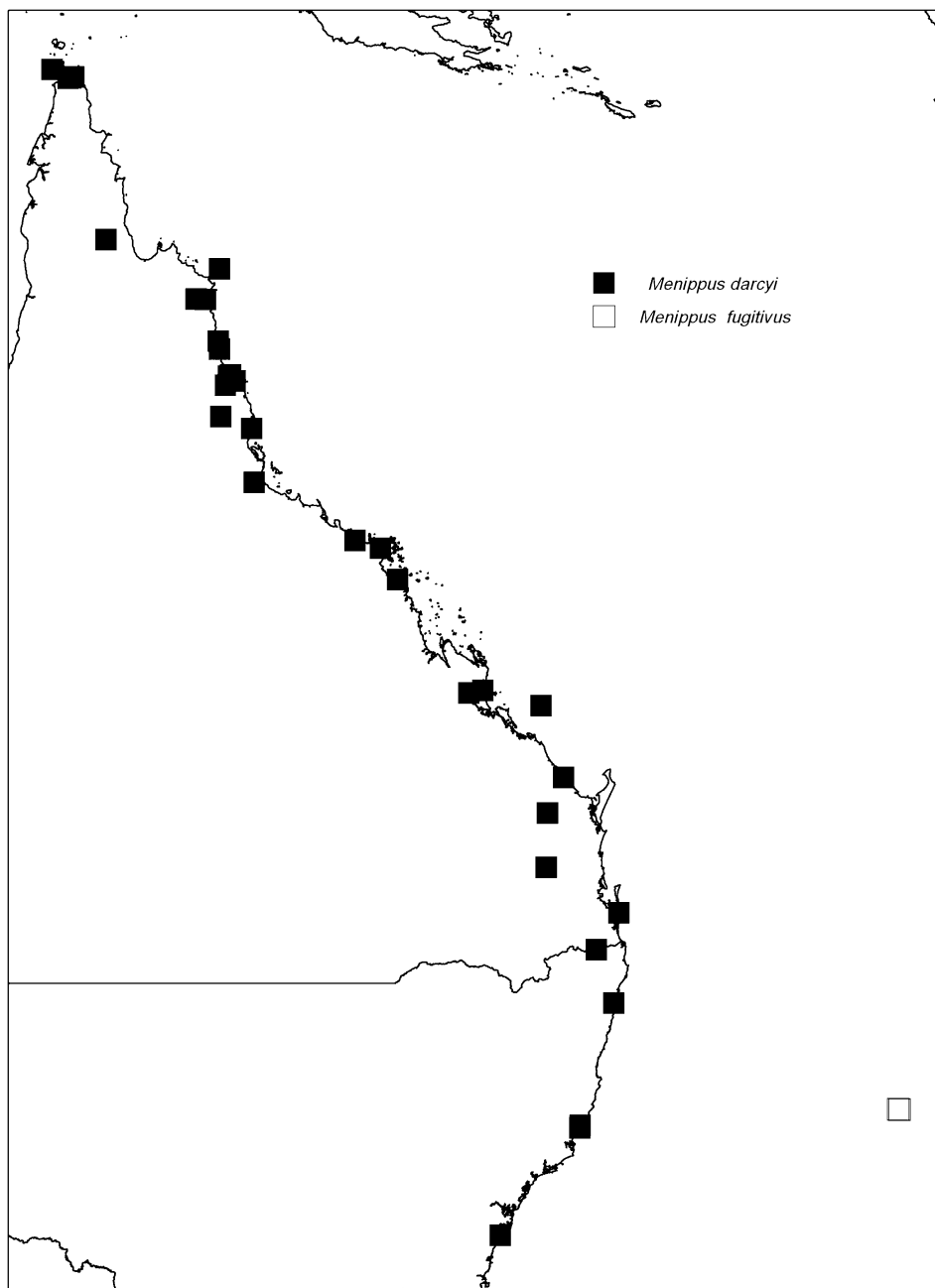


Fig. 54. Distribution map of *Menippus* species: (■) *M. darcyi* sp. n.; (□) *M. fugitivus* (Lea).

limit of their distribution at Gray's Point. This isolated population of *M. darcyi* has been listed as endangered under the threatened species legislation of NSW under the name *M. fugitivus* (see Anonymous 2006).

