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**New species of the genus *Lederina* NIKITSKY & BELOV, 1982,
stat. nov. from the Nepal Himalayas ^{*})**
(Coleoptera, Melandryidae)

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Abstract

Three new species of *Lederina* NIKITSKY & BELOV, 1982, stat. nov. (elevated to full generic status from a subgenus of *Lederia* REITTER, 1879) are described from Nepal: *L. martensi* sp. nov., *L. obscuripennis* sp. nov., and *L. schawalleri* sp. nov.

Zusammenfassung

Drei neue Arten der Gattung *Lederina* NIKITSKY & BELOV, 1982, stat. nov. (früher Untergattung von *Lederia* REITTER, 1879) werden aus Nepal beschrieben: *L. martensi* sp. nov., *L. obscuripennis* sp. nov. und *L. schawalleri* sp. nov.

Introduction

The false darkling beetle genus *Lederia* REITTER, 1879 has hitherto been divided into no fewer than five subgenera encompassing ca. 20 described species distributed in the

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Holarctic, Oriental and Neotropical regions. Out of the five subgenera, *Lederina* NIKITSKY & BELOV, 1982 has heretofore been known to comprise about a dozen species, all confined to East and Southeast Asia.

Recently, through the kind assistance of both Prof. J. MARTENS (Mainz) and Dr. W. SCHAWALLER (Stuttgart), I was privileged to study a small but highly interesting material of *Lederina* taken by them in the Himalayas of Nepal. Taking this chance, I reconsider now the status of *Lederina*, elevating it to full generic rank - stat. nov.. Indeed, the hiatus existing between *Lederia* s. str. (the type-species: *L. suramensis* REITTER, 1879 from the Caucasus, see REITTER 1879) and *Lederina* seems considerable enough to allot the latter the full generic status. *Lederina* is distinguished from *Lederia* s. str. and all other subgeneric categories established (NIKITSKY & BELOV 1982) by the metasternum without a shortened metasternal suture; antennomeres 1 and 2 very wide and long as compared to antennomere 3, the latter being no less than 2 - 2.5 times as narrow and 2.5 - 3 times as short as antennomere 2; club 3-jointed, well-developed; lateral edges of pronotum margined; anterior part of metacoxae rather well attenuating forward and directed anterolaterally.

The Himalayan fauna has hitherto been known to comprise only two *Lederina*: *L. indica* NIKITSKY & BELOV, 1982 from Darjeeling Distr., North India, and *L. similis* NIKITSKY & BELOV, 1982 from Central Nepal (NIKITSKY & BELOV 1982). The present paper is devoted to the description of three new *Lederina* deriving from the Nepal Himalayas (see map Fig.10). It must be emphasized that only part of material has been treated herein, the remaining few specimens will be dealt with elsewhere. Interestingly, all the three new species described below are particularly close to both Himalayan as well as to all three currently known Vietnamese congeners. In other words, at least continental ♂ *Lederina* are distinguishable at least from some of Japanese forms by the axial depression on the abdomen.

But for some paratypes retained for the collections of the Zoologische Staatssammlung München (ZSM) and the Zoological Museum of the Moscow State University (ZMUM), material has been deposited in the Staatliches Museum für Naturkunde in Stuttgart (SMNS). Before going further, I wish to acknowledge the co-operation of both Prof. Dr. J. MARTENS and Dr. W. SCHAWALLER who also helped in the publication of this article.

Lederina martensi sp. nov. (Figs 1, 3, 4, 7)

Holotype: ♂ (SMNS), Nepal, Ilam Distr., Mai Pokhari, 2100-2200 m, *Castanopsis* forest, 9.-10.IV.1988; leg. J. MARTENS & W. SCHAWALLER. - Paratypes: 1 ♂, 3 ♀s, 21 ex. (SMNS), 5 ex. (ZSM), 5 ex. (ZMUM), same locality, together with holotype; 1 ♀ (SMNS), Sankhua Sabha Distr., Arun Valley, between Mure and Hurure, mixed broadleaved forest, 2050-2150 m, 9.-17.VI.1988; all leg. J. MARTENS & W. SCHAWALLER.

Description: Body oblong-oval, 1.85 - 1.97 times as long as wide, convex, black-brown to castaneous-brown; head, partly prothorax and abdomen paler; maxillary palpi, antennae and legs reddish-brown to castaneous.

Head considerably more coarsely punctured than elytra and, especially, pronotum. Lateral almost devoid of punctuation. All these structures transversely shagreened. Head and pronotum somewhat more shining than elytra, latter rather poorly shining to more or less dull, being extremely finely but distinctly and densely punctured and densely, transversely

shagreened.

