

The soldier-beetle subfamily *Silinae* (Coleoptera: Cantharidae) in Laos : an annotated checklist and new faunistic data

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The soldier-beetle subfamily Silinae (Coleoptera: Cantharidae) in Laos: An annotated checklist and new faunistic data

by Michael Geiser

Abstract. A summary of current knowledge of the Silinae in Laos is provided. A checklist of the 18 recorded species and detailed faunistic records for each species are given. Seven species are new for the fauna of Laos: *Mimopolemius atrocinctus* (Pic, 1911) comb.nov.; *Polemosilis foveolata* Pic, 1921; *P. grandiceps* (Pic, 1911); *Paradiscodon martini* (Bourgeois, 1890); *Macrosilis circumcincta* Wittmer, 1987; *M. discolineata* Pic, 1911; *Podosilis langana* (Pic, 1923) and *P. longelobata* (Pic, 1923). Also, a list of species from adjacent countries, that might be found in Laos as well, is given. For a species from Myanmar, *Silis peguensis* Pic, 1916, a lectotype is designated and a new combination provided: *Mimopolemius peguensis* (Pic, 1916) comb.nov.

Key words. Elateriformia – Elateroidea – Silini – faunistics – new records – new combinations – Indochina – Laos

Introduction

The cantharid subfamily Silinae, as redefined by BRANCUCCI (1980), is a diverse group containing over 1700 species (DELKESKAMP 1977). While a few of these may be found even in Arctic parts of Siberia (KAZANTSEV 1998), the vast majority are tropical. In comparison with the subfamily Cantharinae, they have received little taxonomic attention in recent years.

Only very few Silinae were described from the Indochinese subregion in the 19th century. This changed profoundly in the first half of the 20th century, when the French entomologist Maurice Pic described a large number of species. Unfortunately, his descriptions are often very poor by modern standards and sometimes based on females only, which makes interpretation, or even generic assignment of his species, very difficult or nearly impossible. Fortunately, a large part of his species were revised in subsequent decades by another very prolific worker, Walter Wittmer from Basel. Wittmer established a new generic classification for Silinae, based mainly on male secondary sexual characters. He provided revisions with determination keys for several genera, including the basal genera of Silinae (WITTMER 1969b), *Asiosilis* Wittmer, 1977 (WITTMER 1977, 1978) and *Podosilis* Wittmer, 1978 (WITTMER 1992, 1997). Thanks to these efforts and the extensive collection left by Wittmer, it has become possible to identify a large part of the material recently collected from Laos and deposited with the Natural History Museum in Basel. During a visit to the National Museum in Prague, another important collection of Laotian Silinae was studied, thanks to the help of Vladimír Švihla.

The aim of this paper is to provide a checklist and summary of current knowledge of the Silinae of Laos, including new faunistic data and new country records for the species described. However, this checklist must be seen as only preliminary, as there are large numbers of new species awaiting description, particularly in the genera *Podosilis* and *Laemoglyptus* Fairmaire, 1886. Genera such as *Laemoglyptus*, but also *Macrosilis*

Pic, 1911 and *Pseudosilis* Pic, 1911, are in need of thorough revision, including the study of all historical type material. A revision of *Laemoglyptus* is currently in progress by V. Švihla, and will certainly reveal several more species from Laos.

To facilitate further taxonomic work on the Laotian fauna, a list of species described from the remaining parts of Indochina is also provided here, as several of them may be recorded for Laos in the future.

Material and methods

Over 200 specimens were examined through a stereoscopic microscope, using the published keys by W. Wittmer (as cited in "Introduction") and by comparing them either directly to type material, or to non-type material examined by W. Wittmer or V. Švihla, which had been, in most cases, compared to the types before.

Specimens were examined mainly in the collections of the Naturhistorisches Museum, Basel, Switzerland (NHMB), the Národní Muzeum, Praha, Czech Republic (NMPC) and the Natural History Museum, London (BMNH). A few specimens currently deposited in the author's collection in Basel (CMG) were also examined.

Checklist of the species recorded from Laos

Lycopolemius Pic, 1921

1. *Lycopolemius monini* (Pic, 1917)

Mimopolemius Pic, 1921

2. *Mimopolemius atrocinctus* (Pic, 1911) **comb.nov.**
3. *Mimopolemius laosensis* (Pic, 1915)

Polemiosilis Pic, 1921

4. *Polemiosilis foveolata* Pic, 1921
5. *Polemiosilis grandiceps* (Pic, 1911)

Paradiscodon Wittmer, 1954

6. *Paradiscodon martini* (Bourgeois, 1890)

Macrosilis Pic, 1911

7. *Macrosilis circumcincta* Wittmer, 1987
8. *Macrosilis discolineata* Pic, 1911
9. *Macrosilis salvazai* Pic, 1923

Asiosilis Wittmer, 1977

10. *Asiosilis carinensis* (Pic, 1913)
11. *Asiosilis semibrunnescens* (Pic, 1923)

Podosilis Wittmer, 1978

12. *Podosilis langana* (Pic, 1923)
13. *Podosilis laosensis* (Pic, 1921)
14. *Podosilis longelobata* (Pic, 1923)

Laemoglyptus Fairmaire, 1886

15. *Laemoglyptus carinatus* (Pic, 1921)

***Pseudosilis* Pic, 1911**

16. *Pseudosilis* sp. 1 (= *Silis incrassicornis* Pic, 1923?)
 17. *Pseudosilis* sp. 2
 18. *Pseudosilis* sp. 3

Faunistic data***Lycopolemius monini* (Pic, 1917)**

Polemius monini Pic, 1917: 4. Pic, 1923: 44.

Polemius transversicollis Pic, 1917: 4. Pic, 1923: 44. Synonymised by Wittmer, 1969b: 240.

Polemius monini var. *lineaticeps* Pic, 1917: 4. Pic, 1923: 44. Synonymised by Wittmer, 1969b: 240.

Lycopolemius monini (Pic): Wittmer, 1969b: 240.

