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Coleoptera: Fam. Cryptophagidae, Genus Henoticus

by T. Sen Gupta and T. K. Pal

Abstract: The systematic position and relationship of *Henoticus* Thomson is discussed, and the genus is redefined. One new species, *H. bhutanicus* is described and a key to the Indian species of the genus is given.

Henoticus Thomson is a small genus belonging to the tribe Cryptophagini (Cryptophaginae: Cryptophagidae). In Junk's 'Coleopterorum Catalogus' SCHENKLING (1923) listed 11 species under this genus from the world, of which one species, *H. indicus* Grouvelle is recorded from India. Recently, JOHNSON (1975) has added 2 more species from India and a subspecies from Nepal. One of us (Sen Gupta) has examined the types of these species in Manchester Museum. The genus *Henoticus* can be easily separated from *Cryptophagus* Herbst and its related genera by the absence of callosities on the front angles of the prothorax. Unlike *Henotiderus* Reitter its front angles do not project forward and it can be separated from *Salebius* Casey by its prothorax, the lateral margin of which is uniformly serrated and slightly rounded, or at least not parallel sided. Until now, the tarsal formula of *Henoticus* was believed to be 5-5-5 in the female and 5-5-4 in the male. In the present investigation we have discovered that it may be 5-5-5 in both sexes or 5-5-4 in the male.

Genus **Henoticus** Thomson

Henoticus Thomson, 1968, Skand. Col. 10: 67; Reitter, 1875, Deutsche. ent. Zeit. Heft 3: 4, 9; 1911, Fauna Germanica 3: 57, 59; Ganglbauer, 1899, Die Käfer von Mitteleuropa 3: 670; Sharp, 1900, Biologia centrali-Americana 2: 597.

Type-species: *Cryptophagus serratus* Gyllenhal

General appearance (Fig. 1) broadly elongated, somewhat convex, dorsal surface usually reddish brown to blackish brown and pubescent.

Head (Fig. 7) transverse, anterior margin of clypeus almost straight, eyes moderately large and coarsely faceted, temple short, shelf-like, vertex with a transverse impressed line, tentorium with two long tentorial

arms and connected by a transverse bridge behind middle, on ventral side gular sutures moderately widely separated. Antenna moderately long and slender, antennal insertions partially hidden by projection of frons, 11-jointed, scape broadly elongated, joints 2–8 subequal and narrower than scape, club loose and 3-jointed. Mandible (Fig. 14) with two apical teeth and a row of short teeth behind, mola well developed. Maxilla (Fig. 15) with lacinia narrow, elongated and with two apical spines, galea short and broad, its apex densely hairy; palpi with segments 2 and 3 nearly equal in length, apical segment longest and somewhat fusiform. Labium (Fig. 16) with mentum triangular, palpi with apical segment longest and somewhat fusiform. Labrum (Fig. 17) with apical margin slightly concave.

Prothorax (Fig. 8) usually distinctly transverse, front margin rounded, side margins outwardly curved and serrated, pronotum convex, prebasal impression on pronotum distinct, prosternal process slightly rounded at apex, front coxae almost contiguous, coxal cavities slightly transverse with hidden trochantins, cavities broadly opened outwardly and internally closed.

Mesometathorax (Fig. 10). Mesocoxae narrowly separated, cavities closed outwardly, lateral margins of mesosternal process simple, sternal fitting between mesocoxae with two knobs; metasternum transverse, median impressed line extends anteriorly near middle, hind coxae moderately widely separated. Metendosternite well developed, anterior tendons closely situated.

Wing and elytra: Wing (Fig. 13) with single anal vein and radial cell, without anal cell and subcubital fleck. Elytra somewhat ovoid, confusely punctured, with semierect setae, epipleura distinguishable only at basal half (Fig. 11).

Legs (Fig. 9) moderately long, trochanters short and simple, femora usually broadened towards middle, tibiae not broadened at apex and with two apical spurs; tarsal formula 5-5-5 in female, in male usually 5-5-4 (5-5-5 in male of *H. indicus*), tarsi simple, penultimate segment smallest, claws simple.

