CONICOBRUCHUS OF INDIA (BRUCHIDAE: COLEOPTERA)

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ABSTRACT

Genus Conicobruchus has been revised by assigning correct positions to the so far known five Indian species. Conicobruchus caerulens (Champion) has been redescribed and a key to the Indian species is given.

INTRODUCTION

Decelle (1951) erected the genus Conicobruchus for the type species Bruchus strangulatus Fairmaire from Senegambian and transferred three other species namely, B. flabelicornis Boheman, B. bedfordi Pic & B. atrosuturalis Pic under the same. A few more species from other parts of the world were described subsequently (Decelle, 1960).

The genus Conicobruchus is so far represented by four Indian species. Of these, two species namely, C. indicus (Pic) and C. albopubens (Pic) were transferred to the present genus by Arora (1977), while the remaining two new species C. decellei & C. alpina were described by Arora & Singal (1977, 1979). However, examination of type material in the British Museum Natural History, London, has revealed that both these species are already described as B. impubens Pic and B. kashmiricus Pic. The species, B. caerulens (Champion) is transferred here to Conicobruchus, which is redescribed below. A key to the species of Indian Conicobruchus is also added.


Type-species: C. strangulatus (Fahr.), Gen. Curc. V, p. 4, 1839.

Pronotum conical, strongly narrowed in front, with a large depression in front of scutellum; elytra covered over with fine sparse pubescence, without basal tubercles, with humeral calli well developed; hind femur thin, not canaliculate below, with or without a dent on inner border.

KEY TO THE INDIAN SPECIES OF CONICOBRUCHUS DECELLE

1. Sige small, upto 3.5 mm long; head surface between and behind the eyes not elevated; endophallus with one or more sclerotized plates ...............2
   Size medium to large, 3.50 to 6.00 mm long; head surface between and behind the eyes elevated endophallus without sclerotized plates ...............3

2. Body coloration black; antennae bicolorous; scutellum not bifid posteriorly; endophallus with 2 pairs of plates; parameres fused at base upto 1/3 length each carrying 8-9 long setae ............... albopubens (Pic)
Body colouration metallic blue; antennae unicolourous; scutellum bifid posteriorly; endophaIlius with one elongate plate; parameres fused at base up to 1/2 length, each carrying 4 fine setae .......... caerulens (Champion)

3. Antennae not surpassing base of pronotum; scutellum broader than long; hind femur with a small pre-apical tooth on lower inner border; endophaIlius covered with numerous fine hairs; parameres fused at base differently, each carrying a number of similar setae ............. indicus (Pic)

Antennae surpassing base of pronotum; scutellum longer than broad; hind femur without a pre-apical tooth; endophallus thickly studded with sharp tubercles; parameres fused at base up to 1/5 length, each bearing two prominent long setae, several small setae and a terminal flap; ventral valve beak-shaped............................. impubens (Pic)

4. Legs black, with fore and mid tibiae and tarsi testaceous; parameres finger-like with truncated tips, fused basally up to 1/4 length; each paramere bearing two prominent long setae, several small setae and a terminal flap; ventral valve broadly conical..................Kashmiricus (Pic)

Conicobruchus albopubens (Pic)

Bruchidius albopubens Pic, 1931, Melanges Exot. Moulines, 57-76.

Conicobruchus albopubens : Arora, 1977, Oriental Insects, Suppl. 7 : 34 (bibliog.)

Additional host plant : Crotolaria cosmosa

Additional localities : Pilibhit & Pantnagar (U.P.); Okha (Gujarat); Nagpur (Maharashtra); Coimbatore (T.N.); Mysore & Bangalore (Karnataka); Burdwan (W. Bengal) and Hazaribagh (Bihar).

Conicobruchus caerulens (Champion)

Bruchus caerulens Champion, 1919, Ent. Mon. Mag., 55 : 244.

Head metallic blue, indistinctly constricted posteriorly; frons carinate, minutely punctate between and behind eyes, its surface covered with fine white pubescence; eyes large, protruding, emarginate in front; canthus shallow and broad, its surface covered with sparse white pubescence; area between and behind eyes not elevated. Antennae bluish, similar in both sexes, surpassing base of pronotum, segments 1 to 3 cylindrical, segments 4 to 10 serrate, segment 11 conical.

Pronotum metallic blue, conical, with sides feebly sinuate near middle, its surface coarsely pitted and covered uniformly with sparse white pubescence, with a conical patch of white setae in front of scutellum.

