

**Revision of the genus *Neolosus* BLACKWELDER, 1942
from South America
(Coleoptera Staphylinidae Osoriinae)***

Ulrich IRMLER

Oecology-Zentrum, University, Schauenburgerstr. 112, D-24118 Kiel, Germany (email :
irmler@fsoe.uni-kiel.de).

Abstract

The type material of neotropical *Neolosus* was examined. Additionally to the two known species of *Neolosus*, *N. trichidus* (IRMLER, 1994) and *N. zischkai* (SCHEERPELTZ, 1951), two new species are described from South America, *Neolosus ecuadoriensis* and *N. obscurus*. The four species form two species groups with two species each.

Keywords : South America, Insecta, Coleoptera, Staphylinidae, Osoriinae, new species.

Introduction

MOTSCHULSKY (1857 : 496) described the genus *Holosus* for several species from South East Asia. BLACKWELDER (1942 : 84) compiled the characters of the genus and described the subgenus *Neolosus*. Due to the junior homonymy of *Holosus*, *Neolosus* is used as genus name (BLACKWELDER, 1952 : 260). The first species of *Neolosus* described from South America was *Neolosus zischkai* (SCHEERPELTZ, 1951 : 13). IRMLER (1994 : 71) added *Lispinus trichidus* that also belongs to the genus *Neolosus*. Thus, two species have been known from South America. Within the collections of the "Institut royal des sciences naturelles", Bruxelles, and the Canadian National Collections of Insects, Arachnids and Nematodes (CNC), Ottawa, two new species have been found.

The genus *Neolosus* BLACKWELDER, 1942 is very similar to *Lispinus* due to the diagonal strigae of the abdominal sterna and the structure of the spermatheca. The pronotum is broad, distinctly broader than the head, scarcely

* Received : 1.VII.1999; accepted : 9.VIII.1999.

narrowed behind and with a distinct depression at the posterior angles. The characteristic structure of the genus is a raised line on the hypomeron forming an angle near the front coxae. At least for the neotropical species the prosternal process is not margined. The anterior margin of the head terminates near the base of the antennae. The species of the genus *Lispinus* have no raised line on the hypomeron and at least for the neotropical species the prosternal process is margined and the apical margin of the head continue to the posterior edge of the eyes. The neotropical species of *Neolosus* are longer than 6 mm, they have a typical transverse microreticulation of the elytra, and the abdomen laterally carries very long yellow hairs. The four species form two species groups, the first group with the species *N. zischkai* and *N. obscurus* and the second group with *N. trichidus* and *N. ecuadoriensis*. The *N. zischkai* group has a relatively small pronotum and typically large paramera of the aedeagus. Pronotum and elytra have only few hairs. The *N. trichidus* group has a wider pronotum and particularly the elytra have two rows of at least 4 setae each. The paramera of the aedeagus are more slender.

Abbreviations of collections and thanks to curators :

- CNC Canadian National Collections of Insects, Arachnids and Nematodes, Ottawa (Dr. SMETANA)
 IRSN Institut royal des Sciences naturelles, Bruxelles (Dr. DRUGMAND)
 NHMW Naturhistorisches Museum, Vienna (Dr. SCHILLHAMMER)
 UIC Ulrich IRMLER collection, Kiel

Key to the species

- 1 Elytra red, row of punctures on the elytra disk contains at least four punctures 3
- Elytra black, row of punctures on the elytra disk contains only two punctures 2
- 2 Antennae more stout, apical part of aedeagus curved and with a hook at the top, the outer digit of paramera longer than membranous part (Fig. 4)
 4. *N. obscurus* sp. n.
- Antennae more slender, 2nd segment longer than wide, apical part of aedeagus straight and ventrally with a median ridge, the outer digit of paramera as long as membranous part (Fig. 3)
 3. *N. zischkai* (SCHEERPELTZ, 1951)
- 3 Row of punctures on elytra contains 8 punctures (Fig. 1)
 1. *N. trichidus* (IRMLER, 1994)
- Row of punctures on elytra contains 4 punctures (Fig. 2)
 2. *N. ecuadoriensis* sp. n.