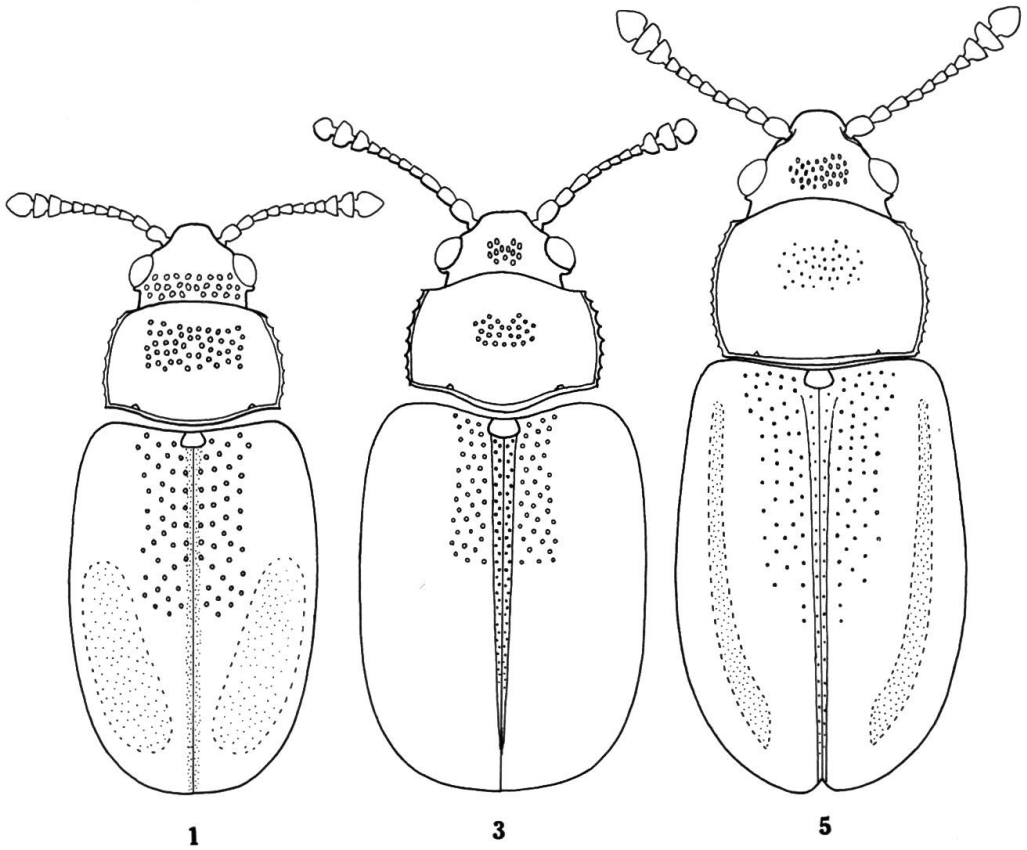
Abdomen (Fig. 12) broadly elongated, ventrites freely articulated, ventrite 1 longest, intercoxal process moderately broadly elongated and rounded at apex, ventrites 2–5 subequal. Aedeagus (Fig. 2) univerted cucujoid-type, median lobe broadly elongated, tegmen complete; articulated parameres well developed, slender and elongated. Ovipositor (Fig. 18) with well developed paraprocts, valvifers, coxites, and a pair of styli attached to outer margin of apex of coxites.

Habitat: No published information is available regarding habitat of this genus. In the present study the specimens were collected mainly from bushes, leaves and flowers and were also collected from the under side of bark and garbage mixed with dung.

Distribution: This genus is chiefly recorded from the temperate regions of both the Old and New Worlds; in India this genus is recorded from the Eastern and Western Himalayas, but is not known from Southern India.

Key to Indian Species of Henoticus

1. Elytra reddish with apical third abruptly black, with a broad callosity on each side of suture at base; pronotal disc with two large well marked rounded depressions in posterior half and a small depression at about the middle of each side margin, prothorax weakly transverse **regificus** Johnson



Figs 1, 3, 5: 1, *Henoticus indicus* Grouvelle, dorsal view. 3, *Henoticus serratus nepalensis* Johnson, dorsal view. 5, *Henoticus bhutanicus* n. sp., dorsal view.