Scutellum blue, as long as broad, bifid posteriorly, densely covered with white pubescence. Elytra metallic blue, elongated, each three times as long as broad, without basal tubercle; striae pitted; elytral surface covered uniformly with fine sparse white pubescence. Legs metallic blue; hind femur flat and non-carinate below, with a short pointed pre-apical tooth on inner border. Pygidium metallic blue sub-vertex in both sexes, longer than broad, its surface covered uniformly with fine white pubescence.

Phallus 1.09 mm long; parameters free distally and fused at bases up to 1/2 length, each sclerotized along its outer border, dilated terminally and bearing 4 prominent fine setae; endophallus studded with long and pointed tubercles basally in addition to a single sclerotized plate; ventral value broadly conical.

Length male 3.40 mm; Length female 3.30 to 3.40 mm. Specimen examined : Males 2. Locality – Chamba (Himachal Pradesh). Host
plant—*Desmodium nutous*. Females 3, Locality—Chamba (H.P.) Host plant—*Desmodium nutous*.

*Conicobruchus caerulens* (Champion) Phal- lus (1), ventral valve (2), parameres (3), pronotum (4), antenna (5) & hind leg (6)

*Conicobruchus caerulens* (Champion) is near to *Conicobruchus albopubens* (Pic). It, however, differs from the same in having body entirely metallic blue (body including head, pronotum, elytra, pygidium excluding fore and middle legs black in *C. albopubens*), in having antennae unicolourous bluish (antennae bicoloourous, first four segments yellow and rest black in *C. albopubens*), in having scutellum bifiid posteriorly (scutellum not bifiid posteriorly in *C. albopubens*) and in having endophallus with a solitary elongate plate, parameters fused at base to 1/2 length and each carrying 4 slender setae (endophallus with 2 pairs of plates parameres fused at base to 1/3 length and each carrying 8-9 long setae in *C. albopubens*).

*Conicobruchus indicus* (Pic)

*Bruchus indicus* Pic, 1909, Echange, 25-118.

*Conicobruchus indicus*: Arora, 1977, Oriental Insects, Suppl. 7: 33-34.

Additional host plant: *Glycine max*

Additional localities: Hisar (Haryana); Allahabad (U.P.) and Jaipur (Rajasthan)

*Conicobruchus impubens* (Pic) comb. nov.

*Bruchus impubens* Pic, 1929, Echange, 45-74.


Additional locality: Ambala (Haryana)

*Conicobruchus kashmiricus* (Pic)

*Bruchus kashmiricus* Pic, 1929, Echange, 45 : 4 (Paris Museum) (Islamabad, Kashmir)


Additional locality: Udhampur (J & K)

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FURTHER CONTRIBUTIONS ON THE STUDIES OF NORTH-WEST HIMALAYAN RUSSLACEAE

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ABSTRACT

Thirty seven taxa of Russulaceae (25 of *Russula* Pers. and 12 of *Lactarius* Pers.) which are found associated with the broad-leaved, coniferous and mixed forests of the North-western Himalayas are listed here. Of these, 12 taxa belonging to each genus are new records for India.

INTRODUCTION

In the earlier contributions (Saini & Atri, 1981; 1982a, b; 1984; Saini et al., 1982, 1983) 24 species of *Russula* Pers. and 5 species of *Lactarius* Pers. have been reported from the North-western Himalayas along with the trees with which they are associated. In the present paper 25 taxa of *Russula* and 12 taxa of *Lactarius* are listed along with the different trees associated with each taxon. Of the taxa listed, 12 taxa each of *Russula* and *Lactarius* are new fungal records for India (Bilgrami et al., 1979; Watling & Gregory, 1980; Narayanan & Raman, 1983; Sarwal, 1984). During this study the identification have been done by consulting standard references (Singer, 1957, 1975; Mac Nabb, 1971, 1973; Rayner, 1968-1970; Hesler & Smith, 1979; etc.)

OBSERVATIONS

In the area surveyed presently the various species and varieties of the two genera were observed growing either in the pure stands of broad-leaved trees mainly consisting of *Quercus incana* Roxb., *Q. dilatata* Lindl., *Q. semecarpifolia* Sm., *Rhododendron arboreum* Sm., *Betula utilis* Ham. etc., or in purely coniferous forest consisting of *Pinus roxburghii* Sargent, *P. wallachiana* Jack., *Cedrus deodara* Loud., *Abies pindrow* Spach, *A. spectabilis* (Don.) Spach., *Picea smithiana* (Wall.) Boiss., etc. Besides these, a large majority of them are found in the

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