

The genus *Lacconectus* Motschulsky, 1855 in Laos (Coleoptera, Dytiscidae): new species and new data

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The genus *Lacconectus* Motschulsky, 1855 in Laos (Coleoptera, Dytiscidae): New species and new data

by Michel Brancucci †

Abstract. The Laotian fauna of the diving beetle genus *Lacconectus* Motschulsky, 1855 is reviewed. Eight new species are described: *L. atlas* sp.nov., *L. attapeu* sp.nov., *L. hajeki* sp.nov., *L. haucki* sp.nov., *L. namkading* sp.nov., *L. reumauxi* sp.nov., *L. savannakhet* sp.nov. and *L. vongsanai* sp.nov. The new species are illustrated and compared to their nearer relatives. New faunistic data for Laos and some adjacent countries are given. Apart from many new province records within Laos, *L. merguiensis* Brancucci, 1986, *L. tonkinoides* Brancucci, 1986 and *L. valeriae* Brancucci, 2004 are new for the fauna of Laos and *L. schillhammeri* Brancucci, 2003 is new for Vietnam. A key is provided for the identification of species. Distribution maps are given for all 21 species occurring in Laos.

Key words. Coleoptera – Dytiscidae – *Lacconectus* – Laos – taxonomy – new species – distribution

Introduction

At the time of my revision of the genus *Lacconectus* (BRANCUCCI 1986) I recognized a total of 38 species, one of which was recorded only from Laos. Later on, Laos was revisited and a number of species added (BRANCUCCI 2003, 2006), bringing the total occurring in Laos to ten in the immediately previous paper. In the meantime, more material has again been collected, and the total number of species addressed here is 21, eight of them new to science.

Material and methods

This study is based on examination of several thousand specimens collected from many parts of Laos. As *Lacconectus* live mostly in specific habitats, such as small to very small puddles in rain forest, particular attention was paid to collecting in water. *Lacconectus* are mobile and more than capable of flying off to avoid capture. They were therefore picked out with forceps or sucked up directly with an aspirator. Many of the specimens were collected in flight interception traps. Specimens were placed in sawdust with ethyl acetate and then dry-mounted.

Abbreviations:

TL = total length, TL-h = total length without head, TW = total width

Editorial note: This manuscript was prepared for publication after the unfortunate passing of Dr. Brancucci, based on the most recent version available. In the interests of completeness, Michael Geiser made certain additions, as follows: Abstract, parts of the diagnosis of the *atlas* species-group, some locality data and distribution maps. Figures and distribution maps were modified and arranged by Armin Coray.

The specimens mentioned here are deposited in following collections:

ELEU Entomological Laboratory, Faculty of Agriculture, Ehime University,
Matsuyama, Japan
IZAS Institute of Zoology, Chinese Academy of Sciences, Beijing, P.R. China
JS coll. Jaroslav Štátný, Liberec, Czech Republic
NHMB Naturhistorisches Museum Basel, Switzerland
NMPC Národní Museum, Praha, Czech Republic
NUOL . . . National University of Laos, Faculty of Agriculture, Nabong (Vientiane), Laos

Checklist of *Lacconectus* species from Laos

<i>L. atlas</i> sp.nov.	Laos (Attapeu)
<i>L. attapeu</i> sp.nov.	Laos (Attapeu)
<i>L. basalis</i> Sharp, 1882	China, Myanmar, Thailand, Vietnam, Cambodia, northern part of Peninsular Malaysia, Taiwan and Laos (Bokeo, Xayabury, Oudomxai, Louang Prabang, Xieng Khouang, Vientiane, Bolikhamxai, Khammouan, Savannakhet, Champasak, Sekong, Attapeu)
<i>L. geiseri</i> Brancucci, 2006	Laos (Phongsaly)
<i>L. hajeki</i> sp.nov.	Laos (Attapeu, Savannakhet, Champasak)
<i>L. haucki</i> sp.nov.	Laos (Xieng Khouang, Vientiane, Khammouan)
<i>L. kubani</i> Brancucci, 2003	China and Laos (Oudomxai, Louang Namtha, Louang Prabang, Phongsaly, Houa Phan, Xieng Khouang)
<i>L. merguiensis</i> Brancucci, 1986	Myanmar, Thailand, Laos (Bokeo)
<i>L. meyeri</i> Brancucci, 2003	China, Laos (Oudomxai, Louang Prabang, Louang Namtha, Phongsaly)
<i>L. namkading</i> sp.nov.	Laos (Bolikhamxai)
<i>L. nigrata</i> Brancucci, 2003	Laos (Oudomxai, Louang Namtha, Louang Prabang, Phongsaly)
<i>L. pseudonicolasi</i> Brancucci, 2003	China (Yunnan) and Laos (Oudomxai, Louang Namtha, Louang Prabang, Phongsaly)
<i>L. pseudosimilis</i> Brancucci, 2003	Laos (Vientiane, Bolikhamxai, Khammouan)
<i>L. punctatus</i> Brancucci, 1986	Cambodia, Vietnam, Thailand, Laos (Bokeo, Vientiane, Bolikhamxai, Khammouan, Savannakhet, Attapeu)
<i>L. reumauxi</i> sp.nov.	Laos (Bokeo)
<i>L. savannakhet</i> sp.nov.	Laos (Savannakhet, Salavan)
<i>L. schillhammeri</i> Brancucci, 2003	Thailand, Vietnam, Laos (Bokeo, Xieng Khouang, Vientiane, Bolikhamxai, Savannakhet, Champasak, Sekong, Attapeu)
<i>L. similis</i> Brancucci, 1986	China (Yunnan) and Laos (Bokeo, Louang Prabang, Xayabouri, Phongsaly, Xieng Khouang)
<i>L. tonkinoides</i> Brancucci, 1986	China (Yunnan, Guangdong), N Vietnam, Laos (Houa Phan, Bolikhamxai)
<i>L. valeriae</i> Brancucci, 2004	S Vietnam and Laos (Bolikhamxai, Savannakhet, Sekong, Champasak)
<i>L. vongsanai</i> sp.nov.	Laos (Bolikhamxai, Xieng Khouang)

Taxonomy***fulvescens* species-group (BRANCUCCI 1986)*****Lacconectus haucki* sp.nov.**

Figs 1, 9

Type material. Holotype ♂ (NHMB): Laos, Xieng Khouang Prov., 19°03'N, 103°25'E, 550m, Ban Thaviang env., 17.V.2010, forest stream, M. Geiser & D. Hauck leg. 1 paratype ♂ (NHMB): Idem; 2 paratypes (1 ♂, JS, 1 ♂, NHMB): Vientiane Prov., 5 km NE of Vang Viang, Kaeng Nyui waterfall, 29.XI.2011, J. Šťastný lgt. 1 paratype ♂ (NHMB): Laos, Khammouan Prov., 18°07'N, 104°29'E, Ban Khoun Ngeun env., ~200 m, Vít. Kubáň.

Description. Body elongate, testaceous brown, lustrous; base and apex of elytra testaceous.

Head brown, narrowly darker alongside eyes, semi-matt. Microsculpture consisting of small, distinctly impressed, almost rounded meshes and of dense but irregularly distributed and deeply impressed punctures. Clypeal grooves, a row of deep punctures alongside eyes and a transverse depression beside eyes deeply impressed. Antennae testaceous; joints elongate, the fifth 1.8 times as long as broad.

Pronotum testaceous brown, the disc somewhat darker, semi-matt. Microsculpture consisting of small polygonal, almost rounded and well-impressed meshes and of dense and small, irregularly distributed punctures. Longitudinal median suture short and superficial. Anterior and lateral rows consisting of large punctures coalescing at the sides. Coarse punctures at each latero-basal quarter. Lateral margins finely bordered, broadly interrupted before reaching anterior border.

Elytra lustrous, testaceous brown, with a distinct but not well-delimited sub-basal testaceous band as well as a postmedian and a subapical testaceous spot. Margin alongside epipleura brownish-black. Epipleura ferruginous-brown along entire length. Reticulation consisting of strongly elongate meshes at very base soon giving way to a fine striolation; the latter disappearing completely before mid-length. Punctures of small size, dense and well-impressed. Sutural row of punctures reduced to a few large punctures on apical third. Discal row of punctures not reaching base; punctures medium-sized in a straight line but in spaced groups. Sublateral row with punctures in a straight line on anterior half. Second interspaces with some large, spaced punctures.

Underside testaceous-brown. Prosternal process short, only 1.2 times as long as broad, strongly bordered at sides and broadly rounded at apex. Metacoxal lines represented only by deep, short striae at their mid-length. Sternites 3, 4 and 5 finely with very sparse and irregularly-distributed medium-sized punctures, particularly at their mid-length. Anal sternite with almost indiscernible microstriolation at the apex, slightly reticulated and almost smooth posteriorly, with oblique rows of broad setae at both sides of centre. Posterior margin finely bordered and broadly rounded.

Measurements: Holotype: TL: 4.6 mm; TL-h: 4.1, TW = 2.5 mm. Paratypes: TL: 4.4–4.6 (4.5, n = 2), TL-h: 3.9–4.1 (4.0 mm, n= 2), TW: 2.5–2.6 (2.55 mm, n= 2).

♂. Aedeagus, in lateral view, broadened at apical part and then almost constant in width up to apex (Fig. 1). Parameres broad (Fig. 9).

♀. Unknown.

Etymology. Named after David Hauck, CZ-Brno, who took part in three of our expeditions to Laos and who collected large numbers of interesting species.

Differential diagnosis. This species is very closely related to *L. similis* Brancucci, so close that I did not describe the first specimen I had at my disposal. Since then, several more have been made available for study, allowing me to improve the description and see that certain characters are constant and well-delimited. It may be distinguished from *L. similis* by the elytral reticulation, which consists of very elongate meshes at the very base, very soon becoming fine striolation, the latter disappearing before mid-length. Further, the punctures on the elytra are distinctly more impressed. Finally, the aedeagus in lateral view is moderately enlarged at the apical part then practically constant in width, not constricted before apex.

Distribution. Laos: Xieng Khouang, Vientiane and Khammouan prov. (Fig. 20).

***Lacconectus attapeu* sp.nov.**

Figs 2 and 10

Type material. Holotype ♂ (NHMB) and 8 paratypes (4 ♂ and 4 ♀, NHMB): LAOS: Attapeu Prov., Thong Kai Ohk Ban Kachung (Mai) env., 1200–1450 m, 15°01–02' n/ 107°26–27'E, 10.–24 VI. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan.

Description. Body broadly oval, dark brown; vertex frons, sides of pronotum as well as base and apex of elytra testaceous.

Head brown, broadly darker alongside eyes, semi-matt. Microsculpture consisting of small, distinctly impressed, polygonal meshes and of large, dense but irregularly distributed and deeply impressed punctures. Clypeal grooves, a row of deep punctures alongside eyes and a transverse depression beside eyes deeply impressed. Antennae testaceous; joints elongate, the fifth 1.7 times as long as broad.

Pronotum dark brown, the sides broadly testaceous, semi-matt. Microsculpture consisting of small polygonal and well-impressed meshes, regular in size, and of irregularly distributed small punctures. Longitudinal median suture long and well impressed. Anterior and lateral rows consisting of middle-sized punctures not coalescing even at the sides. Coarse punctures at each latero-basal quarter. Lateral margins finely bordered, broadly interrupted before reaching anterior border.