Material examined. LAOS: BOKEO: 5 km W Ban Toup, Bokeo Nature Reserve, 500–700 m, 20°27–28' N / 100°45' E, 4.–18. V. 2011, NHMB Basel, Laos 2011 Expedition, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan. 1 ♂ 3 ♀ (NHMB). LOUANG NAMTHA: Namtha→Muang Sing, 900–1200 m, 21°09' N / 101°19' E, 5.–31. V. 1997, Vít Kubáň leg. 2 ♂ 2 ♀ (NHMB). XAYABURY: Umgeb. Paklay, 1963, coll. W. Wittmer. 2 ♂ (NHMB); Umgeb. Paklay, 1964, coll. W. Wittmer. 1 ♀ (NHMB). VIENTIANE (province): Umgeb. Vanky, 1963, coll. W. Wittmer. 1 ♂ (NHMB). HOUA PHAN: Phu Leoi N. P., Ban Sakok, 20°10' N / 103°12' E, 23.–26. V. 2001, J. Bezděk leg. 1 ♀ (NMPC). KHAMMOUAN: Nakai-Nam Theun NPA, Ban Navang env., 17°57–59' N / 105°13–16' E, 600–750 m, 18.–21. V. 2012, NHMB Basel Expedition, Laos 2012: M. Brancucci, M. Geiser, K. Phanthavong & S. Xayalath leg. 1 ♀ (NHMB).

General distribution. Laos (Pic 1923), Thailand, Vietnam.

Distribution within Laos. Widespread in lowland areas and up to 1200 m. Found in Bokeo, Louang Namtha, Xayabury, Vientiane, Houa Phan, Bolikhamxai and Khammouan provinces. Not yet recorded from the southern part of Laos.

Notes. The type localities “Nape” (for *monini*) and “Kan Kent” (for *transversicollis*) are apparently both in Bolikhamxai province: “Nape” corresponds to the old French military fort at Ban Nape (18°18' N 105°05' E). “Kan Kent”, cited in a later paper as “Cam-Keut” (Pic 1923), is probably a mis-spelling of Kham-Kheut (18°13' N 104°43' E), a nearby locality visited by collectors during French colonial times. The locality “Lak-Mune” (for var. *lineaticeps*) was not found.

***Mimopolemius atrocinctus* (Pic, 1911) comb.nov.**

Silis atrocinctus Pic, 1911a: 143.

Polemiosilis atrocinctus Pic: Pic, 1923: 44.

Polemiosilis atrocincta (Pic) [emend.]: Delkeskamp, 1977: 241.

Material examined. LAOS: BOKEO: 5 km W Ban Toup, Bokeo Nature Reserve, 500–700 m, 20°27–28' N / 100°45' E, 4.–18. V. 2011, NHMB Basel, Laos 2011 Expedition, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan leg. 2 ♂ (NHMB). LOUANG NAMTHA: Louang Namtha, 600 m, 21°00' N / 101°25' E, 31. V. 1997, Vít Kubáň leg. 3 ♂ (NHMB). OUDOMXAI: Oudom Xai (17 km NEE), 20°45' N / 102°09' E, ~1100m, 3. V. 2002, Vít Kubáň leg. 1 ♂ (NHMB); Pak Beng, 450 m, 19°53'37" N / 101°07'51" E, 18.–27. V. 2001, Jiří Kolibáč leg. 1 ♂ (NHMB). LOUANG PRABANG: Thong Khan, ~750m, 19°35' N / 101°58' E, 11.–21. V. 2002, Vít Kubáň leg. 1 ♂ (NHMB); Nong Khiaw env., Ban Sop Houn, edge of forest, on shrubs and low vegetation, 4. VIII. 2006, M. Geiser leg. 1 ♀ (CMG); „Luang Prabang: Nam Pot. 2. IV. 1920. R. V. de Salvaza“ 1 ♂ (BMNH). SAINYABULI: Pak Hanon, 330 m, 19°49'43" N / 101°28'48" E, 18.–27. V. 2001, Jiří Kolibáč leg. 1 ♂ (NHMB); Muang Ngeun to Ban Nangeun env., 500–600 m, 19°36' N /

101°06–08' E, 4.–5. VII. 2010, David Hauck leg., NHMB Basel, Laos 2010 Expedition, M. Brancucci, M. Geiser, D. Hauck. 1 ♂ (NHMB). VIENTIANE (prefecture): Umg. Vientiane, III.–VI. 1963, coll. W. Wittmer. 2 ♂ 1 ♀ (NHMB); Lao Pako, 55 km NE Vientiane, 200 m, 1.–4. V. 2004, F. & L. Kantner leg. 1 ♂ (NMPC); Lao Pako, 55 km NE Vientiane, 200 m, 19.–21. V. 2004, P. Kresl leg. 3 ♂ (NMPC). VIENTIANE (province): 70–90 km NNW Vientiane, 260–450 m, 18°34–46' N / 102°22–24' E, 3. V. 1997, Vít Kubáň leg. 1 ♀ (NHMB); Phou Khao Khouay N. P., 18°27' N / 102°49' E, V. 2005, P. Kresl leg. 1 ♀ (NMPC). BOLIKHAMXAI: 70 km NEE Vientiane, 150 m, 27.–30. IV. 1997, Vít Kubáň leg. 1 ♂ (NHMB); Pakkading, ~300 m, 18°20' N / 104°00' E, 1.–2. VI. 2001, P. Pacholátko leg. 1 ♂ (NHMB); Ban Nape, 300–500 m, 18°20' N / 105°08' E, 7.–16. V. 2004, E. Jendek & O. Šauša leg. 3 ♀ (NMPC). CHAMPASAK: Dong Hua Xao NBCA, Tad Fane env. (10–14 km W Paksong), 900–1000 m, 15°10–12' N / 106°07–08' E, 2.–4. VI. 2010, M. Geiser & D. Hauck leg. 1 ♀ (NHMB); Bolaven Plateau, 15 km SE of Ban Houaykong, Nong lom (lake) env., 800 m, 15°02' N / 106°35' E, 18.–30. IV. 1999, E. Jendek & O. Šauša leg. 1 ♂ 2 ♀ (NMPC).

