

## **Helotidae (Coleoptera: Cucujoidea) from Mt. Phu Pane, northeast Laos, with descriptions of two new species**

Petr VOTRUBA

Rychtáře Šimona 182, Praha 9, CZ-196 00 Czech Republic  
e-mail: pevo@email.cz

**Taxonomy, new species, new records, identification keys, Coleoptera, Helotidae, *Helota*, *Neohelota*, Laos**

**Abstract.** The material of family Helotidae collected over 2008-2014 in the area of Mount Phu Pane, in the small part of northeastern Laos, was studied and the results are given. Twenty-two species of this family were recognized, including two species new to science described herein: *Helota luciae* sp. nov. (the *Helota thibetana* species group) and *Helota catharinae* sp. nov. (the *Helota vigorsii* species group). An updated key for three mentioned species groups sensu Lee (2010) including the newly described species is provided. Figures of protibiae, genitalia, internal sacs, eighths abdominal tergites, and fifth abdominal ventrites are given for all new species. New records from Laos are presented for the two new species only.

### INTRODUCTION

Helotidae is a little known and originally monogeneric family of cucujoid beetles. Kirejtshuk (2000) divided the family into five genera: *Helota* MacLeay, 1825, *Neohelota* Ohta, 1929, *Afrohelotina* Kirejtshuk, 2000, *Metahelotella* Kirejtshuk, 2000 and *Strophohelota* Kirejtshuk, 2000.

Helotidae are found in Asia and Africa. *Strophohelota* and *Afrohelotina* are restricted to the Afrotropical Region, other genera are distributed in the Palaearctic and Oriental Regions. Species within the genera *Helota* and *Metahelotella* have been revised (Lee 2007, 2008, 2009a, b). The genus *Helota* was divided by Lee (2007) into three species groups and the genus *Neohelota* was also divided by Lee (2010) into six species groups. The *laevigata* and *helleri* groups have been already revised (Lee 2010). The *candezei*, *attenuata*, *guerni* and *culta* group was revised by Lee & Votruba (2011, 2013a, 2013b, 2014).

Due to the friend of mine Stanislav Jákl, a respected Czech entomologist, I had a possibility to examine extensive material of Helotidae collected over 2008-2014 on the slopes of Phu Pane mountain (ca. 800-1600 m a.s.l.), lying in Hua Phan Province, northeastern Laos. This material contains nearly 700 (684) specimens and revealed extraordinary diversity of helotids in the area - altogether 22 species were recognised, including three hitherto undescribed species. Their formal descriptions and summary of all findings is the purpose of the present paper.

Findings of S. Jákl concerning the presence of beetles from this family are in agreement with biological information about *Neohelota* found by Lee & Satô (2006) during their studies of the Taiwanese species of Helotidae. Adults of the genus were always found on flowers, suggesting that members of *Neohelota* are anthophilous. It is possible to add a notice about the common presence of representatives of the genus *Helota* on injured places of trees with the sap too (S. Jákl, personal communication).

## MATERIAL AND METHODS

The descriptive terminology follows Lee & Satô (2006). The material was examined using an Olympus SZX12 stereomicroscope. Habitus photographs were taken using a Canon EOS 550D digital camera with an attached Canon MP-E65mm f/2.8 1-5× macro lens as numerous separate images at different focal planes and afterwards combined using Helicon Focus 6.3.0 software. The male genitalia were studied and illustrated in temporary glycerine mounts using an Olympus BX41 transmitted light microscope with Canon DS126291 camera; they were subsequently washed in distilled water and mounted in DMHF on the same card as the beetle, with exception of penis and endophallus, which is mounted in Eukitt on separate transparent plate. Exact label data are cited and given in quotation marks. Separate label lines are indicated by a slash (/), separate labels by a double slash (//).

The specimens included in this study are deposited in the following collections:

BMNH The Natural History Museum, London, United Kingdom (M. Barclay);

NMPC National Museum, Praha, Czech Republic (J. Hájek);

PVPC Petr Votruba private collection, Praha, Czech Republic;

SJPC Stanislav Jákl private collection, Praha, Czech Republic.

