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Tropicus manni n. sp. from Bolivia
(Coleoptera: Heteroceridae)

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Abstract: A new species of Heteroceridae: *Tropicus manni* **n. sp.** from Bolivia is described, illustrated and compared with similar species. *T. boukali* Skalický, 2002, *T. tucumanensis* Pacheco, 1964, *Heterocerus ciliaticollis* (Steinheil, 1869) and *H. pachecoi* Skalický, 2002 are reported from Bolivia for the first time.

Key words: Coleoptera, Heteroceridae, taxonomy, new species, new records, Bolivia

Introduction

Only 6 representatives of *Heterocerus* (*H. danielsoni* Skalický; *H. meridianus* Pacheco; *H. santacruzensis* Tremouilles; *H. solitarius* Pacheco; *H. woodrufi* Pacheco) and 7 representatives of *Tropicus* (*T. bertiae* Skalický; *T. deuvei* Skalický; *T. huachiensis* Skalický; *T. taghaviani* Skalický; *T. imperator* Mascagni; *T. squamosus* Pacheco and *T. alcicornis* Mascagni) are currently known to occur in Bolivia.

During the study of Heteroceridae deposited in the OUMNH I identified five species of this family new for the fauna of Bolivia, including one new species described in the present paper (*H. pachecoi* Skalický, 2002, *H.* ciliaticollis (Steinheil, 1869), *T. tucumanensis* Pacheco; 1964, *T. boukali* Skalický, 2002 and *T. manni* **n. sp.**).

The following acronyms are used in the text to indicate the depository of the material examined:
CSU: Coll. S. Skalický, Ústí nad Orlicí, Czech Republic

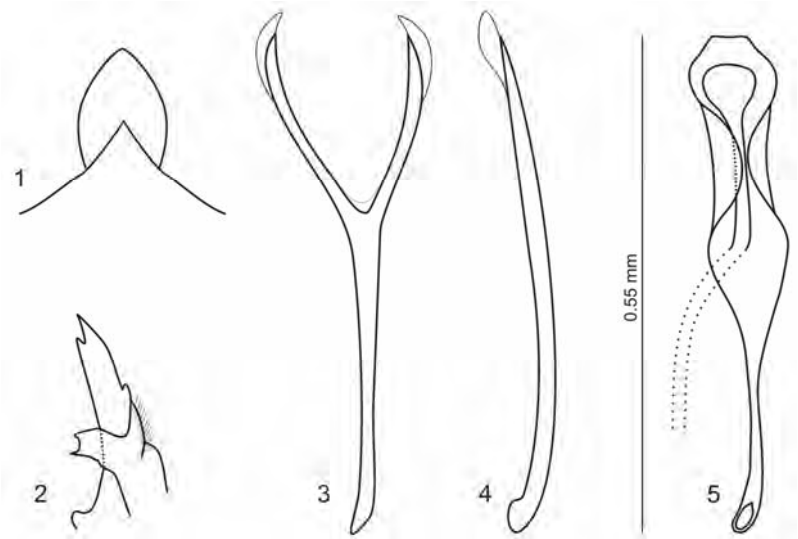
OUMNH: Oxford University Museum of Natural History, London, England
Separate labels are indicated by double slashes.

Results

Tropicus manni n. sp.

Type locality: BOLIVIA Department Santa Cruz, Bermejo.
Type material: Holotype ♂: "BOLIVIA: Dep. Santa Cruz Bermejo, refugio Los Volcanes River margins, nr Research Station 18°06´34´´S, 63°36´11´´W, 21.xi.2003, @ blue light trap coll. D. J. Mann & A. C. Hamel B-05" // "OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)" (OUMNH). Paratype (Allotype) ♀: the same data as holotype (OUMNH). Paratypes 3 specimens (♀♀) same data as holotype (OUMNH, 1 spec. CSU).

Description: Holotype ♂: Total length 2.75 mm (incl. labrum); elytra 1.55 mm long, 0.9 mm wide across shoulders. Colour uniform brown, without elytral pattern. Labrum as in Fig. 1, with dense, erect long setae. Mandibles (Fig. 2) moderately curved, process of dorsal ridge well developed, dorsal subapical tooth small, rounded. Prostheca without prosthecal notch, with series of spines. Antennae 9-segmented, with 6-segmented club. Clypeus pointed anteriorly, with dense short setae. Head finely granular, setae as on clypeus. Pronotum (partly damaged) slightly wider as base of elytra, oblong, pronotal base without rim; densely microgranular; setae sparse, short, semi-erect, with intermixed longer setae. Elytra without longitudinal furrows, and scutellar depressions, with well developed humeral depressions extending obliquely to almost midlength of elytra. Surface of elytra finely micropunctate without larger punctures Setae on elytra rare, semi-erect, short. Epipleural ridges absent. Ventral surface sparsely setose. Metasternum without post-mesocoxal ridge. Mesosternum neither spinose nor tuberculate in front of each mesocoxa. Post-metacoxal line absent. Stridulatory arch marked, without striae. Protibia with 9 spines, meso- and metatibia with undetected number of spines. Spiculum gastrale (Figs 3–4), Y-shaped. Aedeagus 0.55 mm long, shape as in Fig. 5.



