

Two new species of *Anabunda* Emeljanov (Hemiptera: Fulgoromorpha: Achilidae) from Australia

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Abstract

Two new species of Achilini from eastern Australia are described and keys to the genera of Achilini in Australia, and species of the genus *Anabunda*, are provided. In addition, the type species of *Anabunda* is redescribed and the recorded distribution extended. The new species are *Anabunda murrayfletcheri* **sp. nov.** from Queensland, and *A. minuta* **sp. nov.** from New South Wales and Queensland. Both represent short-range endemic species, possibly under threat because of rapid urbanisation within their ranges. Biogeography and plant associations are discussed briefly.

Key words: Auchenorrhyncha, Fulgoroidea, fungus bugs, New South Wales, Queensland, short-range endemic species

Introduction

The Australian Achilidae have not been reviewed in their entirety since Fennah's (1950) review of genera, which recorded 20 species in Australia. The subfamily Achilinae consists of 7 tribes worldwide; the Achilini, Plectoderini, Rhotalini, and Tropiphlepsiini are represented in Australia. Fletcher (2004) published an electronic key to the Australian tribes, and Fletcher and Larivière (2001+) list the current 30 species.

The Achilini is a Gondwanan tribe, distributed predominantly in Australia (13 species); south-east Asia including Papua New Guinea, Borneo, and Indonesia (6 species); and Brazil (2 species). Emeljanov (2005) added a number of new species and genera to the Australian fauna. Moir and Fletcher (2005) published an electronic key to the nine genera of Achilini, including the five added by Emeljanov (2005). Here, we present a modified version of this key, although readers are referred to Moir and Fletcher (2005) for colour photographs and images of the characters used.

Of Emeljanov's (2005) five new Australian genera, three include bright green species with narrow elongate frons. These are *Epiona*, *Rhinochloris*, and *Anabunda* and all three were based on single species. Here we redescribe *Anabunda retortinervis* Emeljanov, which is currently described only in Russian, extend the known distribution of the species, and describe a further two species of *Anabunda*.

Abbreviations: AM, Australian Museum, Sydney; ANIC, Australian National Insect Collection, Canberra; ASCU, NSW Agricultural Scientific Collections Unit, Orange; NSW, New South Wales; BMNH, British Museum of Natural History, London; QDPI, Queensland Department of Primary Industries, Brisbane; Qld, Queensland; QM, Queensland Museum, Brisbane; WINC, University of Adelaide Insect Collection, Adelaide; UQIC, University of Queensland Insect Collection, Brisbane.

Taxonomy

Key to genera of Australian Achilini

(A web version of this key, with colour images of the characters used, is provided at <http://www.agric.nsw.gov.au/Hort/ascu/fulgor/achilidae/achili00.htm>)

1. Tegmina and body entirely red or dark pink, sometimes with minute pale blue specks.
.....*Achilus* Kirby
Tegmina and body dark to mid brown..... 2
Tegmina and body variable in colour, often green 5
2. Vertex at least twice as wide as long..... *Ouwea* Distant
Vertex less than twice as wide as long 3
3. Frons convex, smooth, with median longitudinal carina indistinct.....*Bunduica* Jacobi
Frons concave between lateral margins, with distinct median longitudinal carina 4
4. Pronotum with a series of short, pale carinae marking off a line of dark areolets laterally *Parabunda* Emeljanov
Pronotum lacking lateral areolets..... *Dipsiathus* Emeljanov
5. Hind tibia with 3–4 lateral spines. Vertex anteriorly sharply acute, often forming a narrow horn *Rhinochloris* Emeljanov
Hind tibia with single lateral spine. Vertex not shaped as above 6
6. Frons less than three times as long as wide. Often brightly coloured species
.....*Aneipo* Kirkaldy
Frons at least four times as long as wide. Mainly green (fading to yellow in older specimens) 7
7. Anterior margins of vertex and pronotum angulate, in dorsal view.. *Epiona* Emeljanov
Anterior margins of vertex and pronotum rounded, in dorsal view
..... *Anabunda* Emeljanov

Genus *Anabunda* Emeljanov

Anabunda Emeljanov, 2005: 30.

Type species: *Anabunda retortinervis* Emeljanov, 2005, by original designation.