General distribution. Vietnam (PIC 1923); Thailand, Cambodia, Laos.

Distribution within Laos. Widespread, predominantly in lowland areas. Found in Bokeo, Louang Namtha, Louang Prabang, Xayabury, Vientiane, Bolikhamxai and Champasak provinces, as well as Vientiane prefecture.

Remarks. PIC (1923) placed this species in *Polemiosilis* Pic, 1921, which was followed by DELKESKAMP (1977) in his catalogue. To judge by the pronotal shape and the morphology of the hind claws (one of the claws deeply cleft), it clearly belongs to *Mimopolemius* Pic, 1921, as redefined by WITTMER (1969). This had already been recognised by both W. Wittmer and V. Švihla but remained unpublished until now.

At the BMNH, specimens of the same species from Thailand have been identified as “*M. laosensis* (Pic, 1915)” by A. Kopetz. This was done according to the literature (A. Kopetz, pers. comm.). If these specimens are, in fact, conspecific with the type of *M. laosensis*, which is highly probable, the latter becomes a junior subjective synonym of *M. atrocinctus*. A re-examination of Pic’s type material will be necessary to confirm this synonymy. **New record for Laos.**

Mimopolemius laosensis (Pic, 1915)

Cantharis (Telephorus) laosensis Pic, 1915: 3.

Cantharis laosensis Pic: Pic, 1923: 37, 40.

Mimopolemius laosensis (Pic): Wittmer, 1969a: 131.

Material examined. None from Laos.

General distribution. Laos (Pic, 1923).

Distribution within Laos. Unknown.

Remarks. This species, not re-examined after its initial description, is probably a synonym of *M. atrocinctus*, according to the characters given by the author.

Polemiosilis foveolata Pic, 1921

Polemiosilis foveolatus Pic, 1921a: 27. Pic, 1923: 44.

Polemiosilis foveolata Pic [emend.]: Delkeskamp, 1977: 241.

Material examined. LAOS: PHONGSALY: Boun Tai, ~580 m, 21°24' N / 102°58' E, 18. V. 2004, M. Brancucci leg. 1 ♂ (NHMB). LOUANG PRABANG: Thong Khan, ~750m, 19°35' N / 101°58' E, 11.–21. V. 2002, Vít Kubáň leg. 2 ♂ (NHMB).

General distribution. Vietnam (PIC 1923); Thailand, Laos.

Distribution within Laos. Recorded from two localities in the North, Phongsaly and Louang Prabang provinces. **New record for Laos.**

Polemosilis grandiceps (Pic, 1911)

Silis grandiceps Pic, 1911a: 144.

Polemosilis grandiceps (Pic): Pic, 1923: 44. Wittmer, 1997: 260.

Material examined. LAOS: BOKEO: 5 km W Ban Toup, Bokeo Nature Reserve, 500–700 m, 20°27–28' N / 100°45' E, 4.–18. V. 2011, NHMB Basel, Laos 2011 Expedition, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan leg. 2 ♀ (NHMB). LOUANG PRABANG: Louang Prabang, outskirts of city, on low vegetation, 5. VIII. 2004, M. Geiser leg. 1 ♂ (CMG); Ban Song Cha (5 km W), 30°33–34' N / 102°14' E, 1200m, 1.–9. V. 1999, Vít Kubáň leg. 1 ♂ (NHMB); Nong Khiaw env., Ban Sop Houn, edge of forest, on shrubs and low vegetation, 4. VIII. 2006, M. Geiser leg. 1 ♂ (CMG); Thong Khan, ~750m, 19°35' N / 101°58' E, 11.–21. V. 2002, Vít Kubáň leg. 1 ♂ (NHMB). VIENTIANE (province): Vang Vieng, 300 m, 18°55'23" N / 102°26'35" E, 10.–15. V. & 1.–6. VII. 2001, Jiří Kolibáč leg. 1 ♂ (NHMB). VIENTIANE (prefecture): Umg. Vientiane, III.–VI. 1963, coll. W. Wittmer. 1 ♂ (NHMB); Lao Pako, 55 km NE Vientiane, 200 m, 1.–4. V. 2004, J. Bezděk leg. 5 ♂ 1 ♀ (NMPC); Lao Pako, 55 km NE Vientiane, 200 m, 1.–4. V. 2004, F. & L. Kantner leg. 4 ♂ (NMPC); Lao Pako, 55 km NE Vientiane, 200 m, 19.–21. V. 2004, P. Kresl leg. 1 ♂ 1 ♀ (NMPC). BOLIKHAMXAI: Lak Sao ("Km 20") env., secondary forest, on low vegetation, 18. VIII. 2004, M. Geiser leg. 1 ♀ (CMG); Ban Nape (8 km NE), ~600 m, 18°21' N / 105°08' E, 1.–18. V. 2001, Pacholátko leg. 1 ♂ (NHMB).

General distribution. Cambodia, Vietnam (PIC 1923); Thailand (WITTMER 1997); Peninsular Malaysia, Burma, Laos.

Distribution within Laos. Widespread in lowland areas. Found in Bokeo, Louang Prabang, Vientiane and Bolikhamxay provinces, as well as in Vientiane prefecture. **New record for Laos.**

Paradiscodon martini (Bourgeois, 1890)

Cantharis martini Bourgeois, 1890: 173. Pic, 1923: 39, 41.

Discodon martini (Bourgeois): Wittmer, 1942: 609.

Anisotelus martini (Bourgoin)[sic!]: Wittmer & Chũjô, 1961: 328.

Paradiscodon martini: Delkeskamp, 1977: 244.

