

A NEW SPECIES OF *SIPHANTA* STÅL (HEMIPTERA: FLATIDAE) FROM WESTERN AUSTRALIA AND NOTES ON OTHER SPECIES OF THE GENUS

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Abstract

Siphanta striata sp. nov. is described and illustrated. The species is close to *Siphanta luteolineata* Fletcher. This brings the number of species in the genus to 41, of which 37 are restricted to Australia. Six colour forms of *Siphanta patruelis* (Stål) are figured, including a previously unknown form from Western Australia here given the infrasubspecific name "form *drysdalensis*". The presence of *Siphanta acuta* (Walker) in the United States is reported and its likely presence on the island of New Guinea discussed.

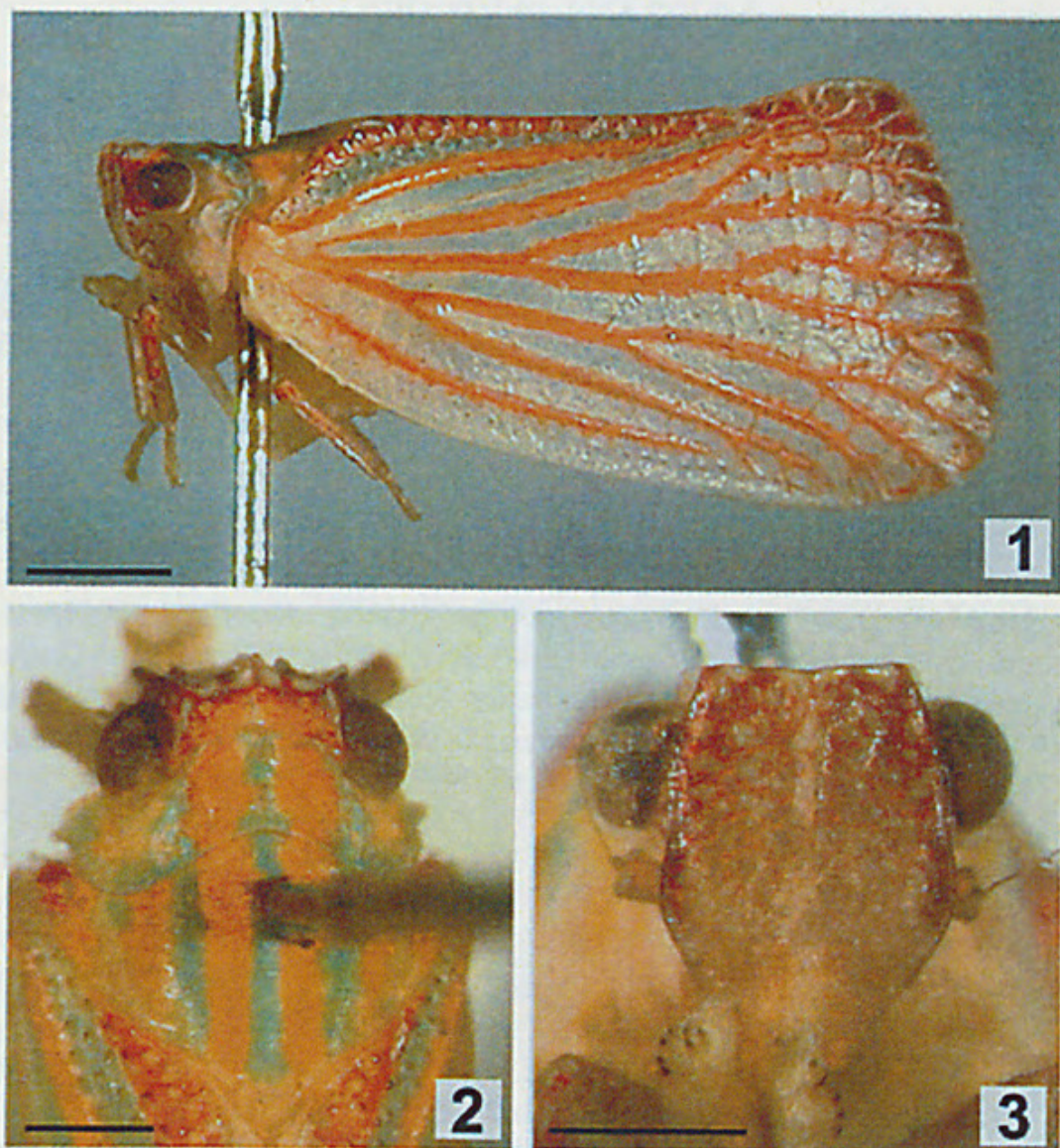
Introduction

The genus *Siphanta* Stål was revised by Fletcher (1985) who recognised 40 species, of which all but four are restricted to Australia and one, *S. expatria* Fletcher, is only recorded from New Guinea (Irian Jaya and possibly Papua New Guinea). The other three species extend from Australia into neighbouring regions: *S. patruelis* (Stål) from Australia to New Guinea, Indonesia and the Philippines, *S. lucindae* Kirkaldy in Australia and New Guinea and *S. acuta* (Walker) from Australia to New Zealand and Hawaii and is here recorded from California, USA. Medler's (2000) record of *S. acuta* from New Guinea is discussed below. This paper adds a further species, *S. striata* sp. nov. from Western Australia.

Materials and methods

The colour photographs included in this paper were taken with an Agfa ePhoto 1680 digital camera through a Zeiss Stemi SV8 stereomicroscope fitted with a phototube. The male genitalia of the holotype of *S. striata* were removed and macerated in 10% KOH before being photographed using the same camera and microscope. Figure 4 was produced using Photoshop 5.0 by adding a layer to the digital image and tracing over the pygofer and subgenital plates in the photograph. The background image was then deleted leaving the line drawing. The aedeagus illustration was produced by initially printing a copy of the genitalia photograph and tracing over the aedeagus with pencil to highlight the relevant parts. This image was then scanned using an HP Scanjet ADF and the image traced in Photoshop using the same technique as used for the external genitalia.

Repositories of examined material are: ANIC - Australian National Insect Collection, Canberra; ASCU - Agricultural Scientific Collections Unit, NSW Agriculture, Orange; MAMU - Macleay Museum, University of Sydney.



Figs 1-3. *Siphanta striata* sp. nov. (1) habitus; (2) dorsum; (3) frontal view of head. Scale bars: (1) 1 mm; (2-3) 0.5 mm.

***Siphanta striata* sp. nov.**

(Figs 1-5)