Last segment of maxillary palpi more or less securiform, considerably wider and longer than both preceding joints combined, apically more or less obliquely truncate, ca. 1.25 - 1.35 times wider than long. Antennae (Fig.3) rather short, failing to exceed caudal edge of pronotum. Antennomeres 1-2 big; joint 2 only a little longer than 1st and 1.5 - 1.7 times as long as wide, subequal in length to subsequent four antennomeres combined; joint 3 very short, 2 - 2.5 times as narrow and ca. 3 times as short as 2nd, very poorly longitudinal; joint 4 somewhat shorter than 3rd, more or less transverse; joints 5-8 also short, transverse, more or less gradually broadening toward apex; joints 9-10 each subequally wide and long, each 2.2 - 2.3 times as long and ca. 1.5 as wide as 8th; joint 11 oblong-oval; 1.8 - 2.0 times as long as 10th and 1.7 - 2.0 times as long as wide. Club 1.2 - 1.4 times as long as antennomeres 1 and 2 combined. Interocular isthmus 1.15 - 1.25 times greater than transverse eye diameter.

Pronotum ca. twice as broad as long, roundly attenuating forward, both anterior and posterior corners rounded. Elytra oblong-oval, 1.45 - 1.60 times longer than maximum wide, broadest between anterior third and midlength. Metasternum more or less shining, finely and transversely shagreened and very delicately and sparsely punctured. Axial depression of metasternum thin, lineiform, extending forward at least to anterior 1/4 - 1/5 metasternal length (fig.4). Bigger of spurs of metatibiae subequal in length to tarsomere 1, latter ca. 1.35 - 1.45 times longer than all other tarsomeres combined.

Lateral lobes of parameres not shorter than their middle piece (Fig.7).

Body 1.3 - 2.1 mm long.

Diagnosis: This species is more easily distinguishable from other continental congeners by the thin, more or less lineiform, elongate, axial depression of the metasternum.

Lederina obscuripennis sp. nov. (Figs 6, 9)

Holotype: ♂ (SMNS), Nepal, Taplejung Distr., pasture Lassetham, NW of Yamputhin, 3300-3500 m, mature *Abies - Rhododendron* forest, 6.-9.V.1988; leg. J. MARTENS & W. SCHAWALLER.

Description: Body oblong-oval, ca. 1.8 times longer than wide, both elytra and middle of pronotum black-brown to blackish, apices of elytra somewhat paler; head, mouthparts, antennae, legs and at least most of underside reddish to reddish-brown.

Head more or less shining, but distinctly, rather densely punctured and finely transversely shagreened. Pronotum at best very slightly shining, hardly visibly, very sparsely and delicately punctured and distinctly transversely shagreened. Elytra rather more or less dull, exceedingly delicately, almost untraceably punctured and finely transversely shagreened. Upperside clothed with moderately dense, adpressed, silky pubescence.

Last segment of maxillary palpi more or less roundly securiform, much wider and longer than preceding one. Antennal structure very similar to that of *L. martensi* sp. nov. Interocular isthmus ca. 1.2 - 1.3 times greater than transverse eye diameter. Shape and width of pronotum as in *L. martensi* sp. nov. Elytra oblong-oval, 1.45 - 1.47 times longer than maximum wide, latter lying between anterior 1/3 and midlength. Metasternum medially more or less shining, axial depression short, lineiform, considerably far from reaching to midlength of metasternum (Fig.6). Bigger of spurs of metatibiae 1.12 - 1.15 as short as tar-

somere 1.

Lateral lobes of parameres shorter than their wide middle piece (Fig.9).

Body 1.9 mm long.

Diagnosis: Differs from congeners by the very short and lineiform axial depression of the metasternum combined with the lateral lobes of the parameres shorter as compared to the middle piece.

Lederina schawalleri sp. nov. (Figs 2, 5, 8)

Holotype: ♂ (SMNS), Sankhua Sabha Distr., above Pahakhola, 2600-2800 m, *Quercus semecarpifolia* - *Rhododendron* forest, 31.V.-3.VI.1988; leg. J. MARTENS & W. SCHAWALLER. - Paratypes: 2 ♀♀, 4 ex. (SMNS), 5 ex. (ZMUM), same locality, together with holotype; 2 ♂♂, 2 ♀♀, 1 ex. (SMNS), Arun Valley, between Mure and Hurure, mixed broadleaved forest, 2050-2150 m, 9.-17.VI.1988; 1 ♂ (SMNS), Panchthar Distr., Paniporua, 2300 m, mixed broadleaved forest, 16.-20.IV.1988; all leg. J. MARTENS & W. SCHAWALLER.