Material examined. LAOS: BOKEO: 5 km W Ban Toup, Bokeo Nature Reserve, 500–700 m, 20°27–28' N / 100°45' E, 4.–18. V. 2011, NHMB Basel, Laos 2011 Expedition, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan leg. 1 ♂ (NHMB). LOUANG NAMTHA: Namtha→Muang Sing, 900–1200 m, 21°09' N / 101°19' E, 5.–31. V. 1997, Vít Kubáň leg. 4 ♀ (NHMB); Laos north, 20 km NW Louang Namtha, 21°09.2' N / 101°18.7' E, 900–1000 m, 5.–30. V. 1997, C. Holzschuh leg. 2 ♂ (NHMB). OUDOMXAI: Oudom Xai (17 km NEE), 20°45' N / 102°09' E, ~1100m, 1.–9. V. 2002, Vít Kubáň leg. 1 ♂ (NHMB); Oudom Xai (17 km NEE), 20°45' N / 102°09' E, ~1100m, 3. V. 2002, Vít Kubáň leg. 1 ♂ (NHMB). LOUANG PRABANG: Ban Song Cha (5 km W), 30°33–34' N / 102°14' E, +/-1200m, 24.IV.–16.V. 1999, Vít Kubáň leg. 1 ♀ (NHMB); Ban Song Cha (5 km W), 30°33–34' N / 102°14' E, 1200m, 24.–30. IV. 1999, Vít Kubáň leg. 1 ♀ (NHMB); Ban Song Cha (5 km W), 30°33–34' N / 102°14' E, 1200m, 1.–9. V. 1999, Vít Kubáň leg. 1 ♂ (NHMB); Ban Song Cha (5 km W), 30°33–34' N / 102°14' E, 1200m, 10.–16. V. 1999, Vít Kubáň leg. 1 ♂ 1 ♀ (NHMB). VIENTIANE (prefecture): Umg. Vientiane, III.–VI. 1963, coll. W. Wittmer. 1 ♂ (NHMB). BOLIKHAMXAI: Ban Nape, 300–500 m, 18°20' N / 105°08' E, 7.–16. V. 2004, E. Jendek & O. Šauša leg. 4 ♂ 3 ♀ (NMPC); Ban Nok env., Route No. 8, 220 +/- 50 m, 18°08.7' N / 104°18.1' E, E. Jendek & O. Šauša leg. 1 ♀ (NMPC).

General distribution. Cambodia, Vietnam (Pic 1923), Thailand (WITTMER & CHŪJÔ 1961); Laos.

Distribution within Laos. Widespread. Common in lowlands, but also in altitudes up to 1200 m. Found in Bokeo, Louang Namtha, Oudomxai, Louang Prabang and Bolikhamxai provinces, as well as in Vientiane prefecture. Not yet found in the southern provinces. **New record for Laos.**

Macrosilis circumcincta Wittmer, 1987

Macrosilis circumcincta Wittmer, 1987: 103.

Material examined. LAOS: CHAMPASAK: Dong Hua Xao NBCA, Tad Fane env. (10–14 km W Paksong), 900–1000 m, 15°10–12' N / 106°07–08' E, 2.–4. VI. 2010, M. Geiser & D. Hauck leg. 1 ♀ (NHMB).

General distribution. Vietnam (WITTMER 1987); Laos.

Distribution within Laos. Apparently endemic to the southern part of the Annamite mountains. Previously only recorded from South Vietnam (Gia Lai prov.). **New record for Laos.**

Macrosilis discolineata Pic, 1911

Macrosilis discolineatus Pic, 1911b: 173.

Material examined. LAOS: PHONGSALY: Phongsaly env., ~1500 m, 21°41–42' N / 102°06–08' E, 28. V. – 30. VI. 2003, P. Pacholátko leg. 1 ♂ (NHMB); Phongsaly env., Phu Fa, montane rain forest, 1450–1600 m, 26. VII. 2006, M. Geiser leg. 2 ♂ 2 ♀ (CMG), 1 ♀ (NHMB); Phongsaly env., Phu Fa, montane rain forest, 1450–1600 m, 27. VII. 2006, M. Geiser leg. 1 ♂ 1 ♀ (CMG); Phongsaly env., Phu Fa, montane rain forest, 1450–1600 m, 28. VII. 2006, M. Geiser leg. 1 ♂ 1 ♀ (CMG); Boun Neua (4 km E), ~1100 m, 21°38' N / 101°57' E, 20. VI. 2003, P. Pacholátko leg. 1 ♂ (NHMB). LOUANG PRABANG: Ban Kiukacham env., 1400–1450 m, 19°34' N / 102°13' E, 19. VI. 2009, M. Geiser & D. Hauck leg., NHMB Basel, NMPC Prague, Laos 2009 Expedition; M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň. 1 ♂ (NHMB). XIENG KHOUANG: Phonsavan town env., 19°26' N / 103°13' E, 2010, local collectors leg. 1 ♀ (NHMB); Xien-Khouan, X. 1949, Romieux leg., coll. W. Wittmer. 1 ♂ (NHMB).

General distribution. Myanmar (DELKESKAMP 1977); Thailand, Laos.

Distribution within Laos. Found in montane areas of the northern Annamite mountains. Recorded from Phongsaly, Louang Prabang and Xieng Khouang provinces.

Remarks. The above specimens were identified according to Wittmer's collection. They are usually larger than stated in Pic's description. However, this species seems to be quite variable in body size throughout its range. It is therefore not impossible that the following species, *M. salvazai*, distinguished mainly by larger size, will eventually turn out to be a junior synonym when type material is examined. **New record for Laos.**

Macrosilis salvazai Pic, 1923

Macrosilis salvazai Pic, 1923: 62.

Material examined. LAOS: VIENTIANE (prefecture): Umg. Vientiane, III.–VI. 1963, coll. W. Wittmer. 2 ♂ (NHMB).

General distribution. Laos (PIC 1923).

Distribution within Laos. No precise locality is given with the description. The specimen recorded here is from the area around Vientiane in the central Mekong valley.