Description of the species**1. *Neolosus trichidus* (IRMLER, 1994)**

Lispinus trichidus IRMLER, 1994 : 71; Fig. 1

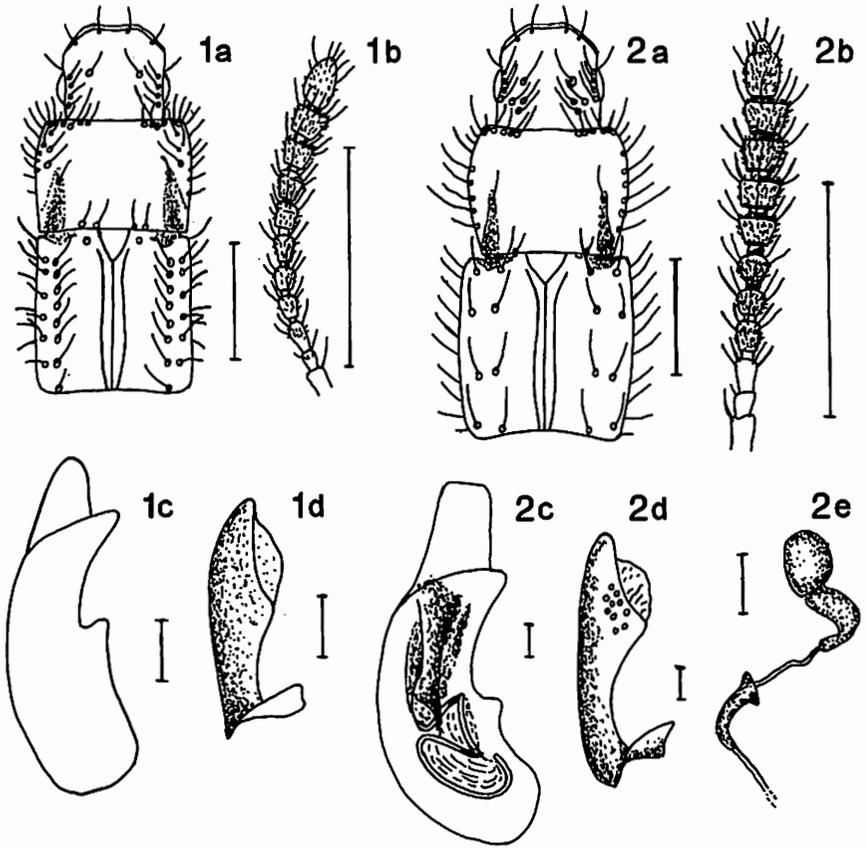
Description

Length : 6.2 mm; colour : black, elytra and legs reddish. *Head* : 0.7 mm long, 0.9 mm wide; antennae long, segments 4 to 6 slightly longer than wide, segments 7 to 10 quadrate, front edge between base of antennae margined, disk finely and sparsely punctuate, distance between punctures much wider than diameter, several large punctures with a long yellow seta each, a row of 4 large punctures on a supra-ocular stria, which continues posteriorly to the neck, on the disk between the apical edge of eyes another two large punctures, between the normal punctuation a finer micropunctuation, microsculpture transverse reticulate. *Pronotum* : 0.9 mm long, 1.3 mm wide; widest at anterior edge, scarcely narrowed posteriorly, emarginate in front of posterior angles, sides margined, front edge not margined, punctuation similar to the head with a smooth midline, 6 large punctures with yellow setae at the apical edge, at the front angles several punctures, between the hind depressions and the lateral margin and along the lateral margin several large punctures with yellow setae, on the posterior half of the disk with denser punctuation, at the posterior edge on each side of the midline two further large punctures, the depressions at the posterior angles densely and coriaceously punctured, microsculpture along the smooth midline and in the basal half of the pronotum longitudinal reticulate, on the apical part of the disk a transverse reticulation. *Elytra* : 1.2 mm long, 1.3 mm wide; very finely and sparsely punctuate, punctures much finer and sparser than on the pronotum, a row of 8 large punctures with yellow setae on the disk, a second row with 6 punctures between the first row and the lateral margin, along the lateral margin several large punctures with setae, microsculpture transverse reticulate. Scutellum distinctly punctuate. Abdomen continuously narrowed from base to apex, with transverse reticulate ground sculpture, dorsally with sparse and fine punctuation, punctuation laterally dense and coarse, laterally and ventrally with distinct diagonal strigae and very long yellow hairs.