Elytra not abruptly black in apical third, without any callosity at base; pronotal disc devoid of any large well marked depression, with only weak basal impression, prothorax more strongly transverse 2

2. Head and pronotum brownish black, both paler towards front, elytra yellowish brown and scutellum dark reddish brown; antennal club darker than preceding joints; prothorax broadest in front of middle **flavipennis** Johnson

Head and pronotum uniformly coloured, elytra and scutellum unicolourous, antenna uniformly coloured throughout, prothorax broadest at middle or behind middle 3

3. Species uniformly blackish brown; tarsal formula 5-5-4 in male and 5-5-5 in female; aedeagus with apex of median lobe narrowly pointed **serratus nepalensis** Johnson

Species reddish brown; tarsal formula 5-5-5 in both sexes, aedeagus with apex of median lobe somewhat rounded 4

4. Prothorax strongly transverse (1.00:1.40–1.45); antennal insertions on lateral side of head, aedeagus with apex of median lobe broadly rounded, parameres somewhat boradly elongated and each paramere with two long apical setae (Fig. 2) **indicus** Grouvelle

Prothorax less transverse (1.00:.23); antennal insertions somewhat dorso-lateral; aedeagus with median lobe narrowed towards apex and apical margin slightly rounded, parameres narrowed towards apex and each paramere with a single long apical seta (Fig. 6). **bhutanicus** n. sp.

Henoticus regificus Johnson

Henoticus regificus Johnson, 1975, Senckenbergiana biol. 56 1/3: 38 (West Nepal: Jumla area, Dzunda Khola Valley).

This species was described by JOHNSON (1975). He mentioned that this is an exceptionally beautiful species and different in colouration from any other species of *Henoticus*. Legs and antennae black, head slightly reddish, pronotum black and elytra with apical third black; prothorax weakly transverse, pronotum finely and sparsely punctured, depression on each side of pronotal disc in the basal half and a small one about the middle of each side margin, prothorax weakly curved at sides and widest near middle; elytra with a broad callus on each side of the

suture at the base are also distinguishing features of this species. Length 2.3 mm.

Distribution: Nepal.

Henoticus flavipennis Johnson

Henoticus flavipennis Johnson, 1975, Senckenbergiana biol. 56 1/3: 38 (West Nepal: area of the Rara Lakes).

This species is also described by JOHNSON (1975). He mentioned that it can be readily recognised by the colouration of the dorsal surface, the prothorax being broadest in front of the middle and pronotum coarsely and densely punctured. Head and prothorax dark reddish brown, antennal joints 1–8 pale reddish brown and club dark reddish brown, elytra yellowish brown, scutellum dark reddish brown, legs reddish brown with tarsi slightly paler. Length 2.4 mm.

Distribution: Nepal.

Henoticus indicus Grouvelle

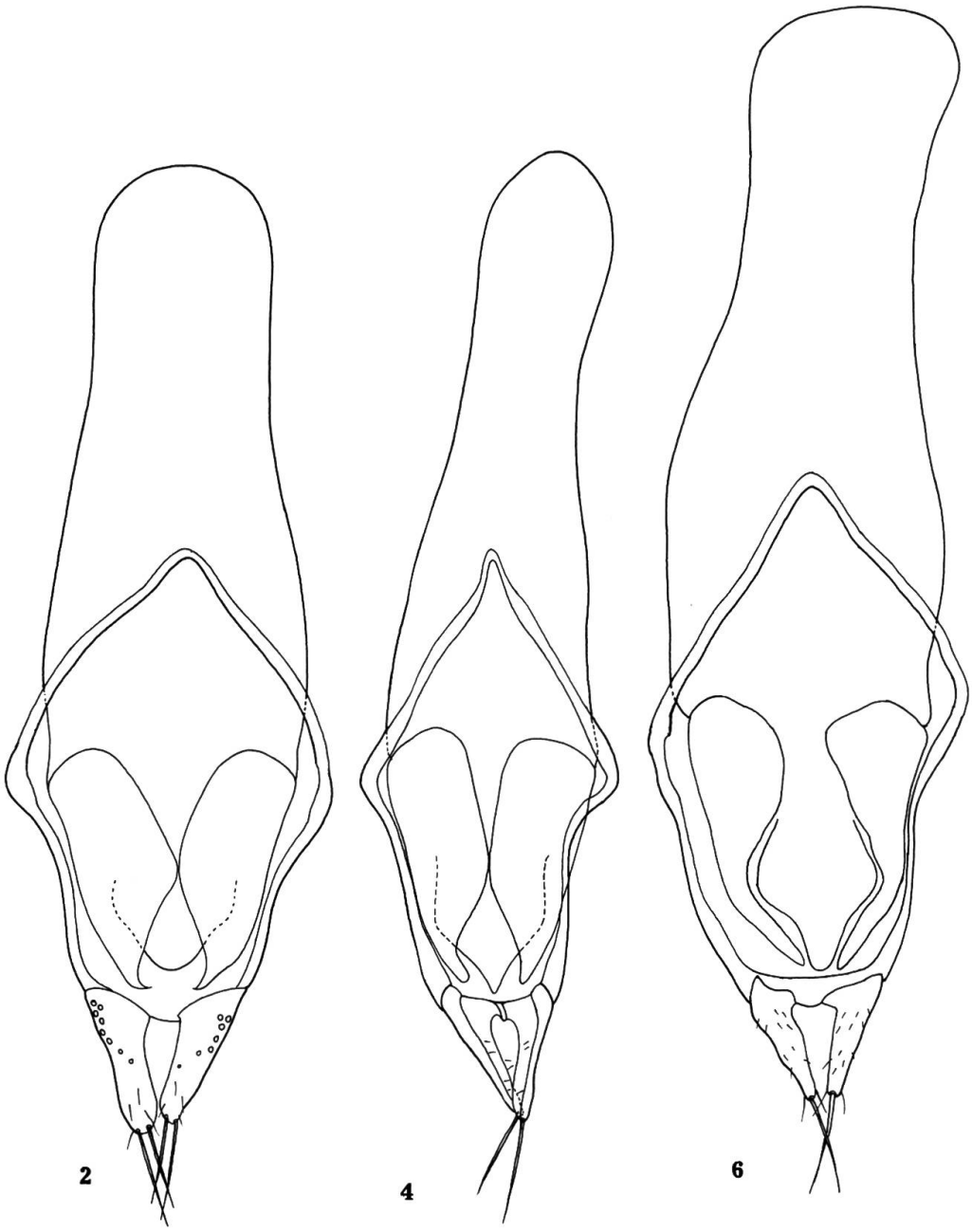
Henoticus indicus Grouvelle, 1916, Mem. ent. 1:78 (India: Uttar Pradesh, Nainital); Johnson, 1975, Senckenbergiana biol. 56 1/3: 38.