Description: *Colour.* All species are predominantly green, fading to yellow in pinned specimens.

Body length. ♂ 5.9–10.9 mm, ♀ 6.7–13.4 mm

Head. Vertex rounded anteriorly and slightly concave, extending no more than one eye's length in front of eyes. Vertex approximately half as wide as long. Frons approximately four times as long as wide with lateral and median carinae strongly elevated. Frontoclypeal suture not distinct, arching to form inverted U-shape with median point reaching lower margin of antennal scape.

Thorax. Pronotum rounded, projecting anteriorly to approximately anterior margin of eyes, bearing distinct median carina and two lateral carinae, these not reaching posterior margin. Mesonotum with three distinct longitudinal carinae; lateral carinae interrupted at approximately one-third length. Forewings with 16–20 apical cells and 1–4 rows of subapical cells. Vein CuA2 strongly recurved in all species except *Anabunda minuta*.

Male genitalia. Nomenclature follows Fennah (1945). Anal tube with terminal segment diamond-shaped and fringed with setae (Figs. 4e, 5e, 6e). Aedeagus with two appendages, generally tubular. Dorsal lobe of phallobase reduced to two small spines in all species except *Anabunda minuta*, where greatly expanded.

Distribution: Australia (NSW, Qld) (Fig. 1).

Remarks: *Anabunda* can be distinguished from *Rhinochloris* by the latter's having the head anteriorly sharply acute, usually forming a narrow horn. Species of *Rhinochloris* also have 3–4 spines on the hind tibia whereas *Anabunda* and *Epiona* have only one. Species of *Anabunda* and *Epiona* are generally more similar to each other but can be differentiated by the anterior margin of the pronotum, which is rounded in *Anabunda* and angulate in *Epiona*. The distal position of the single lateral hind-tibial spine places *Anabunda* in the tribe Achilini of the subfamily Achilinae (see Fletcher 2004).

Key to species of *Anabunda*

1. Body length less than 7 mm. Maximal dorsal width less than 2.5 mm (Fig. 2c). Maximal width of frons at midlength. Hind margin of pronotum angulate. Hind tibia with 2 rows of apical spines, 1st row comprising 10 spines, 2nd row 7 spines (Fig. 3c)
..... *A. minuta*, **sp. nov.**
... Body length greater than 7 mm. Maximal dorsal width greater than 3 mm. Maximal width of frons at frontoclypeal suture. Hind margin of pronotum rounded. Hind tibia not as above 2

2. Narrow in dorsal view, width approximately one-third total length of the animal (Fig. 2a). One or two rows of subapical cells in forewings. Hind tibia with 2 rows of apical spines, 1st row comprising 7 spines, 2nd row 4–5 spines (Fig. 3a) *A. retortinervis* Emeljanov
- Broad in dorsal view, width at least half length (Fig. 2b). Three or more rows of subapical cells in the forewings. Hind tibia with 1 row of apical spines, comprising 7 spines (Fig. 3b) *A. murrayfletcheri*, **sp. nov.**