The species is differentiated from the other neotropical *Neolosus* species by the row of 8 large punctures on the elytra.

Material examined

1 male : Yuracaris, Bolivia (in IRSN, holotype).



Figs 1-2. 1 : *Neolossus trichidus*. 2 : *Neolossus ecuadoriensis*. a : front body, b : antenna, c : aedeagus, d : paramera, e : spermatheca (line : a and b 1 mm, c - e : 0.1 mm).

2. *Neolossus ecuadoriensis* sp. n.

Fig. 2

Description

Length : 6.4 mm, colour : black, elytra and legs reddish. *Head* : 0.6 mm long, 0.9 mm wide; 3rd segment of antennae slightly longer than 2nd, 4th segment longer than wide, 5th and 6th segment quadrate, 7th to 10th scarcely wider than long, 4th to 11th segment each apically with long yellow hairs, front edge of head margined between base of antennae, 4 large punctures with yellow setae on a supra-ocular stria, a group of 3 large punctures with setae between eye and neck and a row of 2 large punctures with setae between the eyes, disk weakly and sparsely punctate and a sparse micropunctuation, ground-sculpture transverse reticulate. *Pronotum* : 0.9 mm long, 1.3 mm wide,

widest shortly behind the apex, slightly narrowed posteriorly and emarginate in front of the posterior angles, punctuation slightly deeper than on head but as sparse, with sparse micropunctuation, ground-sculpture longitudinal reticulate on the smooth midline and on the posterior half, transverse reticulate on the apical half, on the disk adjacent to the midline with netlike reticulation, 6 large punctures with setae along the apical edge on each side of the midline and several large punctures along the lateral margin, one large puncture at the posterior edge between midline and hind depression. *Elytra* : 1.3 mm long, 1.4 mm wide; sparsely and finely punctate, in the middle of the disk a row of 4 large punctures and another row of 4 large punctures between the first row and the lateral margin, microsculpture netlike transverse reticulate. Abdomen weakly punctate, laterally with deeper and coarser punctuation, laterally and ventrally with distinct diagonal strigae and long yellow hairs, continuously narrowed from base to apex.

The species is differentiated from *N. zischkai* (SCHEERPELTZ, 1951) by the reddish elytra. The row of punctures consists of 4 instead of 2 punctures and the microsculpture is more netlike. It is very similar to *N. trichidus* (IRMLER, 1994). The species differs from *N. trichidus* (IRMLER, 1994) by the fewer punctures of the elytra and the pronotum.

Holotype : 1 male : Ecuador; Pichinde, old Quito, Sto. Domingo Road, W. Chiriboza, 71-7500, 10.6.1982, leg. H. Frania, under log bark (CNC)

Paratypes : 3 males, 6 females with same data as the holotype (CNC and UIC); 1 female only with the label Columbia (IRSN).

3. *Neolosus zischkai* (SCHEERPELTZ, 1951)

