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NEW COMBINATIONS OF SOME TYPHLOCYBINES (HOMOPTERA, CICADELLIDAE, TYPHLOCYBINAE) FROM INDIA

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Nine species of typhlocybines are transferred to the genera other than to which they were reported earlier. ***Erythroneura cassiae*** **AHMED is transferred to the genus** ***Cassianeura*** **RAMAKRISHNAN & MENON,** ***Zygina equata*** **SINGH and** ***Z. simplices*** **SINGH to** ***Empoascanara*** **DISTANT,** ***Pruthius erythromaculatus*** **RAMAKRISHNAN & MENON and** ***P. varians*** **RAMAKRISHNAN & MENON to** ***Limassolla*** **DLABOLA,** ***Hardiana thaiosimilis*** **RAMAKRISHNAN & MENON to** ***Thaia*** **GHAURI, and** ***Zygina manaliensis*** **SINGH,** ***Z. pakistanica*** **AHMED and** ***Z. serrata*** **SINGH to** ***Zyginidia*** **HAUPT.**

Surveys of north-western India were conducted during 1966–75 for the collection of leaf-hoppers from different kinds of vegetation. Thirty seven species of typhlocybines belonging to 23 genera were found from this collection. Out of these, 9 species are transferred to the genera other than to which they were reported earlier.

The proposed new combinations are:

1. **Cassianeura cassiae** (AHMED), comb. n.

Erythroneura cassiae (AHMED), 1970a, *Pakist. J. Zool.* **2** (1) : 34–35.

Erythroneura cassiae AHMED; SOHI & KAPOOR, 1973 a, *Entomologist's Rec. J. Var.* **85** : 217–218.

Cassianeura sexmaculata RAMAKRISHNAN & MENON, 1973, *Oriental Ins.* 7 (1) : 27–29, Syn. n.

Erythroneura cassiae was described by AHMED (1970a) from Lyallpur (Pakistan) on Indian laburnum (*Cassia fistula* LINN.). He reported that the aedeagus was without processes. However, SOHI & KAPOOR (1973a) collected this species from the same host plant at Ludhiana (Punjab) and reported the presence of one pair of apical processes on the aedeagus. A new genus, *Cassianeura* taking *Cassianeura sexmaculata* RAMAKRISHNAN & MENON as its type species was described by RAMAKRISHNAN & MENON (1973) from the same host plant at Delhi. On the basis of similarity in male genitalia, *Cassianeura sexmaculata* is considered to be a synonym of *Cassianeura cassiae*.

This species was collected from Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab and Uttar Pradesh from different plant species, viz. *Atniaris* sp., Bishop wood (*Bischofia javanica* BLUME), Indian persimmon (*Diospyros peregrina* (GAERTN.) GURKE), Jack-fruit, *Artocarpus integrifolius* AUTH.), Kassod-tree (*Cassia siamea* LAMK.), *Kuchla* (*Storychmas noxvomica* LINN.), Mysore-fig (*Ficus drupacea* THUNB. var. *pubescens* (ROTH.) CORNER), *papri* (*Holoptelea integrifolia* (ROXB.) PLANCH.), Pilkhan (*Ficus lacor* BUCH.-HAM.), pride of India (*Lagerstroemia thorelli* GAGNEP.), white *siris* (*Albizzia lebbeck* (LINN.) BENTH.), Spanish-cherry (*Mimusops*

elengi LINN.), *Sterculia acerifolia* CUNN. and summer cypress (*Kochia scoparia*) (LINN.) SCHRAD. var. *culta* FARWELL).

2. Empoascanara equata (SINGH), comb. n. *Zygina equata* SINGH, 1969, *Res. Bull. Punjab Univ. Sci.* **20** (3-4) : 344-345.

SINGH (1969) described *Zygina equata* from grasses at Simla (Himachal Pradesh). According to the structure and setosity of male plate, this species belonged to the genus *Empoascanara* DISTANT to which it has been transferred. It has been reported from the Punjab on black-gram, cowpeas, Egyptian clover, ground-nut, jhonkra (*Fagonia cretica* LINN.) linseed, lucerne and sunnhemp (BINDRA *et al.* 1973). In addition to above plant species, it was also collected from musk-melon, spinach and sweet potato.

3. Empoascanara simplices (SINGH), comb. n.

Zygina simplices SINGH, 1969, *Res. Bull. Punjab. Univ. Sci.* **20** (3-4) : 342-343.

Zygina simplices was described by SINGH (1969) from grasses at Kulu and Chandigarh. According to the structure and setosity of male plate, this species belongs to the genus *Empoascanara* DISTANT. Earlier, this species was reported from Bilaspur (Himachal Pradesh) on Malabar-nut (*Adhatoda vasica* NEES) (BINDRA *et al.*, 1973). Author collected it from groundnut at Ludhiana (Punjab).