## DESCRIPTIONS

### *Helota luciae* sp. nov.

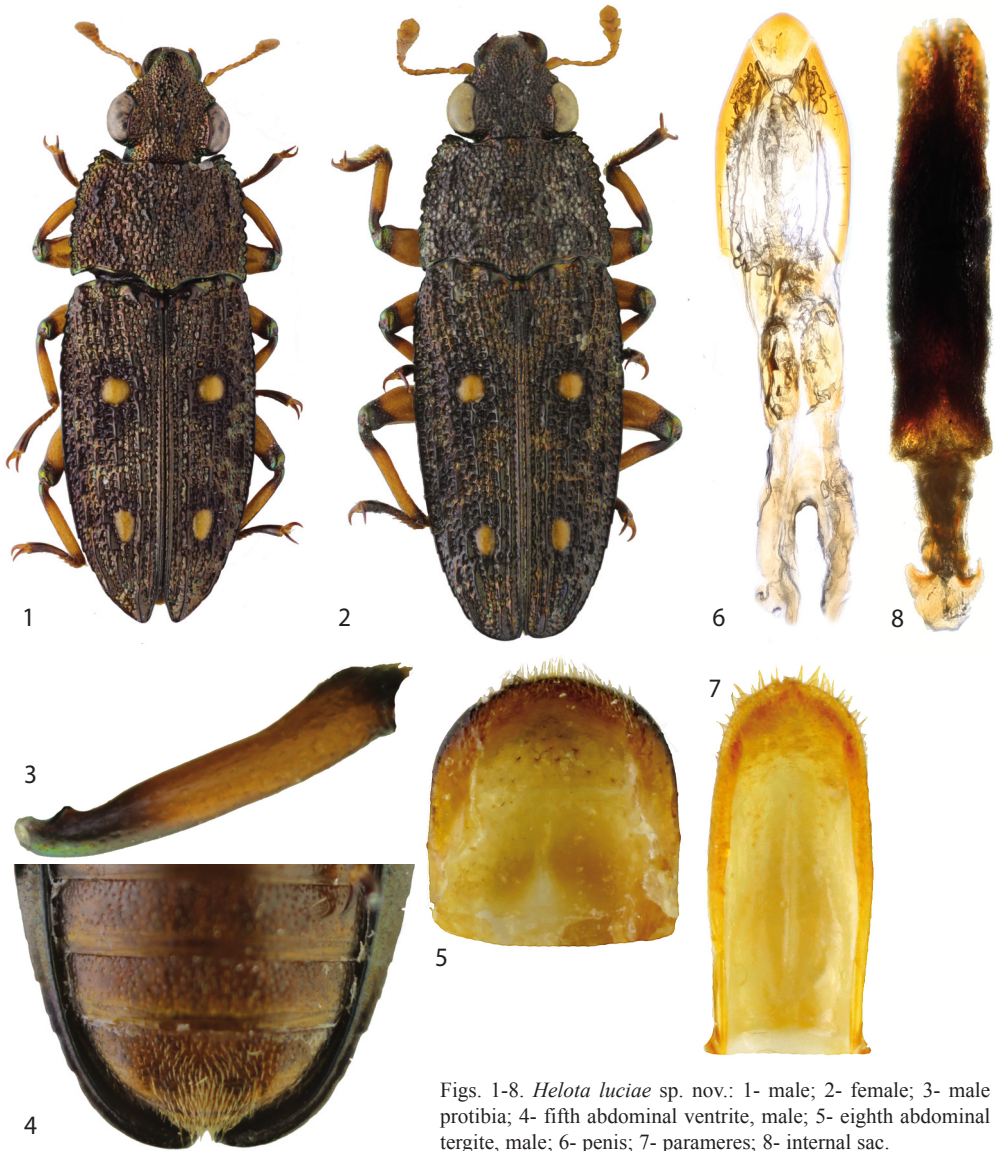
(Figs. 1-8)

**Type material.** Holotype (♂) labelled “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600m/ 20°12'N 103°59'E/ 10.-21.06.2010 / S. Jákl and local collectors lgt.”, (NMPC). Paratypes: (1 ♀): with same locality, (NMPC); (5 ♂♂, 2 ♀♀): with same locality (PVPC).

The types are prided with a printed red label: HOLOTYPE (or PARATYPE, respectively) / *Helota luciae* sp. nov. ♂ / 11.11.2020 Petr Votruba det.

**Description. Male** (Fig. 1) Length 7.9 mm; width 2.7 mm. Dorsal surface bronze with antennae yellowish brown; each elytron with two small yellow spots, anterior one circular, posterior one oval. Ventral surface metallic green with meso- and metaventrites medially brown; abdomen yellowish brown. Leg yellowish brown, apical one tenth of femur, and basal one fifth of tibia - simply knee and apex of tibia dark brown, tarsus dark brown. Dorsal surface of head randomly and densely punctate; ventral surface more randomly punctured. Pronotum 0.77 times longer than wide; lateral margins rounded with strong crenulations, widest at one third of length from the base; surface rugose and densely punctate, with indistinct residues of raised patches. Elytron 3.64 times longer than wide; gradually narrowed toward apices, outer margin serrate; with a tiny sutural tooth, apex moderately rounded; disc densely punctate without visible striae, with small and prominent line-shaped tubercles going in traces of former interstices. Thoracic ventrites with random and prominent punctures, those on metaventrite medially reduced, metaventrite without setae. Punctures on abdominal ventrites very small. Protibia (Fig. 3) slightly curved, slightly depressed dorsally near apex of internal margin, apex forming an acute and curved process - some thumb, apex

of internal margin with setae along internal margin of hooked apex. Fifth abdominal ventrite (Fig. 4) with sparse short setae anteriorly and medially, apical margin with dense setae going longer towards apical margin. Eighth abdominal tergite (Fig. 5) has shape of accurate semicircle, apical margin with long setae. Penis (Fig. 6) slender, apex rounded, parallel and narrowest from apex to apical one fifth. Parameres (Fig. 7) elongate and gradually narrowed from base, ended with oval apex with few setae. Internal sac (Fig. 8) with convoluted of slender narrow sclerites on basal one third; one basal sclerite elongate; resembling H shape.



Figs. 1-8. *Helota luciae* sp. nov.: 1- male; 2- female; 3- male protibia; 4- fifth abdominal ventrite, male; 5- eighth abdominal tergite, male; 6- penis; 7- parameres; 8- internal sac.

**Female** (Fig. 2). Length 8.5-8.9 mm; width 2.4 mm. Similar to males but protibiae straight and not expanded, and elytral apices abruptly tapering apically, forming acute apices.