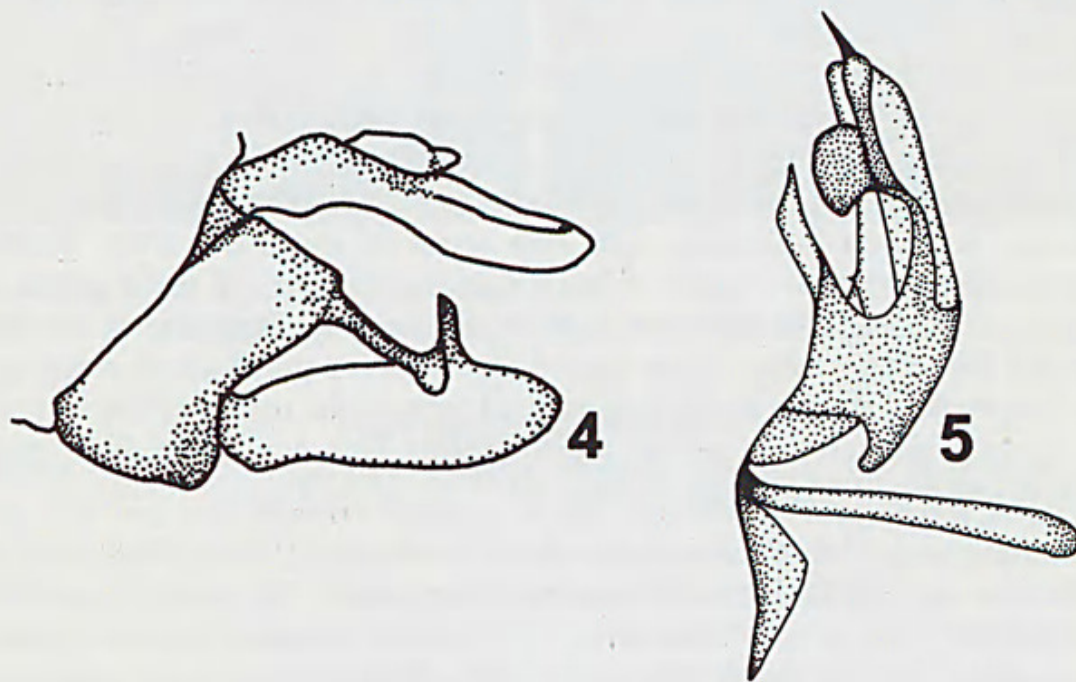
Types. Holotype ♂, WESTERN AUSTRALIA: Drysdale River, 14.39S 126.57E, 18-21.viii.1975, I.F.B. Common and M.S. Upton (ANIC). Paratype ♀, same data as holotype (ANIC).

Description. Coloration: Frons partly testaceous, heavily mottled with dark red, more heavily towards apical margin and lateral margins which are finely rimmed with black, becoming sordid brown ventrally. Vertex orange basally

merging to red towards anterior and lateral margins with line of testaceous round spots around margins. Pronotum and mesonotum orange with median longitudinal stripe and lateral carinae broadly and percurrently green. Tegmen with longitudinal veins broadly orange-red, cells and costal margin pale testaceous, apical cells becoming dark red towards apical margin and granules of corium and clavus finely tipped with black.

Morphology: Frons (Fig. 3) about as wide as long to frontoclypeal suture. Lateral margins strongly carinate, almost foliaceous, apical margin percurrently carinate and medial longitudinal carina well developed throughout. Vertex (Fig. 2) wider than long (2.75:1), concave between carinate margins, slightly corrugated laterally. Anterior margin broadly and obtusely angulate. Hind margin concave. Pronotum (Fig. 2) anterior margin broadly convex, produced medially to align with hind margin of vertex. Lateral carinae well defined. Hind margin roundly and broadly V-shaped. Tegmen (Fig. 1) without, or with very obscure, cross venation in basal two-thirds, including clavus. Sutural angle rounded, slightly more obtuse than right angle. Apical margin broadly rounded. Metatibial spine formula 1:6.

Male genitalia: Anal segment elongate, apically flattened and broad. Pygofer (Fig. 4) with process elongate, apically slightly curved dorsally and clubbed. Subgenital plates (Fig. 4) narrow, parallel-sided, apically acute with dorsal process apically truncate-pointed, perpendicular to plate margin and remote from apex of plate. Aedeagus as in Figure 5.



Figs 4-5. *Siphanta striata* sp. nov. (4) male terminalia, lateral view; (5) aedeagus, lateral view.

Comments. This species keys out as *Siphanta luteolineata* Fletcher in the key to species of *Siphanta* provided by Fletcher (1985) but can be easily distinguished from that species by the marked striping on the tegmen, the somewhat rugose vertex and the structure of the male genitalia, particularly the markedly pointed apical processes of the aedeagus. Both species share an absence of crossveins in the sutural cell, a concave vertex and bright striping on the head and pronotum. Full colour images of both species can be seen in Fletcher and Larivière (2001 + updates) at <http://www.agric.nsw.gov.au/Hort/ascu/fulgor/flat0.htm>.

