



Annotated checklist of Indian Ceutorhynchinae (Coleoptera: Curculionidae)

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ABSTRACT: A checklist to all the known 13 genera and 45 species of the subfamily Ceutorhynchinae from India is given. Taxonomic history with details of synonyms, references and distribution are also included. The zoogeographic distribution has been analyzed and details included. ©2014 Association for Advancement of Entomology

Key words: Ceutorhynchinae, India, checklist, distribution

INTRODUCTION

The subfamily Ceutorhynchinae was erected by Gistel (1856) as new placement from Barididae (Alonzo-Zarazaga and Lyal, 1999). This subfamily contains ca.1316 species, and one of the most speciose in the family Curculionidae (Colonnelli, 2004) and itself one of the largest family of Order Coleoptera (Alonso-Zarazaga and Lyal, 1999). Ceutorhynchines are distributed worldwide except New Zealand, Oceania, Antarctic and Subantarctic regions and South America, south of middle Argentina; no species known from Chile; the greatest numbers of genera and species are known from the Palaearctic, followed by Oriental region (Korotyaev, 2006).

Ceutorhynchinae are easily recognized by their robust complexion and ability to place the rostrum between the coxae in repose. One of the main external structural characters are the dorsally visible apices of the mesepimera (except for the Palaetropical genus *Cyphosenus* Schultze, 1899 and Oriental *Ceutorhynchoides* Colonnelli, 1979). More than one third of the existing Ceutorhynchinae are monophagous or oligophagous on Brassicaceae species (Korotyaev, 2006). Several *Ceutorhynchus* are among the most important pests on cruciferous crops as their larvae and adults damage plants. Larvae of members of this genus tunnel into stems (*Ceutorhynchus napi* Gyllenhal 1837, *Ceutorhynchus pallidactylus* (Marshall 1802)

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and leaf stalks (*Ceutorhynchus picitarsis* Gyllenhal 1837), feed on seeds within pods of the host plants (*Ceutorhynchus obstrictus* (Marsham 1802)) or cause root-gall formation (*Ceutorhynchus assimilis* (Paykull 1800)). *Ceutorhynchus* adults gnaw leaves, stems, buds and flowers of the cruciferous plants (Korotyaev, 2006). Some Ceutorhynchinae species feed on weeds and therefore are used or considered as biological control agents against weeds (Peschken and Wilkinson, 1981; Burki *et al.*, 2001; Colpetzer *et al.*, 2004; Korotyaev, 2006; Newman *et al.*, 2006; Gerber *et al.*, 2007; Visalakshy, 2007). There are some interesting biological and morphological peculiarities that occur in subgroups of Ceutorhynchinae and noteworthy is the ability to leap, expressed to a varying degree in several tribes of Ceutorhynchinae, which is not developed to a comparable extent in other Curculionidae except for Rhamphini (Curculioninae) and has been newly acquired within the Ceutorhynchinae (Korotyaev, 2006). Besides, there are aquatic Ceutorhynchinae with well developed swimming abilities and morphological adaptations compared to Bagoinae, the only other subfamily of the Curculionidae with specialized aquatic forms.

MATERIAL AND METHODS

This list is mainly based on available literature rather than on extensive taxonomic studies. It has been compiled mainly with the aid of Zoological Record (Insecta), the "Catalogue of Ceutorhynchinae of the World, with a key to genera" (Colonnelli, 2004) and original descriptions, wherever available. The classification proposed by Schultze (1902); Wagner (1938a, 1938b) and Colonnelli (2004) was followed.

RESULTS AND DISCUSSION

The results revealed that, the Ceutorhynchinae of India are represented by 45 species distributed in 13 genera under five tribes. A perusal of the checklist indicates that majority of the species are distributed in Northeast and north Indian peninsula. An analysis of described Indian fauna indicates that, from 1837 to 1900 only six species had been described (Table 1); 18 species were described from 1901 to 1950. The majority of species (21) were described during 1951 to 2000, and thereafter, no species were described from India. An analysis made on the contributions of coleopterists (Table 2) indicates that Pajni and Kohli had described 10 species followed by Colonnelli (1979, 1984, 1987, 1992, 1993, 1998); and Marshall with nine species each, Hustache with 6 species, Schultze with three species, Korotyaev with two species, and Dalla Torre, Faust, Gyllenhal, Motschulsky with one species each. In conclusion, the present checklist is a comprehensive list of Ceutorhynchines distributed in India.

