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New species of the genus *Hypnoidus* Dillwyn, 1829 from India and Nepal, with two new generic combinations and an updated catalogue (Insecta: Coleoptera: Elateridae: Hypnoidini)

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Abstract

Four new species of the genus *Hypnoidus* Dillwyn, 1829 are described from North India and Nepal. Two new generic combinations are proposed for two species described under the genus *Ctenicera* Latreille, 1834 and an updated catalogue of the known species of India and Nepal is given.

Zusammenfassung

Vier neue Arten der Gattung *Hypnoidus* Dillwyn, 1829 werden aus Nordindien und Nepal beschrieben. Für zwei in der Gattung *Ctenicera* Latreille, 1834 beschriebene Arten werden Neukombinationen vorgeschlagen und der Katalog der bekannten Arten für Indien und Nepal aktualisiert.

Key-words: Coleoptera, Elateridae, *Hypnoidus*, new species, India, Nepal, catalogue

Introduction

The first important contribution to the knowledge of the Hypnoidus Dillwyn, 1829 species from India and Nepal, is due particularly to the studies of the American entomologist Jeffrey N. L. Stibick in his revision of the Hypnoidinae of the World, Part IV "The Hypnoidinae of India" (STIBICK 1980). In this paper seven new species were described, and it was proposed to subdivide the known taxa into two groups based on the length ratio of metasternum and the second abdominal segment: Metasternus group (metasternum short) species generally with wings reduced to flaps and Hypnoidus group (metasternum long) generally species with developed wings. More recently several contributions to the species from the region were provided by Dolin & Cate (2001, 2002, 2003) while the last contribution is in PLA-TIA (2016) with a new species from North India. Now the examination of new material, recently received by

colleagues, give us the possibility to recognize four new undescribed species, three from India and one from Nepal. One species is recorded for the first time from the Indian eastern state of Arunachal Pradesh. The new species belong all to the Hypnoidus -group sensu Stibick, 1980, all with developed wings except for a species from Nepal with wings reduced to flaps. At the end an updated catalogue of all the described species is given, including two species previously described under the genus Ctenicera Latreille, 1829 (VATS & Chauhan 1992). It is clear according to the descriptions and the figures given by the Authors that these species must be transferred to the genus Hypnoidus Dillwyn. 1829 with two new generic combinations. This made it necessary to provide a new replacement name for Hypnoidus alpinus Dolin, 1999 (China: Tibet), junior synonym of Hypnoidus alpinus (Vats & Chauhan, 1992) (Ctenicera).

Material and Methods

Measurements: Body length is measured along the midline from the anterior margin of the frons to the apex of the elytra; width is measured across the broadest part of the body. Pronotal length is measured along the midline; the width is at the broadest part, usually at the hind angles. Abbreviations - The names of institutions, museums and collections providing material for this study are abbreviated as follows: CPG, collection of G. Platia, Gatteo, Italy; CPR, collection of E. Pulvirenti, Roma; CRB, collection of C. Reuter, Berlin, Germany.

Results

Hypnoidus catei n. sp. Figs. 1, 5, 9, 13, 17.

Material examined. Holotype & - Nepal: Mt. Everest, Khumbu Valley, m 3500-4500, 25.X.1994, C. Piccini. (CPG).

Diagnosis. A species compared with *H. tilloae* Stibick, 1980 for the size and colours of the integuments, can be separated for the long metasternum, very dense and contiguous punctures on propleura, lack of a mid-longitudinal line on pronotum, reduced only to a trace.

Description. Male. Shiny; entirely brownish with reddish, vague, shades on head, apices of posterior angles of pronotum, sides of elytra; covered with moderate yellow-fulvous pubescence.

Frons flat with two very shallow depressions at sides before the anterior margin, the latter sub-arcuate and in the middle nearly touching the clypeus; surface micro-reticulate with punctures, deep, simple, and variable intervals, on average equal to their diameters. Antennae not reaching for about two article the apices of posterior angles, serrated from the fourth article onwards; second and third sub-cylindrical with the third just longer, taken together, 2.5 x longer than the fourth; fourth-tenth sub-triangular and pedunculate; fourth just longer than the following and a little longer than wide, fifth-tenth long as wide, last a little longer, sub-ellipsoidal, asymmetrically constricted before the apex.