Description: Body either more or less oblong-oval, 1.8 - 1.93 times as long as wide (Fig.2), or oblong-ovoid, clothed with a more or less dense, short, adpressed, greyish pubescence. Colour reddish-brown to castaneous-brown, sometimes partly somewhat darkened; mouthparts, antennae and legs paler, reddish-yellow to reddish.

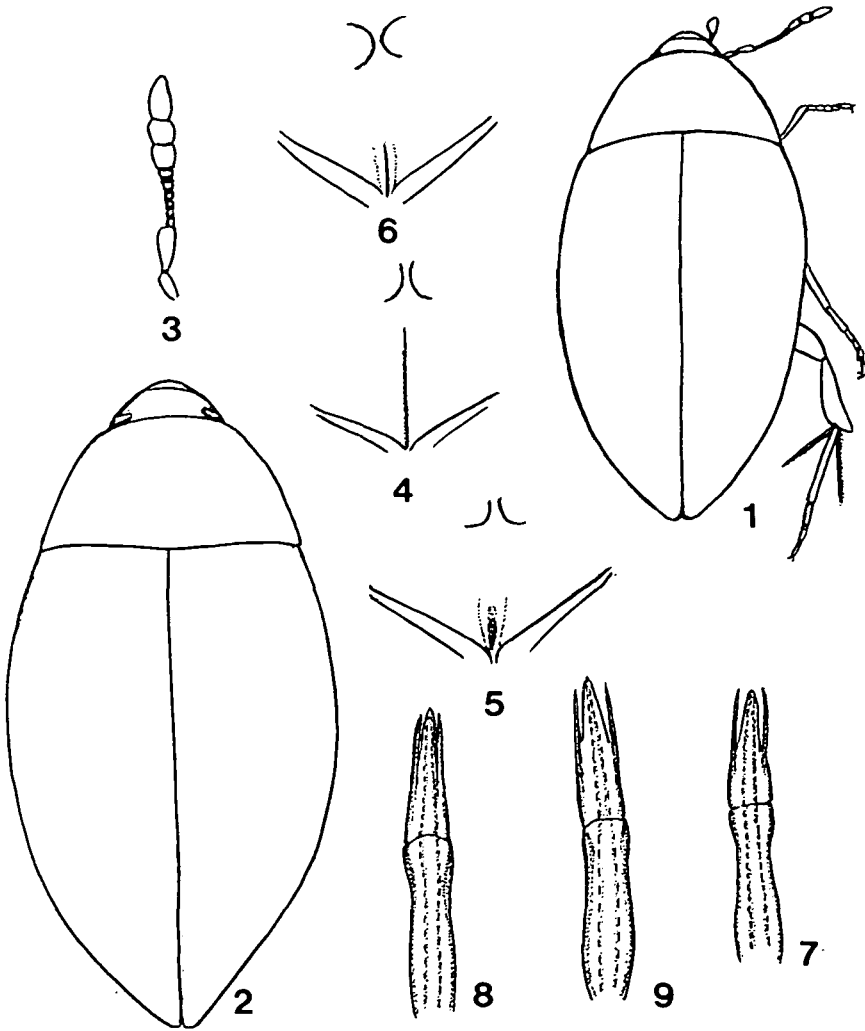
Head at best slightly shining, distinctly, but rather delicately, more or less densely punctured. Pronotum exceedingly delicately, sparsely, almost untraceably punctured and finely, transversely shagreened, poorly shining to more or less dull. Elytra poorly shining to more or less dull, extremely finely (but more densely than on pronotum) to practically invisibly punctured.

Last segment of maxillary palpi big, more or less roundly securiform, 1.2 - 1.3 times longer than wide. Structure and length of antennae as in *L. martensi* sp. nov. Elytra more or less oval, 1.4 - 1.5 times longer than maximum width, latter lying about level to anterior 1/3 length. Axial depression of metasternum rather narrowly lanceolate, i.e. considerably broadened (non-lineiform), anteriorly not (Fig.5) to slightly surpassing metasternal mid-length. Metatibial spurs very long, bigger of them less than 1.1 times as short as tarsomere 1.

Lateral lobes of parameres a bit shorter than their middle piece (Fig.8).

Body 1.5 - 2.0 mm long.

Diagnosis: Differs from congeners by the length and shape of the axial depression of the metasternum combined with the lateral lobes of the parameres just a bit shorter than the middle piece.



Figs.1-9: *Lederina* spp. holotypes (6-9) and paratypes (1-5): 1-2) Habitus of *martensi* sp. nov. and *schawalleri* sp. nov. (schematic), respectively, dorsal view; 3) Antenna of *martensi* sp. nov.; 4-6) Medial part of metasternum of *martensi* sp. nov., *schawalleri* sp. nov. and *obscuripennis* sp. nov., respectively (schematic); 7-9) Aedeagus of *martensi* sp. nov., *schawalleri* sp. nov. and *obscuripennis* sp. nov., respectively.