**Variability.** Measurements: Body length ♂♂ 7.1-7.9 mm; width 2.7 mm. Body length ♀♀ 8.5-8.9 mm; width 2.4-2.6 mm.

**Differential diagnosis.** Based on above mentioned characters, the new species can be classified within the *Helota thibetana* species group sensu Lee (2009). *Helota luciae* sp. nov., *H. lesnei* Ritsema 1906 and *H. acutipennis* Ritsema 1914 can be distinguished from others of the species group by the very dense punctures and small tubercles on the elytra, oblong, elongated or line-shaped. *Helota luciae* sp. nov. differs from *H. lesnei* by lack of middle bands on pro-, meso- and metatibias and by the nearly indistinct raised patches on pronotum and by the puncturation of background of elytra, which is huge and strong. From *H. acutipennis*, it differs by the absence of yellowish-brown spots on antero-lateral angles of the pronotum; and from both by the male genitalia.

**Etymology.** I would like to dedicate this species to my wonderful wife Lucie.

**Distribution.** Laos

### Key to Species of *Helota thibetana* Group

1. Punctures very dense and tubercles small on elytra; on pronotum small, individual and drop-shaped to indistinct ..... 2
  - Punctures less dense and tubercles prominent on elytra; on pronotum flat and joined each other ..... 4
2. Without yellowish brown spots on antero-lateral angles of pronotum, black bands on different parts of protibiae, and small rounded processes near apices of ventral margins of protibiae in males; elytral apices in females tapering ..... 3
  - With yellowish brown spots on antero-lateral angles of pronotum, black bands on bases and apices of protibiae, and prominent rounded processes near apices of ventral margins of protibiae in males; elytra apices in females acute ..... *H. acutipennis* Ritsema
3. Black bands on bases and middles of pro-, meso- and metatibiae in males; distinct raised patches on pronotum, the residues of interstices on elytra line shaped on very densely and finely punctured background ..... *H. lesnei* Ritsema
  - Black bands only on bases of pro-, meso and metatibia in males; raised patches on pronotum nearly indistinct, line shaped residues of interstitial on elytra nearly indistinct due to heavily and strongly punctured background ..... *H. luciae* sp. nov.
4. With yellowish brown spots on antero-lateral angles of pronotum, black bands on middle of protibiae and rounded processes near apices of ventral margins of protibiae, tubercles on elytra oblong ..... 5
  - Without yellowish brown spots on antero-lateral angles of pronotum, without black bands on protibiae and with an angular processes near apices of ventral margins of protibiae, tubercles on elytra elongate ..... *H. sinensis* Olliff
5. Metaventrites with one pair of clusters of stout setae at sides in males ..... *H. thibetana* Westwood
  - Metaventrites without stout setae in males ..... *H. jentinkii* Ritsema

*Helota catharinae* sp. nov.

(Figs. 9-16)

**Type material.** Holotype (♂) labelled: "NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m/ 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and Lao collectors lgt.", (NMPC). Paratypes: (1 ♂, 1 ♀): with same locality, (PVPC); (12 ♂♂, 4 ♀♀): with same locality or "NE LAOS, Hua Phan prov./ Ban Saleui, Phou Pan (Mt.) / N20°12' E104°01' 1300-1900 m /11.iv.-.15v.2012 // BMNH (E)/2012-14 / C. Holzschuh", (BMNH, PVPC).

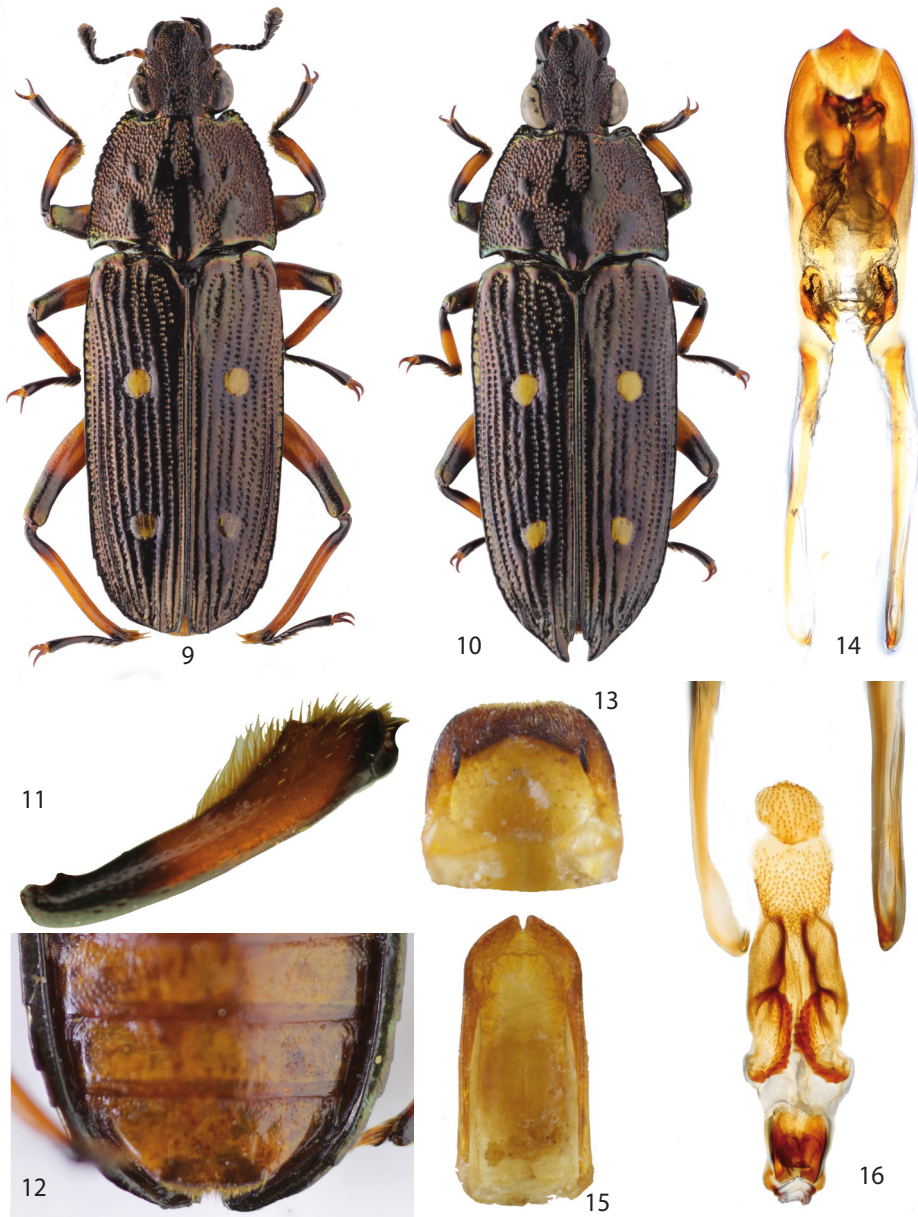
The types are provided with printed red labels: HOLOTYPE (or PARATYPE, respectively) / *Helota catharinae* sp. nov. ♂ / 11.11.2020 Petr Votruba det.