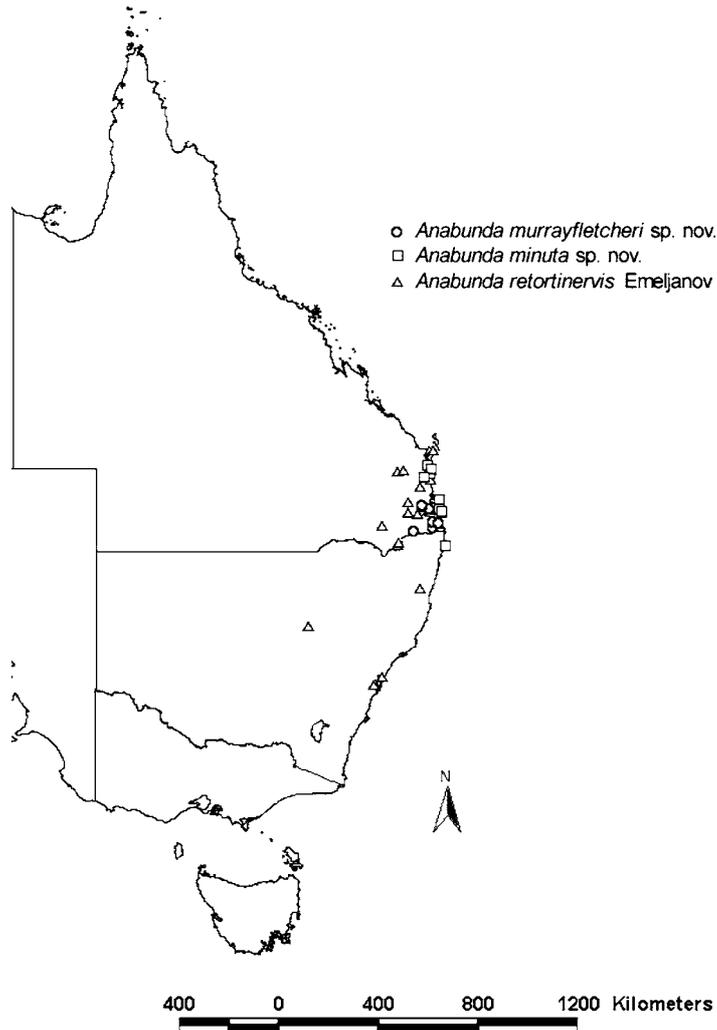


FIGURE 1. Map of eastern Australia with collection localities for each species of *Anabunda*.

***Anabunda retortinervis* Emeljanov**
 (Figs 2a, 3a, 4a–e)

Anabunda retortinervis Emeljanov, 2005:33, fig 13.

Material examined: Holotype: 1♂, Coffs Harbour, NSW, 15.x.1958 (T.G. Campbell) (ANIC).

Paratypes: 1♀, 10km SSE of Yeppoon, Qld, 21.x.1975 (I.F.B. Common) (ANIC).

Other material examined: Australia — QUEENSLAND: 3♂, Southport, 22.ix.1929 (J.A. Bock) (UQIC); 2♂, E Lake Bowarrady, Fraser Island, 2–3.xii.1975 (A. Slater, G. Thompson) (QM); 2♂, Mt Tamborine, .xi.1918 (Froggatt collection) (ANIC); 1♂, Brisbane, 3.x.1936 (A.J.S.) (UQIC); 1♂, Murrallah, Mt Emlyn, SSE Millmerran, at light, 22.xi.1992 (T.A. Lambkin) (QM); 1♂, Yidney rocks, Fraser Island, 4–5.xii.1975 (A. Slater, G. Thompson) (QM); 1♂, 0.5km SW AB Lake, Fraser Island, at light, 17.xii.1979 (K. Lambkin) (QM); 1♂, St Bernards, Mt Tamborine, light trap, 31.i.1961 (C.W. Frazier) (ASCU); 1♂, Mt Gravatt, 26.ix.1964 (A. Terauds) (UQIC); 1♂, S Maryborough, nr Teddington Weir, 27.39S 152.43E, 5.ix.1987 (G. & A. Daniels) (UQIC); 1♂, Planted Creek, nr Tansey, 12.xii.1976 (G.B. & S.R. Monteith) (UQIC); 1♂, Redland Bay, 11.ix.1954 (G. Hooper) (UQIC); 1♂, Brisbane, 17.viii.1955 (F.A. Perkins) (UQIC); 3♂, 1♀, Camp Milo, Cooloola, 15–18.x.1978 (G.B. Monteith) (QM); 1♂, 1♀, Stanthorpe, 23.x.1927 (E. Sutton) (QDPI); 1♀, Stradbroke Island, 26.ix.1906 (Froggatt collection) (ANIC); 1♀, (Froggatt collection) (ANIC); 1♀, Brisbane, 23.x.1969 (PRB) (WINC); 1♀, Gatton, .iii.1954 (C. Flynn) (QM); 1♀, Burleigh Heads, 16.i.1973 (A. Burrows) (QM); 1♀, Booloumba Creek, State Forest Park, at light, 28–29.x.1988 (K.J. Lambkin) (QM); 1♀, Cobbs Hill, 26.02S 151.54E, pitfall & intercept traps, 19.xii.1992–.iii.1993 (S. Hamlet) (QM); 1♀, vine scrub, 200m, Perry's Knob, 27.36S 152.36E, intercept trap, 15.ix.–11.xi.1998 (Monteith, Cook, Thompson) (QM); 1♀, Site 1, Mt Deongwar, 460m, 27.14S 152.15E, pyrethrum of trees, 14.x.1998 (P. Bouchard) (QM); 1♀, ex pine trees (QDPI); 1♀, ex banana leaf, Kandango, 22.xi.1925 (J.L.F.) (QDPI); 1♀, Peel Island, x.1925 (QDPI); 1♀, Taringa, xi.1933 (J.G. Brooks) (AM); 1♀, Glen Aplin, 26.x.1963 (P. Kerridge) (UQIC); 1♀, Noosa Heads, viii.1959 (J. Bryan) (UQIC); 1♀, Brisbane, 20.xi.1956 (J. Martin) (UQIC); 1♀, Brisbane, 18.ix.1964 (Y. Williams) (UQIC); 1♀, Stanthorpe, 21.ix.1930 (E. Sutton) (UQIC); 1 unknown (missing abdomen), Burleigh, .iv.1942 (Mae Smales) (ANIC) labelled as a paratype but was not included in Emeljanov (2005). **NEW SOUTH WALES:** 1♂, Rydalmere nr Sydney, light trap, 23.ii.1988 (G.J. Goodyer) (ASCU); 10♂, 1♀, Eastwood nr Sydney, light trap, 29.x.1991 (M.J. Fletcher) (ASCU); 1♀, Gilgandra, 3.xi.1973 (L.P. Kelsey) (ANIC); 1♀, Ulong East, Dorrigo, (W. Heron) (AM); 1♀, Pearl Beach, Woy Woy, 10.xii.1988 (G.R. Brown, M.A. Terras) (ASCU).