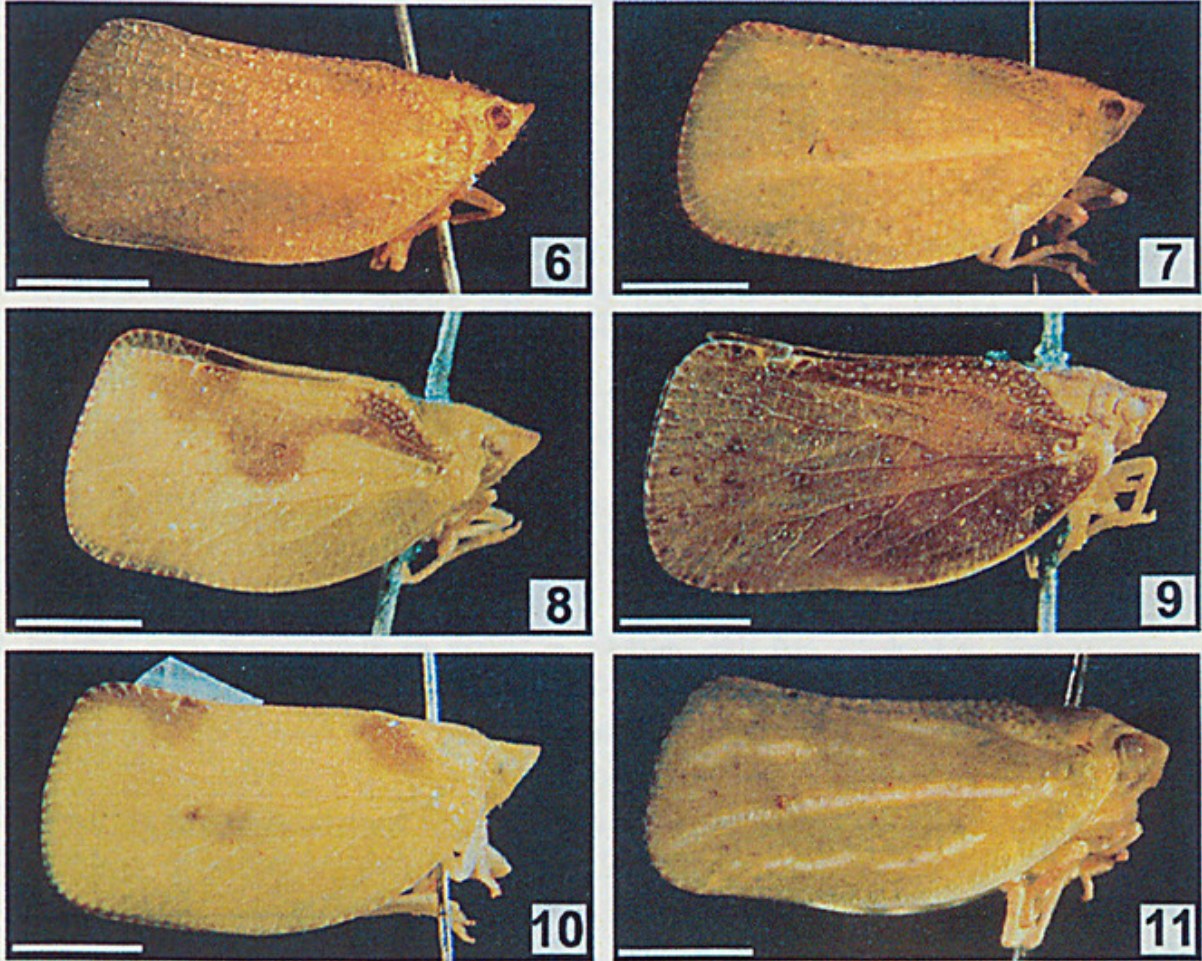
***Siphanta patruelis* (Stål)**
(Figs 6-11)

Material examined. WESTERN AUSTRALIA: 2 ♂♂, 1 ♀, Drysdale River, 14.39S 126.57E, 18-21.viii.1975, I.F.B. Common and M.S. Upton; 5 ♂♂, 1 ♀, Carson escarpment, 14.49S 126.49E, 9-15.viii.1975, I.F.B. Common and M.S. Upton (all in ANIC except 1 ♂ from each locality in ASCU).

