

DESCRIPTION OF FURTHER INDIVIDUAL VARIATIONS OF THE *CICADA BALINTA OCTONOTATA* (INSECTA: HEMPTERA: CICADIDAE) AND EXTENSION OF ITS KNOWN DISTRIBUTION IN INDIA

PARIXIT KAFLEY¹ & PETER SMETACEK²

¹*Village & Post Office Gangmouthan Biswanath district, 784 167, Assam, India*
parixitk1@gmail.com

²*Butterfly Research Centre, Bhimtal 263 136, Uttarakhand, India*
petersmetacek@gmail.com

Reviewer: Sudhanya Ray Hajong

The cicada *Balinta octonotata* (Westwood, 1845) is known from Sikkim, Assam and Myanmar (Distant, 1906) as well as Bhutan and Nepal (Sanborn, 2014). Distant (1906) described three forms of the species: the typical form has four creamy spots on the tegmina, one sub basal, two distal and one subapical. The first variety lacks the basal spot to the tegmina and the second variety lacks the basal spot and has the two discal spots replaced by a narrow transverse fascia.

The species is common during April and May in the village forest of Gangmouthan village, district Biswanath, Assam and has been recorded in June from Uttarakhand, which record extends the known distribution of the species westwards from Nepal to Uttarakhand. During this period, a series of specimens was collected and the following undescribed variations noted:

Variety 3, with the basal and subcostal creamy spots obliterated, so that there are only two discal spots on the tegmina.

Variety 4, the subapical creamy spot is obliterated.

Variety 5, the tornal creamy spot is broken into two separate spots, making a series of three discal spots and a total of five creamy spots on the wing.

The length excluding tegmina is 25-27 mm for males and the expanse of the tegmina varies

from 60-64 mm (Distant, 1903). Although it is not documented whether Distant (1903) measured the expanse of the tegmina in a straight line across the apices, below we have measured the expanse of a tegumen from the centre of the thorax to the apex and doubled the result, as described by Evans (1932) for measuring butterflies.

The data for the specimens examined is as follows:

Material examined: 13 specimens; length of body excluding tegmina 22-26 mm; expanse of tegmina 62 - 66 mm. 20.v.2019 Gangmouthan village, Biswanath district, Assam (90 m amsl). *Leg. et Coll.* Parixit Kafley; 1 male; 26.vi.2007; Ranibagh, district Nainital, Uttarakhand, India, 400 m elevation. *Leg. et Coll.* Peter Smetacek, Butterfly Research Centre, Bhimtal, Uttarakhand (Variety 4).

The present records add three undescribed forms to the known range of variation in this species and also add a major westward extension to the known distribution. In Uttarakhand, the cicada is found in forests of *Shorea robusta*, which is the larval host plant of the distasteful moth, *Lymantria semicineta* Walker, 1855 (Lepidoptera: Erebidiae: Lymantrinae). The moth swarms in some years and is not rare at suitable seasons.

The similarity between the cicada and females of the moth is too remarkable to be a mere coincidence, with the range of variation in the creamy spots reflected in series of the moth. The palatability of the cicada is not known, but at least one member of the subfamily, *Sulphogaeana sulphurea* (Westwood, 1839) appears to be distasteful in the adult stage, for it is avoided by birds although it swarms during April and May in suitable localities in the western Himalaya. Dead and dying cicadas are common on the ground and are ignored by all insectivorous birds.

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References

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Fig. 1 & 2: Typical form underside and upperside



Fig. 3 & 4: Variety 1 underside and upperside (*vide* Distant)



Fig. 5 & 6: Variety 3 underside and upperside (*new variety*)



Fig. 7 & 8: Variety 4 underside and upperside (*new variety*: Ranibagh, Uttarakhand 26.vi.2007)



Fig. 9 & 10: Variety 5 underside and upperside (*new variety*)



Fig. 11 & 12: *Lymantria semicincta* female underside and upperside: Jones Estate, Bhimtal, Uttarakhand, 1500 m. 27.vii.1988)



Fig. 13 & 14: *Balinta octonotata*