**Taxonomic notes.** Structure of the male and female genitalia is consistent throughout its range (Figs 20,21,27–29,36,37,42,43,48,49). The great similarity of this species to *M. fugitivus* suggests that these are sister-taxa. This is not surprising as *M. darcyi* is the nearest mainland species to the isolated island of Lord Howe.

The living adult shows quite different colouration from preserved specimens: elytra bright green; pale areas of head and pronotum yellow; legs pale yellow.

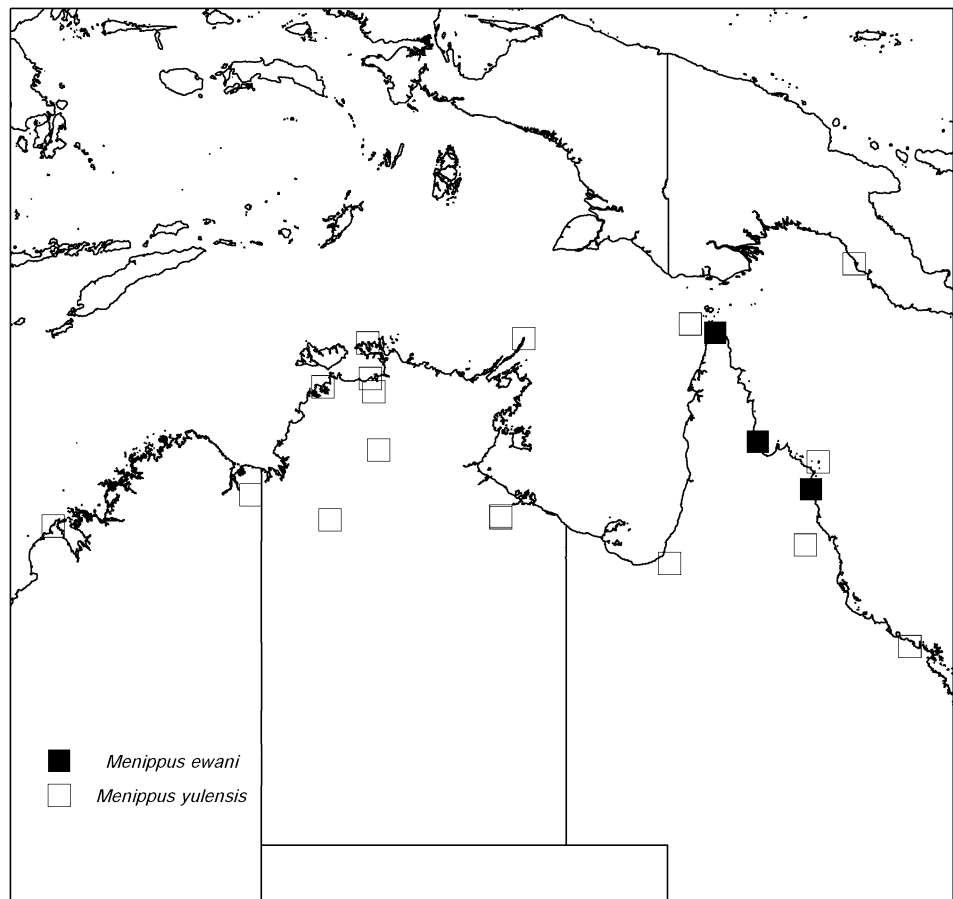
This species is named for Darcy, son of SCN.

***Menippus ewani* sp. nov.**  
(Figs 3,11,15,31,38,45,50,55)

**Material examined.** Holotype: male/Cooktown/(QMB); Paratypes: **Queensland:** male, female/Bamaga, xii.1983, J. H. Sedlacek (QMB); male, female/Stewart R., i.–ii.1927, Hale & Tindale (SAM).