4. Limassolla erythromaculata (RAMAKRISHNAN & MENON), comb. n. *Pruthius erythromoculatus* RAMAKRISHNAN & MENON, 1972, *Oriental Ins.* **6** (1) : 121-122.

Pruthius with *Pruthius aureatus* as its type species was described by MAHMOOD (1967) from Singapore. DWORAKOWSKA (1969) synonymised *Pruthius* MAHMOOD witn *Limassolla* DLABOLA. Hence, *Pruthius erythromaculatus* RAMAKRISHNAN & MENON is transferred to the genus *Limassolla*. It was reported from Kulu (Himachal Pradesh) on *Artemisia scoparia* WALDST. & KIT. (SOHI & KAPOOR, 1973b).

5. Limassolla varians (RAMAKRISHNAN & MENON), comb. n. *Pruthius varians* RAMAKRISHNAN & MENON, 1972, *Oriental Ins.* **6**(1) : 122-123.

Since the genus, *Pruthius* MAHMOOD has been synonymised with *Limassolla* DLABOLA (DWORAKOWSKA, 1969), the new combination *Limassolla varians* (RAMAKRISHNAN & MENON) is proposed for *Pruthius varians* RAMAKRISHNAN & MENON).

6. Thaia thaiosimilis (RAMKRISHNAN & MENON), comb. n. *Hardiana thaiosimilis* (RAMAKRISHNAN & MENON, 1974, *Oriental Ins.* **8**(4) : 441-443.

Hardiana thaiosimilis was described from Karnataka state by RAMARISHNAN & MENON, (1974) on grasses. Since, DWORAKOWSKA (1970) has synonymised *Hardiana* MAHMOOD with *Thaia* GHAURI, the species *thaiosimilis* of the genus *Hardiana* MAHMOOD is transferred to the genus *Thaia* GHAURI.

7. **Zyginidia manaliensis** (SINGH), comb. n. *Zygina manaliensis* SINGH, 1969 *Res. Bull. Punjab Univ. Sci.* **20** (3-4) : 341-342.

Zygina manaliensis was described from grasses at Manali (Himachal Pradesh) by SINGH (1969). The grasses were : *Aristida adscensionis* LINN., *Cynodon dactylon* (LINN.) PERS., *Sorghum halepense* (LINN.) PERS. and *Dicanthium annulatum* (FORSK.) STAPF which were growing intermingled. This species possesses paired aedeagal atrial processes, aedeagal shaft compressed laterally and scaly sculpture near the gonopore. By these characters it comes to *Zyginidia* HAUPT to which it is transferred. It was reported from arcachne (*Acrachne racemosa* (HEYNE), OHWI annual spear grass (*Poa annua* (LINN.), barley, Bermuda grass, black-gram, crab

grass (*Digitaria sanguinalis* (LINN.) BEAUV.), finger-millet, goose-grass (*Erechites valerianifolia* D. C.), Italian-millet, Johnson grass, lucerne, maize, oats, pearl-millet, red-pepper, sandbur *Cenchrus catharticus* LINN.), seed bird grass (*Phalaris minor* RATZ.), sorghum, sunnhemp, Sudan grass, wild oats and wheat (BINDRA *et al.* 1973; BRAR, 1974).

In addition to above plants this species was also collected from brinjal, *Citronella* sp., common millet, Napier-bajra hybrid, rice, sugar cane and sweet potato.

8. **Zyginidia pakistanica** (AHMED), comb. n. *Zygina pakistanica* AHMED, 1969. *Pakist. J. Zool.* **1** (2) : 172–174.

Zygina pakistanica was described from *Zizyphus jujuba* MILL. by AHMED at Rawalpindi (Pakistan). This species is transferred to the genus *Zyginidia* HAUPT as it possesses paired aedeagal atrial processes. It was collected from the same plant species at Ludhiana (Punjab) which constitutes a new distribution record of this species from India.

9. **Zyginidia serrata** (SINGH), comb. n. *Zygina serrata* (SINGH), 1969, *Res. Bull. Punjab. Univ. Sci.* **20** (3-4): 339–340.

Zygina serrata from grasses was described by SINGH (1969) at Simla (Himachal Pradesh). On the basis of the presence of paired aedeagal atrial processes, the new combination *Zyginidia serrata* (SINGH) is proposed for *Zygina serrata* SINGH. Earlier, it was reported from Egyptian clover, grasses and musk-melon (SINGH, 1969; BINDRA *et al.*, 1973). The additional plants which harboured this species included black-gram and groundnut.

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