This is one of the most common species of *Henoticus* from India, abundantly occur in Darjeeling District: West Bengal and also recorded from Kaziranga: Assam and Nainital: U.P. This species can be characterized by its dorsal surface being straw colour, elytra sometimes with two faint blackish lateral longitudinal spots in posterior half, prothorax strongly transverse and aedeagus with apex of median lobe broadly rounded and each paramere with two long apical setae (Fig. 2).

General appearance (Fig. 1) elongated, convex, dorsal surface straw coloured with faint blackish spots on elytra, covered with semierect golden pubescence.

Head: Exposed part of head broader than long, eyes large, length of eye about half the length of head, temple extended laterally beneath eye and its tip somewhat pointed, temple about as long as 1.5 to 2 eye facets, clypeus broad and transverse, puncturation on vertex coarse and moderately dense and that of near anteroir margin of clypeus finer, setae moderately long and projected posteriorly. Antenna moderately long and slender, scape moderately large, pedicel about as long as scape and narrower, joint 3 about as long as pedicel and narrower, joints 4–8 shorter and subequal; joints 9 and 10 transverse but joint 9 slightly narrower, joint 11 about as broad as long. Prothorax transverse (1:1.40

to 1.45), front margins rounded and slightly sinuated towards extremities; lateral margins rounded and with 9–11 small denticles, finely bordered, prebasal impression on pronotum distinct, two small lateral depressions present on prebasal impression of pronotum. Punctuation on pronotum slightly finer and sparser than on vertex of head,



Figs 2, 4, 6: 2, Aedeagus of *Henoticus indicus* Grouvelle, dorsal view. 4, Aedeagus of *Henoticus serratus nepalensis* Johnson, dorsal view. 6, Aedeagus of *Henoticus bhutanicus* n. sp., dorsal view.

space between punctures wider than each puncture, setae projected towards middle line. Scutellum moderately large, transverse, impunctute and apical margin rounded. Elytra broadly elongated, less than twice as long as broad, slightly wider near middle, lateral margins slightly curved outwardly, two faint blackish longitudinal spots in posterior half and sutural spot usually present, puncturation on elytra sparser than that of pronotum, setae projected posteriorly. Aedeagus (Fig. 2) with apex of median lobe broadly rounded, parameres somewhat broadly elongated, each with two long apical setae and a few short setae.

Measurements: Total length 1.74–2.57 mm, width of head across eyes 0.50–0.59 mm, length of antenna 0.61–0.79 mm, width of prothorax 0.64–0.78 mm, length of elytra 1.29–1.66 mm and width 0.83–1.07 mm.