Elytra matt, brown, with a distinct and broad sub-basal testaceous band as well as a subapical testaceous spot; the latter only slightly visible. Margin alongside epipleura brownish-black. Epipleura ferruginous-brown along entire length. Reticulation consisting of distinctly polygonal meshes, with a clearly impressed puncture at many of the intersections. Sutural row of punctures reduced to a few large punctures particularly on apical third. Discal row of punctures not reaching base with medium-sized punctures in a straight line, but spaced. Sublateral row with punctures in a straight line on anterior half. Second interspaces with some large, spaced punctures.

Underside ferruginous brown. Prosternal process short, 1.5 times longer than broad, strongly bordered at sides and broadly rounded at apex. Metacoxal lines represented only by short, deep striae at their mid-length. Sternites very superficially microstriated with sparse and irregularly distributed medium-sized punctures, particularly at their mid-length. Anal sternites with superficially impressed reticulation on anterior half, more

distinctly impressed on posterior half, with an oblique row of broad setae at both sides of centre. Posterior margin finally bordered and broadly rounded.

Measurements: Holotype: TL: 4.4 mm; TL-h: 4.1, TW = 2.6 mm. Paratypes: TL: 4.6–4.9 (4.75, n = 8), TL-h: 4.3–4.6 (4.40 mm, n= 8), TW: 2.6–2.85 (2.70 mm, n= 8).

♂. Aedeagus broadly curved in lateral view, regular in width, enlarged in apical fifth then suddenly tapered and broadly rounded at apex (Fig. 2). Parameres: Fig. 10.

♀. Similar to ♂. Valvae long, narrow, narrowly rounded at apex. Seta subapical.

Etymology. Named after the province of Attapeu, where this species was collected; name in apposition.

Differential diagnosis.*) See Key.

Distribution. Laos: Attapeu prov. (Fig. 21).

Lacconectus reumauxi sp.nov.

Figs 3 and 11

Type material. Holotype ♂ (NHMB) and 8 paratypes 5 ♂ and 4 ♀ (NHMB): LAOS: Bokeo Prov., ca. 5 km W Ban Toup, Bokeo Nature Reserve, 500–700 m, 20°27–28' N / 100°45' E, 4.–18. V. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan.

Description. Body elongate-oval, brown to dark brown, lustrous; sides of pronotum as well as base and apex of elytra testaceous.

Head brown, broadly darker alongside eyes and on disc, semi-matt. Microsculpture consisting of small, distinctly impressed, almost polygonal meshes and of numerous but irregularly distributed and deeply impressed punctures; clypeal grooves, a row of deep punctures alongside eyes and a transverse depression beside the eyes deeply impressed. Antennae testaceous; joints shorts and broad, the fifth 1.6 times as long as broad.

Pronotum dark brown, the sides narrowly testaceous, semi-matt. Microsculpture consisting of small polygonal, regular in size and well-impressed meshes and of irregularly distributed small punctures. Longitudinal median suture short and very superficial. Anterior and lateral rows consisting of large punctures coalescing at sides. Coarse Punctures at each latero-basal quarter. Lateral margins finely bordered, broadly interrupted before reaching anterior border.

Elytra lustrous, brown, with a distinct and broad sub-basal testaceous band as well as a subapical testaceous spot; the latter only slightly visible. Margin alongside epipleura brownish-black. Epipleura testaceous-brown towards the front, ferruginous-brown towards the rear. Reticulation consisting at base of polygonal meshes, with a distinctly impressed puncture at many of the intersections. Meshes becoming superficial and elongate after mid-length, giving way to fine striolation on apical fourth only. Sutural row of punctures reduced to a few large punctures on apical third. Discal row of punctures not reaching base with medium-sized punctures in a straight line but spaced. Sublateral row with punctures in a straight line on anterior half. Second interspaces with some large, spaced punctures.

*) There is no diagnosis in the original manuscript - Ed.

Underside testaceous-brown. Prosternal process short, only 1.3 times as long as broad, strongly bordered at sides and broadly rounded at apex. Metacoxal lines represented only by short, deep striae at their mid-length. Metacoxal lines with a knob on each side of centre on anterior part. Metacoxoae strongly and deeply wrinkled towards the rear on both sides of centre. Sternites 3, 4 and 5 each with sparse and irregularly-distributed large punctures, particularly at their mid-length. Anal sternite with distinct microstriolation on anterior half, clearly reticulated on posterior half, with an oblique row of broad setae at both sides of centre. Posterior margin finely bordered and broadly rounded.

Measurements: Holotype: TL: 4.4 mm; TL-h: 3.9, TW = 2.5 mm. Paratypes: TL: 4.1–4.6 (4.40, n = 8), TL-h: 3.7–4.2 (3.95 mm, n= 8), TW: 2.3–2.6 (2.46 mm, n= 8).

♂. Aedeagus, in lateral view, broadly curved, gently tapered, very slightly constricted before apex and broadly rounded at apex (Fig. 3). Parameres broad (Fig. 11).

♀. Similar to ♂. Metacoxae less wrinkled than in male. Valvae long, narrow, narrowly rounded at apex. Seta subapical.

Etymology. Named after M. Jean-François Reumaux, Houay Xay (Laos), not only for the help he kindly provided us but also for the energy he brings every day to the preservation of the national park and the whole biodiversity of Bokeo.

Differential diagnosis. *L. reumauxi* is closely related to *L. merguiensis* Brancucci and *L. schillhammeri* Brancucci that occurs in the same habitat. It can, however, be easily distinguished by the aedeagus, which is broadly rounded at apex, and also by the microsculpture on the elytra, particularly by the meshes, which are distinctly impressed and polygonal on the whole anterior part of the elytra in the first interspace. After mid-length the reticulation gives way to striolation which remain visible almost up to the apex.

Distribution. Laos: Bokeo prov. (Fig. 21).

Lacconectus hajeki sp.nov.

Figs 4 and 12

Type material. Holotype ♂ (NMPC): Laos, Attapeu Prov., Annam Highland Mts, Dong Amphan NBCA, ca. 1160 m, Nong Fa (crater lake), env. 15°15.9'N, 107°25.6' E, 30.IV.–6.V.2010, Jiří Hájek leg. 47 paratypes (8 ♂ and 33 ♀, NMPC; 4 ♂ and 2 ♀; NHMB). LAOS, Attapeu prov., NONG FA crater lake, 1150–1300 m, 15°05–07' N / 107°25' E, 21.–25. VI. 2011; NHMB Laos Expedition 2011, M. Geiser & D. Hauck (22 ♂ and 35 ♀; NHMB). LAOS, Attapeu prov., Thong Kai Ohk, BAN KACHUNG (MAI) env., 1200–1450 m, 15°01–02' N / 107°26–27' E, 10.–24. VI. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (199 ♂ and 139 ♀; NHMB). LAOS, Attapeu prov., Ban Vang Tat Noi env., 900 m, 15°03–04' N / 107°24' E, 10.–25. VI. 2011, NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (1 ♂; NHMB). LAOS, Savannakhet Prov., Phou Xang He NBCA, ca. 5 km SW Ban Pa Phaknau, 250–400 m, 17°00' N / 105°38' E, 31. V.–6. VI. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan 1 ♀; NHMB). Laos, Champasak Prov., Bolaven Plt, Muang Paxon, Ban Thongvay, 15°14.054' N, 106°31.867' E, 1200 m, 8.–16.VI.2008, A. Solodovnikov & J. Pedersen, disturbed primary rainforest, near clearing, flight intercept trap (3 ex., ZMUC).

Description. Body broadly oval, testaceous brown, lustrous; vertex, frons, sides of pronotum as well as base and apex of elytra testaceous.

Head brown, broadly darker alongside eyes and on disc, semi-matt. Microsculpture consisting of small, distinctly impressed, polygonal but rounded meshes and of dense but irregularly distributed and deeply impressed punctures; clypeal grooves, a row of deep punctures alongside eyes and a transverse depression beside the eyes deeply impressed. Antennae testaceous; joints short and broad, the fifth 1.5 times as long as broad.

Pronotum dark brown, the sides broadly testaceous, semi-matt. Microsculpture consisting of small, polygonal, almost rounded and well-impressed meshes and small punctures. Longitudinal median suture short and very superficial. Anterior and lateral rows consisting of large punctures coalescing at sides. Coarse punctures at each latero-basal quarter. Lateral margins finely bordered, broadly interrupted before reaching anterior border.

Elytra lustrous, brown, with a distinct and broad sub-basal testaceous band as well as a postmedian and a subapical testaceous spot. Margin alongside epipleura brownish-black. Epipleura testaceous at base, dark brown on the rest of the surface. Reticulation consisting of polygonal meshes at base, with a distinctly impressed minute puncture at their intersections, building star-shaped groups of meshes. Meshes becoming strongly elongate and superficial before midway and giving way to fine striolation; the latter very superficial and disappearing completely beyond three-quarter length. Sutural row of punctures reduced to a few large punctures on apical third. Discal and sublateral rows of punctures not reaching base, with medium-sized punctures in a straight line but spaced. Discal row with punctures in a straight line, spaced and grouped mostly in threes. Second interspaces large and spaced, some of the punctures aligned.

Underside testaceous-brown. Prosternal process short, only 1.43 times as long as broad, strongly bordered at sides, at apex finely so and broadly rounded. Metacoxal lines represented only by short, deep striae at their mid-length. Sternites 3, 4 and 5 each with very sparse and irregularly distributed, medium-sized punctures, particularly at their mid-length. Anal sternite with a very fine striolation towards the front, slightly but distinctly reticulated towards the rear, with an oblique row of broad setae at both sides of centre. Posterior margin finely bordered and broadly rounded.

Measurements: Holotype: TL: 4.7 mm; TL-h: 4.2, TW = 2.7 mm. Paratypes: TL: 4.3–4.8 (4.54, n = 10), TL-h: 4.0–4.4 (4.15 mm, n= 10), TW: 2.3–2.7 (2.57 mm, n= 10).

♂. Aedeagus, in lateral view, broadly and strongly curved, distinctly narrow and parallel-sided; apex obliquely truncated (Fig. 4). Parameres broad (Fig. 12).

♀. Similar to ♂. Valvae long, elongated, flattened, narrowly rounded at apex. Seta subapical.

Etymology. Named after my colleague Jiří Hájek of the National Museum in Prague, who collected some of the material addressed in this paper.

Differential diagnosis. this species comes close to *L. meyeri* Brancucci but may easily be distinguished by the microsculpture of its elytra; the meshes are transformed into striolation before midway, the latter disappearing post-three-quarter length. In *L. meyeri* the meshes are distinctly visible on the anterior half, become superficial beyond and give way to a fine striolation only post-four-fifths; the last-mentioned visible to apex. Further, the aedeagus of *L. hajeki* is more elongate, less curved and presents a truncated apex in

lateral view. This species is also very closely related to *L. schawalleri* Brancucci from Doi Phu Kha National Park in Thailand. It may be distinguished by the minute punctures on the elytra, which are very superficial over the entire surface, whereas they are dense and strongly impressed in *L. schawalleri*. The discal and sublateral rows on the elytra also help in discrimination: the punctures in *L. hajeki* sp.nov. are small, distinctly spaced and grouped on the disc, very much spaced on the apical third, while in *L. schawalleri* they are large, very closely set and the row is prolonged onto the apical third. Finally the striolation in *L. hajeki* sp.nov. is visible up to the posterior third, while in *L. schawalleri* it disappears before mid-length. The aedeagus also facilitates easy identification.

