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Revision of the Oriental and Australian Agalliini (Hemiptera: Cicadellidae: Megophthalminae)

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Abstract

The tribe Agalliini of the subfamily Megophthalminae is revised for the Oriental and Australian regions. Fifteen genera and 86 species have been recognized including 6 new genera, 40 new species, 7 new synonyms and 9 new combinations. The new genera and species described are *Austroagallia bali* **sp. nov.** (Indonesia: Bali Is.), *A. distanti* **sp. nov.** (India: Karnataka), *A. prachuabensis* **sp. nov.** (India, Thailand), *Formallia* **gen. nov.**, *F. ishiharai* **sp. nov.** (Taiwan), *F. longipennis* **sp. nov.** (Taiwan), *F. longistyla* **sp. nov.** (Taiwan), *F. rugosa* **sp. nov.** (Taiwan), *F. truncata* **sp. nov.** (type species) (Taiwan), *Hemagallia* **gen. nov.** (type-species: *Agallia plotina* Distant), *Ianagallia* **gen. nov.** (type-species *Austroagallia bifurcata* Sawai Singh & Gill), *Igerna aurora* **sp. nov.** (Sunda Is, Timor Is.), *I. darjeelingensis* **sp. nov.** (India: Sikkim, West Bengal), *I. delineata* **sp. nov.** (India: Tamil Nadu), *I. himalayensis* **sp. nov.** (India: West Bengal), *I. keyae* **sp. nov.** (India: Sikkim), *I. priyankae* **sp. nov.** (India: Himachal Pradesh, Meghalaya, Nepal), *I. quinlani* **sp. nov.** (Nepal), *I. sikkima* **sp. nov.** (India: Sikkim), *I. wilsoni* **sp. nov.** (India: West Bengal), *Japanagallia asymmetrica* **sp. nov.** (China: Fukien), *J. curvata* **sp. nov.** (China: Fukien), *J. javana* **sp. nov.** (Indonesia: Java), *J. longipennis* **sp. nov.** (China: Fukien), *J. malaisei* **sp. nov.** (Myanmar), *J. mussooriensis* **sp. nov.** (India: Uttar Pradesh), *J. neotappana* **sp. nov.** (China: Fukien), *J. nepalensis* **sp. nov.** (Nepal), *J. peculiaris* **sp. nov.** (Nepal), *J. sumatrana* **sp. nov.** (Indonesia: Sumatra), *J. yoshimotoi* **sp. nov.** (Taiwan), *Nandigallia* **gen. nov.**, *N. matai* **sp. nov.** (India: West Bengal; China: Fukien), *N. nandiensis* **sp. nov.** (type-species) (India: Karnataka, Maharashtra), *Paulagallia* **gen. nov.**, *P. maai* **sp. nov.** (Malaysia: Borneo: Sabah), *P. punctata* **sp. nov.** (type-species) (Malaysia: Borneo: Sabah), *Sangeeta* **gen. nov.**, *S. dentata* **sp. nov.** (Indonesia: Pahang), *S. dlabolai* **sp. nov.** (Laos), *S. fyanensis* **sp. nov.** (Vietnam), *S. linnavuorii* **sp. nov.** (Vietnam), *S. nigra* **sp. nov.** (Indonesia: Java), *S. quadri-loba* **sp. nov.** (Indonesia: Sumatra), *S. sadongensis* **sp. nov.** (type-species) (Malaysia: Sadong) and *S. sarawakensis* **sp. nov.** (Malaysia: Borneo: Sarawak) The following new combinations are proposed: *Anaceratagallia srinagarensis* (Kameswara Rao & Ramakrishnan) **comb. nov.** (*Agallia*), *Hemagallia biplagiata* (Melichar) **comb. nov.** (*Agallia*), *Hemagallia plotina* (Distant) **comb. nov.** (*Agallia*), *Ianagallia bifurcata* (Sawai Singh & Gill) **comb. nov.** (*Austroagallia*), *Igerna atrovencosa* (Melichar) **comb. nov.** (*Agallia*), *Igerna fasciata* (Osborn) **comb. nov.** (*Agalliopsis*), *Igerna quadrinotata* (Melichar) **comb. nov.** (*Agallia*), *Igerna nigrita* (Melichar) **comb. nov.** (*Oncopsis*) and *Igerna violacea* (Distant) **comb. nov.** (*Nehela*). The following species are treated as new synonyms: *Agallia pseudorobusta* Kameswara Rao & Ramakrishnan **syn. nov.** of *Anaceratagallia cuspidata* Dlabola; *Anaceratagallia delhiensis* Kameswara Rao & Ramakrishnan **syn. nov.** of *Anaceratagallia robusta* Pruthi; *Agallia campbelli* Distant **syn. nov.** and *Agallia janaka* Distant **syn. nov.** of *Hemagallia biplagiata* (Melichar); *Agallia rugosa* Distant **syn. nov.** and *Agallia bhuntra* Sawai Singh **syn. nov.** of *Hemagallia plotina* (Distant), *Austroagallia bisinuata* Viraktamath & Viraktamath **syn. nov.** of *Igerna quadrinotata* (Melichar), and *Dryodurgades bifurcatus* Cai & Shen **syn. nov.** of *Dryodurgades formosana* (Matsumura). Most of these taxa are described and illustrated. Keys to genera and species are also included.

Key words: Leafhopper, morphology, distribution, identification, key

Introduction

The agalliines, one of the smallest groups of leafhoppers with 32 genera and 600 species known around the world, were formerly treated as a separate subfamily (Agalliinae) (Oman 1949; Viraktamath 2005; Oman *et al.* 1990). They can readily be recognized by their wedge shaped body, short and broad head with ocelli on the face and lateral frontal sulci not exceeding the antennal pits, forewings with appendix poorly developed or absent, hind wings with four apical cells, hind femora with 2+1 setae at apex, hind tibiae with setae on row AV often starting at 0.5 distance from base, hind basitarsus with one or two platellae in apical transverse row and male styles usually forked caudally (not forked in *Euragallia* Oman, *Omanagallia* Dietrich, few species of *Chromagallia* Linnavuori, and *Paranagallia* Gonçalves and Nielson from the New World) (Oman 1949; Dietrich 2005; Viraktamath 2004). Most recently, the group was considered a tribe (Agalliini) of the subfamily Megophthalminae, together with Evansiolini, Adelungiini and Megophthalmini (Hamilton 1999; Dietrich 2005; Gonçalves & Dietrich 2009). Agalliini can be separated from Megophthalmini by the absence of carinate frontal sutures between the ocelli and antennal pits, and from Adelungiini in rarely having densely reticulate forewing venation and in the shorter connective of the male genitalia (usually about as long as or slightly longer than width at base) (Dietrich 2005; Viraktamath 2005).

The Palearctic Agalliini have been dealt with by Ribaut (1952) for France, Ossiannilsson (1981) for Fennoscandia and Denmark, Mitjaev (1969, 1971) for the Tien Shan, Karatau and Kazakhstan regions of the former USSR, and Vilbaste (1968, 1974) for the Russian Maritime Territory, Latvia and Lithuania. Emeljanov (1964) dealt with the Agalliini of the European USSR and Anufriev & Emeljanov (1988) with the Soviet Far East. Lindberg (1954, 1958) dealt with Agalliini from the Canary Islands. Theron (1970, 1979) revised the species described