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Longhorn beetles (Cerambycidae: Coleoptera) of Sundarban, West Bengal, India

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ABSTRACT

The present communication gives a comprehensive account of Cerambycidae of Indian Sundarbans. Total eight species has been reported form Sundarban Biosphere reserve, among them four species are reported for the first time and two species Nepiodes sulcipennis and Chlorophorus annularis are reported for the first time from the state of West Bengal.

Keywords: West Bengal; India; Cerambycidae; Sundarbans.
Abbreviations Used: Coll.: Collected by.; ex./s.: Example/s.

INTRODUCTION

Sundarban mangrove forests (contiguous landmass of both India and Bangladesh) have been considered as one of the seven most important wetlands globally, based on biological diversity [1]. About 60 % of the mangrove forests lie in the Bangladesh and the rest in the West Bengal (India). The estimates of the total area of Sundarbans in the two countries often differ considerably. According to recent estimates, the area of the Sundarban in Bangladesh is 599,330 ha [2] and in India it is 426,300 ha [3].

There is vast extent of information available based on long years of research in the Sundarbans especially on biological and physical components of the ecosystem. But little has been known about the longhorn beetles of this area. Gahan [4] was the first to compile and describe the known cerambycid beetles, excluding Lamiinae, from the Indian region in the 'Fauna of British India'. After that, extensive work on the diversity and distribution of cerambycids from India is particularly lacking. Recently, Mitra et al. [5] documented four species of longhorn beetles from the SundarbanBiosphere Reserve.

Present communication reports eight species of cerambycid beetles from this mangrove ecosystem of Sundarbans. Of them, four species, *viz*. *Nepiodes sulcipennis*, *Xystrocera globosa*, *Stromatium barbatum* and *Chlorophorus annularis* are reported for the first time from this Biosphere reserve. Diagnostic characters of the four newly recorded species and their photographs along with their valid scientific names are also dealt herewith.

MATERIALS AND METHODS

Cerambycid beetles are mostly collected at night with the help of a light trap. Mercury bulbs (160 Watt) were used to attract insects on a white sheet of cloth measuring approximately 3x2 m. The coordinates of the collection sites were recorded using GPS (Garmin Oregon 550) which were further used in preparing maps of the survey sites. Map has been prepared using Bhuvan Imagery, (http://bhuvan.nrsc.gov.in) accessed on dated 26/05/2015 (Fig. 1)

RESULTS

The present taxonomic study of the collected Cerambycidae reveals the presence of 8 species belonging to 8 genera and 7 tribes of 3 sub families from Sundarban Biosphere Reserve. Of them, four species are recorded for the first time from this mangrove ecosystem.

Sub family:Prioninae
Tribe:Aegosomatini

1. ***Nepiodes sulcipennis*** (White, 1853)
Aegosoma sulcipenne White, 1853, *Cat. Col.B.M.,Longic* 1: 31
Material examined: 3exs. Ganga Sagar colony, Sagar Island, 20.v.2015, 1 ex. Amaravati village, Bakkhali, 21.v. 2015, coll: B.Mitra& Party.

Diagnostic characters: A medium size (2.5-2.7cm), elongate beetle red brown in colour, clothed with yellowish pubescence; head produced, with dense coarse punctuation, antenna as long as body, red brown, coarsely, densely punctate, rugose, segment 3 longest, apical margin weakly produced, rest of the segments subequal; pronotum transverse, rectangular, surface strongly uneven, disc gibbous, lateral margins undulating, anterolateral corners produced, with tuft of hairs; elytra elongated, with dorsal costae, parallel sided, narrow near apex, clothed with white silky pubescence, which at regions forming patches, apex round, sutural spine long acute; legs elongate, hairy and punctate, mid and hind trochanters at inner margin with a patch of white silky pubescence.

Remarks: This is the first report of this species from Indian Sundarban**.** This is also the first report of this species from the state of West Bengal [1].

Subfamily: Cerambycinae
Tribe: Xystrocerini

2. ***Xystrocera globosa*** (Olivier, 1795)
Cerambyx globosus, Olivier, 1795, *Ent*. 4: 27, pl. 12, fig. 81
Material examined: 1ex. Pakhirala, Gosaba Island, 30.iv. 2015, coll: B.Mitra& Party.