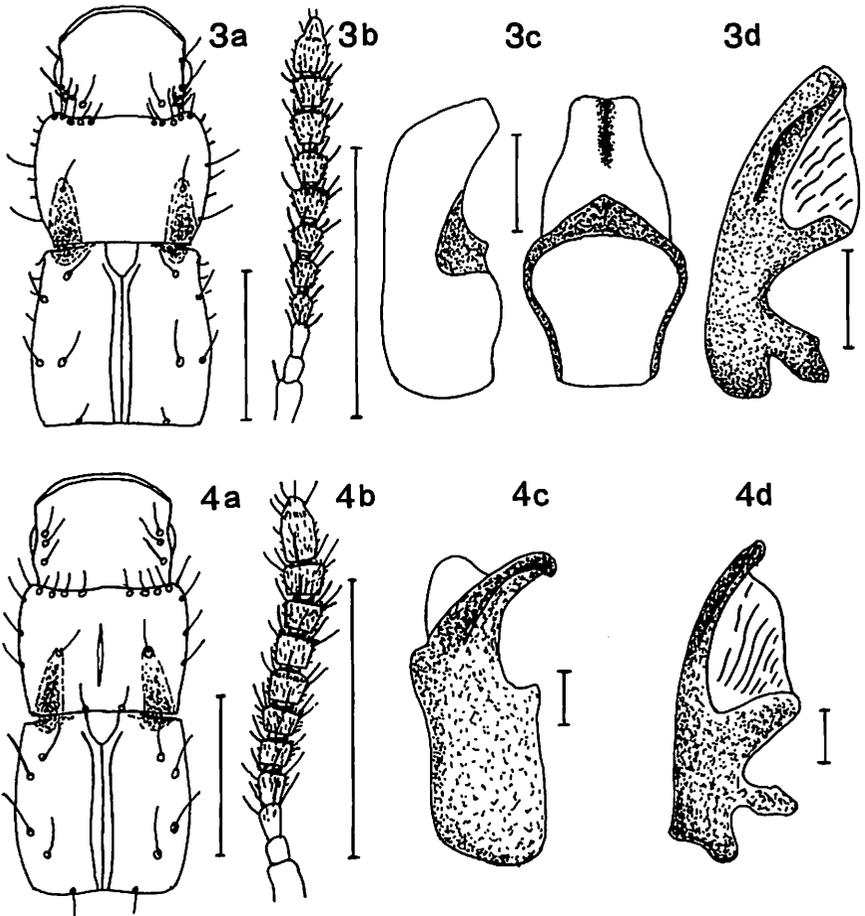
Holosus zischkai SCHEERPELTZ, 1951 : 13; Fig. 3

Description

Length : 6.4 mm, colour : black, legs piceous. *Head* : 0.7 mm long, 0.9 mm wide; 2nd segment of antennae slightly longer than wide, 3rd segment conical, 4th segment globular, segments 6 to 8 wider than long, segments 9 and 10 quadrate, head apically distinctly margined between base of antennae, finely and sparsely punctate, microsculpture transverse reticulate, moderately shining, eyes as long as temples, at posterior edge of eyes a supra-ocular puncture with a long yellow seta, between this puncture and another large puncture near posterior edge of the neck a group of three punctures. *Pronotum* : 0.9 mm long, 1.2 mm wide; widest at anterior part, continuously narrowed to the base, anterior edges prominent, at front margin with five large punctures on each side, the sides with several punctures, two carrying large setae, punctuation fine and sparse, still sparser than on the head, with transverse reticulate microsculpture, moderately shining, depressions at posterior angles deep, with dense, netlike microsculpture. *Elytra* : 1.2 mm long, 1.4 mm wide; as sparsely and finely punctate as pronotum, with transverse reticulate microsculpture, more shining than pronotum, at inner part of shoulders depressed, a row of two punctures with a large puncture posteriorly to the depression and another

large puncture at the posterior third, a second row of two punctures between the first row and the lateral margin. Abdomen continuously narrowed from base to apex, laterally with distinct diagonal strigae, laterally with long yellow hairs, segments 1 to 3 dorsally without strigae, segments 4 to 5 also dorsally with strigae.

The species differs from *N. trichidus* (IRMLER, 1994) and *N. ecuadoriensis* by the less hairy body. The row of punctures on the elytra contains only 2 punctures. It can be differentiated from *N. obscurus* only by the structure of the aedeagus. The central lobe of aedeagus is straight and the apical part is transparent. In ventral view the top is bilobed with a longitudinal ridge in the apical third. The paramera are similar to *N. obscurus*, but the membranous



Figs 3-4. 3 : *Neolossus zischkai*. 4 : *Neolossus obscurus*. a : front body, b : antenna, c : aedeagus (lateral view left, ventral view right), d : paramera (line : a-b : 1 mm, c-d : 0.1 mm).

part between the two digits is more developed. The outer digit is not longer than the membranous part.