Distribution. Laos: Attapeu, Savannakhet and Champasak prov. (Fig. 20).

***Lacconectus vongsanai* sp.nov.**

Figs 5 and 13

Type material. Holotype ♂ (NHMB): LAOS, Bolikhamsay Prov., Nam Kading NBCA, Tad Paloy campsite, 300 m, 18°23.17' N / 104°09.65'E, 7.–12. VII. 2010, forest stream, M. Brancucci & M. Geiser leg. 4 paratypes (2 ♂, 2 ♀): Mt. Phu Bia, Saisombun, Laos, 21.III.2005, M. Satô (1 ♂ and 2 ♀; ELEU; 1 ♂ NHMB)

Description. Body broadly oval, dark brown, lustrous; vertex, frons, sides of pronotum as well as base and apex of elytra testaceous.

Head brown, broadly darker alongside eyes, semi-matt. Microsculpture consisting of small, distinctly impressed polygonal meshes and of many irregularly distributed and deeply impressed punctures. Clypeal grooves, a row of deep punctures alongside eyes and a transverse depression beside eyes deeply impressed. Antennae lacking.

Pronotum dark brown, the sides broadly testaceous, only the middle part of pronotum dark, semi-matt. Microsculpture consisting of small polygonal, regular and well-impressed meshes and of irregularly-distributed small punctures. Longitudinal median suture long and superficial. Anterior and lateral rows consisting of large punctures partly coalescing, particularly at the sides. Coarse punctures at each latero-basal quarter. Lateral margins finely bordered, broadly interrupted before reaching anterior border.

Elytra semi-matt, brown, with a distinct and broad sub-basal testaceous band, interrupted twice, as well as a postmedian and a subapical testaceous spot. Margin alongside epipleura brownish-black. Epipleura testaceous to ferruginous-brown along entire length. Microsculpture consisting of strongly impressed polygonal meshes with the intersections of many meshes marked by a distinctly impressed, minute puncture. Meshes becoming more superficially impressed towards the rear but remaining polygonal all the way to the apex. Sutural row of punctures reduced to a few large punctures on apical third. Discal row of punctures not reaching base with medium-sized punctures, in a straight line but spaced. Sublateral row almost reaching base; punctures forming a straight line. Second interspaces with some large, spaced punctures.

Underside testaceous-brown. Prosternal process short and oval, only 1.50 times as long as broad, strongly bordered at sides and broadly rounded at apex. Metacoxal lines represented only by two or three deep punctures at their mid-length. Sternites 3, 4 and 5 each with very sparse and irregularly distributed, medium-sized punctures, particularly at their mid-length. Anal sternite with fine striolation towards the front, reticulate in the apical region.

Measurements: Holotype: TL: 4.3 mm; TL-h: 3.9, TW = 2.4 mm.

Paratypes: TL: 4.2–4.5 (4.35, n = 4), TL-h: 3.8–4.1 (3.95 mm, n= 4), TW: 2.4–2.5 (2.48 mm, n= 4).

♂. Aedeagus, in lateral view, distally curved, broadened at apical four-fifths then gently tapered and narrowly rounded at apex (Fig. 5). Parameres broad (Fig. 13).

♀. Similar to ♂, somewhat larger. Valvae long, elongated, flattened, narrowly rounded at apex. Seta subapical.

Etymology. Named after Prof. Khosada Vongsana, Nabong Campus, NUOL, Vientiane, for the unflagging assistance he provided us during our work in Laos.

Differential diagnosis. Because of the microsculpture of the elytra, particularly the polygonal meshes covering the whole surface, this species can easily be distinguished from all others. It is somewhat reminiscent of *L. biswasi* Brancucci from India.

Remarks. As there is neither altitude nor coordinate on the label, the locality “Saisamboun” seems somewhat imprecise to me. Saisamboun lies at 1200 m and this species probably occurs on the plain, as observed in Bolikhamxai.

Distribution. Laos: Bolikhamxai and Xieng Khouang prov. (Fig. 21).

atlas species-group nov.

This informal species-group is here newly established for four species spread along the Mekong river drainage basin from South China (Yunnan, Xishuangbanna) to south-eastern Laos. They are characterised by large size (5.3–7.1 mm), unusually dark colouration (dark brown to completely black) and a broader, more robust body than in the *L. fulvescens* species-group, which includes the other species of Laotian *Lacconectus*. Included into this group are the three species described below, as well as *L. nigrita* Brancucci, 2003.

Lacconectus namkading sp.nov.

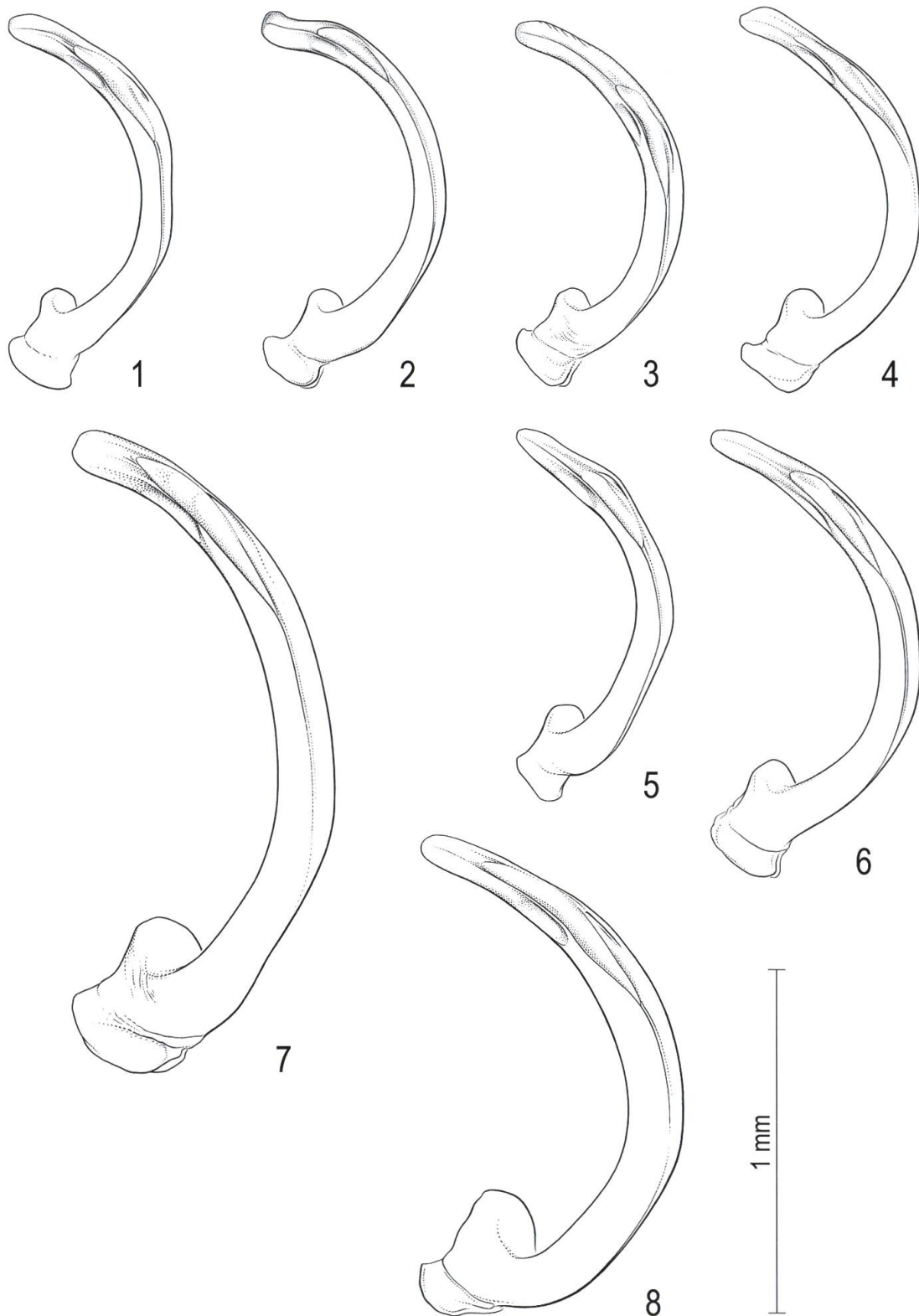
Figs 6, 14 and 17

Type material. Holotype ♂ (NHMB): LAOS, Bolikhamsay Prov., Nam Kading NPA, Tad Paloy campsite, 250–400 m, 18°21–23' N / 104°09' E, 24.–28. V. 2011, M. Geiser & D. Hauck leg.; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan. 86 paratypes (35 ♂ and 51 ♀, NHMB): Idem. 1 paratype ♀ (NHMB): Bolikhamsay Prov., Nam Kading NPA, Tad Paloy campsite, 300 m, 18°21–23.17' N / 104°09.65' E, 8.–11. VII. 2010, forest stream, M. Brancucci & M. Geiser.