Material examined: 31 ex. India, West Bengal: Darjeeling dt., Dow Hill, 1880 m, 30.IV.1976, 1 ex., A.R. Bhaumik, on bush; Darjeeling dt., Mirik, 2 ex. 2.V.1976, A.R.Bhaumik, on leaf; Darjeeling dt., Jhepi, 12 ex., 3.V.1976., A.R.Bhaumik, on bush; Darjeeling dt., Tindharia, 860 m, 4 ex., 4.V.1976, A.R.Bhaumik, swept from bush; locality, date and collector same as above, 3 ex., on leaf; Darjeeling, 2 ex., 19.VI.1971, T.Sen Gupta, on Compositae flower; Darjeeling, 2 ex., 4.V.1976, W.Wittmer; Tiger Hill, 2150 m, 3 ex., 7.V.1975, W.Wittmer; Assam: Kaziranga, 75 m, 3 ex., 7.–9.V.1976, Wittmer & Baroni.

Distribution: India: West Bengal (Darjeeling District), Assam (Kaziranga), and Uttar Pradesh (Nainital).

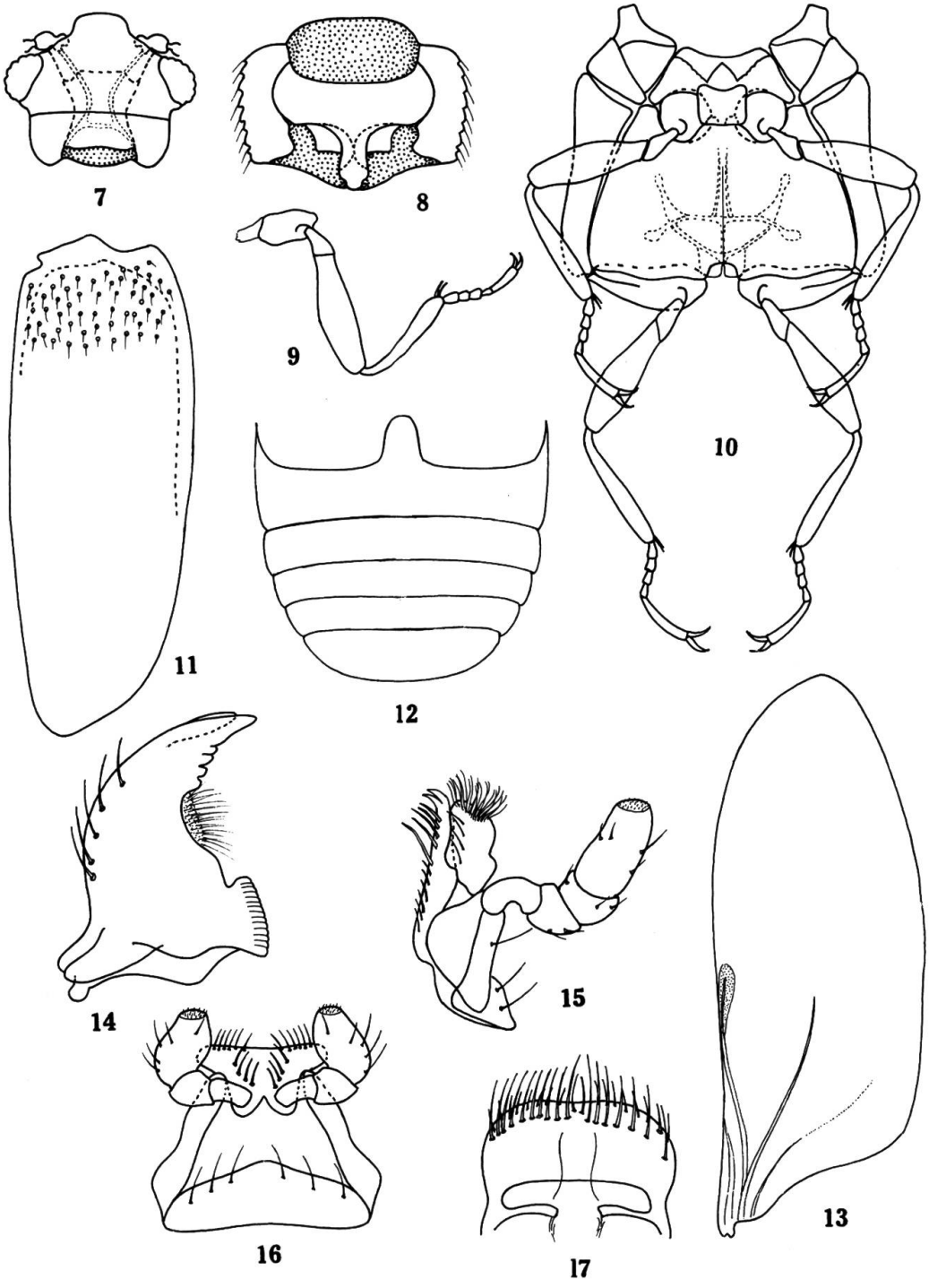
Henoticus serratus nepalensis Johnson

Cryptophagus serratus Gyllenhal, 1808, Insecta Suecica, 1: 171.
Paramecosoma serratus (Gyllenhal): Mannerh., 1853, Bull. Moscou 26 (3): 209.
Henoticus serratus (Gyllenhal): Thomson, 1868, Skand. Col. 10: 67
Henoticus serratus nepalensis Johnson, 1975, Senckenbergiana biol. 56 1/3: 38 (Nepal, Northern Dhaulagiri Himal.)

This species is as common in Darjeeling district: West Bengal as *H. indicus*. This species can be distinguished from other Indian species by its colouration being uniformly blackish and the narrowly pointed apex of median lobe of aedeagus (Fig. 4).

General appearance (Fig. 3) elongated, convex, dorsal surface blackish, covered with semierect golden pubescence.

Head: Exposed part of head broader than long, eyes large, length of eye about half the length of head, temple extended laterally beneath eye and its tip somewhat pointed, temple about as long as 1–1.5 eye facets,



Figs 7–17: *Henoticus indicus* Grouvelle ♂: 7, Head, dorsal view. 8, Prothorax, ventral view. 9, Front leg. 10, Meso-metathorax, ventral view. 11, Right elytron, dorsal view. 12, Abdomen, ventral view. 13, Wing. 14, Left mandible, dorsal view. 15, Left maxilla, ventral view. 16, Labium, ventral view. 17, Labrum.