Description: Colour. Vertex predominantly green except for three red marks on anterior margin, which may be faded in older specimens. Frons, pronotum, and mesonotum green (Fig. 2a). Eyes black fading to brown in older specimens. Legs green with reddish colouration at posterior section of femur and anterior section of tibia. Spines on legs black. Forewings green, hindwings smoky white.

Body length. ♂ 8.3–9.6 mm, ♀ 9.1–10.9 mm

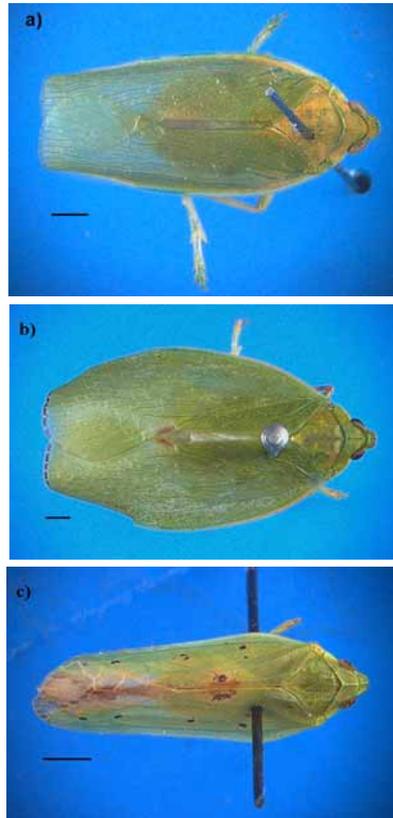


FIGURE 2. *Anabunda* species; habitus a) *A. retortinervis*, b) *A. murrayfletcheri*, and c) *A. minuta*. Scale bars = 1mm.

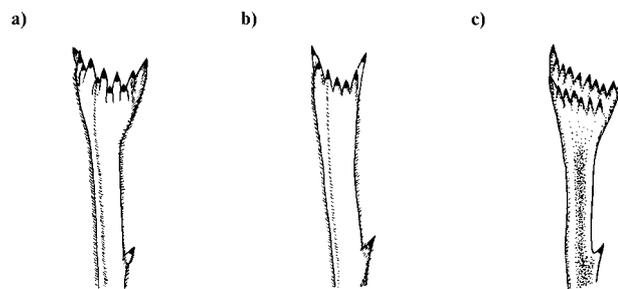


FIGURE 3. *Anabunda* species; hind tibial apical spination a) *A. retortinervis*, b) *A. murrayfletcheri*, and c) *A. minuta*.

