STUDIES ON IDIOCERINE LEAFHOPPERS: VI, NEW SPECIES OF *BALOCHA* FROM THE PAPUAN

SUBREGION (Homoptera: Cicadellidae)¹

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Abstract: Three new species—Balocha maculifrons, B. pseudomaculifrons, and B. unilineata—are described from the Papuan Subregion.

The material herein described belongs to the B. P. Bishop Museum, Honolulu, Hawaii, and was kindly loaned to me for study by Dr J. L. Gressitt.

The species of *Balocha* are characterized by usually being orange-colored, having a blackish forked apical cell, and typical genitalia as in fig. 14 to 17.

The holotypes and allotypes are deposited in the collection of the Bishop Museum (Bishop) and paratypes in my collection. In the measurements that follow 10 micrometer units are equivalent to 0.38 mm.

Balocha maculifrons Maldonado Capriles, new species

3. Overall color dirty orange-yellow. Vertex dirty pale-orange, the 2 vitreous areas well defined in some specimens; face with a broad brown band from eye to eye and from below ocelli to below anterior margin of vertex (fig. 1); below brown band narrowly dirty pale-orange; rest of face, to lower margin of head, yellowish white. Pronotum and scutellum dirty pale-orange. Forewings hyaline; clavus uniformly pale greenish yellow; corium hyaline pale brownish to middle longitudinal vein (M); from middle vein to costal margin pale greenish yellow; costa slightly deeper greenish-yellow. Claval suture and next 2 veins on clavus brown, the middle vein (M) broadly blackened throughout; veins of apical cells all visible, brownish. Forked apical cell totally blackish as in fig. 7. Thorax ventrally and laterally, legs, and abdominal sterna yellowish.

Vertex finely striated, about 1/3 as long as pronotum (5:13); pronotum about 1/3 as long as wide (13:30), hind margin of pronotum straight. Scutellum 3/4 as long as wide (15:22). Face slightly wider across eyes than long (35:33); lateral margin of frons (or postelypeus) rounded, laterofrontal suture reaching to slightly below and mediad of ocellus of same side. Clypeus expanded apically, bell-shaped, as long as wide apically (7:7). Forked cell with a very short peduncle (1:9). Length 3.52 mm.

Genitalia typical of the genus, as in fig. 3 to 6.

♀. Coloration much as in ♂, with the following differences: clavus greenish yellow; face uniformly dirty orange from posterior margin of vertex to level of antennae, from here dark

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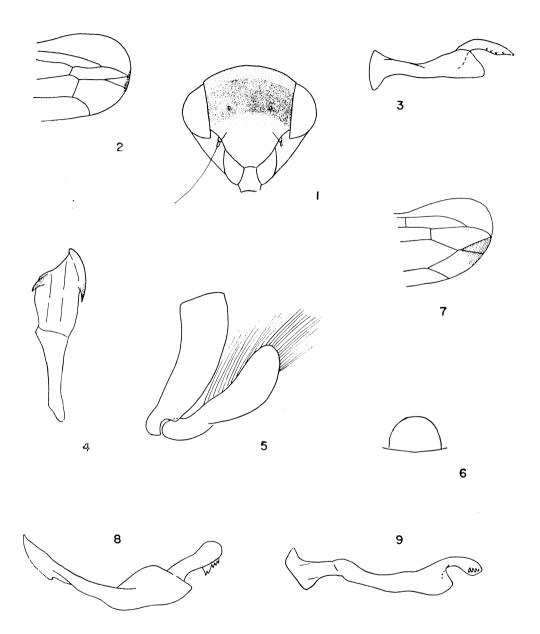


Fig. 1-7. Balocha maculifrons n. sp.: 1, face, \eth ; 2, tip of forewing, $\mathfrak P$; 3, style, lateral; 4, aedeagus, lateral; 5, pygofer and plate, lateral; 6, valve, ventral; 7, tip of forewing, \eth . Fig. 8-9. Balocha unilineata n. sp.: 8, style, ventral; 9, style lateral.