**Description (Male).** Length: 7–8.5 mm.

**Colour:** orange or brownish-orange, with dark brown base of head, sides and middle of pronotum, elytra, apices of apical antennomeres, tarsi and apical two-thirds of outer face of tibiae; the mid pronotal markings broad but diffuse, with paler midline. Sculpture: outer faces of tibiae with glabrous median strip; frons and vertex densely punctured and microsculptured,



**Fig. 55.** Distribution map of *Menippus* species: (■) *M. ewani* sp. n.; (□) *M. yulensis* (Jacoby).

dull; pronotum with dense large punctures throughout, interspaces < puncture diameters, shining; elytra densely and strongly punctured (punctures similar to or slightly narrower than on pronotum), interspaces  $\leq$  puncture diameters, punctures slightly coalescent transversely on disc, and interspaces shining. Head: median ridge broad, terminating in *c.* 90° point defined by deep grooves of anterior margins of post-antennal tubercles; postantennal tubercles distinctly elevated, entire, with deep groove along convex basal margins; eyes separated by 2× eye-widths; antennae 1.6 socket-diameters apart, 0.3× socket-diameter from eyes; antennae reaching slightly beyond midpoint of body if reflexed, antennomere relative lengths 1 = 4 > 5 = 6 = 7 > 3 = 8 = 9 = 10 = 11 > 2, length first *c.* 2.5× width, second short, 0.4× first, length *c.* 1.3× width, third expanded to obliquely truncate apex, length *c.* 2× width; apex labrum truncate; **Thorax** (Figs 3,11): pronotum broadest at middle, with finely raised borders on all margins; pronotal disc with shallow depressions medially and laterally, without marginal depressions, lateral depressions almost circular; lateral margins evenly convex, hind margin slightly medially concave; prosternal process reduced to a sharp keel between coxae, not convex; procoxal cavities open, gap between apex of hypomeron and prosternal process approximately 0.3× coxal cavity width; scutellum with straight sides contracting to truncate or rounded apex;

elytra in combination flattened along midline in cross-section, elytral height less than a quarter elytral length, with narrow explanate margins and swollen ridge above epipleuron in basal half; mesosternal process flat; tibial external face with strong median and slight lateral ridges; length hind tarsus *c.* 0.7× length hind tibia. Abdomen (Figs 15,31): apex of last ventrite with a shallow concave excision; tegmen without basal hook; penis lateral shape unknown (teneral specimen dissected), apex mucronate in dorsal view, the narrowed tip slightly asymmetric and much less than 0.25× width of penis; apex of endophallic sclerite with narrow elongate lobe.

**Female** (Figs 38,45,50): as male, except: base of head not darkened; eyes slightly smaller and antennae slightly shorter; apex of last ventrite shallowly concave, almost truncate; sternite 8 with deeply excised apex and short spiculum at base; vaginal palpi narrow and elongate, slightly cylindrical, setose at apex; spermathecal receptaculum with strongly swollen base, internally spirally grooved, apex narrow and curved, spermathecal duct slightly projecting into receptaculum.

**Distribution and biology.** *Menippus ewani* is known from five specimens collected on the coast of the northern half of Cape York Peninsula, Qld, between Cooktown and Bamaga (Fig. 55). One of the Bamaga specimens, collected in December, is teneral. The biology is unknown.

**Notes on taxonomy.** *Menippus ewani* and *M. sufi* are similar and may be sister-taxa, but the diversity of species on nearby New Guinea is unknown.

This species is named for Ewan, son of CAMR.

***Menippus fugitivus* (Lea)**  
(Figs 4,9,16,22,30,40,44,51,54)

*Adimonia fugitiva* Lea 1926: 83.

*Menippus fugitivus*: Wilcox 1971: 61.

**Material examined. Types.** Holotype: female/A. *fugitiva* Lea Lord Howe I, type/*Adimonia fugitiva* Lea Lord Howe Is type I.4462/(SAM); Paratypes: (4): 1/Lord Howe I, A. M. Lea/K40613/*Adimonia fugitiva* Lea, Lord Howe I, cotype/(AMS); 1 m/LHI A. M. Lea/cotype/*Adimonia fugitiva* Lea Lord Howe Island, cotype (SAM); 1m1f/LHI A. M. Lea/[no type label but these must be part of parotypic series] (SAM).

**Other material. Lord Howe Island:** 1, no data (AMS); 1/26.xii.1921, A. Musgrave (AMS); 1/xii.1923, A. Musgrave & R. Baxter (AMS); 1/i.1928, E. LeG. Troughton (AMS); 2/Research Station, nr Stevens Reserve, at light, 7.xii.2000, C. Reid (AMS); 2, ditto, except on *Celtis*, 7.xii.2000, C. Reid (AMS); 1/Transit Hill, 23.ii.1971, C. N. Smithers (AMS).