Head. Vertex projecting beyond eyes about two-thirds eye length. Pronotum extending to level with anterior margin of eyes, hind margin rounded. Frons widest at frontoclypeal suture, dorsal edge approximately two-thirds width of widest point. Frontoclypeal suture distinct.

Thorax. Forewings with 19–20 apical cells and one to two rows of subapical cells.

Vein CuA_2 strongly curved. Apical spines of hind tibia in two rows, 2nd row with 4–5 spines positioned between 7 spines of 1st row (Fig. 3a).

Male genitalia. First segment of anal tube widening along length, bearing two small flanges at posterior margin (Figs 4d, e). Medioventral process of pygofer square (Fig. 4b). Parameres with ventral surface smooth (Fig. 4b), dorsal surface twisted, lined with 1 large and 4 small spines along outer margin (Fig. 4a). Aedeagal appendages slightly broadened at midlength, each with 1 apical spine (Figs 4a, c). Dorsal lobe of phallobase reduced to 2 small spines (Fig. 4a). Lateral lobes greatly reduced.

Remarks: Unlike other described species of the genus, *A. retortinervis* lacks dark markings on the forewings. The material examined has extended the known distribution of this species east to Fraser and Stradbroke Islands (Qld), south to Sydney (NSW), and west to Gilgandra (NSW) (Fig. 1)

***Anabunda murrayfletcheri* Moir, sp. nov.**

(Figs 2b, 3b, 5a–e)

Material examined: Holotype: 1♂, Rainforest canopy, Main Rd, Mt Glorious Biological Centre, Malaise trap, 3–10.x.1997 (S. Winterton, N. Power, D. White) (QM — QMT133356 — The Holotype is a UQIC specimen transferred permanently to QM).

Paratypes: 1♂, Rainforest canopy, Main Rd, Mt Glorious Biological Centre, Malaise trap, 3–10.x.1997 (S. Winterton, N. Power, D. White) (UQIC); 1♀, rainforest, 700–800m, nr Wilson's Peak, via Teviot Gap, 9.i.1977 (I. Naumann) (QM); 1♀, in creek bed, Scrub Rd, Brisbane Forest Park, 27.25'06"S 152.50'14"E, 15.ix.1997 (S. Winterton) (UQIC); 1♀, Tamborine, 18.ii.1960 (J. Bryan) (UQIC); 1♀, St Bernards, Mt Tamborine, at light, 3.iii.1960 (C.W. Frazier) (ASCU).

Other material examined: Australia — Qld: 1♂, ex *Argyrodendron actinophyllum*, subtropical rainforest, Mt Glorious State Forest, chemical knockdown, 10–17.x.1987 (Y. Basset) (ASCU); 1♀, Southport, 23.iv.1934 (J.A. Bock) (UQIC); 1♀, National Park, xi.1920 (H. Hacker) (QM); 1♀, Beechmont, .iv.1958 (G.W.F.) (ASCU); 1 unknown (missing abdomen), St Bernards, Mt Tamborine, at light, 3.iii.1960 (C.W. Frazier) (ASCU). The specimens excluded from the type series are in poor condition or apparently mounted ex ethanol.

Description: Colour. Vertex green except anterior and lateral margins lined with red, darkening at midline. Frons, pronotum, mesonotum green. Eyes black fading to brown in older specimens. Legs mostly green, except fore and mid tarsi, fore tibia, posterior section of fore femur, red. Spines black. Forewings green with large brown distorted spot on inner margin and apical cells dark brown along posterior edge (Fig. 2b). Hindwings smoky white.

Body length. ♂ 10.2–10.9 mm, ♀ 12.8–13.4 mm.