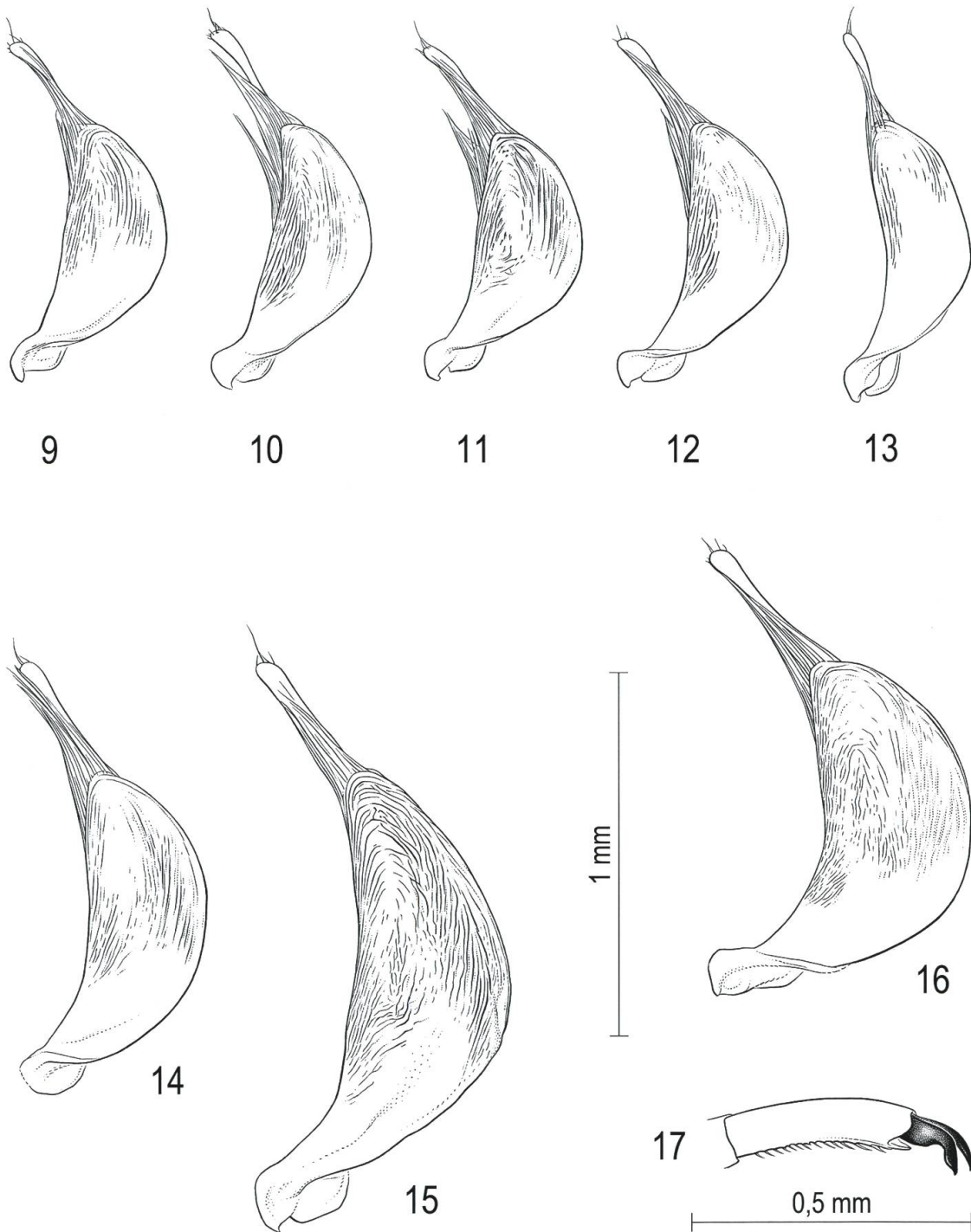
Description. Body strongly and broadly oval, dark brown, lustrous; vertex, frons, sides of pronotum ferruginous brown and elytral markings testaceous (Fig. 18).

Head ferruginous brown, broadly darker alongside eyes and on disc, semi-matt. Microsculpture consisting of small, polygonal, almost rounded meshes and of dense but irregularly-distributed and very small punctures. Clypeal grooves, a row of deep punctures alongside eyes and a transverse depression beside eyes deeply impressed. Antennae testaceous; joints elongate, the fifth twice as long as broad.

Pronotum dark brown on disc and on anterior and posterior margins, the sides broadly ferruginous-brown. Microsculpture consisting of small polygonal meshes and of irregularly-distributed small punctures; punctures separated by 2–4 meshes.



Figs 1–8. Aedeagi: 1 – *L. haucki* sp.nov.; 2 – *L. attapeu* sp.nov.; 3 – *L. reumauxi* sp.nov.; 4 – *L. hajeki* sp.nov.; 5 – *L. vongsanai* sp.nov.; 6 – *L. namkading* sp.nov.; 7 – *L. savannakhet* sp.nov.; 8 – *L. atlas* sp.nov.



Figs 9–17. Parameres: 9 – *L. haucki* sp.nov.; 10 – *L. attapeu* sp.nov.; 11 – *L. reumauxi* sp.nov.; 12 – *L. hajeki* sp.nov.; 13 – *L. vongsanai* sp.nov.; 14 – *L. namkading* sp.nov.; 15 – *L. savannakhet* sp.nov.; 16 – *L. atlas* sp.nov.; 17 – male protarsal claw of *L. atlas* sp.nov.

Longitudinal median suture long but superficial. Anterior and lateral rows consisting of large punctures coalescing at sides. Punctures at each latero-basal quarter coarse, partly coalescent, building into some longitudinal wrinkles. Lateral margins finely bordered, broadly interrupted before reaching anterior border.

Elytra lustrous, dark brown, with testaceous markings as follows: a broad and often interrupted sub-basal band, a more or less developed postmedian band, a narrow, longitudinal preapical stripe as well as a poorly delimited apical patch. Epipleura testaceous at very base, ferruginous-brown on the rest of the surface. Surface of elytra completely without microreticulation, smooth but covered with minute and superficial punctures. Sutural row of punctures reduced to a few large punctures on apical 1/3. Discal row of punctures not reaching base with medium-sized punctures in a straight line but spaced. Sublateral row with punctures in a straight line on anterior half. Second interspaces with a short row of large punctures.

Underside testaceous-brown. Prosternal process short, about 1.5 times as long as broad, strongly bordered at sides and broadly rounded at apex. Metacoxal lines represented only by short, deep striae at their mid-length. Sternites 3, 4 and 5 each with very sparse and irregularly-distributed, minute punctures, particularly at their mid-length. Anal sternite with almost indiscernible microstriolation towards the rear, narrowly reticulated along posterior margin, with an oblique row of large punctures at both sides of centre. Posterior margin finely bordered and broadly rounded.

Measurements: Holotype: TL: 5.3 mm; TL-h: 4.8, TW = 3.2 mm. Paratypes: TL: 5.3–6.30 (5.74, n = 10; ♂: 5.64, ♀: 6.02); , TL-h: 4.9–5.6 (5.30 mm, n= 10), TW: 3.2–3.7 (3.49 mm, n= 10).

♂. Aedeagus, in lateral view, regularly curved, narrowed on apical part and narrowly rounded at apex (Fig. 6). Parameres elongate (Fig. 14).

♀. Similar to ♂, somewhat larger. Valvae long, elongated and flattened, narrowly rounded at apex. Seta subapical.

Etymology. Named after the type locality, noun in apposition.

Differential diagnosis. This species comes near to *L. savannakhet* sp.nov. and *L. atlas* sp.nov., but may easily be recognized by its smaller size, its short, oval habitus, by the absence of elytral reticulation and by the aedeagus.

Distribution. Laos: Bolikhamxai prov. (Fig. 22).

Lacconectus savannakhet sp.nov.

Figs 7 and 15

Type material. Holotype ♂ and 52 paratypes (18 ♂ and 34 ♀, NHMB): LAOS, Savannakhet Prov., Phou Xang He NBCA, ca. 5 km SW Ban Pa Phaknau, 250–400 m, 17°00' N / 105°38' E, 31. V.–6. VI. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan. 8 paratypes (4 ♂ and 4 ♀, NHMB): LAOS, Salavan Prov., Xe Xap NPA, 15 km NE Ta-Oy, BAN DOUB env., 600–900 m, 16°08' N / 106°42–43' E, 26.–30. V. 2012; NHMB Laos 2012 Expedition, M. Brancucci, M. Geiser, K. Phanthavong & S. Xayalath.

Description. Body broadly oval, dark brown to black, matt; vertex, frons and sides of pronotum ferruginous brown; elytra with variable markings on base and apex.

Head matt, brown, broadly darker alongside eyes sometimes on whole disk. Microsculpture consisting of small, polygonal, well-impressed meshes and of dense but

irregularly-distributed and deeply impressed punctures; clypeal grooves, a row of deep punctures alongside eyes and a transverse depression beside eyes deeply impressed. Antennae testaceous; joints elongate, the fifth 2.3 times as long as broad.

Pronotum dark brown, the sides broadly testaceous, matt. Microsculpture consisting of small polygonal, almost rounded and well-impressed meshes and of small, irregularly distributed punctures. Longitudinal median suture long and clearly distinct. Anterior and lateral rows consisting of large punctures coalescing at sides. Coarse punctures at each latero-basal quarter. Lateral margins finely bordered, broadly interrupted before reaching anterior border.

Elytra matt, dark brown to black with variable testaceous markings; completely black with a humeral rounded spot and an apical elongate patch, or with a sub-basal band mostly divided into two patches and a distinctly visible apical patch. Postmedian patch absent. Epipleura dark brown along entire length. Reticulation consisting of polygonal meshes at base, with distinctly impressed minute punctures at the intersections of many meshes. Meshes becoming elongate and less impressed before mid-length, soon giving way to fine striolation and disappearing completely by mid-length. Sutural row of punctures reduced to a few large punctures along entire length. Discal row of medium-sized punctures in a straight line, spaced and not reaching base. Sublateral row with punctures in a straight line on anterior half. Second interspaces with a row of large, spaced punctures.

Underside testaceous-brown. Prosternal process short, only 1.25 times as long as broad, strongly bordered at sides and broadly rounded at apex. Metacoxal lines represented only by short, deep striae at their mid-length. Sternites 3, 4 and 5 each with very sparse and irregularly distributed, medium-sized punctures, particularly at their mid-length. Anal sternite with almost indiscernible microstriolation at the rear, slightly reticulated along posterior margin and with an oblique row of broad setae on both sides of centre. Posterior margin finely bordered and broadly rounded.

Measurements: Holotype: TL: 6.5 mm; TL-h: 5.9, TW = 3.7 mm. Paratypes: TL: 6.2–6.6 (6.46, n = 10), TL-h: 5.8–6.3 (5.99 mm, n= 103), TW: 3.6–3.9 (3.74 mm, n= 10).

♂. Aedeagus, in lateral view, broadly curved, constant in width and broadly rounded at apex. In dorsal view, it is markedly twisted (Fig. 7). Parameres broad (Fig. 15).

♀. Similar to ♂. Valvae elongated long, flattened, narrowly rounded at apex. Seta subapical.

Etymology. Named after the province in which this holotype was collected, noun in apposition.

Differential diagnosis. Species closely related to *L. atlas* sp.nov. but certainly different. It can easily be distinguished by its colouration, particularly by the consistent lack of a postmedian testaceous patch, by the inner tarsal claw which is not abruptly bent and enlarged, but just regularly curved and tapered, by its somewhat smaller size and by the aedeagus, which is not tapered apically but constant in width. Further, the microreticulation extends backwards past mid-length, giving way to distinct microstriolation. In *L. atlas* the microreticulation reaches mid-length at most and the microstriolation is very superficial and only visible for a short way.

Distribution. Laos: Savannakhet and Salavan prov. (Fig. 22).

***Lacconectus atlas* sp.nov.**

Figs 8, 16, 17 and 18

Type material. Holotype ♂ and 96 paratypes (45 ♂ and 51 ♀, NHMB): LAOS, Attapeu Prov., Thong Kai Ohk, Ban Kachung (Mai) env., 1200–1450 m, 15°01–02' N / 107°26–27' E, 10.–24. VI. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan. 38 paratypes (23 ♂ and 11 ♀, NMPC; 2 ♂ and 2 ♀, NHMB): Laos, Attapeu Prov., Annam Highland Mts, Dong Amphan NBCA, ca. 1160 m, Nong Fa (crater lake), env. 15°15.9'N, 107°25.6' E, 30.IV–6.V.2010, Jiří Hájek leg. (23 ♂ and 11 ♀, NMPC; 2 ♂ and 2 ♀, NHMB).

Description. Body broadly oval, dark brown to black, matt; vertex, frons, sides of pronotum narrowly as well as markings on elytra testaceous, the latter varying from specimen to specimen (Fig. 19).

Head brown, broadly darker alongside eyes and on disc, matt. Microsculpture consisting of small, distinctly impressed, polygonal meshes and of dense but irregularly distributed and small, well-impressed punctures; clypeal grooves, a row of deep punctures alongside eyes and a transverse depression beside eyes deeply impressed. Antennae testaceous; joints elongate, the fifth 2.2 times as long as broad.