Pronotum 1.16x wider than long, widest at the middle and the apices of posterior angles, strongly and regularly convex with a vestige of a very narrow, short and shallow mid-longitudinal line in the middle; sides arcu-

ate, sinuate before the posterior angles, the latter, long, moderately acuminate, not divergent; carina reduced to a trace, lateral margins complete and well visible in a dorsal view; punctuation on the disk deep, generally rounded, simple, some oblong with shiny intervals on average equal to a little smaller than their diameters.

Scutellum quadrangular, rounded at apex, slightly convex, finely punctured.

Elytra 1.89 x longer than pronotum and 1.55 x longer than wide, very convex; oviform, sides widest at the middle; striae regularly marked, obsolete at the apical extremities, not punctured; interstriae flat with fine punctures.

Propleura very densely punctured giving the surface an opaque appearance.

Metasternum long, more than twice length of second abdominal segment.

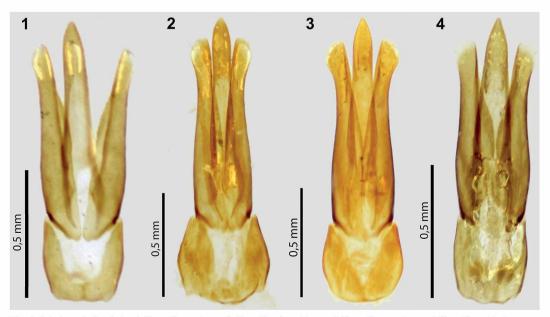
Wings reduced to flaps.

Aedeagus as in fig. 1 (length 0.77 mm).

Female unknown.

Size. Length 5.5 mm; width 2.1 mm.

Etymology. The species is dedicated to the Memory of our colleague Peter Cate from Wien, Author of the Palearctic Catalogue and student together W. Dolin of the *Hypnoidus* species from the Himalayan region, recently deceased.



Figs. 1-4. Aedeagus in dorsal view. 1. Hypnoidus catei n. sp.; 2. Hypnoidus chassaini n. sp.; 3. Hypnoidus reuteri n. sp.; 4. Hypnoidus zeisingi n. sp.

Hypnoidus chassaini n. sp. Figs. 2, 6, 10, 14, 18.

Material examined. Holotype ♂ - India: Uttarakhand, Flowers Valley, m 3500, 3.VIII.1980, G. Ledoux & G. Meurgues. (CPG).

Diagnosis. Species resembling *H. beckeri* Stibick, 1980 in general shape and size, it can be separated by the larger punctures of pronotum, wings developed, slender aedeagus.

Description. Male. Moderately shiny; entirely black with legs brown; covered with moderate, yellowish, pubescence.

Frons flat with some irregular and very shallow depressions, anterior margin sub-arcuate and in the middle nearly touching the clypeus; surface micro-reticulate with sparse punctures, deep, simple, and variable intervals, on average equal to a little larger than their diameters. Antennae short just exceeding the middle of pronotum, serrated from the fourth article on; second and third sub-cylindrical with the third just longer, taken together, 2.3 x longer than the fourth; fourth-tenth sub-triangular and pedunculate; fourth just longer than the following and a little longer than wide, fifth-tenth long as wide, last a little longer, sub-ellipsoidal, asymmetrically constricted before the apex.

Pronotum 1.16 x wider than long, widest at the middle, convex without any basal depression; sides very arcuate, from the middle tapering to the apices and base, sinuate before the posterior angles, the latter long, acuminate, slightly divergent, carinate; carina very short, lateral margin complete and well visible in a dorsal view; punctuation uniformly distributed on a surface slightly micro-reticulate, punctures deep, simple with intervals variable, equal to a little larger than their diameters.

Scutellum quadrangular, rounded at apex, slightly ridged at base, flat, sparsely punctured.

Elytra 2.4 x longer than pronotum and 1.83 x as long as wide; convex, widest at the middle, oviform; striae regularly marked and not punctured; interstriae flat with very slightly micro-reticulate surface and very finely punctured.

Metasternum long more than twice length of second abdominal segment.

Wings present and normally developed.

Aedeagus as in the fig. 2 (length 1.05 mm).

Female unknown.

Size. Length 6.9 mm; width 2.43 mm.