Figs 1–5: *Tropicus manni* **n. sp.** holotype: 1: labrum, dorsal view; 2: right mandible, dorsal view; 3: spiculum gastrale, dorsal view, 4: spiculum gastrale lateral view, 5: aedeagus, dorsal view. Fig. 1, 2 not in scale.

Paratype (Allotype) ♀: Total length 2.6 mm (incl. labrum); elytra 1.6 mm long, 0.9 mm wide across shoulders. Mandibles without process on dorsal ridge. Externally similar to male.

Differential diagnosis: Due to the shape of the aedeagus and spiculum gastrale, *T. manni* n. **sp.** belongs to the *imperator* group sensu PACHECO (1964). Morphology of male genitalia and spiculum gastrale of *T. manni* **n. sp.** similar to that of *T. tucumanensis* Pacheco, 1964 and *T. alpacinchensis* Skalický, 2002 (both occurring in Argentina). Spiculum gastrale in *T. manni* is similar to that in *T. tucumanensis*, without pointed process at the apex of arms as in *T. alpacinchensis*. Aedeagus of *T. manni* is different (in the presence of sclerotized process in the middle part of median plate) from *T. tucumanensis* and *T. alpacinchensis*. Apex of the aedeagus is truncate in *T. manni* and *T. alpacinchensis* in contrast to *T. tucumanensis* with aedeagus pointed. (compare Figs 441–445 in PACHECO 1964, Figs 13–15 in SKALICKÝ 2002 and Figs 1–5 in this paper). External

marks in all three above mentioned species are similar with smaller variation without diagnostic value.
Etymology: Dedicated to Dr. D. J. MANN (England) who collected the type series.

Distributional notes

Tropicus boukali Skalický, 2002

Material examined: 83 spec., (34 ♂♂, 49 ♀♀) "BOLIVIA: Dep. Beni San Ramon, Ranch (Estancia), San Lorenzo, 13°26´55´´S, 64°36´15´´W. 31.xi.2003 @ blue light trap Disturbed gallery forest 140 m, Coll. D. J. Mann & A. C. Hamel" // "OUMNH-2004-005 D. J. Mann & Hamel coll. Pres. Mann & Hamel, 2004" (OUMNH, 1 ♂ CSU); 179 spec., (♂♂, ♀♀) "BOLIVIA: Dep. Beni San Ramon Ranch (Estancia), San Lorenzo, Dist. Gallery Forst 140m S13°27´02´´ W64°36´05´´ 01.xii.2003, @ blue light coll. D. J. Mann & A. C. Hamel B-19" // "OUMNH-2004-005 D. J. Mann & Hamel coll. Pres. Mann & Hamel, 2004" (OUMNH); 100 spec., (♂♂, ♀♀) "BOLIVIA: Dep. Cochabamba Sacta, S17°04´18´´, W64°46´00´´, 250 m alt disturbed, 2° Amazonian forest 20.xii.2004, @ blue light trap coll. Mann, Hamel & Simmons05" // "OUMNH-2005-065 D. J. Mann coll. Bolivia Oxford University Museum of Natural History (OUMNH)" (OUMNH, 1 ♂ CSU); 58 spec., (23 ♂♂, 35 ♀♀) "BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes River margins, nr Research Station 18°06´34´´S 63°36´11´´W 21.xi.2003, @ blue light trap coll. D. J. Mann & A. C. Hamel B-05" // "OUMNH-2004-005 D. J. Mann & Hamel coll. Pres. Mann & Hamel, 2004" (OUMNH); 2 spec., (♀♀) "BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes Humid forest, along 3hr walk path. S18°06´31´´ W63°35´22´´. 1100m alt. 21.xi.2003 @ blue light coll. Mann, Hamel & Simmons." // "OUMNH-2004-005 D. J. Mann & Hamel coll. Pres. Mann & Hamel, 2004" (OUMNH).
Distribution: Known from five departments of Paraguay (SKALICKÝ in press). First record for Bolivia.

Tropicus alcicornis Mascagni, 1989

Material examined: 24 spec., (♂♂, ♀♀) "BOLIVIA: Dep. Beni San Ramon, Ranch (Estancia), San Lorenzo, 13°26´55´´S 64°36´15´´W. 31.xi.2003 @ blue light trap Disturbed gallery forest 140m, Coll. D. J. Mann & A. C. Hamel" // "OUMNH-2004-005 D. J. Mann & Hamel coll.