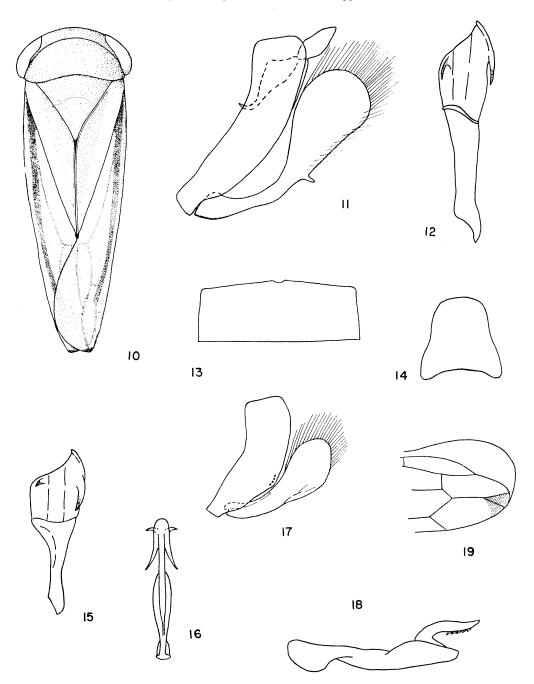


Fig. 10-13. Balocha unilineata n. sp.: 10, habitus, dorsal, φ ; 11, pygofer and plate, lateral; 12, aedeagus, lateral; 13, last sternum, φ . Fig. 14-19. Balocha pseudomaculifrons n. sp.: 14, valve, ventral; 15, aedeagus, lateral; 16, aedeagus, caudal; 17, pygofer and plate, lateral; 18, style, lateral; 19, tip of forewing, \eth .

brown to lower margin of frons. Clypeus, lorae, genae, and underside of body yellowish as in 3. Forked cell black on apical 1/2. Hind tarsi with a greenish tinge. Length 3.72 mm.

Pronotum slightly broader than in \Im (13:32), hind margin shallowly and broadly concave. Scutellum very slightly larger than in \Im (16:25). Face nearly as wide across eyes as long (35:34). Lateral frontal suture short, obsolete, pointing to above ocellus of other side. Forked cell with pedicel as long as cell (5:5), as in fig. 2. Last abdominal sternum rectangular, with hind margin straight.

Holotype & (Bishop 9180), NW New Guinea, Waris, S of Hollandia, 450-500 m, 1-17. VIII.1959, T. C. Maa, by sweeping. Allotype ♀ (Bishop), same data.

This species is close to the next 2 new species and to *B. melichari* (Baker) as all have a blackened median vein. See under *B. unilineata* n. sp. as to how to separate them.

Balocha pseudomaculifrons Maldonado Capriles, new species

Description of color as for *B. maculifrons* n. sp.; vertex relatively long, about 1/3 as long as pronotum (4:11); pronotum $2.5 \times$ as wide as long (28:11), posterior margin straight. Scutellum $1.5 \times$ as wide as long (22:15). Pedicel of forked cell slightly longer than cell (7:6) and the cell totally dark, as in fig. 19. Genitalia as in fig. 14-18. Length 3.5 mm.

Holotype & (Bishop 9181), NW New Guinea: Vogelkop, Kebar Valley, W of Manokwari, 550 m, 31.IV.1962, L. W. Quate.

Externally this species looks very much like the Q of B. maculifrons n, sp. as both have similarly shaped forked apical cell. The different genitalia and forked cell of the males separates them. See additional discussion under B. unilineata n, sp.

Balocha unilineata Maldonado Capriles, new species

 δ . Fig. 10; above and below pale ochraceous or pale golden-brown. Forewing with median vein broadly blackened throughout to before peduncle of forked cell; forked cell black, black extending to apex of outer apical cell; corium more transparent on both sides of blackened median vein. Clavus with inner 1/2 very slightly orange-tinted, outer 1/2 colored as corium.

Vertex relatively short, less than 1/4 as long as pronotum (3.5:16); pronotum nearly 2.5×10^{-2} as broad as long (37:16), posterior margin broadly and shallowly concave. Scutellum broader than long (26:22). Face about as long as wide across eyes (41:41.5). Lateral margin of frons angled; lateral frontal sutures short, obsolete, pointing well above occllus of other side. Clypeus bell-shaped, slightly longer than wide at apex (9:8). Length 4.6 mm.

Genitalia typical of genus, as in fig. 8, 9, 11, 12.