Etymology. The species is dedicated to the memory of our Elaterologist colleague Jacques Chassain, who sent us material of *Hypnoidus* for study.









Figs. 5-8. Antennae. 5. Hypnoidus catei n. sp.; 6. Hypnoidus chassaini n. sp.; 7. Hypnoidus reuteri n. sp.; 8. Hypnoidus zeisingi n. sp.

Hypnoidus reuteri n. sp. Figs. 3, 7, 11, 15, 19.

Material examined. Holotype ♂ - India: Himachal Pradesh, Mahri, m 3500, 19.VIII.1980, G. Ledoux & G. Meurgues. (CPG). 1 Paratype ♀ - same data as HT. (CPG).

Diagnosis. A species comparable for the size and the general shape to *H. jeffreyi* Dolin & cate, 2002, it can be easily separated by the moderate shiny body and larger punctures on pronotum, male genitalia.

Description. Male. Moderately shiny; entirely black with legs brown; covered with moderate, few apparent fulvous, pubescence.

Frons flat with some irregular and very shallow depressions, anterior margin sub-arcuate and in the middle nearly touching the clypeus; surface micro-reticulate with sparse punctures, deep, simple, and variable intervals, on average larger than their diameters. Antennae not reaching for about 1.5 articles the apices of posterior angles of pronotum, serrate from the fourth article on; second article sub-cylindrical, third sub-conical and just longer, second and third, taken together 2 x longer than the fourth; fourth-tenth triangular, pedunculate, from twice as long as wide (fourth-fifth) to less (sixth-tenth), last sub-ellipsoidal and asymmetrically constricted after the middle.

Pronotum 1.2 x wider than long, widest at the middle and at the apices of the posterior angles, strongly convex on the middle, abruptly sloping at sides and more at base with a very shallow mid-longitudinal depression along the basal slope; sides very arcuate, from just behind the middle strongly tapering to the apices, distinctly sinuate before the posterior angles, the latter, long, acuminate, divergent, finely and shortly carinate; lateral margins complete and totally visible in a dorsal view; surface very slightly micro-reticulate so to appear not shiny with deep and simple punctures and with intervals variable but on average two-three times larger than their diameters.

Scutellum rounded, as long as wide, moderately ridged at base, flat, sparsely punctured.

Elytra 2.7 x longer than pronotum and 1.88 x as long as wide, convex; sides widest at the middle and then very gradually tapering to the apices; striae regularly marked, not punctured; interstriae flat with very fine micro-reticulation and sparse punctures.

Metasternum long more than twice length of second abdominal segment.

Wings present and regularly developed.

Aedeagus as in the fig. 3 (length 1.07 mm).

Female. Identical to the male, difficult to separate without examination of genitalia.

Size. Length 7.6-7.7; width 2.68-2.75 mm.

Etymology. The species is dedicated to our colleague Christoph Reuter who sent us material for study.

Hypnoidus zeisingi n. sp. Figs 4, 8, 12, 16, 20.

Material examined. Holotype ♂ - India: Arunachal Pradesh, env. 20 km W of Sela Pass (27°30'N/92°01'E), m 3400, 24.VI.2008, C. Reuter. (n. sp. det. Zeising) (CPG). 17 Paratypes (10 ♂, 7 ♀) - same data as Ht. (CPG; CPR; CRB).

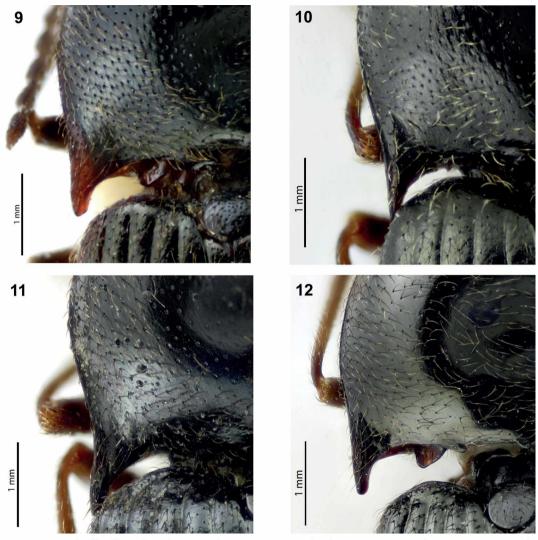
Diagnosis. A species separated by all the other for the clearly bicarinate angles of pronotum with the outer carina running sub-parallel to the lateral margins for nearly all its length and visible in a dorsal view.