Material examined

Bolivia : 1 male and 2 females : Chapare, 400m, 25.8.1949, leg. Zischka (NHMW), one male and one female were labelled as type, the other female as cotype.

4. *Neolosus obscurus* sp. n.

Fig. 4

Description

Length : 6.4 mm, colour : black, legs piceous. *Head* : 0.8 mm long, 0.9 mm wide; 3rd segment of antennae slightly longer than 2nd, 4th segment quadrate, segments 5 to 9 slightly transverse, 10th segment quadrate, front edge margined between base of antennae, very finely and sparsely punctuate, 2 larger punctures with setae in a supra-ocular stria and another larger puncture between eye and neck, no large punctures on the disk, with transverse reticulate ground-sculpture. *Pronotum* : 0.9 mm long, 1.1 mm wide; widest at the apical third, slightly narrowed posteriorly, emarginate in front of the posterior angles, sides margined, front edge not margined, distinct depressions at the posterior angles, with similar sparse and fine punctuation as head, a smooth midline without punctures, in the posterior third with an indistinct fine furrow, 4 large punctures with setae along the front edge on each side of the middle, 2 large punctures along the lateral margin, another large puncture at the apex of the posterior depressions and 1 puncture at the posterior margin on each side of midline between the midline and the posterior depression, depressions at the posterior angles with deeper punctuation, microsculpture transverse reticulate. *Elytra* : 1.2 mm long, 1.3 mm wide; as finely and sparsely punctuate as the pronotum, a row of fine punctures between suture and stria, 2 large punctures in a row on the disk and another row of 2 punctures between the first row and the lateral margin, the distance between the punctures of the second row shorter than the distance between punctures of the first row, several large punctures with setae along the lateral margin, another large puncture at the apical edge between suture and first row. Abdomen continuously narrowed from base to apex, dorsally with fine punctures, laterally with deep and coarse punctures, the lateral and ventral diagonal strigae continue on the disk, microsculpture transverse reticulate, at the base with dense and distinct netlike reticulation, laterally with long yellow hairs.

The species is most related to *N. zischkai* (SCHEERPELTZ, 1951) due to the black colour, the few large punctures on the head, and the row of large punctures on the elytra, which consists only of 2 punctures. It can be differentiated from *N. zischkai* (SCHEERPELTZ, 1951) by the apically curved central lobe of the aedeagus, which terminates in a thick hook. It is strongly sclerotized, particularly at the apical part. The outer digit of the paramera is longer than the membranous part.

Holotype : 1 male : Peru : Pebas, without further data (IRSN).

Paratypes : 3 females : with same data as the holotype (IRSN).

References

- BLACKWELDER R.E., 1942. - Notes on the classification of the staphylinid beetles of the groups Lispini and Osoriinae. *Proceedings of the United States National Museum*, 92 : 75-90.
- BLACKWELDER R.E., 1952. - The generic names of the beetle family Staphylinidae. With essay on genotypy. *Smithsonian Institution United States National Museum Bulletin*, 200 : 483 pp..
- IRMLER U., 1994. - Taxonomie und Verbreitung neotropischer *Lispinus* Er. (Coleoptera, Staphylinidae). *Beiträge zur Entomologie*, 44 : 53-82.
- MOTSCHULSKY T.V., 1857. - Énumération des nouvelles espèces de coléoptères rapportés de ses voyages (2nd article). *Bulletin de la Société impériale des naturalistes de Moscou*, 30 : 490-517.
- SCHEERPELTZ O., 1951. - Los Staphylinidae (Coleoptera). Encontrados en Bolivia por el Sr. Rodolfo ZISCHKA. *Folia Universitaria, Publicacion de la Universidad de Cochabamba*, 5 : 3-16.