**Description (Male). Length:** 4.5–5 mm.

**Colour:** almost entirely yellowish-brown: darkest specimens with base of head, middle and sides of pronotal disc, middle of femora, apices of foretibiae, base of scutellum and sides of abdominal ventrites black or blackish-brown, apices of antennomeres and elytra brown; palest specimens with base of head and lateral spots on pronotum dark brown, apices of apical antennomeres brown. **Sculpture:** outer faces of tibiae with glabrous median strip; frons and vertex densely punctured and microsculptured, dull; pronotum with dense (coalescent) large punctures at sides, but smooth and finely punctured in middle; elytra densely punctured, interspaces < puncture diameters, punctures tending to coalesce transversely on disc, and microsculptured, dull. **Head:** frontoclypeal median ridge, terminating in approximately 90° point defined by shallow grooves of anterior margins of postantennal tubercles; postantennal tubercles slightly elevated, entire, with truncate basal margins; eyes separated by 2× eye-widths; antennae 1.2 socket-diameters apart, almost touching eyes; antennae reaching midpoint of body if reflexed, relative lengths 1 = 4 > 5 = 6 = 7 = 11 > 3 = 8 = 9 = 10 > 2, length first antennomere *c.* 2× width, second short, 0.6× first, length *c.* 1.3× width, third expanded to obliquely truncate apex, length *c.* 2× width; apex labrum shallowly emarginate; **Thorax** (Figs 4,9): pronotum broadest at middle, with finely raised borders on all margins; pronotum with depressions medially, laterally and marginally, lateral depressions arcuate-transverse; lateral margins evenly convex, hind margin slightly medially concave; prosternal process reduced to a sharp keel between coxae, not convex; procoxal cavities open, gap from triangular hypomeral lobes to apex of prosternal process about 0.3× coxal cavity width; scutellum trapezoid, apex truncate; combined elytra in cross-section flat at middle, elytral height less than a quarter elytral length, with narrow explanate

margins and swollen ridge above epipleuron in basal half; mesosternal process flat; entire tibial external face with strong median and slight lateral ridges; length hind tarsus about 0.7× length hind tibia. **Abdomen** (Figs 16,22,30): apex of last ventrite with a U-shaped excision; tegmen without basal hook; penis with thin curved tip in lateral view, apex mucronate in dorsal view, long triangular tip blunt, feebly asymmetric and length about width of penis; endophallic sclerite with laterally lobed apex.

**Female** (Figs 40,44,51): as male, except: larger, length 5–5.5 mm; eyes slightly smaller, antennae slightly shorter; apex of last ventrite with shallow U-shaped excision; sternite 8 with distinctly emarginate apex and long spiculum at base; vaginal palpi approximately triangular, broad, flat, setose throughout; spermathecal receptaculum with distinctly swollen base, internally smooth, apex narrow and curved, spermathecal duct strongly projecting into receptaculum.

**Distribution and biology.** *Menippus fugitivus* is endemic to Lord Howe Island (Fig. 54), where it feeds on leaves of the endemic tree *Celtis conferta* ssp. *amblyphylla* (Muell.) Green (CAM Reid pers. obs. 2000), which primarily occurs in the lowlands (Green 1994). Adults are active from December to February. The species is attracted to light. The adult has been described as pale green when alive (Lea 1926) but living specimens seen by CAMR were similar to *M. darcy*, with elytra bright green, pale areas of head and pronotum yellow and legs pale yellow.