**Description. Male** (Fig. 9) Length 14 mm; width 4.8mm. Dorsal surface blackish bronze, with first two antennomeres yellowish brown; each elytron with two small yellow spots between third and sixth striae. Ventral surface light brown; proepisternum, head, and elytral epipleuron blackish bronze. Legs yellowish, with trochanters, apical one third of femora, basal one third and apices of tibiae, and tarsi blackish brown. Dorsal surface of head with prominent punctures, denser at sides. Pronotum 0.70 times longer than wide, trapezoidal, lateral margins with moderate crenulations, surface rugose, with raised patches and dense prominent punctures. Elytra 1.90 times longer than wide, parallel, apex weakly serrate; each elytron with 10 striae and three longitudinal carinae; first carina between second and third striae, only visible near apices; second weak, between sixth and seventh striae; third minute one between eighth and ninth striae. Thoracic ventrites without punctures except for proepisternum and metepisternum and outer sides of metaventrites. Protibia (Fig. 11) slightly curved, with triangular process before apex on inner margin and row of dense brush of setae at its distal half. Fifth abdominal ventrite (Fig. 12) with apical margin very slightly bisinuate with dense setae restricted to apical margin. Eighth abdominal tergite (Fig. 13) square, antero-lateral angle rounded. Penis (Fig. 14) slender, gradually narrowed toward apex; apex rounded, mesal margin pointed. Parameres (Fig. 15) elongate, middle of apical margin with a shallow notch, with one pair of long setae near median notch, ventral surface with sparse long setae, basal margin truncate. Internal sac (Fig. 16) with sclerites covered by teeth, resembling a Canadian ice hockey goalkeeper, see photo.

**Female.** (Fig. 9). Length 13.9 mm; width 4.4 mm. Similar to male, but protibiae without processes and setae, elytral apices tapering and weakly serrate.

**Variability.** Measurements: Body length ♂♂ 12.5-14.4 mm; width 4.8 mm. Body length ♀ 13.9 mm; width 4.4 mm.

**Differential diagnosis.** This new species belongs to the *Helota vigorsii* species group sensu Lee (2008) according to raised patches on pronotum and 10 striae of punctures on elytron without punctures in interstices. It is similar to *H. brancucci* Lee, 2008 possessing serrate elytral apices and an unicolorous pronotum and proepisternum, but it can be easily distinguished by the size, having *H. brancucci* up to 12 mm and *H. catharinae* more than 13 mm. Moreover male protibia on inner margin is covered by row of dense brush of setae on whole distal half of tibia, which we have never seen before in any other species from this genus.



Figs. 9-16. *Helota catharinae* sp. nov.: 9- male; 10- female; 11- male protibia; 12- fifth abdominal ventrite, male; 13- eighth abdominal tergite, male; 14- penis; 15- parameres; 16- internal sac.