Remarks. The identification of the present specimen follows Wittmer. Judging by the male genitalia, it is different from *M. discolineata*. However, it does not fully comply with the description given by Pic. The type material should therefore be examined to confirm its identity, or otherwise.

Asiosilis carinensis (Pic, 1913)

Silis carinensis Pic, 1913: 98

Asiosilis carinensis (Pic): Wittmer, 1977: 290.

Material examined. LAOS: “Luang Prabang, Xieng Om, 14. V. 1920, R. V. de Salvaza” 1 ♀ (BMNH). LOUANG NAMTHA: Namtha→Muang Sing, 900–1200 m, 21°09' N / 101°19' E, 5.–31. V. 1997, Vít Kubáň leg. 21 ♂ 2 ♀ (NHMB); 20 km NW Louang Namtha, 21°09.2' N / 101°18.7' E, 900–1000 m, 5.–30. V. 1997, C. Holzschuh leg. 7 ♂ 1 ♀ (NHMB). OUDOMXAI: Muang Pakbeng, 4.–8. V. 2003, O. Šafránek leg. 2 ♂ (NMPC). PHONGSALY: Ban Sano Mai, 21°21' N / 102°03' E, ~1150 m, 19.–26. V. 2004, P. Pacholátko leg. 4 ♂ (NHMB); Ban Sano Mai, 21°21' N / 102°03' E, ~1150 m, 19.–26. V. 2004, M. Brancucci leg. 1 ♀ (NHMB). XAYABURY: “Mekong River: Pak Kop. 7. V. 1920. R. V. de Salvaza” 1 ♂ (BMNH). LOUANG PRABANG: Ban Song Cha (5 km W), 30°33–4'N / 102°14'E, +/-1200m, 24. IV. –16. V. 1999, Vít Kubáň leg. 17 ♂ (NHMB); Ban Song Cha (5 km W), 30°33–4'N / 102°14'E, 1200m, 24.–30. IV. 1999, Vít Kubáň leg. 3 ♂ (NHMB); Ban Song Cha (5 km W), 30°33–4'N / 102°14'E, 1200m, 1.–9. V. 1999, Vít Kubáň leg. 5 ♂ (NHMB); Ban Song Cha (5 km W), 30°33–4'N / 102°14'E, 1200m, 10.–16. V. 1999, Vít Kubáň leg. 6 ♂ (NHMB); Thong Khan, ~750m, 19°35'N / 101°58'E, 11.–21. V. 2002, Vít Kubáň leg. 6 ♂ (NHMB). HOUA PHAN: Ban Saluei→Phou Pane Mt., 1300–1900 m, 20°11–13' N / 103°59'–104°01' E, 9.–17. VI. 2009, Michael Geiser leg., NHMB Basel, NMPC Prague, Laos 2009 Expedition; M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň. 1 ♂ (NHMB). XIENG KHOUANG: 30 km NE Phonsavan: Phou Sane Mt., ~1400–1500 m, 19°37–38' N / 103°20' E, 10.–30. V. 2009, Z. Kraus leg., NHMB Basel, NMPC Prague, Laos 2009 Expedition; M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň. 2 ♂ (NHMB), 1 ♂ (NMPC); 30 km NE Phonsavan: Phou Sane Mt., 1400–1700 m, 19°37–38' N / 103°20–21' E, 10.–30. V. 2009, D. Hauck leg., NHMB Basel, NMPC Prague, Laos 2009 Expedition; M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň. 1 ♀ (NMPC); Muang Khoun env., 10. V. 2009, Chantaseng Keomaravong leg. 1 ♂ (NHMB).

General distribution. Myanmar, Laos (WITTMER 1977); Thailand.

Distribution within Laos. Widespread in montane areas of northern Laos. Found in Louang Namtha, Oudomxai, Phongsaly, Xayabury, Louang Prabang, Houa Phan and Xieng Khouang provinces. Also recorded from “Houei Sai” (= Houay Xay, Bokeo prov.) by WITTMER (1977).

Asiosilis semibrunnescens (Pic, 1923)

Silis semibrunnescens Pic, 1923: 61.

Asiosilis semibrunnescens (Pic): Wittmer, 1978: 325.

Material examined. LAOS: BOLIKHAMXAI: Ban Nape, 300–500 m, 18°20' N / 105°08' E, 7.–16. V. 2004, E. Jendek & O. Šauša leg. 3 ♂ 1 ♀ (NMPC).

General distribution. Laos, Vietnam (PIC 1923).

Distribution within Laos. The holotype is labelled “Laos, Tonkin” (WITTMER 1978), so it is unsure whether the type locality of this species should be in Laos or in Vietnam. The only known exact locality is in Central Laos (Bolikhambxai).

***Podosilis langana* (Pic, 1923)**

Silis langana Pic, 1923: 43.

Podosilis langana (Pic): Wittmer, 1997: 237.

Material examined. LAOS: LOUANG NAMTHA: Laos north, 20 km NW Louang Namtha, 21°09.2' N / 101°18.7' E, 900–1000 m, 5.–30. V. 1997, C. Holzschuh leg. 1 ♂ (NHMB). HOUA PHAN: Phu Phan mt., Ban Saluei, 1500–2000 m, 20°15' N / 104°02' E, 26. IV. – 11. V. 2001, J. Bezděk leg. 1 ♂ (NMPC).

General distribution. Vietnam, Thailand, China: Yunnan (Wittmer, 1997); Laos.

Distribution within Laos. Known from montane localities in the North, Houa Phan and Phongsaly prov. **New record for Laos.**

***Podosilis laosensis* (Pic, 1921)**

Silis laosensis Pic, 1921a: 28. Pic, 1923: 43.

Podosilis laosensis (Pic): Wittmer, 1997: 234.

Material examined. None.

General distribution. Laos (WITTMER 1997).

Distribution within Laos. Only known from the type locality Pak Lay (Xayabury prov.).

***Podosilis longelobata* (Pic, 1923)**

Silis longelobata Pic, 1923: 55.

Podosilis longelobata (Pic): Wittmer, 1997: 225, 229.

