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New record and redescription of *Zanna dohrni* (STÅL) from Bakhrahat, West Bengal, India (Homoptera: Fulgoridae)

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ABSTRACT. A detailed description of a male and a female of *Zanna dohrni* (STÅL) is provided. The comparison with related species probably indicates that this species is more related to *Z. chennelli* DISTANT and *Z. affinis* WESTWOOD that to *Z. chinenesis* DISTANT.

Key words: entomology, taxonomy, redescription, new record, Homoptera, Fulgoridae, *Zanna dohrni*, India.

INTRODUCTION

Fulgorinae include some of the most spectacular planthoppers such as the Hong Kong Lanternfly *Pyrops candelarius* (LINNAEUS). Many of them are easily recognized by a medium sized, grayish body with a long snout. So far, they are known to occur in India (Trivandrum, Assam and Meghalaya), China, Taiwan, Hong Kong, Malaysia, Sri Lanka and Java (METCALF 1947). A male and a female of *Zanna dohrni* (STÅL) have been collected from Bakhrahat, South 24 Parganas near Kolkata of West Bengal for the first time. A description and critical comparison with related species is provided.

REDESCRIPTION

Zanna dohrni (STÅL) 1858

Pyrops dohrni STÅL, 1858: 449.
Zanna dohrni: KIRKALDY. 1902: 48, pl. I, fig. 3.
Pyrops mustelinus DISTANT 1906: 180.

DESCRIPTION

Measurements:

	Cephalic process to end of abdomen	Cephalic process	Width of process		Max. width of body at base of fore wing	Fore wing	Hind wing	Hind leg
			Max.	Min.				
Male	32.0	15.0	3.0	1.9	5.0	25.0	19.0	14.0
Female	30.0	15.0	3.0	1.9	5.0	22.0	18.0	14.0

The measurements of *Z. dohrni* in respect of the rest three Indian species are:

Species	Cephalic process to end of abdomen	Cephalic process	Expanse of fore wing
dohrni	30.0-34.0	14.5-15.0	49.0-55.0
chinensis	34.0-35.0	14.0	60.0-65.0
chennelli	25.0	10.0	47.0
affinis	27.0-28.0	12.0-12.5	51.0-58.0

Colour of entire body appears grayish white. Entire body, head, pronotum, mesonotum, sternum, wings and legs uniformly pale yellow and all with black spots. Cephalic process straight, gradually a little narrowed in front; with black dots more towards basal part; apex spotted by black and obliquely truncate; with an apical and a sub-apical circular ridge connected by a feeble longitudinal ridge; with small dorso-lateral carinae marked laterally by black patches. Antenna with distal (single black hair like) segment and a basal short (stub-like) segment. Ocellus placed laterally between base of antenna and eye. Genae before eyes rounded. Apex of face profoundly sinuate.

Mesonotum without carina. Abdomen dorsally unspotted, ventrally with 3-5 spots at lateral areas and few in middle. Anal appendage in male black, with more bristles laterally, distal dorsal part lanceolate and excavated dorsally. Entire genitalia in female yellow and unspotted; dorsal terminal appendage small, ends in a triangular part; ventrally somewhat rhomboidal with two lateral notches below each of which is a flat minute curved hook marked by black at apex.

Legs are gradually bigger from fore leg to hind leg; all pale yellow and pilose. Hind coxa less spotted than anterior two. All femora with 3 distal spots; all tibiae

with 4-5 black spots in a row. Hind tibia with 4 spines (except 3 in the right tibia of female); its distal end with 8 spiniform lobes (apices black); such lobes in distal two digits are gradually smaller.

Veins of all wings pale yellow. Fore wings more opaque than hind wing. Hind wings are spot-less and these are more whitish in female. On fore wing, bigger black spots are fewer and distributed in the anterior half of wings; smaller black spots are more in number and occupies posterior half of the wings.

MATERIAL EXAMINED

One male and one female, 15.IX.2004, collected by Probhas Saha, locality Bakhrahat, near Kolkata, West Bengal, India.

DISCUSSION

The description in literature appear scanty, particularly to substantiate the differences with other Indian species. This species is rare although so far record shows distribution in varied geographical areas of India. That is the species is less surveyed, at least in India. The present species differs from *Z. chinenesis* DISTANT [known from Assam (India), Hong Kong and China] by the absence of: (i) abdomen tan-coloured above, (ii) head, thorax, wings and legs look grayish with a tint of pink colour (iii) robust cephalic process and this with more number of

1, 2. *Zanna dohrni*: 1 - dorsal view, 2 - dorsal view of proboscis

longitudinal carinae. (iv) Hind wing with a distal pinkish area. But rest of the characters is very similar. The present species differs from *Z. chennelli* DISTANT [known from Assam, India] by the absence of: (i) black colour above abdomen and (ii) face marginally ridged. It differs from *Z. affinis* WESTWOOD [known from Sikkim, India] by the absence of: (i) cephalic process considerably longer than abdomen and (ii) cephalic process uniformly spotted by black.

It is probable that the genus *Zanna* comprises four species from India. The species are very much related to each other as apparent from their similarities in most of the characters and lengths of different parts. The ratio of cephalic process and total length of body is almost uniform in all species and in this sense the length of cephalic process in *Z. affinis* seems to be not much longer (although it is uniformly spotted by black). The presence of tan or black colour above abdomen is prominent to separate *Z. dohrni* from Z. *chinenesis* and Z. *chennelli*. The comparison with related species indicates that the present species has deviated more from Z. *chinenesis* and appears related to *Z. chennelli*. The distribution also confirms this view.

DISTANT (1906: 181) clearly stated that infrequent presence of microorganisms and parasites cause luminosity. However the process may be a propulsive organ for the insects (ANANDALE 1900) which was contradicted by Mr. FLETCHER (KIRKALDY 1901). Thus it appears that the function of the cephalic process is unresolved.

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