

NEW ADDITION TO THE MOTH AND BEETLE FAUNA OF ACHANAKMAR-AMARKANTAK BIOSPHERE RESERVE

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ABSTRACT : Periodical surveys of two localities namely Amarkantak and Jagatpur of transition zone of Achanakmar- Amarkantak Biosphere Reserve were conducted and 2 lepidopteran species, viz., *Dichocrocis leptalis* Hamp. (Pyralidae) from Amarkantak sal forest, *Paectes (Ingura) subapicalis* Walk. (Noctuidae) from Jagatpur sal forest, and two coleopterans, viz., *Lophosternus indicus* Hope (Cerambycidae), *Macrotoma fisheri* Waterh. (Cerambycidae) from Jagatpur were recorded for the first time.

Keywords : Biosphere Reserve, Coleopterans, Lepidopteran species, Sal forest.

INTRODUCTION

Achanakmar-Amakantak Biosphere Reserve, having an area of 3835.51 km², falls both in Madhya Pradesh and Chhattisgarh. It has typical monsoon climate with distinct three seasons, viz., summer- from March to June, rainy- from July to October and winter- from November to February. The relative humidity is fairly high in dense sal forest throughout the year. The forest vegetation is mostly moist tropical type. The Biosphere Reserve is divided into core, buffer and transition zones.

More than 40,000 species of insects existing in India, Pakistan, Bangladesh, Myanmar and Sri Lanka have been named (Hampson, 1892, 1894, 1895, 1896; Bingham, 1897, 1903; Jacoby, 1908; Burr, 1910; Brunetti, 1912, 1920, 1923; Morley, 1913; Kirby, 1914; Stebbing, 1914; Fletcher, 1914; Distant, 1902, 1904, 1906; Gahan, 1906; Marshall, 1916; Arrow, 1917; Maulik, 1919, 1926; Andrewes, 1929, 1935; Cameron, 1930, 1931a, 1931 b, 1932, 1939; Bell and Scott, 1937; Talbot, 1939, 1947; Beeson, 1941; Pajni, 1990; Gupta and Jonathan, 2003). Of these, 49 species of butterflies (Singh and Chandra, 2006), 34 species of moths (Chandra *et al.*, 2006), 24 species of beetles (Anon, 1998; Roychoudhury *et al.*, 2004; Chandra, 2006; Joshi *et al.*, 2006) and a cricket species (Chandra and Gupta, 2005) have been reported from different localities of Achanakmar-Amakantak BR. Information about the existence of other species is not known. Therefore, the present study was initiated and the results are summarized as hereunder:

MATERIALS AND METHODS

Periodical surveys of Jagatpur and Amarkantak areas of transition zone of Achanakmar- Amarkantak BR were conducted during the years 1998-2000. The immature insects feeding on their host were collected from both the locality and reared in captivity at Jagatpur till the emergence of the adult moths. The adults or matured insects were also collected with the help of light trap. The collected insects, both moths and beetles, were killed, dried, studied morphologically and systematically to identify them up to species with the help of literature available (Hampson, 1894, 1896; Gahan, 1906).

RESULTS AND DISCUSSION

The sampled moths and beetles were systematically studies as per the following characteristics:

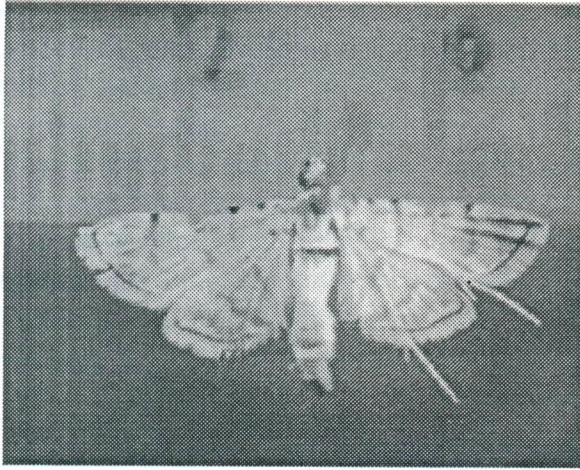
A. Moths:

I. Moths usually slender with long thin legs. Forewing (FW) vein 1a usually free but sometimes forked with 1b; 1c absent. Hind wing (HW) 1a,b,c present

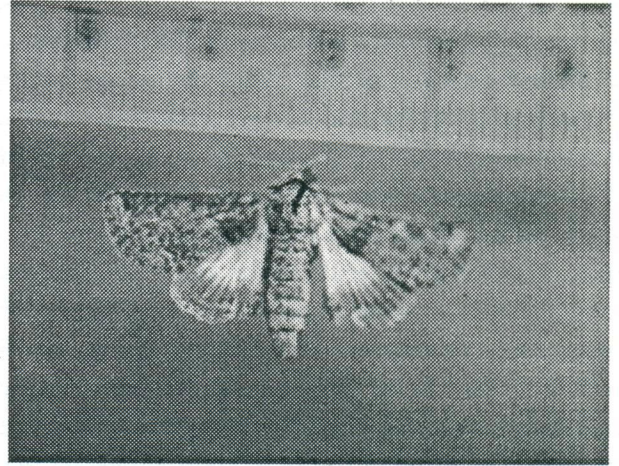
-----Pyralidae

Proboscis well developed. FW vein 1a free and separate from 1b, 7 not stalked with 8, 9. HW vein 4, 5 from a point