TRIBE, GENERA AND SPECIES

DISTRIBUTION

A. Phytobinii Gistel, 1848

- | | | |
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| I. | <i>Rhinoncus</i> Schoenherr, 1825: c586
Type species: <i>Curculio pericarpus</i> Linnaeus, 1758 | |
| 1. | <i>caesareus</i> Colonnelli, 1979b: 483 | North Indian peninsula: India, Nepal, Pakistan |

2. *paganus* Gyllenhalin Schoenherr, 1837: 586
Rhinoncus luzonicus Hustache, 1925: 333;
 Colonnelli, 2004: 32
 Southeast Asia, South Africa:
 Bangladesh, Indonesia, India, Laos,
 Nepal, Philippines, Thailand, Vietnam,
 South Africa

B. Ceutorhynchini Gistel, 1848

- II. *Ceutorhynchoides* Colonnelli, 1979a: 144
 Type species: *Ceutorhynchoides badius* Colonnelli, 1979b
- 3 *bengalensis* Colonnelli, 1984: 201 Bengal: India
- 4 *notatus* Colonnelli, 1984: 202 Bengal: India
- 5 *subcostulatus* (Hustache, 1920)
Ceuthorrhynchus subcostulatus Hustache, 1920:
 332; Colonnelli, 2004: 36 South India: India
- 6 *topali* Colonnelli, 1984: 202 Assam: India
- III. *Ceutorhynchus* Germar, 1824
Ceutorhynchus Germar, 1824: 217
 Type species: *Curculio assimilis* Paykull, 1792
- 7 *kashmirensis* Korotyaev, 1980: 144 Kashmir: India
- IV. *Dieckmannius* Colonnelli, 1987: 139
 Type species: *Ceuthorrhynchus sexnotatus* Schultze, 1899
- 8 *ingens* Colonnelli, 1993: 388 Himalayas: Bhutan, India, Nepal
- 9 *sexnotatus* (Schultze, 1899)
Ceuthorrhynchus sexnotatus Schultze,
 1899: 190; Colonnelli, 2004: 56
Ceuthorrhynchus camerunensis Hustache,
 1930: 78; Colonnelli, 2004: 56 Himalayas: North India, Nepal
- V. *Indicoplontus* Colonnelli, 1984: 205
 Type species: *Ceuthorrhynchus indicus* Hustache, 1930
- 10 *indicus* (Hustache, 1930)
Ceuthorrhynchus indicus Hustache, 1930: 77;
 Colonnelli, 1984: 205 Himalayas: India, Nepal, Pakistan
- VI. *Indozacladus* Colonnelli, 1984: 204
 Type species: [*Ceutorhynchus*] *theresiae* Dalla Torre, 1922
- 11 *theresiae* (Dalla Torre, 1922)
Ceutorhynchus theresiae Dalla Torre, 1922:
 125; Colonnelli, 1984: 204
Ceutorhynchus asperulus Faust, 1898: 323 not
Ceuthorrhynchus asperulus Boheman, 1845;
 Colonnelli, 2004: 66
Indozacladus cajani Colonnelli, 1998: 140;
 Colonnelli, 2004: 66 South India: India