Diagnostic characters: Body medium (2.0-2.2), yellowish brown to red brown in color with metallic green lusture; antenna much longer than body, segments apically black, segment 1 stumpy, coarsely punctate, rugose, antero-lateral margins strongly angulate; pronotum elongate, globular, swollen little beyond middle, finely granulated, rugose, warty, with the front and hind borders, a narrow median longitudinal band (sometimes obsolete) and a broader lateral band; elytra elongated, three prominent lateral ridges running on either side of elytra in between basal margin and apex, two prominent longitudinal bands on either side of the elytra, one broad green metallic band started from basolateral margin of elytra and ended at the apex, second one originate from the same area running along the middle lateral ridge, ended near the apex, elytral apex sub rounded; legs glossy, dark brown, stout, more or less elongate, femur strongly pedunculate.

Remarks: This is the first report of this species from Indian Sundarban**.** This species was reported earlier only from Jalpaiguri in West Bengal [1]

Tribe: Cerambycini

3. ***Derolus discicollis*** Gahan, 1906
Derolus discicollis Gahan, 1906.*Fauna.Brit. India*. (Col.) 1 : 136

Material examined: Recorded from Literature
Remarks: This species was reported earlier from Sundarban [1]

Tribe: Hesperophanini

4. ***Stromatium barbatum*** (Fabricius, 1775)
Callidium barbatum Fabricius, 1775.*Syst. El*.,2 : 339.
Material examined: 1ex. Pakhirala, Gosaba Island, 30.iv. 2015; 2exs.Panmazani, Sagar Island, 20.v.2015; 2exs.9.no.Gheri, Bali Island, 17.iii. 2015 coll: B.Mitra& Party.

Diagnostic Characters: Body medium size (2.9 - 3.1 cm), brown to deep brown in color, densely punctate throughout, covered with fine hairs.; antenna little longer than body, segment 1 red brown, rest paler, small, stout, densely punctate; pronotum squarish, with five blunt tubercles, constricted basally, lateral margin laminate with a tuft of longitudinal yellow hairs; elytra red brown, elongate, gently narrowed toward apex, thickly, coarsely punctate; legs brown, clothed with yellowish pubescence, robust, femur flat, wide.

Remarks: This is the first report of this species from Sundarban Biosphere Reserve**.** This species was reported earlier only from Jalpaiguri in West Bengal [1]

Tribe: Callidiopini

5. ***Ceresium zeylanicum*** White**,** 1855
Ceresium zeylanicum White, 1855.*Cat. Col. B. M., Longic*.ii,p. 246

Material examined: Recorded from Literature
Remarks: This species was reported earlier from Sundarban [1]

Tribe: Clytini

6. ***Demonax sonneratiae*** Gardner, 1940
Demonax sonneratiae Gardner, 1940 *Ind. For. Rec.* 6 (6): 213-225.

Material examined: Recorded from Literature
Remarks: This species was reported earlier from Sundarban [1]
7. ***Chlorophorus annularis*** (Fabricius, 1787)
Callidium annularis Fabricius, 1787, *Mant. Ins*., 1: 156 .
Material examined: 6exs. 9.no.Gheri, Bali Island, 17.iii. 2015 coll: B.Mitra & Party.

A medium size beetle (1.5-2.2 cm), covered with yellowish pubescence, ornamented with dark brown or black markings; head very much narrower than pronotum, antenna shorter than broad, extended to half of elytra; pronotumas long as wide, subglobular, with a bifurcate, more like a inverted Y-letter fuscous tomentose patch at median region, sometimes the lateral oval patches converge in anterior with the arm of median Y-shaped patch; elytra elongated ornamented with yellowish and black patches: black designed patch apically broadened starting beyond the scutellum surpassing the hind leg on either side of the elytra, one large surrounded black patch close to apex on either side of elytra, apex sub truncated with lateral and sutural spines.; undersurfaces entirely clothed with silky pale lemon yellow pubescence; legs fuscous with thin whitish pubescence on femora, even less pubescent on tibiae, mid femora carinate on ventral of its entire length.

Remarks: This is the first report of this species from Sundarban Biosphere Reserve**.** This is also the first report of this species from the state of West Bengal [1].

Subfamily: Lamiinae
Tribe: Apomecynini

8. ***Ropica pseudosignata*** Breuning, 1938
Ropicap seudosignata Breuning, S.1938.*Festschr.E.Strand*. 4: 180-392.