Material examined. LAOS: PHONGSALY: Phongsaly env., Phu Fa, montane rain forest, 1450–1600 m, 26. VII. 2006, M. Geiser leg. 1 ♂ (CMG).

General distribution. Northern Vietnam (WITTMER 1997); Laos.

Distribution within Laos. Found in montane areas of the northern Annamite mountains. Recorded from Phongsaly province. **New record for Laos.**

***Laemoglyptus carinatus* (Pic, 1921)**

Drilosilis carinatus Pic, 1921b: 28. Pic, 1923: 42.

Laemoglyptus carinatus (Pic): Wittmer, 1948: 170.

Material examined. None.

General distribution. Laos (Pic 1923).

Distribution within Laos. Described after a female from “Haut-Laos”. This area, in historical context, includes the northern Mekong valley and the adjacent mountain chains.

***Pseudosilis* sp. 1 (= *Silis incrassicornis* Pic, 1923?)**

Material examined. LAOS: LOUANG NAMTHA: Namtha→Muang Sing, 900–1200 m, 21°09' N / 101°19' E, 5.–31. V. 1997, Vít Kubáň leg. 2 ♂ (NHMB); 20 km NW Louang Namtha, 900 +/- 100 m, 21°09.2' N / 101°18.7' E, E. Jendek & O. Šauša leg. 1 ♂ 2 ♀ (NMPC). OUDOMXAI: Oudom Xai (17 km NEE), 20°45' N / 102°09' E, ~1100m, 1.–9. V. 2002, Vít Kubáň leg. 1 ♂ (NHMB). LOUANG PRABANG: Ban Song Cha (5 km W), 30°33–34' N / 102°14' E, 1200m, 1.–9. V. 1999, Vít Kubáň leg. 1 ♀ (NHMB). BOLIKHAMXAI: Ban Nape, Kaew Nua pass, 18°22.3' N / 105°09.1' E, E. Jendek & O. Šauša leg. 1 ♂ (NMPC). CHAMPASAK: Bolaven Plateau, 15 km SE of Ban Houaykong, Nong lom (lake) env., 800 m, 15°02' N / 106°35' E, 18.–30. IV. 1999, E. Jendek & O. Šauša leg. 2 ♂ 1 ♀ (NMPC).

General distribution. Unknown.

Distribution within Laos. Widespread across the country, in montane altitudes between 800 and 1200 m.

Remarks. This is the first record of this genus for Laos, and for the whole of Indochina. The species has a rather isolated position within the genus *Pseudosilis* Pic, 1911 by virtue of its antennal morphology, having the 7th segment simple and the 3rd to 6th with longitudinal impressions in males. According to PIC'S description (1923) it may be identical to *Silis incrassicornis*, described on the basis of a female from Vietnam. This needs to be confirmed through revision of type material.

***Pseudosilis* sp. 2**

Material examined. LAOS: BOLIKHAMXAI: Ban Nape (8 km NE), ~600 m, 18°21' N / 105°08' E, 1.–18. V. 2001, Pacholátko leg. 1 ♂ (NHMB); Ban Nape, 300–500 m, 18°20' N / 105°08' E, 7.–16. V. 2004, E. Jendek & O. Šauša leg. 1 ♂ (NMPC).

General distribution. Unknown.

Distribution within Laos. Only known from one locality in the central part, near to the Vietnamese border.

Remarks. The second species of *Pseudosilis* in Laos is distinguished from the first by simple antennomeres 3–6, without longitudinal impressions in males. The antennae as a whole are thinner and also lack the modifications on the 7th segment otherwise characteristic of the genus. It may be a new species, but there are several unrevised “*Silis*” (in the old sense), described mainly by Pic, which would have to be examined before describing this one (V. Švihla, pers. comm.).

***Pseudosilis* sp. 3**

Material examined. LAOS: PHONGSALY: Phongsaly env., ~1500 m, 21°41–42' N / 102°06–08' E, 28. V. – 30. VI. 2003, P. Pacholátko leg. 1 ♂ (NHMB).

General distribution. Unknown.

Distribution within Laos. Only found in one locality in the North (Phongsaly prov.).

Remarks. This species has the 7th antennomere difform in males, as in other *Pseudosilis*. It may be a new species, but, as noted above for *Pseudosilis* sp. 2, the possibility that it has been described in another genus cannot be ruled out.

Species described from adjacent countries

The following species have been described from areas adjacent to Laos (DELKESKAMP 1977; WITTMER 1992, 1993, 1997). It may be assumed that some of them will be recorded from Laos in the future. A few of them may also prove to be synonyms of species listed above, having not been revised since the original description.