**Etymology.** I would like to dedicate this species to my first daughter Katerina.

**Distribution.** Laos

## Key to Species of the *Helota vigorsii* Group

1. Elytral apices serrate; proepisternum same color as pronotum ..... 2
- Elytral apices smooth; proepisternum same color as prosternum ..... 5
2. Elytral apices strongly and remotely serrate; pronotum sparsely punctuate ..... 4
- Elytral apices weakly and densely serrate; pronotum densely punctuate ..... 3
3. Small species max up to 12 mm long, male protibia with setae on distal fourth of its inner margin .....  
..... *H. brancucci* Lee
- Large species more than 12,5 mm long, male protibia with setae in distal half of its inner margin .....  
..... *H. catharinae* sp. nov.
4. Dorsal surface golden bronze; setae on apical margin of parameres longer; apical and median sclerites of internal sac absent ..... *H. rouyeri* Ritsema
- Dorsal surface dark bronze; setae on apical margin shorter; apical and median sclerites of internal sac present ..... *H. vandepolli* Ritsema
5. Spots on elytra large, more than size of eyeball ..... 6
- Spots on elytra small, up to size of eyeball ..... 8
6. Punctures on elytra smaller and less impressed; elytral apices in females narrowly rounded ..... 7
- Punctures on elytra larger and more impressed; elytral apices in females acute. .... *H. scintillans* Olliff
7. Posterior elytral spots located between striae 1-6 ..... *H. vigorsii* MacLeay
- Posterior elytral spots located between striae 3-6 ..... *H. vigorsii borneensis* Ritsema
8. Elytral apices in males with a small truncate process; elytral apices in females acute ..... 9
- Elytral apices in males truncate without truncate processes; elytral apices in females rounded ..... 10
9. Dorsal surface reddish bronze, without pale bands along lateral margins of pronotum ..... *H. servillei* Hope
- Dorsal surface blackish bronze, with pale bands along lateral margins of pronotum ..... *H. feai* Ritsema
10. Dorsal surface reddish bronze, without pale bands along lateral margins of pronotum; carinae between striae 2 and 3 in males reduced ..... 11
- Dorsal surface blackish bronze, with pale bands along lateral margins of pronotum; carinae between striae 2 and 3 on elytra in male well developed ..... *H. thoracica* Ritsema
11. Punctures on elytra smaller and denser, elytral apices in females widely rounded ..... *H. fairmairei* Ritsema
- Punctures on elytra larger and sparser; elytral apices in females narrowly rounded ..... *H. longipes* Ritsema

### LIST OF OTHER RECORDED SPECIES

#### Genus *Helota* MacLeay, 1825

##### *thibetana* species group:

##### *Helota thibetana* Westwood, 1842

**Material examined:** 3 ♂♂, 5 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 10.-21.06.2010 / S.Jákl and local collectors lgt.”, (SJPC).

##### *gemmata* species group:

##### *Helota ventralis* Westwood, 1842

**Material examined:** 8 ♂♂, 7 ♀♀ labelled: “NE LAOS, Huaphanne Pr. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 26.IV-10.V.2013 / 20°12'N 103°59'E / S.Jákl + lao collector lgt.”, (SJPC); 4 ♂♂, 3 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600m/ 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

**vigorsii species group:**

***Helota brancucci* Lee, 2008**

**Material examined:** 7 ♂♂, 3 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC); 12 ♂♂, 9 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 1-20.V.2014 / 20°12'N 103°59'E / S.Jákl + lao collectors lgt.”, (SJPC); 1 ♂, 4 ♀♀ labelled: “NE LAOS, Huaphanne Pr. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 26.IV-10.V.2013 / 20°12'N 103°59'E / S.Jákl + lao collector lgt.”, (SJPC).

***Helota feai* Ritsema, 1891**

**Material examined:** 3 ♂♂, 2 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 1-20.V.2014 / 20°12'N 103°59'E / S.Jákl + lao collectors lgt.”, (SJPC).

***Helota thoracica* Ritsema, 1895**

**Material examined:** 1 ♂, 2 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 10.-21.06.2010 / S.Jákl and local collectors lgt.”, (SJPC); 2 ♂♂, 2 ♀♀ labelled: “NE LAOS, / Hua Phan Prov., Mt. PHU PANE. / 1200-1600m, 10-22.V.2011 / 20°12'N 103°59'E / S.Jákl and Lao collectors lgt.”, (SJPC); 2 ♂♂, 2 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 1-20.V.2014 / 20°12'N 103°59'E / S.Jákl + lao collectors lgt.”, (SJPC); 3 ♂♂, 5 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

**Genus *Neohelota* Ohta, 1929**

***attenuata* species group:**

***Neohelota durelli* (Ritsema, 1895)**

**Material examined:** 1 ♂ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 10.-21.06.2010 / S.Jákl and local collectors lgt.”, (SJPC).

***Neohelota rotundata* (Ritsema, 1891)**

**Material examined:** 6 ♂♂, 1 ♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 1-20.V.2014 / 20°12'N 103°59'E / S.Jákl + lao collectors lgt.”, (SJPC); 3 ♂♂, 6 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

***Neohelota satoi* Lee, 2010**

**Material examined:** 3 ♂♂ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 10.-21.06.2010 / S.Jákl and local collectors lgt.”, (PVPC).

**Remarks.** This species was described by Lee (2010) in *helleri* species group according to shape of pronotum, which is transversely trapezoidal in *attenuata* species group and elongately trapezoidal in *helleri* species group. This species has without doubt transversely



trapezoidal pronotum (3:2), so it newly belongs to the *attenuata* species group. Thus below is proposal of updated key for *attenuata* species group.