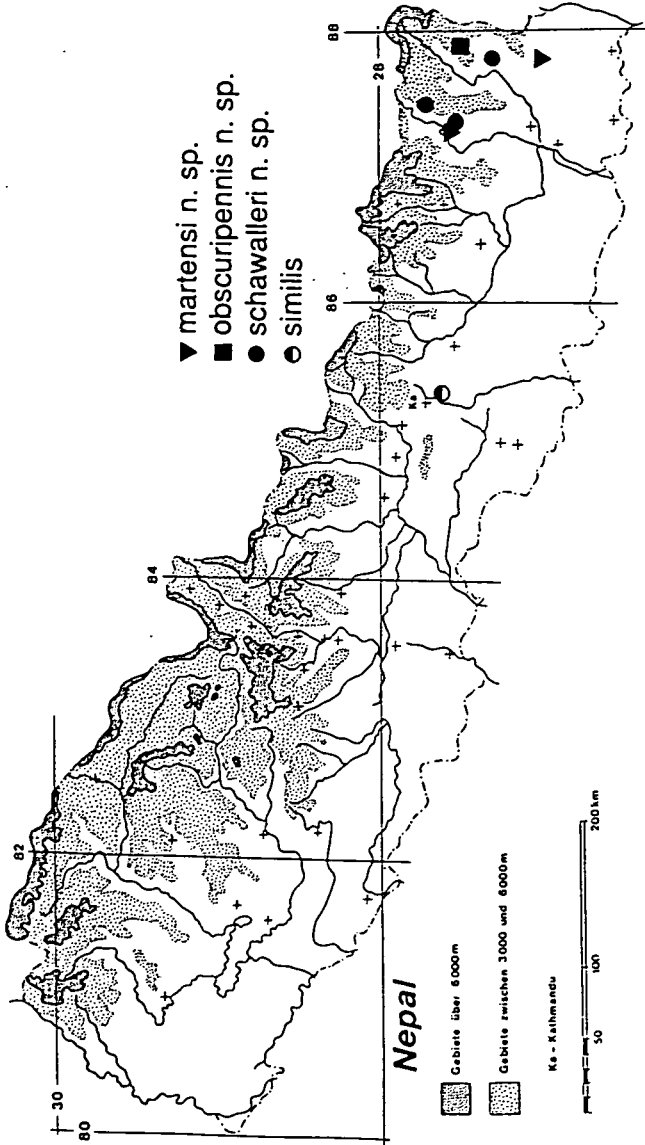


Fig.10: Distribution of *Lederna* species in Nepal: *martensi* sp. nov. (Mai Pokhari and Mure - Hurure), *obscuripennis* sp. nov. (Lassetham), *schawalleri* sp. nov. (Paniporua, Pahakhola and Mure - Hurure), *similis* (Phulchoki).

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Literaturbesprechung

Carroll, R.L.: Paläontologie und Evolution der Wirbeltiere. -Georg Thieme Verlag, Stuttgart-New York, 1993. 684 S.

Die Entwicklung der rezenten Organismen ist nicht alleine aus ihren aktuellen Anpassungsbedingungen heraus verständlich; die Kenntnis ihrer ganz spezifischen Vorgeschichte ist für eine gesamtbiologische Beurteilung ebenso unerlässlich. Dabei bilden phylogenetische Hypothesen die Voraussetzung für ein vertieftes konstruktionsmorphologisches und evolutionsbiologisches Verständnis der stammesgeschichtlichen Prozesse.

Dieses Mammutwerk basiert auf einer Fortschreibung und Aktualisierung von ROMER's Lehrbuch "Vertebrate Palaeontology" von 1966. Es vermittelt einen nahezu vollständigen Überblick über die wichtigsten Fachpublikationen der vergangenen zwei Jahrzehnte und dient somit nicht nur als Lehrbuch auf dem Gebiet der Wirbeltierbiologie, sondern auch als Nachschlagewerk für Biologen und Geologen.

Beginnend mit einer kurzen Einführung in die phylogenetische Systematik ("Fossilien und phylogenetische Verwandtschaft") und dem "Ursprung der Wirbeltiere" werden innerhalb von 22 Kapitel die einzelnen Wirbeltiergruppen mit ihrer geschichtlichen Entwicklung und ihren Verwandtschaftsbeziehungen vorgestellt. Sehr aktuell und besonders spannend ist natürlich das Kapitel über Biologie und Aussterben der Dinosaurier und das abschließende Kapitel "Evolution".

Eine überaus empfehlenswerte Gesamtdarstellung zu einem fairen Preis.

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