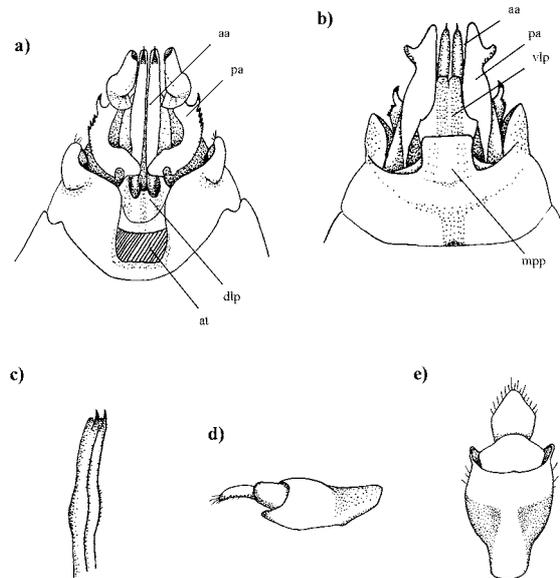


FIGURE 4. *Anabunda retortinervis*, a) male terminalia, dorsal view with anal tube removed, b) male terminalia, ventral view, c) aedeagal appendages, lateral view, d) anal tube, lateral view, and e) anal tube, dorsal view. Key: *aa*, aedeagal appendage; *at*, anal tube removed here; *dlp*, dorsal lobe of phallobase; *mpp*, medioventral process of pygofer; *pa*, paramere; *vlp*, ventral lobe of phallobase.

Head. Vertex projecting approximately one eye length beyond eyes. Frons widest at distinct frontoclypeal suture, dorsal margin almost as wide.

Thorax. Pronotum extending to level of anterior margin of eyes, posterior margin rounded. Forewings with 19–20 apical cells and 4–5 rows of subapical cells. Vein CuA_2 strongly curved. Hind tibia with single row of 7 apical spines (Fig. 3b).

Male genitalia. First segment of anal tube widening uniformly from base, bearing two small flanges at posterior margin (Figs 5d, e). Pygofer with medioventral process lobe-shaped and indented at midpoint (Fig. 5b). Parameres with ventral surface smooth and rounded (Fig. 5b), dorsal surface twisted, bearing one large and one small outer marginal spines (Fig. 5a). Aedeagal appendages each with spine extending to posterior margin (Figs 5a, c), and with lobe bearing marginal setae and wrapped around upper section of appendage, from outer to inner margins (Figs 5a, c). Dorsal lobe of phallobase slightly elongated, with two small curved spines (Fig. 5a). Lateral lobes greatly enlarged into a scalloped shape (Fig 5a).

Remarks: The large number of subapical cells gives the posterior half of the forewings a reticulated appearance. The female genitalia are difficult to distinguish from those of *A. retortinervis*. Few specimens were obtained from Australian collections, suggesting that this species may be cryptic or relatively rare. It appears to be restricted to rainforest mainly around southeast Queensland (Fig. 1).

Etymology: This species is named in honour of one of my favourite co-authors, the

eminent Auchenorrhyncha taxonomist, Prof. Murray Fletcher.

Common name: Fletcher's fungus bug

ZOOTAXA

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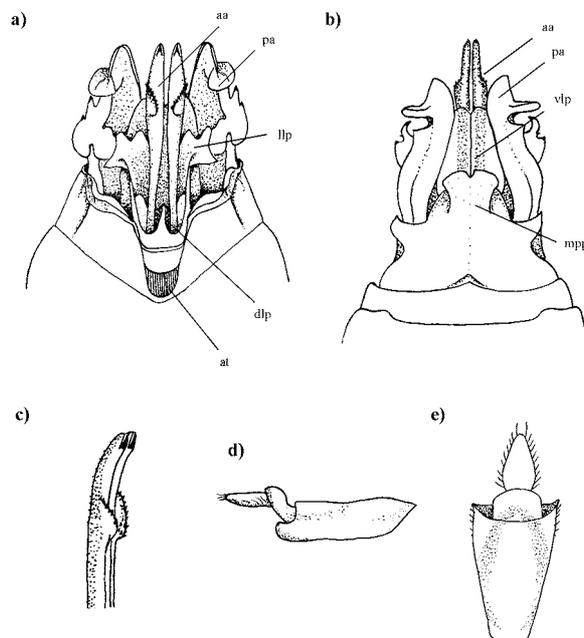


FIGURE 5. *Anabunda murrayfletcheri*, a) male terminalia, dorsal view with anal tube removed, b) male terminalia, ventral view, c) aedeagal appendages, lateral view, d) anal tube, lateral view and e) anal tube, dorsal view. Key: *aa*, aedeagal appendage; *at*, anal tube removed here; *dlp*, dorsal lobe of phallobase; *llp*, lateral lobe of phallobase; *mpp*, medioventral process of pygofer; *pa*, paramere; *vlp*, ventral lobe of phallobase.