Comments. *S. patruelis* is known to occur in several colour forms, most of which have been described as separate species which were synonymised by Fletcher (1985). The typical form (Fig. 6) has the tegmen of more or less uniform green or greenish-yellow colour throughout, sometimes with the margins finely marked with red. The tegminal granules are black-tipped and sometimes also surrounded by a narrow red rim. A form from Cairns, northern Qld, with a pale oblique longitudinal stripe through the tegmen (Fig. 7), was described by Kirkaldy (1906) as *S. toga* Kirkaldy. Distant (1910) described, as *Parasalurnis infumata* Distant, a form from Townsville, northern Qld, with extensive brown coloration on the posterior half of the tegmen (Fig. 8) and this brown coloration may completely cover the tegmen (Fig. 9). Lallemand (1935) described a form from the Northern Territory, with this brown coloration broken up into discrete brown patches (Fig. 10), as *S. toga* var. *maculata* Lallemand. The two series of specimens from Western Australia detailed above match *S. patruelis* in the shape of the tegmen, the presence of dark-tipped granules on the tegmen and the structure of the male genitalia, but differ from all the above forms in the presence of a series of pale longitudinal stripes in the longitudinal cells of the tegmen. The vertex is also slightly shorter than in the typical form. This new form, here called "form drysdalensis", is shown in Figure 11.

The names applied to these colour forms are currently infrasubspecific and hence have no validity, at this taxonomic level, under the terms of the Code (ICZN 1999, Art. 15.2). However, "toga" and "infumata" were originally published as species names (Kirkaldy 1906, Distant 1910) and "maculata", although originally published as a "form" (Lallemand 1935), was published prior to 1961 so is recognised by the Code as having subspecific rank at the time of publication (ICZN 1999, Art. 45.6.4). These three names are therefore recognised by the Code and would regain valid status from their original dates

of publication if they are ever restored to a taxonomic level, such as subspecies, which is recognised under the Code. Since the forms are not geographically isolated from the typical form, which occurs throughout the distribution of the species, it is unlikely that sufficient evidence will be found to justify recognition of these colour forms as subspecies.



Figs 6-11. *Siphanta patruelis*. (6) typical form; (7) "toga" form; (8) "infumata" form; (9) brown form of "infumata"; (10) "maculata" form; (11) "drysdalensis" form. Scale bars: 2 mm.

Siphanta acuta (Walker)

Comments. This species was recorded from all States of Australia and from New Zealand and Hawaii (Hawaii, Kauai, Molokai, Oahu, West Maui) by Fletcher (1985). It is also reported to be seen commonly in gardens in California, USA (E. E. Taylor, pers. comm.). Medler (2000) gives records of *S. acuta* from the island of New Guinea but he also lists *S. lucindae* erroneously as a synonym of that species. Since there is no indication of a proposed new synonymy, it appears that this is an editorial error. It therefore follows that the records from New Guinea provided by Medler (2000) may refer to *S. lucindae*, since his "previously published" locality records are those provided by Fletcher (1985) as the Papua New Guinea records of *S.*

lucindae. Consequently, Medler's (2000) new records from New Guinea may also be for *S. lucindae*. The presence of *S. acuta* in New Guinea thus remains unconfirmed, although the current wide distribution of the species indicates that its presence there is highly likely.

A specimen of *S. acuta* in MAMU is labelled 'Georgia', apparently in George Masters' handwriting, but without further details. It is uncertain whether this label is accurate and the record from Georgia (USA or Eastern Europe) remains unverified. The specimen is probably a male, based on size, but the abdomen is missing.

Acknowledgements

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