clypeus broad and transverse, puncturation on vertex coarse and dense, near anterior margin of clypeus finer, width of each puncture distinctly wider than interspaces. Antenna moderately long and slender, scape moderately large, pedicel about as long as scape and narrower, joint 3 about as long as pedicel and narrower, joints 4–8 shorter and subequal, joints 9 and 10 transverse, but joint 9 slightly narrower than joint 10, joint 11 about as broad as long. Prothorax transverse (1:1.37 to 1.41), widest behind middle, front and hind angles slightly obtuse, front margin rounded and slightly sinuated towards extremities, lateral margin rounded and with 8–10 small denticles, finely bordered, prebasal impression on pronotum distinct, two small lateral depressions present on prebasal impression of pronotum. Puncturation on pronotum slightly finer than that of vertex of head, interspaces between punctures about as wide as width of each puncture, setae projected towards middle line. Scutellum moderately large, transverse, impunctate and pubescent, apical margin rounded. Elytra broadly elongated, less than twice as long as broad, slightly wider near middle, lateral margins slightly curved outwardly, puncturation on elytra slightly finer and sparser than that of pronotum, setae projected posteriorly. Aedeagus (Fig. 4) with apex of median lobe narrowed and pointed, parmeres elongated and slightly narrowed towards apex, each paramere with single long apical seta and a few short setae.

Measurements: Total length 2.03–2.40 mm, width of head across eyes 0.54–0.61 mm, length of antenna 0.74–0.83 mm, width of prothorax 0.70–0.88, length of elytra 1.44–1.66 mm and width 0.90–1.07 mm.

Material examined: 41 ex. India: West Bengal: Darjeeling dt., Lava, 2160 m., 1 ex., 9.VI.1976, A.R.Bhaumik, under garbage mixed with dung; Darjeeling dt., Jhepi, 3.V.1976, 34 ex., A.R.Bhaumik, under bark of *Elaeocarpus* sp. (27 ex.), under bark of *Neolitsea* sp. (26 ex.), under bark of *Temminalia* sp. (1 ex.); Darjeeling dt., Tindharia, 856 m., 6 ex., 4.V.1976, A.R.Bhaumik, on leaf.

Distribution: India: West Bengal (Darjeeling district) and Nepal.