***Menippus sufi* sp. nov. (Figs 5,10,17,23,32,53)**

**Material examined.** Holotype: male/Tindal, NT, 14.31S 132.22E, 1–20.xii.1927, light trap, W. J. M. Vestjens (ANIC).

**Description (Male). Length:** 8 mm.

**Colour:** brown or yellowish-brown, with dark brown patches at sides of pronotum and sides of elytra near humeri, most of antennomeres 4–9, apices of femora, outer faces of tibiae, and tarsi, the pronotal markings broad but diffuse, paler towards middle. **Sculpture:** outer faces of tibiae with glabrous median strip; frons and vertex densely punctured and microsculptured, dull; pronotum with dense large punctures throughout, interspaces < puncture diameters, shining; elytra densely finely punctured (punctures much narrower than on pronotum), interspaces < puncture diameters, punctures usually coalescent transversely on disc, and interspaces shining. **Head:** median ridge terminating in *c.* 70° point defined by deep grooves of anterior margins of postantennal tubercles; postantennal tubercles distinctly elevated, entire, with deep groove along straight basal margins; eyes separated by 2× eye-widths; antennae 1.6 socket-diameters apart, 0.3× socket-diameter from eyes; antennae reaching slightly beyond midpoint of body if reflexed, antennomere relative lengths 1 = 4 > 3 = 5 = 6 = 7 = 8 = 9 = 10 = 11 > 2, length first *c.* 2.5× width, second short, 0.4× first, length *c.* 1.3× width, third expanded to obliquely truncate apex, length *c.* 2.5× width; apex labrum truncate; **Thorax** (Figs 5,10): pronotum broadest at middle with finely raised borders on all margins; pronotal disc with shallow depressions medially and

laterally, without obvious marginal depressions, lateral depressions almost circular; lateral margins evenly convex, hind margin truncate; prosternal process reduced to a sharp keel between coxae, not convex; procoxal cavities open, gap between apex of hypomeron and prosternal process approximately 0.25× coxal cavity width; scutellum with straight sides contracting to narrow rounded apex; elytra in combination flattened along midline in cross-section, elytral height less than a quarter elytral length, with narrow explanate margins and swollen ridge above epipleuron throughout length; mesosternal process flat; tibial external face with strong median and slight lateral ridges; length hind tarsus about 0.75× length hind tibia. **Abdomen** (Figs 17,23,32): apex of last ventrite with a shallow concave excision; tegmen without basal hook; penis with evenly contracted straight tip in lateral view, apex triangular in dorsal view; apex of endophallic sclerite with narrow elongate lobe.

**Female:** unknown.

**Distribution and biology.** *Menippus sufi* is known from a single specimen collected at light at Tindal, near Katherine, NT, in December (Fig. 53). The hostplant is unknown, but if it is *Celtis* the only species at this locality is *C. philippensis* (Hnatiuk 1990).

**Notes on taxonomy.** This species name is a noun in apposition, named for the mystical sufis, in counterpoint to the cynical *Menippus*.

***Menippus yulensis* (Jacoby)**  
(Figs 6,12,18,24,25,33,34,39,46,52,55)

*Diorhabda yulensis* Jacoby 1886: 107; Wilcox 1971: 65.

*Menippus yulensis* (Jacoby); **comb. nov.**

**Material examined. Types.** Lectotype (this designation): male/N. Guinea Yule Isld Albertis/Diorhabda yulensis Jac/1st Jacoby coll/Type 17934/(MCZ; Perkins 2005).

**Other material. Northern Territory:** 1/Black Point, Coburg Peninsula, 11.09S 132.09E, 15–23.ii.1977, T. A. Weir (ANIC); 1, ditto, except 30.i.1977, E. D. Edwards (ANIC); 1/33 km SW Borroloola, Caranbirini W.H., 16.16S 136.05E, 3.xi.1975, M. S. Upton (ANIC); 1/36 km SW Borroloola, 16.19S 136.05E, 4.xi.1975, M. S. Upton (ANIC); 1/Darwin (QMB); 1/Katherine NP, low level, 16.viii.1973, L. P. Kelsey (ANIC); 1/North Point, Kapalga, 19.vii.1979, G. Monteith (QMB); 1/Rimbija I., Wessel Is., 11.01S 136.45E, 3–14.ii.1977, Farrow & Dowse (ANIC); 1/8 km ENE Victoria River Downs, 11.viii.1973, L. P. Kelsey (ANIC); 3/West Alligator Mouth, 12.12S 132.13E, rainforest, 22–24.vii.1979, G. Monteith & D. Cook (QMB); **Queensland:** 1/Booby Island, Torres Strait, 10.36S 141.40E, 13.ii.1978, R. Lewis (ANIC); 2/Bowen, A. Simson (SAM); 1/Eureka Ck., 9 km SW Dimbulah, 20.xi.1981, J. Balderson (ANIC); 4/Lizard Is., NNE Cooktown, 15.xi.1974, M. S. & B. J. Moulds (AMS); 8, ditto, except 16.xi.1974 (AMS); 1, ditto, except 17.xi.1974 (AMS); 4, ditto, except 18.xi.1974 (AMS); 2, ditto, except 19.xi.1974 (AMS); 1/Normanton, 10 m, ii.1982 (QMB); **Western Australia:** 2/Kimberley Res. Sta., Kununurra, 5–8.vii.1973,