### *Neohelota vietnamensis* Lee & Votruba 2013

**Material examined:** 2 ♂♂, 1 ♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

### Key to Species of *Neohelota attenuata* Group

1. Pronotum transversely trapezoidal, lateral margin straight, disc with dense and fine punctures ..... 2
  - Lateral margins of pronotum rounded, disc with sparse and prominent punctures ..... 6
2. Anterior spot on elytra small, extending from 4th to 6th striae ..... *N. renati* (Ritsema)
  - Anterior spot on elytra large, extending from 3<sup>rd</sup> to 6<sup>th</sup> striae ..... 3
3. Apex of elytra transversely trapezoidal or quadrangular; yellowish-brown angles of pronotum well developed, extending along entire lateral margin ..... 4
  - Apex of elytra weakly or broadly rounded; only anterolateral angles of pronotum yellowish brown, sometimes reaching apical one third ..... 5
4. Apex of elytra trapezoidal, with costae II<sup>nd</sup> and VII<sup>th</sup> do not exceed posterior margin of elytra .....
  - ..... *N. durrelli* (Ritsema)
  - Apex of elytra quadrangular, costae II<sup>nd</sup> and VII<sup>th</sup> pointed, exceed posterior margin of elytra ..... *N. satoi* Lee
5. Male protibia with prominent deep notch at apical one third and long triangular process on inner margin; apices of elytra in female widely separated, broadly rounded ..... *N. vietnamensis* Lee & Votruba
  - Male protibia with shallow notch at apical one third; apices of elytra in female conjointly rounded .....
    - ..... *N. rotundata* (Ritsema)
    - ..... *N. attenuata* (Ritsema)
  - Process on male protibial small and rounded .....
    - ..... *N. rotundata* (Ritsema)
    - ..... *N. attenuata* (Ritsema)
  - Process on male protibial prominent and angular ..... *N. lewisi* (Ritsema)
6. Process on male protibial small and rounded .....
  - ..... *N. rotundata* (Ritsema)
  - ..... *N. attenuata* (Ritsema)
- Process on male protibial prominent and angular ..... *N. lewisi* (Ritsema)

### *guerini* species group:

### *Neohelota curvipes* (Oberthür, 1883)

**Material examined:** 4 ♂♂, 2 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600m/ 20°12'N 103°59'E / 10.-21.06.2010 / S.Jákl and local collectors lgt.”, (SJPC); 8 ♂♂, 3 ♀♀ labelled: “NE LAOS, / Hua Phan Prov., Mt. PHU PANE. / 1200-1600 m, 10-22.V.2011 / 20°12'N 103°59'E / S.Jákl and Lao collectors lgt.”, (SJPC); 3 ♂♂, 2 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 1-20.V.2014 / 20°12'N 103°59'E / S.Jákl + lao collectors lgt.”, (SJPC); 4 ♂♂, 1 ♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

### *Neohelota laosensis* Lee & Votruba 2013

**Material examined:** 8 ♂♂, 12 ♀♀ labelled: “NE LAOS, Huaphanne Pr. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 26.IV-10.V.2013 / 20°12'N 103°59'E / S.Jákl + Lao collector lgt.”, (SJPC); 10 ♂♂, 14 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 1-20.V.2014 / 20°12'N 103°59'E / S.Jákl + lao collectors lgt.”, (SJPC); 16 ♂♂, 18 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

### *Neohelota serratipenis* (Ritsema, 1891)

**Material examined:** 2 ♂♂, 1 ♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600m/ 20°12'N 103°59'E / 10.-21.06.2010 / S.Jákl and local collectors lgt.”, (SJPC).

## *Neohelota valentinae* Lee & Votruba 2013

**Material examined:** 6 ♂♂, 6 ♀♀ labelled: “NE LAOS, Huaphanne Pr. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 26.IV-10.V.2013/ 20°12'N 103°59'E / S.Jákl + Lao collector lgt.”, (SJPC); 10 ♂♂, 14 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 1-20.V.2014 / 20°12'N 103°59'E / S.Jákl + lao collectors lgt.”, (SJPC); 11 ♂♂, 13 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

### *culta* species group:

#### *Neohelota affinis* (Ritsema, 1891)

**Material examined:** 14 ♂♂, 12 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600m/ 20°12'N 103°59'E / 10.-21.06.2010 / S.Jákl and local collectors lgt.”, (SJPC); 23 ♂♂, 13 ♀♀ labelled: “NE LAOS, / Hua Phan Prov., Mt. PHU PANE. / 1200-1600 m, 10-22.V.2011/ 20°12'N 103°59'E / S.Jákl and Lao collectors lgt.”, (SJPC); 19 ♂♂, 12 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 1-20.V.2014/ 20°12'N 103°59'E / S.Jákl + lao collectors lgt.”, (SJPC); 19 ♂♂, 11 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

#### *Neohelota barclayi* Lee & Votruba 2014

**Material examined:** 2 ♂♂, 1 ♀ labelled: “NE LAOS, Huaphanne Pr. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 26.IV-10.V.2013 / 20°12'N 103°59'E / S.Jákl + lao collector lgt.”, (SJPC).

#### *Neohelota boysii* (Ritsema, 1889)

**Material examined:** 2 ♂♂, 2 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600m/ 20°12'N 103°59'E / 10.-21.06.2010 / S.Jákl and local collectors lgt.”, (SJPC); 8 ♂♂, 9 ♀♀ labelled: “NE LAOS, / Hua Phan Prov., Mt. PHU PANE. / 1200-1600 m, 10-22.V.2011 / 20°12'N 103°59'E / S.Jákl and lao collectors lgt.”, (SJPC).