Pronotum dark brown, the sides testaceous, matt. Microsculpture consisting of small polygonal and well-impressed meshes and of irregularly-distributed small punctures. Longitudinal median suture impressed. Anterior and lateral rows consisting of large punctures coalescing at sides. Coarse punctures at each latero-basal quarter. Lateral margins finely bordered, broadly interrupted before reaching anterior border.

Elytra matt with variable testaceous markings: may be completely black with just an apical spot to black with a sub-basal, a postmedian and an apical spot testaceous (holotype). The sub-basal band is irregular in width and constricted at centre.

Epipleura brownish-black along entire length. Reticulation consisting of polygonal meshes at base, with single, minute, distinctly-impressed punctures at many of the intersections. Meshes becoming elongate towards the rear, giving way to fine striolation and disappearing completely on apical third. Sutural row of punctures reduced to a few large punctures on apical third. Discal row of punctures almost reaching base with small punctures, close together and in a straight line. Sublateral row with punctures in a straight line on anterior half. Second interspaces with some irregularly distributed, medium-sized punctures.

Underside dark brown. Prosternal process short, only 1.30 times as long as broad, strongly bordered at sides and broadly rounded at apex. Metacoxal lines represented only by short, deep striae at their mid-length. Sternites 3, 4 and 5 each smooth, with very sparse, irregularly distributed and medium-sized punctures, particularly at their mid-length. Anal sternite with microstriolation vanishing towards the front, slightly and superficially reticulated, with an oblique row of broad setae at both sides of centre. Posterior margin finely bordered and broadly rounded.

Measurements: Holotype: TL: 6.8 mm; TL-h: 6.2, TW = 3.8 mm. Paratypes: TL: 6.6–7.1 mm (6.8 mm, n = 103), TL-h: 5.9–6.4 mm (6.2 mm, n= 3), TW: 3.75–4.05 mm (3.87 mm, n= 10).

♂. Protarsal claws unequal, the outer inermous, the inner short and broad, strongly enlarged and bent (Fig. 17). Aedeagus, in lateral view, broadly curved, regularly tapered from base to apex. Apex narrowly rounded (Fig. 8). Parameres broad (Fig. 16).



Figs 18–19. 18 – Dorsal habitus of *L. namkading* sp.nov.; 19 – Dorsal habitus of *L. atlas* sp.nov.

♀. Similar to ♂. Valvae long, elongated, flattened, narrowly rounded at apex. Seta subapical.

Etymology. The name reflects the fact that this species is the largest to be discovered to date.

Differential diagnosis. Because of its size, but also with a view to the unequal protarsal claws, this species can be easily distinguished. It is closely related to the newly-discovered *L. savannakhet* sp.nov. The latter has a protarsal claw that is not bent and an apical part of the aedeagus that is not tapered but of constant width. The both species are closely related each other and belong to a common species-group, together with *L. nigrita* Brancucci.

Distribution. Laos: Attapeu prov. (Fig. 22).

Faunistic observations

Lacconectus punctatus Brancucci

Lacconectus punctatus Brancucci, 1986, Entomologica Basiliensia 11: 144.

Material examined: LAOS: Bokeo Prov., ca. 5 km W Ban Toup, Bokeo Nature Reserve, 500–700 m, 20°27–28' N / 100°45' E, 4.–18. V. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (3 ex. NHMB). Vientiane Prov., Phou Khao Khouay NBCA, 6.V.2009, M. Brancucci (5 ex., NHMB). Bolikhamsay Prov., 18°20.45'N, 104°08.66'E / Nam Kading NBCA, Research / Training Center, ca. 200m, / 11.–12.VII.2010, muddy puddle / M. Brancucci (2 ex., NHMB). Bolikhamsay Prov., Nam Kading NPA research training center, near Ban Phone Kham, 250 m, 18°20' N / 104°08' E, 23.–29. V. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (6 ex., NHMB). Bolikhamsay prov., Nam Kading NPA, Tad Paloy campsite, 250–400 m, 18°21–23' N / 104°09' E, 24.–28. V. 2011, M. Geiser & D. Hauck leg.; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (19 ex., NHMB). Khammouan Prov., Nakai env., 17°43'N, 105°09'E, 500–600 m, 22.V.–8.VI.2001, E. Jendek & O. Sausa leg., coll. Jiří Hájek (1 ex., NMPC). Savannakhet Prov., Phou Xang He NBCA, ca. 5 km SW Ban Pa Phaknau, 250–400 m, 17°00' N / 105°38' E, 31. V.–6. VI. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (7 ex., NHMB). Attapeu Prov., ca. 40 km E of Attapeu, 14°48.159'N, 107°10.940' E 200 m, 11.VI.2008, A. Solodovnikov & J. Pedersen, disturbed dipterocarp forest (5 ex., ZMUC; 1 ex., NHMB).

CAMBODIA: SW 20 km SE /Koh Kong: Tatai riv., / 11°34'N, 103°07'E, 3.–19.V.2005, 50–300m / E. Jendek & O. Šauša leg. (21 ex., NHMB)

Distribution (Fig. 23): Cambodia, Vietnam, Thailand, Laos (Bokeo, Vientiane, Bolikhamxai, Khammouan, Savannakhet and Attapeu). In Laos this species was recorded from Khammouan and Vientiane. The records from Bokeo, Bolikhamxai, Savannakhet and Attapeu are new.

Lacconectus kubani Brancucci

Lacconectus kubani Brancucci, 2003, Water Beetles of China III: 98.

Material examined: LAOS: Louang Namtha Prov., ca. 10 km E Muang Sing, Ban Oudomsinh/B. Nam Det/B. Nam Mai env., 750–1400 m, 21°09–10' N / 101°13–15' E, 14.–20. V. 2011; NHMB Laos Expedition 2011, D. Hauck & M. Geiser (24 ex., NHMB, 2 ex., NUOL). Phongsaly Prov., Phongsaly env., Phu Fa, 1450–1600 m, 26.VII.2006, Bergregendwald, Pfütze in Fahrzeugspur, leg. M. Geiser. (1 ex., NHMB). Xieng Khouang Prov., 30 km NE Phonsavan : Ban Na Lam > Phou Sane Mt., 19°37–8'N 103°20'E, 1300–1500 m, 10.–30.v.2009, M.Brancucci leg. (1 ex., NHMB). Idem, 1300–1700 m, 10.–31. V. 2009, NHMB Basel, NMPC Prague Laos 2009 Expedition, M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň (18 ex., NHMB, 1 ex. NUOL). Xieng Khouang Prov., 30 km NE Phonsavan : Phou Sane Mt., 19°37–8'N 103°20–1'E, 1400–1700 m, D. Hauck leg.; NHMB Basel, NMPC Prague Laos 2009 Expedition, M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň (32 ex., NHMB). Idem, 1400–1500 m, Z. Kraus leg. (70 ex., NHMB). Xieng Khouang Prov., 30 km NE Phonsavan, Phou Sane Mt., 19°37–8'N 103°20'E, 1420 m, 10.–30.v.2009, V. Kubáň leg. (2 ex., NMPC, 1 ex., NHMB); Idem, D. Hauck leg. (34 ex., NHMB); Idem, Z. Kraus leg. (30 ex., NHMB); Houa Phan Prov., Phou Pane Mt., 20°13'09–19'N 103°59'54"–104°00'03"E, 1480–1550 m, 1.–16.vi.2009, Zdeněk Kraus leg. (1 ex., NHMB); Idem, 17.V.–3.VI.2007, M. Brancucci leg. (1 ex., NHMB). Houa Phan Prov., Phou Pan, Ban Saleui, Xam Neua, 11.V.2007, Yūji, Katayama (1 ex., ELEU). Xam Neua, Waterfall, 5 km W of Ban Saleui, 1350 m, 5. V. 2002, M. Sato leg. (1 ex. ELEU). Houa Phan Prov., Ban Meuang Van near Muang Et, 300–800 m, 20°49–50' N, 104°01–2' E, 2.–5. VI. 2009, Michael Geiser leg. (1 ex., NHMB)

Distribution (Fig. 24): China (Yunnan) and Laos (Oudomxai, Louang Namtha, Louang Prabang, Phongsaly, Xieng Khouang and Houa Phan). New for the Laotian Provinces Louang Namtha, Houa Phan and Xieng Khouang.

***Lacconectus basalis* Sharp**

Lacconectus basalis Sharp, 1882, Sci. Trans. R. Dublin Soc. 2: 598.

Material examined: LAOS: Bokeo Prov., ca. 5 km W Ban Toup, Bokeo Nature Reserve, 500–700 m, 20°27–28' N / 100°45' E, 4.–18. V. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (6 ex., NHMB). Xayaboury Prov., Hongsa env., 19°40–44' N, 101°20' E, 550–760 m, 2.–3.VII.2010, D. Hauck (92 ex. NHMB). Xayaboury Prov., Muang Ngeun to Ban Nangeun env., 19°36' N, 101°6–8' E, 500–600 m, 4.–5.VII.2010, D. Hauck (25 ex. NHMB). Xieng Khouang Prov., ca. 10 km W Phonsavan, 1070 m, 19°30'02" N / 103°06'47" E, 3. VII. 2010, muddy puddle, leg. M. Brancucci (14 ex., NHMB). Xieng Khouang prov., Phonsavan (30km NE): Phou Sane Mt., 19°37–8' N, 103°20–1' E, 1400–1700 m, 10.–30.v.2009, D. Hauck leg. (2 ex., NHMB). Mt. Phu Bia, Saisombun, 21.III.2005, M. Satô (1 ex. ELEU). Vientiane Prov., Phou Khao Khouay, 18°20.369' N, 102°48.523' E, 700–800 m, 26.–31.V.2008, A. Solodovnikov & J. Pedersen, strongly disturbed primary rainforest, neat forest edge, flight intercept trap (3 ex., ZMUC). Laos, Vientiane Prov., Phou Khao Khouay NBCA, ca. 46 km N. Vientiane (waterfall), 18°22.4' N, 102°42.4' E, 270 m, 18.V.2010, Jiří Hájek leg. (24 ex., NMPC, 4 NHMB). Vientiane Prov., Phou Khao Khouay NBCA, 6.V.2009, M. Brancucci (19 ex., NHMB); Idem, D. Hauck (2 ex., NHMB). Laos, Vientiane Prov., 5 km NE of Vang Viang, Kaeng Nyui waterfall, 29.XI.2011, J. Šťastný lgt. (1 ex., JS). Vientiane Prov., Houayang Nat. Park, 18°05.889' N, 102°40.521' E, 180 m, 2.VI.2008, A. Solodovnikov & J. Pedersen, mostly secondary rainforest (1 ex., ZMUC). Laos, Vientiane, Dancy, 2.II.2005, H. Wakahara (4 ex., ELEU; 1 ex., NHMB). Bolikhamsay Prov., 18°20.45' N, 104°08.66' E / Nam Kading NBCA, Research / Training Center, ca. 200m, / 11.–12.VII.2010, muddy puddle / M. Brancucci (37 ex., NHMB). Bolikhamsay prov., Nam Kading NPA research training center, near Ban Phone Kham, 250 m, 18°20' N / 104°08' E, 23.–29. V. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (131 ex., NHMB). Bolikhamsay prov., Nam Kading NPA, Tad Paloy campsite, 250–400 m, 18°21–23' N / 104°09' E, 24.–28. V. 2011, M. Geiser & D. Hauck leg.; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (11 ex., NHMB). Savannakhet Prov., Phou Xang He NBCA, ca. 5 km SW Ban Phaknau, 250–400 m, 17°00' N / 105°38' E, 31. V.–6. VI. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (236 ex., NHMB; 3 ex., NUOL). Champasak Prov. Bolavens Plateau, waterfall ca. 2 km E Tad Katamtok, 415 m, 15°08.1 N, 106°38.8E, 10.–12.V.2010, Jiří Hájek leg. (18 ex., NMPC, 2 ex., NHMB). Champasak Prov., Ban Nong Panouan env., 770–800 m, 15°02' N / 106°31–34' E, 17. VI. 2010, muddy puddle, leg. M. Geiser (6 ex., NHMB). Sekong Prov., ca. 51 km N Sekong (river), Ho Chi Minh trail, ca. 410 m, 15°49.6N, 106°39.8E, 14.–15.V.2010, Jiří Hájek leg. (2 ex., NMPC, 1 ex. NHMB). Attapeu Prov., ca. 40 km E of Attapeu, 14°48.159' N, 107°10.940' E 200 m, 11.VI.2008, A. Solodovnikov & J. Pedersen, disturbed dipterocarp forest (3 ex., ZMUC; 1 ex., NHMB). Attapeu Prov. road No. 18, km 18 E of Attapeu, stream near the road, ca.665 m, 14°48.6' N, 107°23.4' E, 29.IV.2010, Jiří Hájek (1 ex., NMPC, 1 ex., NHMB). Attapeu Prov., Thong Kai Ohk, BAN KACHUNG (MAI) env., 1200–1450 m, 15°01–02' N / 107°26–27' E, 10.–24. VI. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (2 ex., NHMB).