B. Mecysmoderini Wagner, 1938a

- VII. *Mecysmoderes* Schoenherr, 1837: 596
Type species: *Mecysmoderes euglyptus* Gyllenhal, 1837
- 12 *aurosquamosus* Korotyaev, 1989: 145 Karnataka: India
- 13 *carinatus* Faust, 1898: 324 Karnataka: India
- 14 *crassirostris* Hustache, 1924: 59 Sikkim: India
- 15 *notobrevicarinatus* Pajni & Kohli, 1982: 351 Northeast India
- 16 *notoexcavatus* Pajni & Kohli, 1982: 364 Northeast India
- VIII. *Belonnotus* Schultze, 1899: 187
Type species: *Belonnotus tricarinatus* Schultze, 1899
- 17 *lineolatus* (Hustache, 1920)
Mecysmoderes lineolatus Hustache, 1920:
329; Colonnelli, 2004: 72 India
- 18 *longicallus* (Pajni & Kohli, 1982)
Mecysmoderes longicallus Pajni & Kohli,
1982: 345; Colonnelli, 2004: 72 Northeast India
- 19 *mussooriensis* (Pajni & Kohli, 1982)
Mecysmoderes mussooriensis Pajni & Kohli,
1982: 349; Colonnelli, 2004: 72 Himalayas: North India, Nepal
- 20 *nigriclava* Colonnelli, 1992: 404 Uttar Pradesh: India
- 21 *ochraceus* (Motschulsky, 1858)
Coeliosomus ochraceus Motschulsky, 1858: 70;
Colonnelli, 2004: 72 India
- 22 *ochrasuturalis* (Pajni & Kohli, 1982)
Mecysmoderes ochrasuturalis Pajni & Kohli,
1982: 360; Colonnelli, 2004: 72 Himachal Pradesh: India
- 23 *pectinipes* (Marshall, 1917)
Mecysmoderes pectinipes Marshall, 1917: 406;
Colonnelli, 2004: 72 Tamil Nadu: India
- 24 *riedeli* Colonnelli, 1992: 406 Tamil Nadu: India
- 25 *tenuirostris* (Marshall, 1917)
Mecysmoderes tenuirostris Marshall, 1917:
403; Colonnelli, 2004: 72
- 26 *tricarinatus* Schultze, 1899: 187 Tamil Nadu; Northeast India: India
- IX. *Cysmemoderes* Colonnelli, 1992: 407
Type species: *Mecysmoderes tuberculatus* Pajni & Kohli, 1982
- 27 *tuberculatus* (Pajni & Kohli, 1982)

- 39 *armirufus* (Marshall, 1948)
Mecysmoderes armirufus Marshall, 1948: 455;
 Colonnelli, 2004: 73
 Himalayas: Northeast India,
 Myanmar
- 40 *brevicornis* (Hustache, 1924)
Mecysmoderes brevicornis Hustache, 1924: 58;
 Colonnelli, 2004: 73
Mecysmoderes albocapillus Pajni & Kohli,
 1982: 359; Colonnelli, 2004: 73
 Himalayas: North India, Nepal
- 41 *comes* Colonnelli, 1992
Xenysmoderes comes Colonnelli, 1992: 413
 Himalayas: North India, Nepal
- 42 *humeralis* (Hustache, 1924)
Mecysmoderes humeralis Hustache, 1924: 57;
 Colonnelli, 2004: 73
 Himalayas: Northeast India, Nepal,
 Bhutan
- 43 *stylicornis* (Marshall, 1934)
Mecysmoderes stylicornis Marshall, 1934: 51;
 Colonnelli, 2004: 73
 Himalayas: North India, Myanmar,
 Australia
- C. Egrini Pajini & Kohli, 1982**
Cyphosenus subg. *Cyphosenus* Schultze, 1899: 188
 Type species: *Cyphosenus paradoxus* Schultze, 1899
- 44 *paradoxus* Schultze, 1899
Cyphosenus paradoxus Schultze, 1899: 188
 North India
- D. Hypurini Schultze, 1902**
Hypurus Rey, 1882: 189
 Type species: *Ceutorhynchus bertrandi* Perris, 1852
- 45 *portulacae* (Marshall, 1916)
Ceuthorhynchus portulacae Marshall,
 1916: 368; Colonnelli, 2004: 80
 India, Pakistan

Table 1. Number of species described during different periods

Serial Number	Period		Number of species described
	From	To	
1	1837	1900	6
2	1901	1950	18
3	1951	2000	21

Table 2. Contribution of coleopterists to Indian Ceutorhynchinae

Serial Number	Contributing coleopterists	Number of species described
1	Colonnelli	9
2	Dalla Torre	1
3	Faust	1
4	Gyllenhal	1
5	Hustache	8
6	Korotyaev	2
7	Marshall	9
8	Motschulsky	1
9	Pajni & Kohli	10
10	Schultze	3

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