<i>Asiosilis birmanica</i> (Pic, 1911)	Myanmar, NE India, Bangladesh, Bhutan
<i>Asiosilis championi</i> Wittmer, 1977	Myanmar (Yangon)
<i>Asiosilis fuscitarsis</i> (Gorham, 1895)	Myanmar (Tharrawaddy), NE India
<i>Asiosilis incisa</i> (Champion, 1926)	Myanmar (Tanintharyi)
<i>Hoosilis blaisei</i> (Pic, 1930)	Vietnam ("Tonkin")
<i>Hoosilis monstrosicornis</i> Pic, 1923	Vietnam (Hoa Binh prov.: Hoa Binh)
<i>Laemoglyptus atricolor</i> (Pic, 1928)	Vietnam (Lao Cai: Sapa)
<i>Laemoglyptus bicoloricollis</i> (Pic, 1926)	Vietnam ("Tonkin")
<i>Laemoglyptus dentatus</i> (Pic, 1926)	Vietnam ("Tonkin")
<i>Laemoglyptus fulvicollis</i> Fairmaire, 1896	Vietnam (Quang Ninh prov.: Ha Long)
<i>Laemoglyptus tamdaoensis</i> Wittmer, 1993	Vietnam (Vinh Phu prov.: Tam Dao)
<i>Macrosilis fortunei</i> Pic, 1911	Vietnam (Lao Cai, Lang Son), China
<i>Macrosilis lajoyei</i> (Pic, 1913)	Vietnam (Cao Bang prov.: Bao Lac)
<i>Macrosilis tonkinea</i> Pic, 1921	Vietnam (Quang Ninh prov.: Ha Long)
<i>Mimopolemium abdominalis</i> Pic, 1945	Thailand ("Péninsule de Siam")
<i>Mimopolemium peguensis</i> (Pic, 1916) comb.nov.	Myanmar (Bago)
<i>Paradiscodon donckieri</i> (Pic, 1906)	China ("Chine méridionale")
<i>Paradiscodon semiustum</i> (Gorham, 1889)	Myanmar, India (Assam)
<i>Podosilis annamita</i> (Pic, 1928)	Vietnam (Lam Dong prov.)
<i>Podosilis baolacensis</i> (Pic, 1916)	Vietnam (Cao Bang prov.: Bao Lac)
<i>Podosilis basiexcavata</i> Wittmer, 1997	Thailand (Chiang Mai prov.)
<i>Podosilis binhana</i> (Pic, 1923)	Vietnam (Hoa Binh, Vinh Phu)
<i>Podosilis cambodgensis</i> (Pic, 1914)	Cambodia (Phnom Penh)
<i>Podosilis carinaticeps</i> (Pic, 1906)	Vietnam (Lang Son prov.: "Monts-Mauson")
<i>Podosilis convexa</i> Wittmer, 1978	Myanmar
<i>Podosilis donckieri</i> (Pic, 1906)	China (Yunnan, Guizhou)
<i>Podosilis expansicollis</i> Wittmer, 1997	Thailand (Mae Hong Son)
<i>Podosilis feai</i> (Pic, 1916)	Myanmar (Kayin state: Carin Cheba)
<i>Podosilis fissangula</i> (Bourgeois, 1890)	Vietnam (Saigon)
<i>Podosilis hamulata</i> Wittmer, 1992	Myanmar (Kayin state: Carin Cheba)
<i>Podosilis helferi</i> (Pic, 1925)	Myanmar
<i>Podosilis jeanvoinei</i> (Pic, 1923)	Vietnam ("Tonkin")
<i>Podosilis kubani</i> Wittmer, 1997	Thailand (Chiang Mai prov.)
<i>Podosilis laokaiensis</i> (Pic, 1914)	Vietnam (Lao Cai, Hoa Binh), China (Yunnan)
<i>Podosilis lateristyla</i> Wittmer, 1992	Myanmar (Bago)
<i>Podosilis longeappendiculata</i> (Pic, 1923)	Vietnam (Hoa Binh prov.: Lac Tho)
<i>Podosilis medioexcavata</i> Wittmer, 1997	Myanmar (Kachin state: Kambaiti)
<i>Podosilis murzini</i> Wittmer, 1997	Vietnam (Gia Lai prov.)

<i>Podosilis nitidissima</i> (Pic, 1922)	China (Yunnan)
<i>Podosilis obscurissima</i> (Pic, 1906)	China (Yunnan)
<i>Podosilis profundoincisa</i> Wittmer, 1997	Thailand (Mae Hong Son)
<i>Podosilis robusticornis</i> (Pic, 1907)	Vietnam (Hanoi, Bac Giang, Hoa Binh)
<i>Podosilis sinensis</i> (Pic, 1906)	China (Yunnan)
<i>Podosilis sublongispina</i> (Pic, 1927)	Vietnam (Hanoi; Lao Cai prov.: Sapa)
<i>Podosilis tamdaoa</i> Wittmer, 1997	Vietnam (Vinh Phu prov.: Tam Dao)
<i>Podosilis thailandica</i> Wittmer, 1997	Thailand (Mae Hong Son)
<i>Podosilis tonkinea</i> (Pic, 1913)	Vietnam (“Tonkin”)
<i>Podosilis vietnamensis</i> Wittmer, 1997	Vietnam (“Cy-Lac-Re”)
<i>Polemiosilis nigriceps</i> Wittmer, 1997	Thailand (Chiang Mai, Mae Hong Son, Yala)
“ <i>Polemius</i> ” <i>siamensis</i> Pic, 1931	Thailand (“Siam”)
“ <i>Silis</i> ” <i>binodosa</i> Pic, 1923	Vietnam (Hoa Binh prov.: Lac Tho)
“ <i>Silis</i> ” <i>incrassicornis</i> Pic, 1923	Vietnam (Hoa Binh prov.: Lac Tho)

Note on *Silis peguensis* Pic, 1916

Silis peguensis was described by PIC (1916) from “Indes: Pégu” (today’s Myanmar). The number of specimens was not given, but Pic noted that his description was based on females (or one female). Only a single specimen, labelled “type” was found in the Pic collection (Muséum nationale d’histoire naturelle, Paris), which is, however, a male. This specimen had already been studied by W. Wittmer and correctly identified as a member of *Mimopolemius*. This generic placement has not been published before, so a new combination is established here. It is possible that Pic mistook this type specimen for a female, as he described it in *Silis*. Males of the latter genus always show strong secondary sexual characters on the pronotum, which are much less developed and not clearly visible in *Mimopolemius*. Also, to fix the usage of the name in case additional specimens of the type series are discovered, the single specimen is here designated as a lectotype:

Mimopolemius peguensis (Pic, 1916) comb.nov.

Silis peguensis Pic, 1916: 10.

Lectotype: ♂, deposited at Muséum nationale d’histoire naturelle, Paris: “Pegu / India” [printed, probably by Staudinger & Banghaas]; “type” [handwritten by Pic of yellowish piece of paper]; “TYPE” [printed on red paper]; “Mimopolemius / peguensis (Pic) / det. W. Wittmer” [Wittmer’s standard determination label, species name handwritten by Wittmer]; “LECTOTYPE ♂ / *Silis peguensis* Pic, 1916 / des. M. Geiser 2012” [printed on red paper]. Pinned, last right antennomere, last two left antennomeres, claw segments of right middle and left hind tarsus missing.