MYANMAR: Upper Burma, Maymyo, 800 m, XII.1937, leg. G. Heinrich // Brit. Mus. 1951-337 (4 ex., BNMH)

THAILAND: Khon Kaen Prov. , Phu Wiang NP, Tad Fa waterfall, stream, 540m, 11.I.2009, H. Zettel & N. Tubtim (55) (7 ex. NHMB)

VIETNAM: Vinh Phu Prov., Tam Dao, 21.IV.1995, M. Satô (1 ex., ELEU)

CAMBODIA: SW, 20 km SE /Koh Kong: Tatai riv., / 11°34' N, 103°07E, 3.–19.V.2005, 50–300m / E. Jendek & O. Šauša leg. (40 ex., NHMB)

Distribution (Fig. 29): Widespread in southern China and South-East Asia: Laos (Bokeo, Xayabury, Oudomxai, Louang Prabang, Xieng Khouang, Vientiane, Bolikhamsai, Savannakhet, Khammouan, Champasak, Sekong and Attapeu), Myanmar, Thailand, Vietnam, Cambodia, northern part of Peninsular Malaysia and Taiwan (BRANCUCCI 1986, 2003, 2004, 2005). The species occurs from 50 m to 1400 m. It was recorded for the first time in Laos in 2003 (BRANCUCCI 2003), from Oudomxai, Louang Prabang, Vientiane, Bolikhamsai and Khammouan. I can add here the following

provinces: Bokeo, Xayabury, Xieng Khouang, Savannakhet, Champasak, Sekong and Attapeu. This species is distributed all over Laos and very common.

***Lacconectus pseudosimilis* Brancucci**

Lacconectus pseudosimilis Brancucci, 2003, Water Beetles of China III: 105.

Material examined: LAOS: Laos, Vientiane Prov., 5 km NE of Vang Viang, Kaeng Nyui waterfall, 29.XI.2011, J. Št'astný lgt. (4 ex., JS). Bolikhamsay Prov., Nam Kading NPA, Tad Paloy campsite, 250–400 m, 18°21–23' N / 104°09' E, 24.–28. V. 2011, M. Geiser & D. Hauck leg.; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (4 ex. NHMB). Bolikhamsay prov., Nam Kading NPA research training center, near Ban Phone Kham, 250 m, 18°20' N / 104°08' E, 23.–29. V. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (6 ex. NHMB).

Distribution (Fig. 25): Laos (Vientiane, Bolikhamxai, Khammouan). New record for Vientiane province.

***Lacconectus valeriae* Brancucci**

Lacconectus valeriae Brancucci, 2004, Aquatic Insects 26(3/4): 176.

Material examined: LAOS: Bolikhamsay Prov., Nam Kading NPA, Tad Paloy campsite, 250–400 m, 18°21–23' N, 104°09' E, 24.–28. V. 2011, M. Geiser & D. Hauck leg.; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (8 ex., NHMB). Savannakhet prov., Phou Xang He NBCA, ca. 5 km SW Ban Pa Phaknau, 250–400 m, 17°00' N / 105°38' E, 31. V.–6. VI. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (1 ex., NHMB). Sekong Prov., ca. 51 km N Sekong (river), Ho Chi Minh trail, ca. 410 m, 15°49.6N, 106°39.8E, 14.–15.V.2010, Jiří Hájek leg. (17 ex., NMPC, 3 ex., NHMB). Laos, Champasak Prov. Bolavens Plateau, waterfall ca. 2 km E Tad Katamtok, 415 m, 15°08.1 N, 106°38.8E, 10.–12.V.2010, Jiří Hájek leg. (6 ex., NMPC, 2 ex. NHMB). Champasak Prov., Ban Nong Panouan env., 770–800 m, 15°02' N / 106°31–34' E, 17. VI. 2010, muddy puddle, leg. M. Geiser (2 ex., NHMB).

Distribution (Fig. 24): South Vietnam and Laos (Bolikhamxai, Savannakhet, Sekong, Champasak). Species described from S Vietnam (Bac Loc), here recorded for the first time for Laos.

***Lacconectus schillhammeri* Brancucci**

Lacconectus schillhammeri Brancucci, 2003, Water Beetles of China III: 104.

Material examined: LAOS: Bokeo Prov., ca. 5 km W Ban Toup, Bokeo Nature Reserve, 500–700 m, 20°27–28' N / 100°45' E, 4.–18. V. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (5 ex., NHMB). Xieng Khouang Prov., 19°03'N, 103°25'E, 550m, Ban Thaviang env., 17.V.2010, forest stream, M. Geiser & D. Hauck leg. (50 ex., NHMB). Vientiane Prov., 5 km NE of Vang Viang, Kaeng Nyui waterfall, 29.XI.2011, J. Št'astný lgt. (3 ex., JS). Vientiane Prov., Phou Khao Khouay NBCA, ca. 46 km N. Vientiane (waterfall), 18°22.4'N, 102°42.4'E, 270 m, 18.V.2010, Jiří Hájek leg. (17 ex., NMPC, 2 ex. NHMB). Bolikhamsay Prov., Nam Kading NBCA, Tad Paloy campsite, 300 m, 18°23.17' N / 104°09.65'E, 7.–12. VII. 2010, forest stream, M. Brancucci & M. Geiser leg. (77 ex., NHMB; 8 ex., NUOL). Bolikhamsay Prov., Nam Kading NPA, Tad Paloy campsite, 250–400 m, 18°21–23' N, 104°09' E, 24.–28. V. 2011, M. Geiser & D. Hauck leg.; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (1284 ex., NHMB). Bolikhamsay Prov., Nam Kading NPA

research training center, near Ban Phone Kham, 250 m, 18°20' N / 104°08' E, 23.–29. V. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (11 ex., NHMB). Savannakhet Prov., Phou Xang He NBCA, ca. 5 km SW Ban Pa Phaknau, 250–400 m, 17°00' N / 105°38' E, 31. V.–6. VI. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (61 ex., NHMB). Champasak Prov., Ban Nong Panouan env., 770–800 m, muddy puddle, 15°02' N / 106°31–34' E, 17.VI.2010 M. Geiser leg. (2 ex., NHMB). Champasak Prov., Dong Hua Xao NBCA, Tad Fane, 900m, 15°10' N / 106°07' E, 2.VI.2010, M. Geiser & D. Hauck leg. (3 ex., NHMB). Champasak Prov. Bolavens Plateau, waterfall ca. 2 km E Tad Katamtok, 415 m, 15°08.1 N, 106°38.8E, 10.–12.V.2010, Jiří Hájek leg. (6 ex., NMPC, 2 ex, NHMB). Champasak Prov. Bolavens Plateau, bridge ca. 4 km E Tad Katamtok, 260 m, 15°07.8 N, 106°40.1 E, 11.–12.V.2010, Jiří Hájek leg. (2 ex., NMPC). Sekong Prov., ca. 51 km N Sekong (river), Ho Chi Minh trail, ca. 410 m, 15°46.6N, 106°39.8E, 14.–15.V.2010, Jiří Hájek. (5 ex., NMPC, 1 ex., NHMB). Attapeu Prov. road No. 18, km 18 E of Attapeu, stream near the road, ca. 665 m, 14°48.6'N, 107°23.4'E, 29.IV.2010, Jiří Hájek (14 ex., NMPC, 4 ex. NHMB). Attapeu Prov., Annam Highland Mts, Dong Amphan NBCA, ca. 1160 m, Nong Fa (crater lake), env. 15°15.9'N, 107°25.6' E, 30.IV.–6.V.2010, Jiří Hájek leg. (6 ex., NMPC; 1 ex., NHMB). VIETNAM: Quang Binh prov., 1 km N of Cha Lo, 400 m, Vietnam-Laos border area, 17°41'22" N 105°45'45" E, L. Dembický leg. 11.–24.iv.2010 (2 ex., NHMB).

Distribution (Fig. 26): Laos (Bokeo, Xieng Khouang, Vientiane, Bolikhamxai, Savannakhet, Champasak, Sekong, Attapeu), Thailand, Vietnam. Previously known only from Vientiane province and one locality in northern Thailand (BRANCUCCI & GUSICH 2004). The present contribution expands the distribution of this species, adding one new country record (Vietnam) and seven Laotian provinces.

Lacconectus merguiensis Brancucci

Lacconectus merguiensis Brancucci, 1986, Entomologica Basiliensia 11: 117.

Material examined: LAOS: Bokeo Prov., ca. 5 km W Ban Toup, Bokeo Nature Reserve, 500–700 m, 20°27–28' N / 100°45' E, 4.–18. V. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (9 ex., NHMB).

Distribution (Fig. 28): Myanmar, Thailand and Laos (Bokeo). New record for Laos.

Lacconectus pseudonicolasi Brancucci

Lacconectus pseudonicolasi Brancucci, 2003, Water Beetles of China III: 106.