Henoticus bhutanicus n. sp.

This species is closely related to *H. indicus* Grouvelle but can be easily separated by its prothorax being less transverse, antennal insertions somewhat dorso-lateral, lateral margin of prothorax with more denticles, which are less marked; puncturation on head, pronotum and elytra finer; paramere of aedeagus distinctly narrowed towards apex

and with a single long apical seta, shape of median lobe different (Fig. 6).

General appearance (Fig. 5) elongated, convex, dorsal surface straw coloured with faint blackish longitudinal spots on lateral sides of elytra, covered with semierect golden pubescence.

Head: Exposed part of head broader than long, eyes large, length of eye about half of length of head, temple extended laterally beneath eye and its tip somewhat pointed, temple about as long as 1–1.5 eye facets, clypeus broad and transverse, puncturation on vertex coarse and dense, towards anterior margin of clypeus sparser, width of each puncture slightly wider than interspaces, setae moderately long and projected posteriorly. Antenna moderately long and slender, antennal insertions somewhat dorso-lateral, scape moderately large, pedicel about as long as scape and narrower, joint 3 about as long as pedicel, joints 4–8 shorter and subequal, joints 9 and 10 transverse, joint 9 slightly narrower, joint 11 about as broad as long. Prothorax transverse (1:1.23), widest at middle, front and hind angles slightly obtuse, front margin rounded and slightly sinuated towards extremities, lateral margins rounded and with 13 small denticles, finely bordered, prebasal impression on pronotum distinct, two small lateral depressions present on prebasal impression of pronotum. Puncturation on pronotum finer and

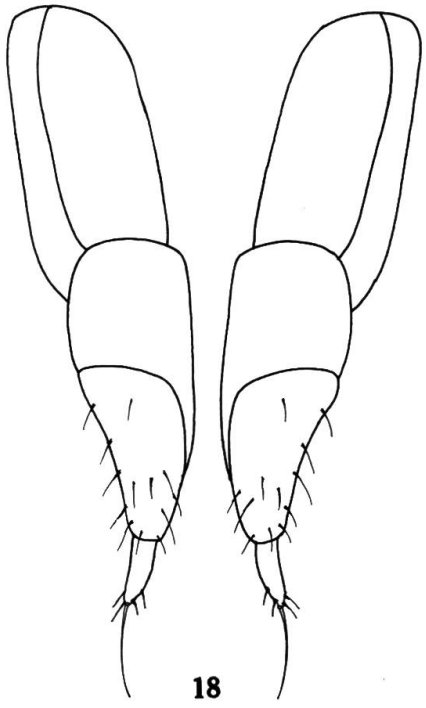


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Fig. 18: Ovipositor of *Henoticus indicus* Grouvelle.

sparser than on vertex of head, space between punctures wider than each puncture, setae projected towards middle line. Scutellum moderately large, impunctate and pubescent, apical margin rounded. Elytra broadly elongated, about 1.5 times as long as broad, slightly wider near middle, lateral margins slightly curved outwardly, two faint blackish lateral longtudinal spots present, puncturation on elytra slightly sparser than that of pronotum, setae projected posteriorly. Aedeagus (Fig. 6) with median lobe narrowed towards apex and its apical margin broadly pointed, parameres elongated and narrowed towards apex, each paramere with a single long and two shorter apical setae.

Measurements of holotype: Total length 2.48 mm, width of head across eyes 0.61 mm, length of antenna 0.94 mm, width of prothorax 0.77 mm, length of elytra 1.61 mm and width 1.07 mm.

Holotype ♂, Bhutan: Gogona, 3100 m, 10–12 VI. 1972, Nat. Hist. Museum Basel – Bhutan Expedition 1972. Aedeagus dissected and mounted on plastic board pinned with the holotype (Nat. Hist. Museum, Basel).

Distribution: Bhutan

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Literature

JOHNSON, COLIN (1975): *The Himalayan species of Henoticus Thomson (Coleoptera: Cryptophagidae)* 1), Senckenbergiana biol. *56* (1/3): 37–38.

SCHENKLING, S. (1923): *Cryptophagidae in Junk & Schenkling eds.*, Coleopterorum Catalogus, *15 (76)*: 1–92.

SEN GUPTA, T. (1967): *Systematic studies in Coleoptera-Clavicornia with special reference to Cryptophagidae, Languriidae and Erotylidae* (Unpublished thesis).

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