9. Overall color pale ochraceous, all specimens slightly lighter than the 33 at hand. Clavus with inner longitudinal 1/2 with a slight orange tinge slightly contrasting with paler outer 1/2. Median vein of corium broadly (slightly narrower than in 33) blackened throughout to base of forked vein; on inner side of median vein colored as inner 1/2 of clavus, on outer side of median vein paler, as outer 1/2 of clavus, thus, the forewing looks faintly banded. Forked cell blackened, black color extending to outer apical cell. Ovipositor light brown. Length 4.86 mm.

From nearly 1/4 as long as pronotum (5:18); pronotum over $2\times$ as wide as long (41:18), hind margin shallowly and broadly concave. Scutellum nearly 2/3 as long as wide (22:30).

Face as wide across eyes as long (45:45). Lateral margins of frons and lateral frontal suture as in \eth . Clypeus slightly longer than wide apically (8.5:8), bell-shaped. Forked cell with peduncle about 1/2 as long as cell (6:10).

Genitalia: last abdominal sternum with posterior margin slightly produced and shortly notched medianly (fig. 13).

Holotype & (Bishop 9182), allotype & (Bishop), New Britain, Gazelle Peninsula, Gaulim, 28.X.1962, J. & M. Sedlacek. Four paratypes: 1 &, 1 &, same data as holotype (Bishop); 1 &, New Britain Gazelle Peninsula, Upper Warangoi, Illugi, 220 m, 15. XII. 1962, from a Malaise trap (JMC coll.); 1 &, New Britain, Gazelle Peninsula, Rabaul, at 5m, 18.X.1962 (JMC coll.). I have labeled as *Balocha* sp., 1 & specimen, from Papua (SE New Guinea), W. District, Oriomo Govt. Station, 26-28.X.1960, J. L. Gressitt (BISHOP) as its last abdominal segment is slightly elongate and it may or may not be this species.

Balocha maculifrons, n. sp., B. pseudomaculifrons n. sp., and B. unilineata n. sp. belong in a group with B. melichari (Baker) as all have the median longitudinal vein blackened and the fine striations of the vertex come lower on the face, characters that separate them from the other species in the genus. B. melichari and B. unilineata do not have the face dark; the scutellum is whitish and the clavus opaque golden-brown in the first, while unilineata has a pale golden-brown scutellum and the clavus banded as described. B. maculifrons and B. pseudomaculifrons differ from all other species in the genus by their dark face; the 33 differ by the genitalia and the shape and coloration of the forked cell as in fig. 7 and 19.

Verified species of Balocha and their geographic distribution

astuta (Melichar) 1903 bicolor Maldonado 1968 lucida Maldonado 1961 maculifrons n. sp. melichari (Baker) 1915 nacreatus (Baker) 1915 pallida Maldonado 1961 pseudomaculifrons n. sp. tricolor Distant 1908 unilineata n. sp. Nilgiri Hills, S. India
Sarawak, Borneo
Sarawak, Borneo
Northcentral New Guinea
Luzon, Philippine Islands
Luzon, Philippine Islands
Lahore, West Pakistan
Northern NW New Guinea
Tenasserim, India
New Britain

REFERENCES

Baker, C. F. 1915. Studies of Philippine Jassoidea, IV: The Idiocerini of the Philippines. *Philip. J. Sci.* 10 (6): 317-42.

Distant, W. L. 1908. The Fauna of British India. Rhynchota IV: 184-90.

Maldonado Capriles, J. 1961. Studies on Idiocerinae Leafhoppers: I. *Idiocerinus* Baker, 1915, synonym of *Balocha* Distant, 1908, and notes on the species of *Balocha*. *Proc. Ent. Soc. Wash.* 63 (4): 300-8.

1964. Studies on Idiocerinae Leafhoppers: II. The Indian and Philippine species of Idiocerus

and the genus *Idioscopus. Proc. Ent. Soc. Wash.* 66 (2): 89-100.
1968. Studies on Idiocerinae Leafhoppers: IV. A new species of *Balocha* and one of *Pedioscopus*, mimics. *Proc. Ent. Soc. Wash.* 70 (2): 97-100.
Melichar, L. 1903. Homopteren Fauna von Ceylon. 248 p.