***Anabunda minuta* Moir & Fletcher, sp. nov.**

(Figs 2c, 3c, 6a–e)

Material examined: Holotype: 1♂, Hind dunes, Lennox Head, N Ballina, NSW, mercury vapour lamp, 10.iii.1981 (M. Fletcher & G.R. Brown) (ASCU: ASCTHE017470).

Paratypes: 15♂, 7♀, same data as holotype (ASCU); 1♂, 1♀, same data as holotype (ANIC); 1♂, 1♀, same data as holotype (BMNH); 1♂, Cooran Tableland, via Gympie, 19–21.iii.1976 (I.D. Naumann) (QM); 1♀, Camp Milo, Cooloola, 15–18.x.1978 (G.B. Monteith) (QM); 1♀, 1♂, Freshwater Lake Area, Cooloola National Park, 14–15.iv.1978 (G.B. Monteith) (UQIC).

Other material examined: Australia — QUEENSLAND: 3♂, Cooran Tableland, via Gympie, 19–21.iii.1976 (G.B. Monteith) (QM); 1♂, Brisbane, .iv.1964 (Fung Yen Leong) (UQIC); 1♂, N Stradbroke Island, 15.iii.1975 (M. Tigiton) (UQIC); 2♂, near bog, Dunwich North, Stradbroke Island, light trap, 12.v.1972 (I. Naumann) (UQIC); 2♂, N Stradbroke Island, 20.iv.1968 (T. Weir) (UQIC); 3♂, 6♀, Banksia dominated open forest,

Camp Milo, Cooloola, at light, 3–13.iii.1970 (E. Dahms) (QM); 16♂, 1♀, 2 unknown (missing abdomen), Cooran Tableland, via Gympie, 19–21.iii.1976 (I.D. Naumann) (QM); 4♂, 3♀, Myora springs, N. Stradbroke Island, at light, 14.iii.1975 (K. Lambkin) (QM); 1♀, Mt Tempest, Morton Island, 20.ix.1997 (J. & A. Skevington) (UQIC); 2♀, Freshwater Lake Area, Cooloola National Park, 14–15.iv.1978 (G.B. Monteith) (UQIC); 1♀, Tewah Creek, Tin Can Bay, 17.x.1970 (T. Weir) (UQIC). **NEW SOUTH WALES:** 1 unknown (missing abdomen), same data as holotype (ASCU).

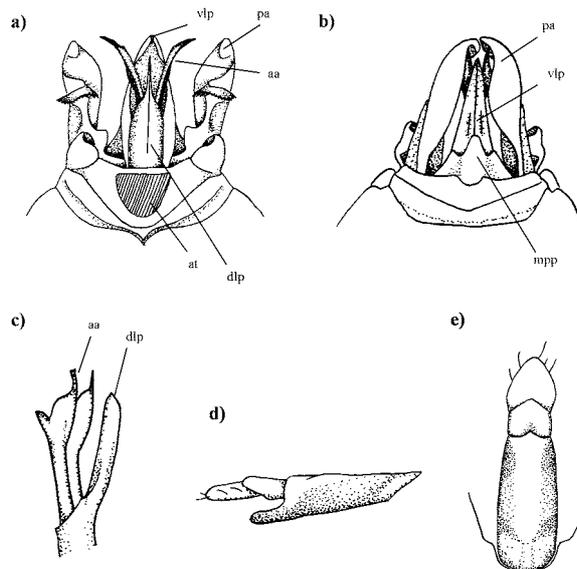


FIGURE 6. *Anabunda minuta*, a) male terminalia, dorsal view with anal tube removed, b) male terminalia, ventral view, c) aedeagal appendages with dorsal lobe of phallobase included and ventral lobe excluded, lateral view, d) anal tube, dorsal view, and e) anal tube, lateral view. Key: *aa*, aedeagal appendage; *at*, anal tube removed here; *dlp*, dorsal lobe of phallobase; *mpp*, medioventral process of pygofer; *pa*, paramere; *vlp*, ventral lobe of phallobase.