#### *Neohelota chinensis* (Mader, 1955)

**Material examined:** 2 ♂♂, 3 ♀♀ labelled: “NE LAOS, Huaphanne Pr. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 26.IV-10.V.2013 / 20°12'N 103°59'E / S.Jákl + lao collector lgt.”, (SJPC); 4 ♂♂, 10 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900 m / Ban Saluei env., 1-20.V.2014/ 20°12'N 103°59'E / S.Jákl + lao collectors lgt.”, (SJPC); 5 ♂♂, 7 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

#### *Neohelota dubia* (Ritsema, 1891)

**Material examined:** 3 ♂♂, 4 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600m/ 20°12'N 103°59'E / 10.-21.06.2010 / S.Jákl and local collectors lgt.”, (SJPC); 5 ♂♂, 4 ♀♀ labelled: “NE LAOS, / Hua Phan Prov., Mt. PHU PANE. / 1200-1600 m, 10-22.V.2011 / 20°12'N 103°59'E / S.Jákl and Lao collectors lgt.”, (SJPC); 8 ♂♂, 2 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 1-20.V.2014 / 20°12'N 103°59'E / S.Jákl + lao collectors lgt.”, (SJPC); 12 ♂♂, 8 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

## *Neohelota fryi* (Ritsema, 1894)

**Material examined:** 7 ♂♂, 8 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600m/ 20°12'N 103°59'E / 10.-21.06.2010 / S.Jákl and local collectors lgt.”, (SJPC); 5 ♂♂, 8 ♀♀ labelled: “NE LAOS, Huaphanne Pr./ Mt. PHU PANE. 1200-1900m/Ban Saluei v.env., 26.IV-10.V.2013/ 20°12'N 103°59'E / S.Jákl + Lao collector lgt.”, (SJPC); 24 ♂♂, 20 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900m/Ban Saluei v.env., 1-20.V.2014 / 20°12'N 103°59'E/ S.Jákl + lao collectors lgt.”, (SJPC); 16 ♂♂, 14 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

## *Neohelota pusilla* (Oberthür, 1883)

**Material examined:** 5 ♂♂, 5 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 10.-21.06.2010 / S.Jákl and local collectors lgt.”, (SJPC); 13 ♂♂, 16 ♀♀ labelled: “NE LAOS, Huaphanne Pr. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 26.IV-10.V.2013 / 20°12'N 103°59'E / S.Jákl + Lao collector lgt.”, (SJPC); 10 ♂♂, 18 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 1200-1900 m / Ban Saluei v.env., 1-20.V.2014 / 20°12'N 103°59'E / S.Jákl + lao collectors lgt.”, (SJPC); 19 ♂♂, 11 ♀♀ labelled: “NE LAOS, Hua Phan Prov. / Mt. PHU PANE. 800-1600 m / 20°12'N 103°59'E / 26.IV-10.V. 2015 / S.Jákl and lao collectors lgt.”, (SJPC).

ACKNOWLEDGEMENTS. I would like to thank Stanislav Jákl (Praha, Czech Republic) for possibility to study his material and my special thanks are extended to Jiří Hájek (NMPC) for kind help with taking pictures and valuable advices while reading manuscript.

## REFERENCES

- KIREJTSHUK A. G. 2000: On origin and early evolution of the superfamily Cucujoidea (Coleoptera, Polyphaga). Comments on the family *Helota*. *The Kharkov Entomological Society Gazette* 3: 8-38.
- KÓNO H. 1939: Helotidae of Japan, Korea, and Formosa (Coleoptera). *Philippine Journal of Science* 69: 157-160.
- LAFER G. S. 1992: 67. Sem. Helotidae, p. 274-276. In: LER P. A. (ed.): *Opređitel nasekomyh Dalnego Vostoka SSSR v shesti tomah. Tom III. Zhestkokrylye, ili zhuki. Chast 2*. St. Petersburg, 704 pp.
- LEE C.-F. 2007: Revision of family Helotidae (Coleoptera: Cucujoidea): I. *Gemmata* group of the genus *Helota*. *Annals of the Entomological Society of America* 100: 623-639.
- LEE C.-F. 2008: Revision of family Helotidae (Coleoptera: Cucujoidea): II. *Vigorsi* group of the genus *Helota*. *Annals of the Entomological Society of America* 101: 722-742.
- LEE C.-F. 2009a: Revision of the genus *Helota* (Coleoptera: Cucujoidea): III: the *Thibetana* group and a checklist of *Helota* MacLeay species. *Annals of the Entomological Society of America* 102: 48-59.
- LEE C.-F. 2009b: Revision of the family Helotidae (Coleoptera: Cucujoidea) IV: The genus *Metahelotella*. *Annals of the Entomological Society of America* 102: 785-796.
- LEE C.-F. 2010: Revision of the family Helotidae (Coleoptera: Cucujoidea): V. species group classification of the genus *Neohelota* Ohta and revisions of *N. laevigata* and *N. helleri* species groups. *Annals of the Entomological Society of America* 103: 500-510.
- LEE C.-F. & SATŌ M. 2006: The Helotidae of Taiwan (Coleoptera: Cucujoidea). *Zoological Studies* 45: 529-552.
- LEE C.-F. & VOTRUBA P. 2011: Revision of the family Helotidae (Coleoptera: Cucujoidea): VI. *Candezei* group of the genus *Neohelota*. *Annals of the Entomological Society of America* 104(4): 658-665.
- LEE C.-F. & VOTRUBA P. 2013a: Revision of the family Helotidae (Coleoptera: Cucujoidea): VII. The *Attenuata* Species Group of the genus *Neohelota*. *Annals of the Entomological Society of America* 106(2): 152-163.
- LEE C.-F. & VOTRUBA P. 2013b: Revision of the family Helotidae (Coleoptera: Cucujoidea): VIII. The *guerini* species group of the genus *Neohelota*. *Entomologica Basiliensia et Collectionis Frey* 34: 269-308.
- LEE C.-F. & VOTRUBA P. 2014: Revision of the family Helotidae (Coleoptera: Cucujoidea): IX. *Culta* Species group and a Checklist of *Neohelota* Species. *Annals of the Entomological Society of America* 107(2): 315-638.