Description. Male. Extremely shiny except for except for the head, opaque; piceous with antennae blackish, only reddish at the base of the first articles; legs brown; covered with very sparse, few apparent, yellowish pubescence.

Frons flat with some irregular and very shallow depressions, anterior margin sub-arcuate and sometimes in the middle nearly touching the clypeus; surface micro-reticulate so to appear opaque with punctures deep, simple with intervals variable, equal to larger than their diameters

Antennae short, just exceeding the middle of the pronotum, serrated from the fourth article onwards; second article sub-cylindrical, third sub-conical and just longer than the second, taken together 2.1 x as long as the fourth; fourth-tenth triangular and pedunculate, the fourth longer and twice as long as wide, fifth-tenth gradually shorter and just longer than wide, last longer, sub-ellipsoidal and asymmetrically constricted after the middle.

Pronotum 1.2-1.3 x wider than long, widest at the middle or at the apices of the posterior angles, convex without any basal depression; sides arcuate from the middle regularly tapering to apex and base or very slightly sinuate before the posterior angles, the latter long, very acuminate, not divergent, bicarinate; the inner carina very short, the outer sub-parallel to the lat-



Figs. 9–12. Pronotal profile with posterior angle. 9. Hypnoidus catei n. sp.; 10. Hypnoidus chassaini n. sp.; 11. Hypnoidus reuteri n. sp.; 12. Hypnoidus zeisingi n. sp.

eral margins and forming with it a shiny and thickened margins reaching the anterior margin; punctuation very moderate with punctures deep, simple very sparse, with intervals variable but on average 3–4 times larger than their diameters.

Scutellum quadrangular, moderately ridged at base, flat with sparse punctures.

Elytra 2.6–2.7 x longer than pronotum and 1.8 x as long as wide, convex; sides gradually dilated from the base widest at the middle then regularly tapering to the api-

ces; striae well marked and with indistinct punctures, interstriae flat finely and sparsely punctured.

Propleurae very densely micro-reticulate, appearing opaque or very slightly shiny and only with some, few apparent, sparse and larger punctures. Prosternum shiny with very fine and sparse punctures.

Metasternum long more than twice as long as second abdominal segment.

Wings reduced just reaching the middle of elytra, not able to fly.

Aedeagus as in the fig. 4 (length 0.875 mm).

Female. Identical to the males, difficult to separate without examination of genitalia.

Size. Length 6.4-7.2 mm; width. 2.3-2.6 mm

Etymology. The new taxon is dedicated to the Memory of our elaterologist colleague Manfred Zeising, who first examined the species and recognised that was undescribed.

Hypnoidus alpinus (Vats & Chauhan, 1992) (comb. nov.)

Ctenicera alpinus Vats & Chauhan, 1992: 25. (India: Himachal Pradesh).

The description, the pictures of the adult and of the male genitalia show, without any doubts, that this species must be transferred to the genus *Hypnoidus* Dillwyn, 1829.

Because of this new generic combination, it is necessary to provide a new replacement name for *Hypnoidus alpinus* Dolin, 1999 described from China: Tibet.

Hypnoidus dolini Platia & Sechi, 2022 nom. nov. (**new replacement name** for *Hypnoidus alpinus* Dolin, 1999 preocc.).

Hypnoidus subnivosus (Vats & Chauhan, 1992) (comb. nov.)

Ctenicera subnivosus Vats & Chauhan, 1992: 25. (India: Himachal Pradesh).

On the basis of description, female, and the picture provided by the authors, the species is transferred to the genus *Hypnoidus* Dillwyn, 1829.