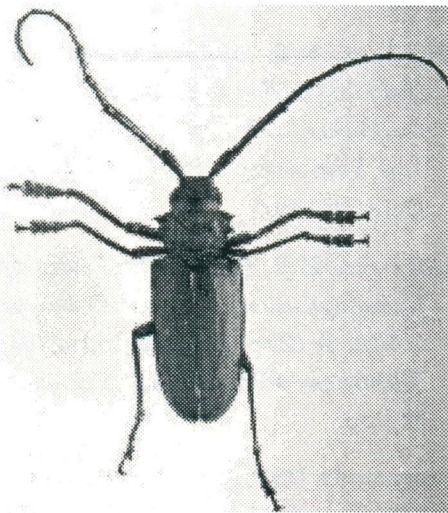
-----Pyraustinae



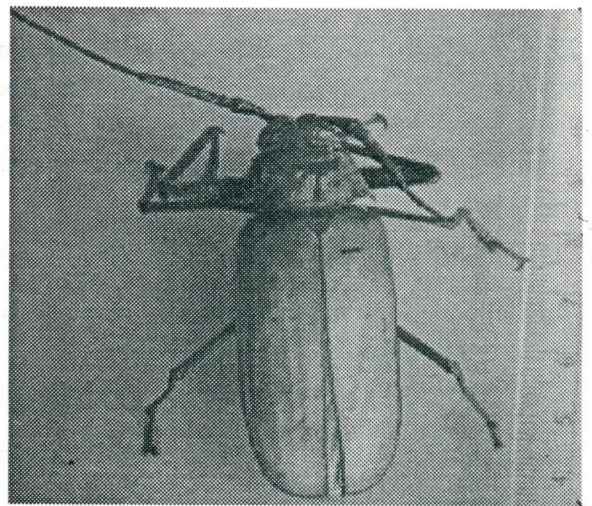
(a)



(b)



(c)



(d)

Fig. 1: (a) *Dichocrocis leptalis* Hamp, (b) *Paectes (Ingura) subapicalis* Walk, (c) *Lophosternus indicus* Hope, (d) *Macrotoma fisheri* Waterh.

Chocolate brown and length varies from 25 to 50 mm. Head darker brown, coarsely punctured. Eyes rather narrow, upper lobe at a distance of at least half its own width from the antennal tuber. Antennae in male is three-fourths to five-sixths of the length of the body whereas in female reaching to middle of elytra. First joint reaching to a short distance beyond the hind margin of the eye, third slightly dilated but not sharply angulate at the apex, fourth slightly acute at the apex. Fifth to tenth produced into an acute angular process at apex on the anterior side. Pronotum with 3 marginal spines, closely and finely punctured in front and for some distance back along each side of middle line, closely but more strongly punctured at the side. Hind angles more or less obtuse, often rounded off. Elytra more or less regulose and punctuate. Hind breast bare of pubescence. Sample deposited at TFRI vide Accession No. 551. Distribution: Jagatpur. Date of collection: 28.06.1998.

ii. Prothorax with 3 strong marginal spines along each side, or pluridentate. Antennae inserted close to the base of the mandibles. First antennal joint longer than broad and antenna is longer than half body length. Legs more or less spiny.

----- Macrotomini

Third antennal joint much longer than the first. Hind angles of prothorax not directed backwards.

----- *Macrotoma*

Macrotoma fisheri Waterh, Fig. 1d (Coleoptera: Cerambycidae: Prioninae: Macrotomini)

Length of the male is 46 mm and female varies from 60 to 66 mm. Antennae reddish brown either longer or shorter than body, usually aspirate or denticulate near the base, 11 jointed. Male antennae, first joint stout, somewhat compressed, third elongated and thickened. Female antennae shorter with first and third joints much less thickened and not aspirate. Basal three joints of antennae nearly black. Front legs nearly black, the middle and hind legs and all the tarsi piceous. The elytra yellowish brown, darker at the base. Hind breast clothed with fulvous yellow pubescence. Head opaque, strongly and closely punctured in front, densely and finely granulose behind. Antennae reach to the apical

third of the elytra. First joint rather stout, twice as long as broad, strongly but sparsely punctured, third thick, flattened or slightly channelled above and equal in length to fourth, fifth and half of the sixth. Prothorax with its lateral edges sharply spined converging in nearly straight lines towards the apex. Elytra parallel-sided, scarcely wider than base of the prothorax. Finely granulate near scutellum. Legs somewhat spinous beneath. The front femora very rough. Abdomen slightly glossy. Sample deposited at TFRI vide Accession No. 553. Distribution: Jagatpur. Date of collection: 28.06.1998.

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