Pres. Mann & Hamel, 2004” (OUMNH, 1 ♂ CSU); 22 spec., (♂♂, ♀♀) “BOLIVIA: Dep. Beni San Ramon Ranch (Estancia), San Lorenzo, Dist. Gallery Forst 140m S13°27´02´´ W64°36´05´´, 01.xii.2003, @ blue light coll. D. J. Mann & A. C. Hamel B-19” // “OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)” (OUMNH); 1 spec., (♂) “BOLIVIA: Dep. Beni Road verge: Trinidad to San Pablo S14°55´18´´ W64°34´25´´ 06.xii.2003, @ pool edge coll. D. J. Mann & A. C. Hamel B-28” // “OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)” (OUMNH); 19 spec., (♂♂, ♀♀) “BOLIVIA: Dep. Cochabamba Sacta, S17°04´18´´ W64°46´00´´ 250 m alt disturbed 2° Amazonian forest 20.xii.2004, @ blue light trap coll. Mann, Hamel & Simmons” // “OUMNH-2005-065 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)” (OUMNH); 3 spec., (♀♀) “BOLIVIA: Dep. Cochabamba Villa Tunari, Hotel en Selva el Puente S16°59´02´´ W65°24´25´´ 22.xii.2004, @ blue light trap coll. Mann, Hamel & Simmons” // “OUMNH-2005-065 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)” (OUMNH); 3 spec., (♂, ♀♀) “BOLIVIA: Cochabamba. Villa Tunari, Hotel en Selva el Puente. 370m a.s.l. S16°19´02´´ W65°24´25´´ Grounds of hotel nr. river @blue light. Coll. Mann Hamel & Simmons” // “OUMNH-2004-005 D. J. Mann & Hamel coll. Pres. Mann & Hamel, 2004” (OUMNH); 62 spec., (♂♂, ♀♀) “BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes River margins, nr Research Station 18°06´34´´S 63°36´11´´W 21.xi.2003, @ blue light trap coll. D. J. Mann & A. C. Hamel B-05” // “OUMNH-2004-005 D. J. Mann & Hamel coll. Pres. Mann & Hamel, 2004” (OUMNH); 10 spec., (♂♂, ♀♀) “BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes Humid forest, 1080 alt 18°06´S 63°36´W 23.xi.2003 @ D. J. Mann & A. C. Hamel” // “OUMNH-2004-005 D. J. Mann & Hamel, 2004” (OUMNH); 3 spec., (♂, ♀♀) “BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes Humid forest, along 3hr walk path. S18°06´31´´, W63°35´22´´. 1100m alt. 21.xi.2003 @ blue light coll. Mann, Hamel & Simmons.” // “OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)” (OUMNH); 94 spec., (♂♂, ♀♀) “BOLIVIA: Dep. Santa Cruz City Santa Cruz de la Sierra S21°04´42´´ W14°35´33´´ 17.xii.2004, @ blue light trap coll. Mann, Hamel & Simmons” // “OUMNH-2005-065 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)”;

(OUMNH, 1 ♂ CSU); 2 spec., (♂, ♀) “BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes Research Station grounds. 18°06´41´´S 63°36´05´´W 21.xi.2003 @ D. J. Mann & A. C. Hamel” // “OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)” (OUMNH); 1 spec., (♂) “BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes Humid forest, 18°06´S 63°36´W 24.xi.2003 @blue light, forest clearing coll. D. J. Mann & A. C. Hamel” // “OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)” (OUMNH); 15 spec., (♂♂, ♀♀) “BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes Hotel area, 18°06´18´´S 63°35´54´´W Near river, 26.xi.2003 @ blue light coll. D. J. Mann & A. C. Hamel” // “OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)” (OUMNH); 8 spec., (♂♂, ♀♀) “BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes Humid Forest, 1080 alt 18°06´S 63°36´0´´W, 24. xi.2003, @ blue light coll. D. J. Mann & A. C. Hamel” // “OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)” (OUMNH); 6 spec., (♂♂, ♀♀) “BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes Research Station grounds 18°06´41´´S 63°36´05´´W, 21.xi.2003, @ blue light trap coll. D. J. Mann & A. C. Hamel” // “OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)” (OUMNH); 3 spec., (♂, ♀♀) “BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes Stream next to Research station 18°06´41´´S 63°36´05´´W, 22.xi.2003, @ blue light trap coll. D. J. Mann & A. C. Hamel” // “OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH) ”(OUMNH); 10 spec., (♂♂, ♀♀) “BOLIVIA: Tarija, Dirt track Between Caiza & Creveaux. 21°48´53´´S 63°26´53´´W. 536m alt. 05.1.2005. @ blue light. Chaco forest transistion zone. Coll. Mann, Hamel & Herzog” // “OUMNH-2004-065 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH) ”(OUMNH); 7 spec., (♂♂, ♀♀) “BOLIVIA: Dep. Taria Between Cazia & Creveaux S21°48´53´´ W63°26´53´´ 536 m alt. 05.i.2005, @ blue light coll. Mann, Hamel & Herzog // Dirt track to Creveaux, transitional Zone from Chaco Forest to Chaco Serrano” // “OUMNH-2005-065 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)” (OUMNH).