L. P. Kelsey (ANIC); 1/Martins Well, West Kimberley, 16.34S 122.51E, 28.iv.1977, D. H. Colless (ANIC).

**Description (Male). Length:** 5–7 mm.

**Colour:** almost entirely pale brown: darkest specimens with sides and narrow midline of pronotum, and scutellum black, apices of antennomeres dark brown; palest specimens with apices of apical antennomeres brown, scutellum and sides of pronotum dark brown. **Sculpture:** outer faces of tibiae with glabrous median strip; frons and vertex densely punctured and microsculptured, dull; pronotum with dense large punctures throughout, interspaces < puncture diameters; elytra densely punctured, interspaces < puncture diameters, punctures not or feebly coalescent transversely on disc, and interspaces microsculptured, dull. **Head:** median ridge terminating in c. 100° point defined by deep grooves of anterior margins of postantennal tubercles; postantennal tubercles distinctly elevated, entire, with deep groove along convex basal margins; eyes separated by 2× eye-widths; antennae c. 1.6 socket-diameters apart, 0.4× socket-diameters from eyes; antennae reaching slightly beyond midpoint of body if reflexed, antennomere relative lengths 1 = 4 = 5 > 6 = 7 > 3 = 8 = 9 = 10 = 11 > 2, length first c. 2.5× width, second short, 0.6× first, length c. 1.5× width, third expanded to obliquely truncate apex, length c. 2× width; apex labrum shallowly emarginate; **Thorax** (Figs 6,12): pronotum broadest at middle with finely raised borders on all margins; pronotum with shallow depressions medially, laterally and marginally, lateral depressions arcuate-transverse; lateral margins evenly convex, hind margin slightly medially concave; prosternal process reduced to a sharp keel between coxae, not convex; procoxal cavities closed by overlap of tips of hypomera behind apex of prosternal process; scutellum trapezoid, apex truncate; elytra in combination flattened along midline in cross-section, elytral height less than a quarter elytral length, with narrow explanate margins and swollen ridge above epipleuron in basal half; mesosternal process flat; tibial external face with strong median and slight lateral ridges; length hind tarsus about 0.75× length hind tibia. **Abdomen** (Figs 18,24,25,33,34): apex of last ventrite with a V-shaped excision; tegmen without basal hook; penis with thin curved tip in lateral view, apex triangular or slightly mucronate in dorsal view, narrowed tip slightly asymmetric; apex of endophallic sclerite broad, without lateral lobe.

**Female** (Figs 39,46,52): as male, except: slightly larger, length 6–8 mm; eyes slightly smaller, antennae slightly shorter; apex of last ventrite with shallow V-shaped excision; sternite 8 with truncate apex and long spiculum at base; vaginal palpi narrow and elongate, flat, setose in apical half; spermathecal receptaculum with strongly swollen base, internally smooth, apex broad and curved, spermathecal duct strongly projecting into receptaculum.

**Distribution and biology.** *Menippus yulensis* was described from Yule Island (now Roro), c. 100 km north-west of Port Morseby, New Guinea, and about 500 km east of the largest Torres Strait Islands. In Australia it occurs widely from north Qld at Bowen to the Torres Strait Islands and west through the Gulf of Carpentaria and northern NT to the coastal region of the Kimberleys, Western Australia (Fig. 55). It occurs as far

inland as Katherine Gorge and Victoria River Downs, NT, both about 225 km from the coast. A similar trans-Coral Sea distribution to this species is shown by several other coastal and near-coastal chrysomelids (Borowiec 1990, 1992; Reid 1992; Reid & Storey 1993).

*Menippus yulensis* is probably attracted to light as most specimens have moth scales attached. The hostplant is unknown but the distribution of this species mirrors that of *Celtis philippinensis*, the only *Celtis* species in Western Australia and the NT (Hnatiuk 1990), which occurs far inland in the latter state and also occurs in New Guinea (Wightman & Andrews 1989).

**Taxonomic notes.** Jacoby did not mention how many specimens he examined but gave a size range, indicating at least two. Designation of a lectotype is justified given the confused identity and taxonomy of species in this genus. The specimen in MCZ is selected as lectotype because it is male and illustrated in detail on the web.

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