General distribution. Myanmar (“Pegu” = Bago or Yangon Region).

Discussion

The Silinae fauna of Laos is far from being sufficiently known, not only in terms of species inventory, but also in terms of faunistic coverage and nomenclature. Taxonomic work is currently being conducted on *Asiosilis*, *Podosilis* and *Laemoglyptus* by V. Švihla

and will certainly lead to several new species described in the near future. The more basal Silinae genera (after WITTMER 1969) are currently not being worked upon, but are all in urgent need of revision, which will eventually lead to several nomenclatural changes and possibly new species. For the Laotian fauna, this applies largely to the genera *Mimopolemius* and *Macrosilis*. All of these future revisions must bear in mind that several cantharid species are widespread in the Indochinese subregion or even further, and are by no means restricted to one country, such as Laos.

In terms of faunistic coverage, almost the whole southern half of Laos is still lacking any data. Although several specimens were collected during the 2010–2012 NHMB expeditions, they could not be prepared in time to be included in this work. Additional data can thus be expected to become available in the near future, which will hopefully help to round out the known distribution areas, at least for some of the more easily collected species.

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References

- BOURGEOIS J. (1890): *Contribution a la faune indo-chinoise. 7e Mémoire. Rhipidoceridae, Dascillidae, Malacodermidae*. Annales de la Société entomologique de France, Ser. 6, **10**: 161–176.
- BRANCUCCI M. (1980): *Morphologie comparée, évolution et systématique des Cantharidae (Insecta: Coleoptera)*. Entomologica Basiliensia **5**: 215–388.
- DELKESKAMP K. (1977): *Coleopterorum Catalogus Supplementa. Pars 165, Fasc. 1. Cantharidae*. Junk, The Hague. 556 pp.
- KAZANTSEV S. (1998): *Novye palearkticheskie vidy Crudosilis (Coleoptera, Cantharidae)*. Zoologicheskii zhurnal **77**: 285–294. [in Russian]
- PIC M. (1911a): *Coléoptères exotique nouveaux ou peu connus (Suite)*. L'Échange, Revue Linnéenne **27(318)**: 142–144.
- PIC M. (1911b): *Coléoptères exotique nouveaux ou peu connus (Suite)*. L'Échange, Revue Linnéenne **27(322)**: 172–174.
- PIC M. (1915): *Nouveautés de diverses familles*. Mélanges exotico-entomologiques **13**: 2–13.
- PIC M. (1916): *Diagnoses Spécifiques*. Mélanges exotico-entomologiques **17**: 8–20.
- PIC M. (1917): *Descriptions abrégées diverses*. Mélanges exotico-entomologiques **23**: 2–20.
- PIC M. (1921a): *Nouveautés diverses*. Mélanges exotico-entomologiques **33**: 1–32.
- PIC M. (1921b): *Nouveautés diverses*. Mélanges exotico-entomologiques **34**: 1–33.
- PIC M. (1923): *Etude des Malacodermes de l'Indochine, recueillis par M. R. Vitalis de Salvaza*. In: VITALIS DE SALVAZA R. (ed.): *Faune Entomologique de l'Indochine Française*. Opuscules de l'Institut scientifique de l'Indochine, Saigon **1**: 3–59.
- WITTMER W. (1942): *The generic position of some indo-malayan Cantharidae (Col., Malacodermata)*. 10th contribution to the Knowledge of Indo-Malayan Malacodermata. Treubia **18**: 609–610.
- WITTMER W. (1948): *Notas sinonimicas y sistematicas sobre Malacodermata (1a nota)*. Anales de la Sociedad científica Argentina **145**: 167–173.

- WITTMER W. & CHŪJŌ M. (1961): 12. *Family Cantharidae*. p. 328 in: KIRA T. & UMESAO T. (eds.): *Nature and Life in Southeast Asia, Vol. 1*. Fauna and Flora Research Society, Kyoto. Kira and Tadao Umesao. 454 pp.
- WITTMER W. (1969a): *Synonymische und systematische Notizen über Coleopteren*. Mitteilungen der schweizerischen entomologischen Gesellschaft **42(1/2)**: 126–134.
- WITTMER W. (1969b): *Zur Kenntnis der indo-malaiischen Silini unter besonderer Berücksichtigung der Fauna von Neuguinea (Col.: Cantharidae)*. 28. Beitrag zur Kenntnis der indo-malaiischen Cantharidae. Pacific Insects **11(2)**: 217–454.
- WITTMER W. (1977): *Ergebnisse der Bhutan-Expedition 1972 des Naturhistorischen Museums in Basel. Coleoptera: Fam. Cantharidae (3. Teil). Gleichzeitig ein Beitrag zur Kenntnis der indo-malaiischen Silini*. Entomologica Basiliensia **2**: 273–303.
- WITTMER W. (1978): *Die Gattung Asiosilis (Col. Cantharidae) der indo-malaiischen Region (2. Teil)*. Entomologica Basiliensia **3**: 321–345.
- WITTMER W. (1987): 40. *Beitrag zur Kenntnis der indo-malaiischen Fauna (Coleoptera: Cantharidae, Malachiidae)*. Mitteilungen der Entomologischen Gesellschaft Basel **37**: 101–115.
- WITTMER W. (1992): *Neue Arten aus der Gattung Podosilis Wittmer (Coleoptera: Cantharidae-Silinae) aus der Ausbeute von L. Fea*. 44. Beitrag zur Kenntnis der indo-malayischen Fauna. Doriana **6(276)**: 1–9.
- WITTMER W. (1993): *Zur Kenntnis der palaearktischen und indo-malaiischen Cantharidae (Coleoptera)*. Entomologica Basiliensia **16**: 203–253.
- WITTMER W. (1997): *Neue Cantharidae (Col.) aus dem indo-malaiischen und palaearktischen Faunengebiet mit Mutationen*. 2. Beitrag. Entomologica Basiliensia **20**: 223–366.

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