Distribution: Paraguay, Venezuela (SKALICKÝ 2002). First record for Bolivia.

Tropicus tucumanensis Pacheco, 1964

Material examined: 2 spec (♂♂) "BOLIVIA: Tarija, Dirt track between Caiza & Creveaux. 21°48´53´´S 63°26´53´´W. 536m alt. 05.1.2005. @ blue light. Chaco forest transition zone. Coll. Mann, Hamel & Herzog" // "OUMNH-2004-065 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)" (OUMNH, CSU).
Distribution: Argentina (PACHECO 1964). First record for Bolivia.

Tropicus squamosus Pacheco, 1964

Material examined: 1 spec (♂) "BOLIVIA: Dep. Santa Cruz Bermejo, Refugio Los Volcanes Humid forest, along 3nr walk path. S18°06´31´´ W63°35´22´´. 1100m alt. 21.xi.2003 @ blue light coll. Mann, Hamel & Simmons." // "OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)" (OUMNH); 1 spec (♀) "BOLIVIA: Tarija, Dirt track between Caiza Creveaux 536m a.s.l. S21°48´53´´ W63°26´53´´ 05.i.2005. @ blue light Chaco forest transition zone. Coll. Mann, Hamel & Herzog" // "OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)" (OUMNH); 2 spec (♂, ♀) "BOLIVIA: "Tarija, Dirt track between Caiza & Creveaux. 21°48´53´´S 63°26´53´´W. 536m alt. 05.i.2005. @ blue light. Chaco forest transition zone. Coll. Mann, Hamel & Herzog" // "OUMNH-2005-065 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)" (OUMNH, ♂ CSU).
Distribution: Bolivia, Brazil (PACHECO 1964).

Tropicus sp. ♀♀

Material examined: 1 spec., "BOLIVIA: Dep. Beni San Ramon, Ranch (Estancia) San Lorenzo, 13°26´55´´S 64°36´15´´W. 31.xi.2003 @ blue light trap Disturbed gallery forest 140m Coll. D. J. Mann & A. C. Hamel" // "OUMNH-2004-005 D. J. Mann & C.Hamel coll. Pres. Mann & Hamel, 2004" (OUMNH); 1 spec., (♂) "BOLIVIA: Dep. Beni Road: San Ramon - Trinidad 13°23´07´´S 64°35´30´´W 04.xii.2003, aeriar sweeping coll. D. J. Mann & A. C. Hamel B-21" // "OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)" (OUMNH); 4 spec., "BOLIVIA: Dep. Cochabamba Sacta, S17°04´18´´ W64°46´00´´ 250 m alt disturbed 2° Amazonian frst 20.xii.2004, @ M.V.

light trap coll. Mann, Hamel & Simmons Sa-02" // "OUMNH-2005-065 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)" (OUMNH); 1 spec., "BOLIVIA: Tarija, Dirt track Between Caiza & Creveaux. 21°48´53´´S 63°26´53´´W. 536m alt. 05.1.2005. @ blue light. Chaco forest transition zone. Coll. Mann, Hamel & Herzog" // "OUMNH-2004-065 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)" (OUMNH).
Note: Nine segmented antennae assign this specimen to genus *Tropicus* Pacheco, 1964, however without male specimens are undeterminable.

Heterocerus pachecoi Skalický, 2002

Material examined: 1spec (♂) "BOLIVIA: Dep. Cochabamba Sacta, S17°04´18´´ W64°46´00´´ 250 m alt disturbed 2° Amazonian forest 20.xii.2004, @ blue light trap coll. Mann, Hamel & Simmons" // "OUMNH-2005-065 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)" (OUMNH).
Distribution: Paraguay (SKALICKÝ 2002). First record for Bolivia.

Heterocerus ciliaticollis (Steinheil, 1869)

Material examined: 29 spec. (♂♂, ♀♀) "BOLIVIA: Dep. Cochabamba Poja area. 2715m alt. S17°44´20´´ W64°56´22´´ 29.xii.2004, pool edge. coll. Mann, Hamel, Simmons & Herzog B22" // "OUMNH-2004-005 D. J. Mann colln. Bolivia Oxford University Museum of Natural History (OUMNH)" (OUMNH, 1 ♂ CSU).
Distribution: Argentina, Brazil, Paraguay (PACHECO 1962). First record for Bolivia.

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