Description: *Colour.* Frons, vertex, pronotum, mesonotum, legs green. Spines on legs black. Eyes black fading to brown in older specimens. Forewings green, with four small dark brown spots along medial vein, large brown distorted spot midway along clavus (Fig. 2c), apical cells with dark brown along posterior edge. Hindwings smoky white

Body length. ♂ 5.9–7.0 mm, ♀ 6.7–7.5 mm

Head. Vertex projecting approximately half eye length beyond eyes, and with distinct median longitudinal carina. Frons widest at midpoint with dorsal margin approximately two-thirds width of widest point. Frontoclypeal suture obscure.

Thorax. Pronotum extending slightly beyond anterior margin of eyes, hind margin angulately emarginate. Forewings with 14–16 apical cells, one row of subapical cells, and pterostigma of reticulate veins two rows deep, with 4–5 cells in 2nd row. Hind-tibial apical spines in two distinct rows, with 10 and 7 spines (Fig. 3c).

Male genitalia. Anal tube relatively uniform in width throughout (Figs. 6d, e). Medioventral pygofer process shaped into three peaks, median longest (Fig. 6b). Parameres with ventral surface smooth (Fig. 6b), dorsal surface twisted and with disc-like flange lined with marginal setae (Fig. 6a). Aedeagal appendages expanded at posteriorly, and dorsoventrally flattened (Figs 6a, c). Dorsal lobe of phallobase greatly expanded, extending almost to apices of appendages and enveloping aedeagal appendages to meet ventral lobe (Figs 6a, c). Ventral lobe of phallobase high, enveloping anterior half of appendages (Figs 6a, c). Lateral lobes absent.

Remarks: The male genitalia are very different from those of other species within the genus, especially in the length of the dorsal lobe of the phallobase, lack of lateral lobes, and the shape of the aedeagal appendages. *Anabunda minuta* appears restricted to coastal regions in far northern New South Wales and southern Queensland, within dune systems, rainforest, and wetter open forests (Fig. 1).

Etymology: Named after the species' smaller size than all other described Achilini species from Australia.

Common name: Delicate green fungus bug

Discussion

Species of *Anabunda* have been found only in south-eastern Queensland, down to the central coast of New South Wales. All species appear to be confined to wet humid regions (with rainfall > 1000 mm per annum) although no species has been found in the wet tropics of northern Queensland. Interestingly, the species appear somewhat isolated in their distribution, *A. minuta* being predominantly a coastal species and *A. murrayfletcheri* slightly further inland in mountainous regions, while *A. retortinervis* is more widely spread (Fig. 1). *Anabunda minuta* and *A. murrayfletcheri* clearly represent short-range endemic species; the prevalence of species with naturally small ranges of less than 10,000 km² (Harvey 2002). The conservation of these two new species may be of significant concern, not solely as they are short-range endemic species, but also because their ranges coincide with areas undergoing rapid urbanisation (*A. minuta* — Gold coast, Sunshine coast, and islands; *A. murrayfletcheri* — hinterland around Brisbane; Fig. 1).

Feeding records for both Achilidae adults and juveniles are few. In the United States, nymphs of the Achilidae tribe Plectoderini have been collected on fungus under rocks, rotting logs, and bark (O'Brien 1971). Wilson *et al.* (1994) found that in 60% of Achilidae species, adults feed on dicotyledons, 55% of the records indicating that species are polyphagous. These figures were from a total of 50 feeding records, and were predominantly of Plectoderini species described in O'Brien (1971). However, Australian species, particularly within the Achilini, have never been studied. Most specimens of *Anabunda* were collected at light. Only three specimens, of the 147 examined here, were

capture from a plant species. Single female specimens of *Anabunda retortinervis* were recorded on a pine tree and a banana palm. In addition, a male of *Anabunda murrayfletcheri* was obtained by chemical knockdown of the tropical tree *Argyrodendron actinophyllum*. As these were not observed feeding, and only single specimens were obtained per plant, it is unknown whether these are host plants of the respective species.

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