Material examined: Recorded from Literature
Remarks: This species was reported earlier from Sundarban[1]

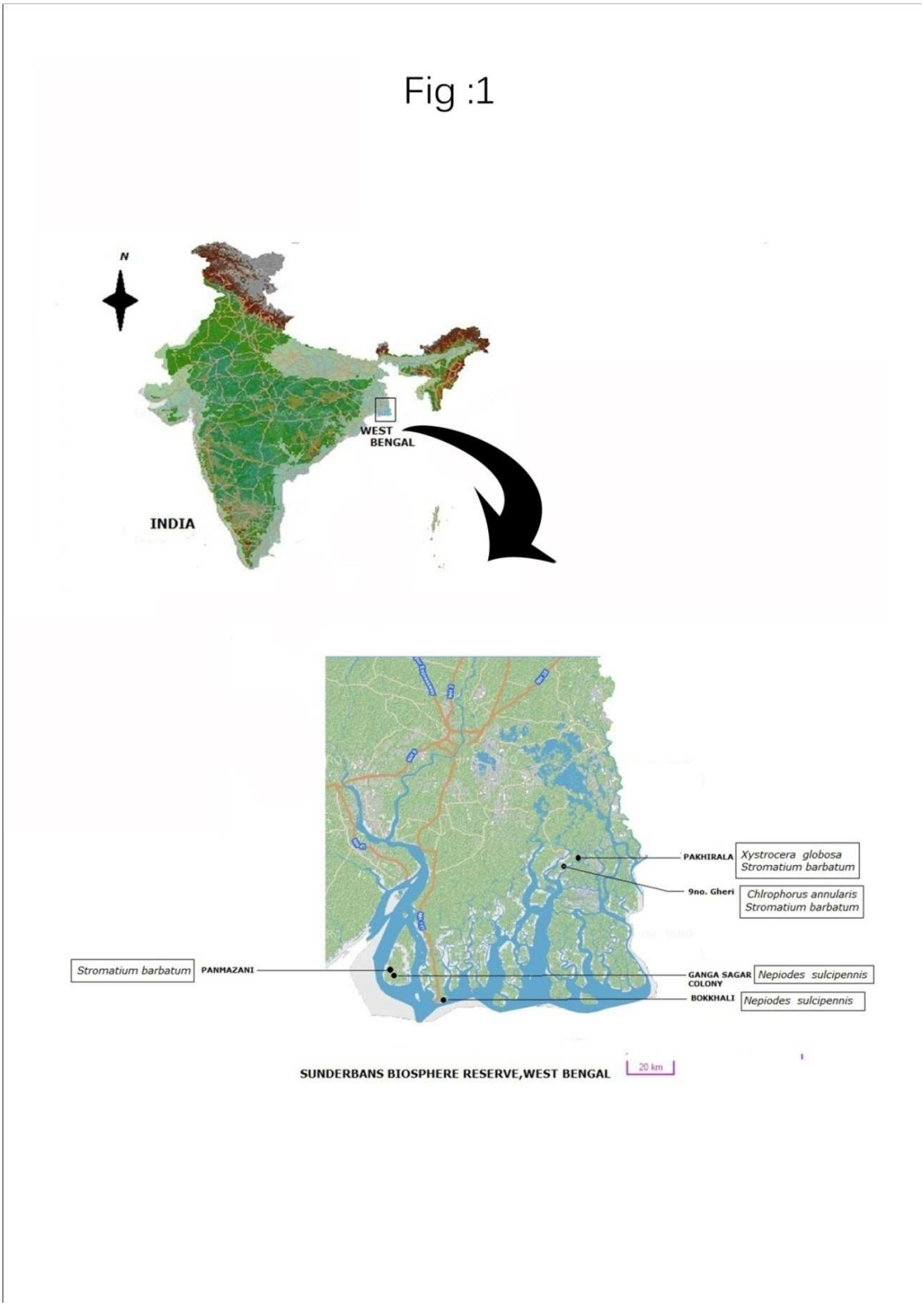

Figure 1: Map showing the collection site of Cerambycidae

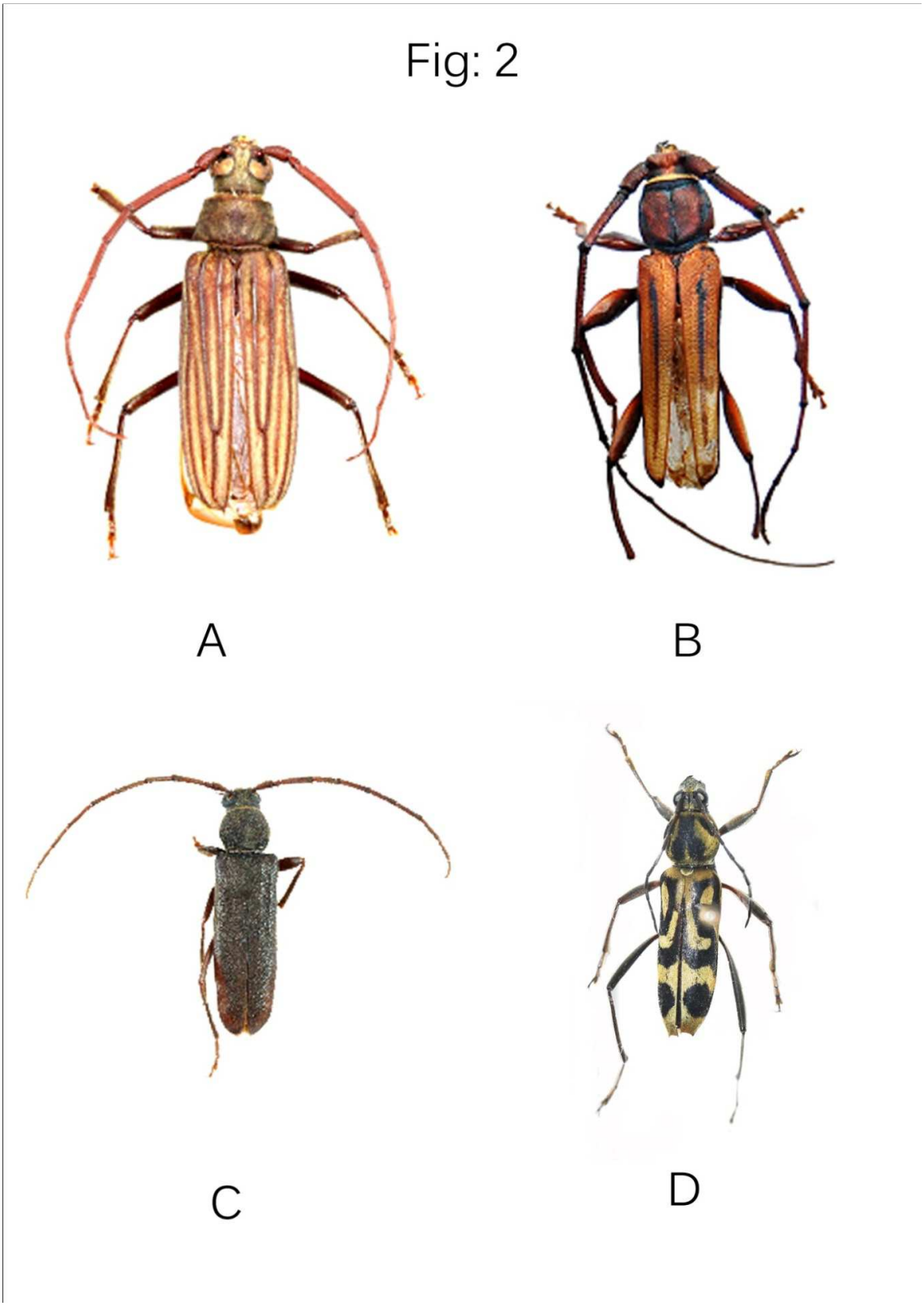

Figure 2: Specimen photographs: A: *Nepiodes sulcipennis* (White); B: *Xystrocera globosa* (Olivier); C: *Stromatium barbatum* (Fabricius); D: *Chlorophorus annularis* (Fabricius)

DISCUSSION

This paper reports eight species from Sundarban Biospshere Reserve based on the present collections and with the available information. The Longhorn beetle fauna of Sundarban Biospere Reserve was poorly studied and therefore, among the four newly recorded species, two species, namely, *Nepiodes sulcipennis* (White, 1853) and *Chlorophorus annularis* (Fabricius) are the first report from West Bengal also. Inaccessibility in the different islands of Sundarban is the prime reason for poor study of these notorious pests in this area. This communication will definitely act as base line data of Longhorn beetles of Sundarban Biosphere Reserve and also helpful for future workers of this difficult terrains.

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REFERENCES

[1] W. J Junk, C. Brown, M., Campbell, C.I., Finlayason, M., Gopal, B., Ramberg, L., and Warner, G.B. **2006**. *Aquat. Sci*.68 : 400–414
[2] N. Rahman, , M. M. Billah and M. U. Chaudhury, **1979**. *The Journal of Noami* 3: 19– 33.
[3] P.Sanyal, **1983**. *Tiger paper* 10(3): 1–4.
[4] C. J. Gahan, **1906***The Fauna of British India including Ceylon and Burma. Coleoptera:Cerambycidae*. Taylor and Francis, London. 329 pp.
[5] B.Mitra, A. Majumder, P. Das, and U.Chakraborti, **2015**. *Entomology and Applied Science Letters*. 2(1):3-8