Updated list of the 24 species of *Hypnoidus* known from India and Nepal:

alpinus (Vats & Chauhan, 1992) India: Himachal Pradesh

beckeri Stibick, 1980 India: Sikkim; Nepal; China: Tibet brevis Dolin & Cate, 2001 Nepal butti Stibick, 1980 Indian Tibet; Pakistan

audryae Stibick, 1980 India: Uttar Pradesh

cachemirensis (Candèze, 1897) India: Kashmir; Pakistan candezei (Fleutiaux, 1905) India: Punjab

catei Platia & Sechi, 2022 n. sp. Nepal

chassaini Platia & Sechi, 2022 n. sp. India: Himachal Pradesh

1 Tudesii

costae Stibick, 1980 Nepal

deuvei Dolin & Cate, 2001 India: Kashmir heinrichi Stibick, 1980 India: Sikkim; Nepal jeffreyi Dolin & Cate, 2002 Nepal; China: Sichuan, Yunnan

leseigneuri Stibick, 1980 India: Sikkim mendeli Dolin & Cate, 2001 India: Himachal Pradesh nadaii Platia, 2016 India: Uttarakhand nepalensis (Ohira & Becker, 1973) Nepal; China: Tibet persimilis Dolin & Cate, 2001 India: Kashmir problematicus Dolin & Cate, 2003 India: Uttar Pradesh reuteri Platia & Sechi, 2022 n. sp. India: Himachal Pradesh

subnivosus (Vats & Chauhan, 1992) India: Himachal Pradesh

tilloae Stibick, 1980 Rapti River (India-Nepal) topali Dolin & Cate, 2001 India: Kashmir zeisingi Platia & Sechi, 2022 n. sp. India: Arunachal Pradesh

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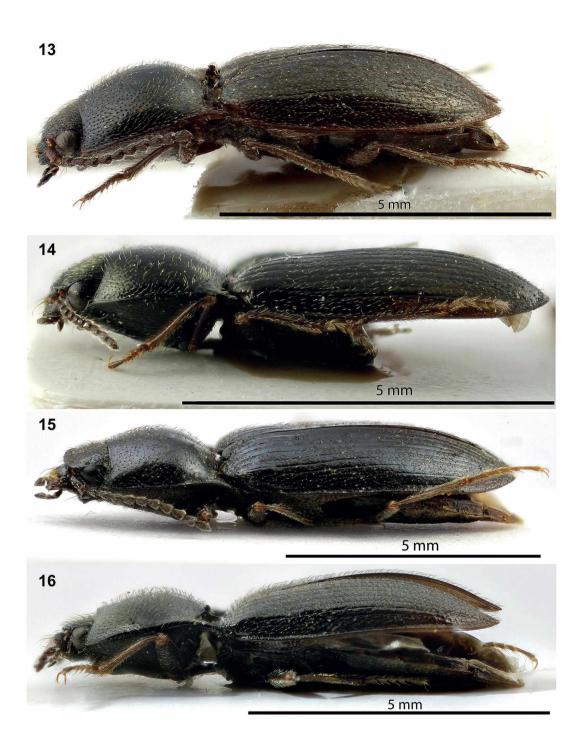
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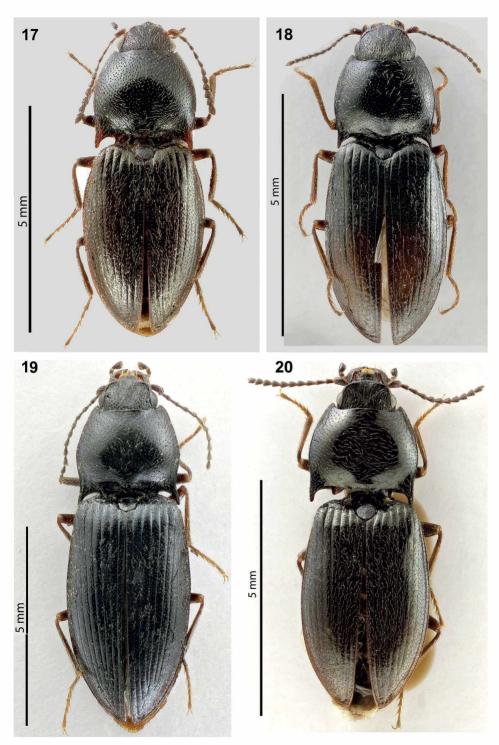
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Figs 13-16. Adult in lateral view. 13. Hypnoidus catei n. sp.; 14. Hypnoidus chassaini n. sp.; 15. Hypnoidus reuteri n. sp.; 16. Hypnoidus zeisingi n. sp.



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