- LEWIS G. 1881: A new species of Helotidae from Japan. *Entomologist's Monthly Magazine* 17: 255-256.
- OBERTHÜR R. 1883: Trois espèces nouvelles du genre *Helota*. *Coleopterorum Novitates* 1: 59-61.
- OHTA Y. 1929: Beitrag zur Kenntnis der Helotiden-fauna von Japan, Korea und Formosa. *Insecta Matsumurana* 3:108-110.
- OLLIFF A. S. 1883: Descriptions of two larvae and new genera and species of Clavicorn Coleoptera, and a synopsis of the genus *Helota*, MacLeay. *Cistula Entomologica* 3: 49-61.
- OLLIFF A. S. 1884: Additional notes on the genus *Helota*, MacLeay, and a synonymic list of the described species. *Cistula Entomologica* 4: 99-101.
- RITSEMA C. 1881: Two new species of the Coleopterous genus *Helota*, Mac Leay. *Notes from the Leyden Museum* 3: 79-81.
- RITSEMA C. 1889: Preliminary descriptions of new species of the Coleopterous genus *Helota*, MacLeay. *Notes from the Leyden Museum* 11: 99-111.
- RITSEMA C. 1891a: Viaggio di Leonardo Fea in Birmania e regioni vicine. The genus *Helota*, as represented in the Civic Museum of Natural History at Genoa, with descriptions of the new species collected in Burma by Mr. L. Fea. *Annali del Museo Civico di Storia Naturale di Genova* 10: 885-898.
- RITSEMA C. 1891b: Additional note on the *Helota*-species of Burma. *Annali del Museo Civico di Storia Naturale di Genova* 10: 898-902.
- RITSEMA C. 1891c: Two new species of the genus *Helota* from Borneo. *Notes from the Leyden* 13: 197-201.
- RITSEMA C. 1891d: Synopsis and alphabetical list of the described species of the Coleopterous genus *Helota* McL. *Notes from the Leyden Museum* 13: 223: 232.
- RITSEMA C. 1893a: Five new species of the genus *Helota* from Sikkim and Darjeeling. *Notes from the Leyden Museum* 15: 131-140.
- RITSEMA C. 1893b: Supplementary list of the described species of the genus *Helota*. *Notes from the Leyden Museum* 15: 160.
- RITSEMA C. 1893c: Note on *Helota gemmata*, Gorb., and *Helota fulviventris*, Kolbe. *The Entomologist* 26: 183.
- RITSEMA C. 1894a: Two new species of the genus *Helota* from Burma. *Notes from the Leyden Museum* 16: 97-106.
- RITSEMA C. 1894b: On a collection of Helotidae from Kurseong. *Notes from the Leyden Museum* 16: 111-118.
- RITSEMA C. 1896: Description of a new *Helota* from Sumatra. *Notes from the Leyden Museum* 18: 131-133.
- RITSEMA C. 1905a: Eight new Asiatic species of the Coleopterous genus *Helota*. *Notes from the Leyden Museum* 25: 117-132.
- RITSEMA C. 1905b: Second supplementary list of the described species of the genus *Helota*. *Notes from the Leyden Museum* 25: 216-218.
- RITSEMA C. 1909: Synopsis and list of *Helota*-species known from Insulinde, with description of a new species from the island of Sumbawa. *Notes from the Leyden Museum* 31: 181-185.
- RITSEMA C. 1910: Description of three new *Helota*-species from Insulinde. *Notes from the Leyden Museum* 33: 75-80.
- RITSEMA C. 1911: Fam. *Helotidae*, p. 104-106. In: JUNK W. & SCHENKLING S. (eds): *Coleopterorum Catalogus Pars* 34. Berlin: W. Junk, 106 pp.
- RITSEMA C. (1914): On three species of the Coleopterous genus *Helota*. *Notes from the Leyden Museum* 36: 165-169.
- RITSEMA C. (1915a): A systematic catalogue of the Coleopterous family *Helotidae* in the Leiden Museum. *Zoologische Mededeelingen* 1: 125-139.
- RITSEMA C. 1915b: Aid to the determination of the described species of the Coleopterous *Helota* Mc L., and description of a new species. *Zoologische Mededeelingen* 1: 229-240.
- WĘGRZYŃCZYK P. 2000: Catalogue of the *Helotidae* (Coleoptera: Cucujoidea). *Zoologische Mededeelingen* 53: 391-411.

Received: 30.11.2020

Accepted: 20.12.2020

Printed: 31.3.2021