



## Redescription of *Heizmannia* (*Heizmannia*) *chandi* Edwards (Diptera: Culicidae)

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Barraud (1934) described very briefly genus *Heizmannia* Ludlow as consisting of nine species including *Heizmannia* (*Heizmannia*) *chandi* Edwards. Most of the characters used in describing the species emphasized the male genitalia, based on which a diagnostic and illustrated key of adults was constructed of these nine species. Subsequently, however, the genus *Heizmannia* was extensively revised by Mattingly (1957, 1970) and Thurman (1959) from Southeast Asia. They included 20 species by introducing one new subgenus *Mattinglyia*. However, in Mattingly's review (1970) *Heizmannia* (*Heizmannia*) *chandi* and *Hz.* (*Mattinglyia*) *discrepans* Edwards were not included. Tewari *et al.* (1986) re-described *Hz.* (*Mat.*) *discrepans* but *Hz. chandi* remained poorly described. In the present paper we are re-describing the adult male and female of *Hz.* (*Hez.*) *chandi* in detail, with emphasis on the male genitalia and variations observed in comparison to the original description of Barraud (1934).

### Material and methods

The description was made using specimens reared to adults from immature specimens collected while conducting mosquito fauna surveys in different wooded areas in India. These specimens were reexamined with a view to determine intraspecific variations. Microscopic slides were prepared of male genitalia using the method described by Reinert (1976). The nomenclature used follows Harbach & Knight (1980, 1982) and generic and sub-generic abbreviations used according to Reinert (2001). All of the specimens were deposited in Centre for Research in Medical Entomology (CRME) Museum, Madurai, India.

**FEMALE:** *Head:* Vertex with small silvery white scales continued downwards between eyes. Flagellar segments subequal, verticillary hairs short and scanty. Clypeus bare. Proboscis equal in length to forefemur or slightly longer, with streak of white scales under at base. Palpus about 1/7 length of proboscis or slightly less.

*Thorax:* Scutum covered with bluish green metallic luster or reflection. Scutellar scales broad, flat with green metallic luster or reflection. Upper surface of anterior pronotal lobe (apn) pale scaled around whole of anterior border, dark behind. Posterior pronotum (ppn) entirely pale scaled. Postspiracular area covered with broad pale scales. Prescutellar area without bristles. Postnotum with small patch of bristles. Mesepimeron with patches of white scales; mesokatepisternum, preallar area and paratergite with patches of white scales. Scutellar scales narrow with dark green metallic luster, most of the scales damaged while transporting the specimens.

*Legs:* Hind femora more extensively pale on both surfaces, dark along dorsal edge from base to distal margin. Tarsus without pale markings. Tarsal claws simple.

*Wings:* Plume scales narrow on r2 and r3, cell r2 about 2.3 to 2.8 times of the length of its stem; dorsal and ventral veins brown scaled, alula fringed.

*Abdomen:* Terga I & II all dark. Terga II to VII dark brown, except a few scattered white broad basal scales occasionally on segment VIII. Sterna II entirely pale, sterna III pale or with dark apical narrow band; remaining sterna with dark apical band.

**MALE:** Similar to female in general features except antenna with two distal flagellomeres elongated and moderately plumose. Antennal flagellum with brown scales; palpus about one tenth length of proboscis.

*Genitalia:* Gonocoxite with gonostylus conspicuous, inclined like bird's beak with prominent projecting serrations and sharp gonostylar claw, basolateral area with elbow-shaped projection on outer side, whereas inner side is deeply concave; subapical lobe with a single strong spine; claspette distally with three leaflet-like projections, one broad and other two slender and lobe shaped, claspette proximally with group of fine setae; proctiger with paraproct curved, with