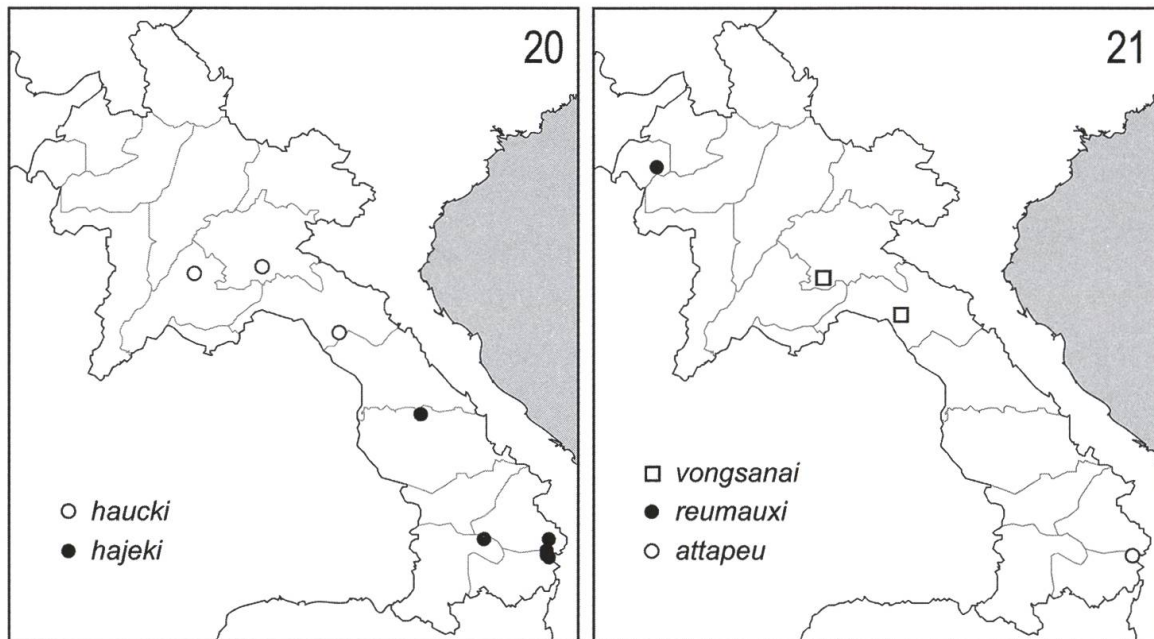
Material examined: LAOS: Louang Namtha Prov., ca. 10 km E MUANG SING, Ban Oudomsinh/B. Nam Det/B. Nam Mai env., 750–1400 m, 21°09–10' N / 101°13–15' E, 14.–20. V. 2011; NHMB Laos Expedition 2011, D. Hauck & M. Geiser (48 ex., NHMB).

Distribution (Fig. 27): China (Yunnan) and Laos (Oudomxai, Louang Namtha, Louang Prabang, Phongsaly). New record for Louang Namtha prov.

Lacconectus similis Brancucci

Lacconectus similis Brancucci, 1986, Entomologica Basiliensia 11: 109.

Material examined: LAOS: Bokeo Prov., ca. 5 km W Ban Toup, Bokeo Nature Reserve, 500–700 m, 20°27–28' N / 100°45' E, 4.–18. V. 2011; NHMB Laos Expedition 2011, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan (461 ex., NHMB, 4 ex., NUOL). Xayaboury Prov., Hongsa env.,



Figs 20–21. Distribution: 20 – *L. haucki* sp.nov. (open circles) and *L. hajeki* sp.nov. (filled circles); 21 – *L. vongsanai* sp.nov. (squares), *L. reumauxi* sp.nov. (filled circle), and *L. attapeu* sp.nov. (open circle).

19°40–44'N, 101°20'E, 550–760 m, 2.–3.VII.2010, D. Hauck (19 ex. NHMB). Xieng Khouang Prov. / 19°03'N, 103°25'E, 550m / Ban Thaviang env. / 17.V.2010, forest stream, M. Geiser & D. Hauck leg. (13 ex., NHMB).

Remarks. The specimens mentioned in BRANCUCCI (2003) from Khammouan seem to result from a layout problem. There are not to be considered as valid. Indeed, I could not find any of the numerous specimens nor could I find material of this species from Khammouan elsewhere.

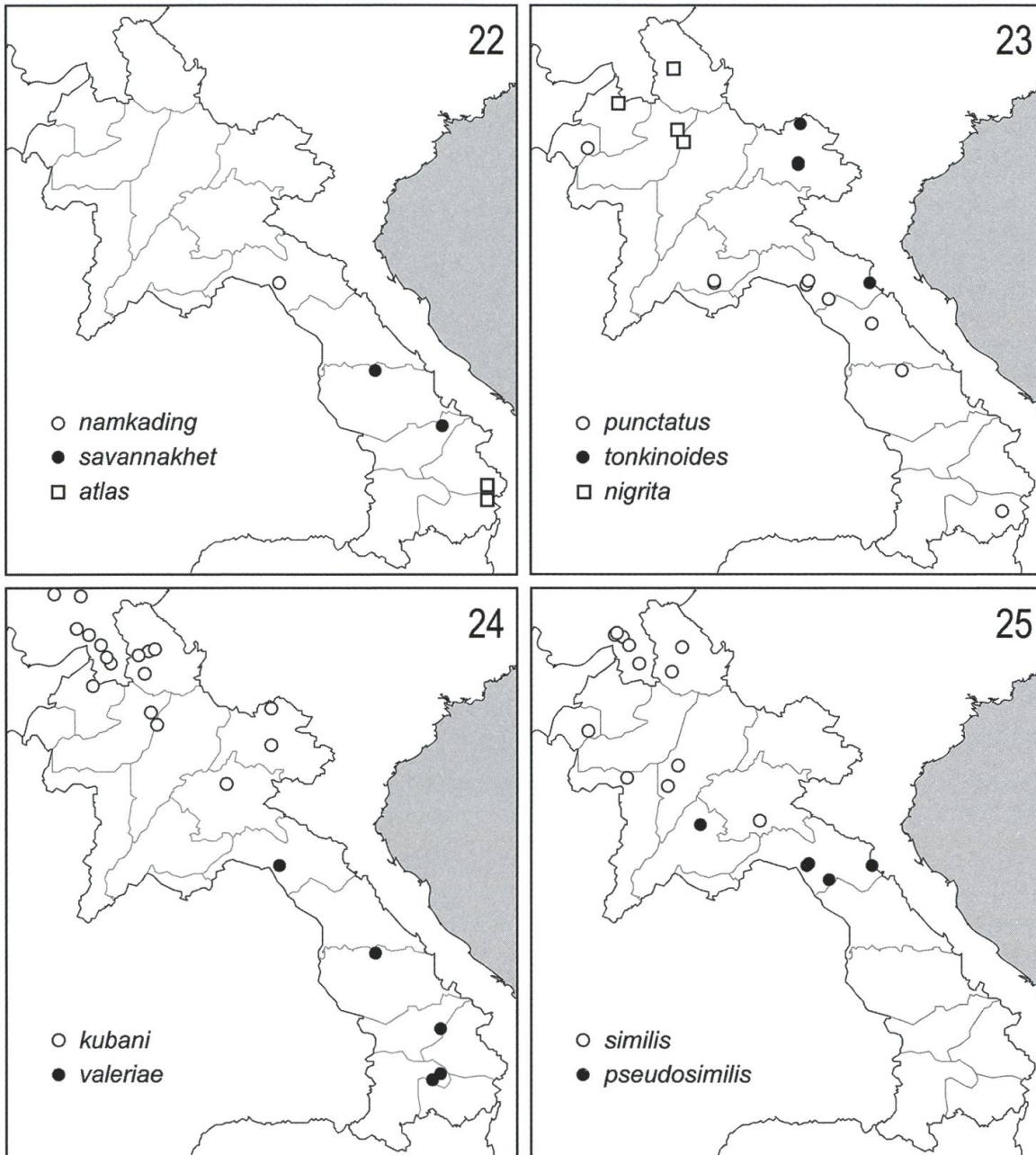
Distribution (Fig. 25): China (Yunnan) and Laos (Bokeo, Louang Prabang, Xayabouri, Phongsaly, Xieng Khouang). First records for the provinces of Bokeo, Xayabury and Xieng Khouang.

Lacconectus tonkinoides Brancucci

Lacconectus tonkinoides Brancucci, 1986, Entomologica Basiliensia 11: 127.

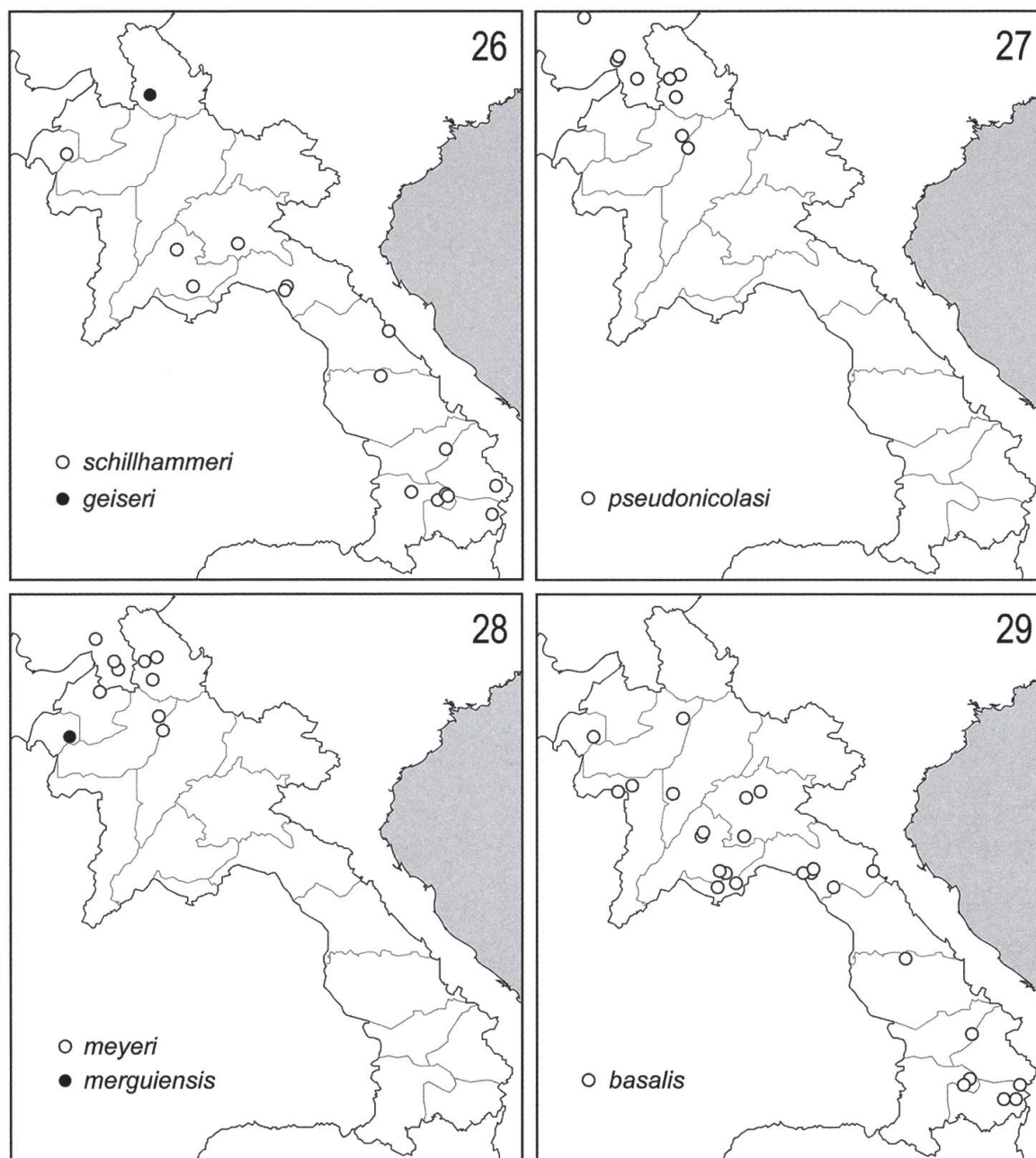
Material examined: LAOS-NE, Hua Phan Prov., Phu Phan Mt., ~20°12'N 104°01'E, 1500–1900m, 17.v.–3.vi.2007, M. Brancucci leg. (15 ex., NHMB). Houa Phan Prov., Phu Phan Mt., ~20°13'N 104°00'E, 1350–1500 m, 1.–16.vi.2009, M. Brancucci leg. (3 ex., NHMB). Houa Phan prov., Ban Meuang Van near Muang Et, 300–800 m, 20°49–50' N, 104°01–2' E, 2.–5. VI. 2009, M. Geiser leg. (1 ex., NHMB). Bolikhamsay Prov., Ban Nape (8km NE), 18°21'N, 105°08'E, ~600 m, 1.–18.V.2001, V. Kubáň leg. (1 ex., NHMB)

VIETNAM: Tonkin, Hoa Binh, A. de Cooman (19 ex., IZAS; 1 ex., NHMB); Vietnam, Vinh Phu Prov., Tam Dao, 21.IV.1995, M. Satô (1 ex., ELEU; 1 ex., NHMB).



Figs 22–25. 22 – *L. namkading* sp.nov. (open circle), *L. savannakhet* sp.nov. (filled circles) and *L. atlas* sp.nov. (squares); 23 – *L. punctatus* Brancucci (open circles), *L. tonkinoides* Brancucci (filled circles) and *L. nigrita* (squares). Localities outside of Laos not shown. 24 – *L. kubani* Brancucci (open circles) and *L. valeriae* Brancucci (filled circles). Type locality for *L. valeriae* (South Vietnam) not shown. 25 – *L. similis* Brancucci (open circles) and *L. pseudosimilis* Brancucci (filled circles).

Distribution (Fig. 23): China (Yunnan, Guangdong), Laos (Houa Phan, Bolikhamxai), N Vietnam. New record for Laos.



Figs 26–29. 26 – *L. schillhammeri* Brancucci (open circles) and *L. geiseri* (filled circle). One locality of *L. schillhammeri* (NW Thailand) not shown. 27 – *L. pseudonicolasi* Brancucci. 28 – *L. meyeri* Brancucci (open circles) and *L. merguiensis* Brancucci (filled circle). Localities of *L. merguiensis* in Thailand and Myanmar not shown. 29 – *L. basalis* Sharp in Laos. Localities outside of Laos not shown.

Lacconectus meyeri Brancucci

Lacconectus meyeri Brancucci, 2003, Water Beetles of China III: 101.

Material examined: LAOS: Louang Namtha Prov., ca. 10 km E MUANG SING, Ban Oudomsinh/B. Nam Det/B. Nam Mai env., 750–1400 m, 21°09–10' N / 101°13–15' E, 14.–20. V. 2011; NHMB Laos Expedition 2011, D. Hauck & M. Geiser (1 ex.).

Distribution (Fig. 28): China (Yunnan) and Laos (Oudomxai, Louang Prabang, Louang Namtha and Phongsaly). Hitherto known from Oudomxai, Louang Prabang and Phongsaly, this is the first record for Louang Namtha.

***Lacconectus nigrita* Brancucci**

Lacconectus nigrita Brancucci, 2003, Water Beetles of China III: 97.

Material examined: LAOS: Louang Namtha Prov., ca. 10 km E MUANG SING, Ban Oudomsinh/B. Nam Det/B. Nam Mai env., 750–1400 m, 21°09–10' N / 101°13–15' E, 14.–20. V. 2011; NHMB Laos Expedition 2011, D. Hauck & M. Geiser (45 ex., NHMB). Phongsaly Prov., Phongsaly env., 21°41–2'N 102°06–8'E, ~1500m, 6.–17.V.2004, Vit. Kubán leg. (1 ex., NHMB).

Distribution (Fig. 23): Laos (Louang Namtha, Oudomxai, Louang Prabang and Phongsaly). Hitherto known from Oudomxai and Louangprabang, this species is recorded for the first time from Louang Namtha and Phongsaly. The specimen from Louangprabang is a female and not a male as given in the original description.

Key to species ^{*)}

1. Smaller species (4.2–5.4 mm). Colour testaceous to testaceous brown (*L. fulvescens* species-group). 2.
- Larger species (5.3–7.1 mm). Colour dark brown to black (*L. atlas* species-group). 15.
2. First interspace on elytra without or with isolated punctures; second interspaces with some spaced punctures, mostly aligned. Aedeagus, in lateral view, not sinuate apically. 3.
- First and second interval on elytra with numerous large and irregularly-distributed punctures. Aedeagus, in lateral view, sinuate apically (see Fig. 93 in BRANCUCCI 1986). Laos (Bokeo, Vientiane, Bolikhamxai, Khammouan, Savannakhet, Attapeu). ***L. punctatus* Brancucci**
3. Upper surface not densely covered with medium-sized punctures on a smooth ground. Microreticulation visible at least on anterior 1/3. 4.
- Upper surface smooth and densely covered with medium-sized to large punctures, each separated by about twice their diameter. Microreticulation visible at very base at most. Laos: Oudomxai, Louang Namtha, Louang Prabang, Phongsaly, Xieng Khouang, Houa Phan. ***L. kubani* Brancucci**
4. Apical half of elytra completely smooth or very finely microstriolate; striolation not visible at lower magnification. 5.
- Microreticulation on apical half of elytra visible even at lower magnification. 12.

^{*)} Editorial note: the key reflects the last draft left by the author. Three species are not included: *L. attapeu* sp.nov., *L. merguiensis* sp.nov., *L. reumauxi* sp.nov.

5. Elytral microreticulate at base, meshes always polygonal, at least for a short distance. 6.
- Elytra microstriolate at base, even at very base. Laos: Xieng Khouang, Vientiane and Khammouan. ***L. haucki* sp.nov.**
6. Larger species (4.6–5.4 mm). Elytral punctation dense; punctures medium-sized, clearly visible even at low magnification. 7.
- Smaller species (4.2–5.0 mm). Elytral punctation superficial; punctures hardly visible at low magnification. 9.
7. Meshes on elytra polygonal on basal 1/5 only. 8.
- Meshes on elytra well-impressed, polygonal on basal 1/3. Aedeagus stretched apically (see Fig. 81 in BRANCUCCI 1986). Laos: Bokeo, Xayabury, Oudomxai, Louang Prabang, Xieng Khouang, Vientiane, Bolikhamxai, Savannakhet, Khammouan, Champasak, Sekong and Attapeu. ***L. basalis* Sharp**
8. Microstriolation covering entire basal half of elytra. Aedeagus narrowed in apical part and rounded at apex (see Fig. 23 in BRANCUCCI 2003). Laos: Vientiane, Bolikhamxai, Khammouan.
- ***L. pseudosimilis* Brancucci**
- Microstriolation not covering entire basal half of elytra. Aedeagus truncated apically (see Fig. 1 in BRANCUCCI 2004). Laos: Bolikhamxai, Savannakhet, Sekong, Champasak. ***L. valeriae* Brancucci**
9. Polygonal meshes of elytra distinctly impressed on anterior half. ... 10.
- Polygonal meshes of elytra superficial, visible only on anterior 1/3.
- 11.
10. Elytra microstriolation visible back to mid-length at most. Aedeagus regularly tapered and very narrowly rounded at apex (see Fig. 21 in BRANCUCCI 2003). Laos: Bokeo, Xieng Khouang, Vientiane, Bolikhamxai, Savannakhet, Champasak, Sekong, Attapeu.
- ***L. schillhammeri* Brancucci**
- Elytral microstriolation still clearly visible beyond mid-length. Aedeagus tapered on apical part and enlarged before apex (Fig. 4). Laos: Attapeu and Champasak. ***L. hajeki* sp.nov.**
11. Elytral microreticulation superficial, meshes hardly discernible on base. Aedeagus regularly curved and abruptly bent in apical 1/5 (see Fig. 25 in BRANCUCCI 2003). Laos: Oudomxai, Louang Namtha, Louang Prabang, Phongsaly. ***L. pseudonicolasi* Brancucci**
- Elytral microreticulation more impressed on basal 1/4. Aedeagus strongly enlarged on apical part (see Fig. 68 in BRANCUCCI 1986). Laos: Bokeo, Louang Prabang, Xayaboury, Phongsaly, Xieng Khouang. ***L. similis* Brancucci**
12. Elytral microreticulation superficial; meshes elongate on apical 1/3. ...
- 13.

- Elytral microreticulation strongly impressed, even at apex. Meshes polygonal on the whole surface. Aedeagus: Fig. 5. Laos: Bolikhamxai and Xieng Khouang. ***L. vongsanai* sp.nov.**
- 13. Elytral microreticulation superficial; meshes polygonal, becoming getting elongate beyond mid-length. 14.
- Elytral microreticulation superficial but distinctly visible; meshes remaining polygonal beyond 2/3 length. Aedeagus tapered in apical part, very narrowly rounded at apex (see Fig. 1 in BRANCUCCI 2006). Laos (Phongsaly). ***L. geiseri* Brancucci**
- 14. Larger species (4.6–5.2 mm). Aedeagus very “stretched” in apical part (see Fig. 82 in BRANCUCCI 1986). Laos: Houa Phan, Bolikhamxai.
..... ***L. tonkinoides* Brancucci**
- Smaller species (4.4–4.8 mm). Aedeagus enlarged apically and broadly rounded at apex (see Fig. 17 in BRANCUCCI 2003). Laos (Oudomxai, Louang Prabang, Louang Namtha and Phongsaly).
..... ***L. meyeri* Brancucci**
- 15. Body oval elongate. Upperside matt, microsculpture well impressed. ...
..... 16.
- Body broad-oval. Upperside lustrous, microsculpture reduced to minute punctures. Aedeagus: Fig. 6. Laos: Bolikhamxai.
..... ***L. namkading* sp.nov.**
- 16. Larger species (6.2–7.1 mm). Upper side microreticulate and covered with small punctures. 17.
- Smaller species (5.8–6.0 mm). Upper side microreticulate and covered with small, deep striae. Laos: Louang Namtha, Oudomxai, Louang Prabang and Phongsaly. ***L. nigrita* Brancucci**
- 17. Punctuation dense and strongly impressed. ♂. Inner protarsal claw not enlarged or strongly bent. Aedeagus constant in width in apical part and broadly rounded at apex (Fig. 7). Laos: Savannakhet and Salavan.
..... ***L. savannakhet* n.sp**
- Punctuation sparse and less impressed. ♂. Inner protarsal claw short, enlarged and strongly bent. Aedeagus regularly tapered in apical part and narrowly rounded at apex (Fig. 8). Laos: Attapeu.
..... ***L. atlas* sp.nov.**

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