

New data about some Alticini from Taiwan with descriptions of two new species (Coleoptera: Chrysomelidae)

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Abstract. The distributional and taxonomical data on alticine genera *Taiwanoliprus* Komiya, 2006, *Pseudoliprus* Chûjô & Kimoto, 1960, *Lipromorpha* Chûjô & Kimoto, 1960, and *Psylliodes* Latreille, 1829 are presented. *Psylliodes palliola* Motschulsky, 1866 and *Psylliodes angusticollis* Baly, 1874 are synonymized with *Psylliodes viridana* Motschulsky, 1858 based on the examination of the type material. The homonymy of *Lipromorpha cyanea* L. Medvedev, 2009 from Laos and *Lipromorpha cyanea* Chen et Wang, 1980 from Yunnan is revealed. Three species *Psylliodes subrugosa* Jacoby, 1885, *Psylliodes chujoe* Madar, 1960, and *Psylliodes cantonensis* Gruev, 1981 are recorded from Taiwan for the first time. Two new species are described: *Lipromorpha alutacea* Nadein, sp. n. and *Psylliodes yuae* sp. n.

Key words. Alticini, flea beetles, *Lipromorpha*, *Pseudoliprus*, *Taiwanoliprus*, *Psylliodes*, synonyms, homonymy, new species.

INTRODUCTION

The alticine genera *Taiwanoliprus* Komiya, 2006, *Pseudoliprus* Chûjô & Kimoto, 1960, *Lipromorpha* Chûjô & Kimoto, 1960, and *Psylliodes* Latreille, 1829 are represented in Taiwan by 14 species (Kimoto & Takizawa 1997; Komiya 2006; Döberl 2010). These are: *Taiwanoliprus wenroni* Komiya, 2006, *T. endonis* Komiya, 2006, *Pseudoliprus lalashanensis* Komiya, 2006, *P. kimotonis* Komiya, 2006, *P. saigusai* Kimoto, 1970, *Lipromorpha montana* Chûjô, 1935, *L. shirozui* Kimoto, 1970, *L. difficilis* Chen, 1934, *Psylliodes taiwana* Takizawa, 1979, *P. taiwanica* Chûjô, 1935, *P. chlorophana* Erichson, 1842, *P. bretinghami* Baly, 1862, *P. angusticollis* Baly, 1874, and *P. punctifrons* Baly, 1874. The presence of *L. difficilis* in the Taiwanese fauna requires confirmation (Medvedev 2009). The range of this species is wider in comparison with others species of the genus. It is recorded from Vietnam, South China, Ryu-Kyu Isl., and Taiwan. In general, the species of *Lipromorpha* have tendencies to local endemism; mostly this concerns insular species. Except *L. difficilis*, no continental species is known from islands of the Oriental Region. Supposedly, the records of this species for Japan and Taiwan are based on misidentifications.

The knowledge on the distribution of the above-mentioned species is fragmentary; some of them are known from the type locality only or from one or two regions of Taiwan. New distributional data presented here supplementing the known records of the species. The data about probable host plants for some species are also given. Two new species of the genera *Lipromorpha* and *Psylliodes* are described.

MATERIAL

The material depositories are abbreviated as following:

HNHM Museum of Natural History, Budapest
ZMHB Museum für Naturkunde, Humboldt Uni., Berlin
BMNH Natural History Museum, London
TARI Taiwan Agricultural Research Institute, Taichung
ZMUM Zoological Museum, Moscow State University
NC K. Nadein collection, Kiev

RESULTS

Psylliodes bretinghami Baly, 1862

Material examined. **Taipei City.** Taiwan: Taipei, Yangmingshan, 24.III.2008, leg. H. Lee, 2 ex. (TARI); Taiwan: Taipei, Peihsinchuang, 20.I.2007, leg. S.-F. Yu, 1 ex. (TARI). **Yilan County.** Taiwan: Ilan, Chiuchihse, 07.XII.2008, leg. M.-H. Tsau, 4 exx. (TARI). **Taoyuan County.** Taiwan: Taoyuan, Hsuanyuan, 16.III.2008, leg. M.-H. Tsao, 1 ex. (TARI). **Pingtung County.** Taiwan: Pingtung, Tahanshan, 22.II.2007, leg. S.-F. Yu, 1 ex. (TARI). **Taitung County.** Taiwan: Taitung, Imalintao, 04.II.2008, M.-H. Tsao, 3 exx. (TARI).

Remarks. Widely distributed in the Oriental region (Scherer 1969; Döberl 2010); from Taiwan it is recorded from Taito and Kwareenko (Kimoto & Takizawa 1997). The material examined was collected on *Solanum americanum* Miller and *Tubocapsicum anomalum* (Franch. & Sav.) Makino (Solanaceae).



Figs 1–4. 1–3. *Lipromorpha alutacea* sp. n. 1. male, Hsitou; 2. female, Tengchih; 3. male, Tengchih. 4. *Psylliodes palleola* Motschulsky, lectotype.

Psylliodes cantonensis Gruev, 1981

Type material examined. *Psylliodes cantonensis*, paratypes: China: Canton W. E. Hoffman, 5 exx. (BMNH).

Additional material examined. **Taitung County.** Taiwan: Taitung, Hsiaolanyu, 25.VI.2009, leg. Y.-T. Chung, 7 exx. (TARI). **Tainan County.** Taiwan: Tainan, Yuching, 08.I.2009, leg. H.-T. Shih, 1 ex. (TARI).

Remarks. New to Taiwan. This species was described from China (Guandong Prov.). The material examined differs from the type specimens by the blue metallic colouration of dorsum, the completely yellowish-reddish legs including posterior femora, and the smaller punctures on the pronotal disk with flat interstices, whereas the structure of the aedeagus and hind tibia are identical.

Using the key in Kimoto & Takizawa (1997) these specimens key to *Psylliodes balyi* Jacoby, 1884. According to Scherer (1982) *P. balyi* is a synonym of *P. chlorophana* Erichson, 1842, a species which is omitted in the Catalogue of Palaearctic Coleoptera by Döberl (2010). As confirmed by the study of the type material of the latter taxon (*Psylliodes chlorophana*, holotype and 6 paratypes: Terra van Diem., Schayer, Nr. 56269. (ZMHB)) the two species differ in the structure of the aedeagus – evenly curved at lateral view in *P. cantonensis* and the apical half nearly straight and then slightly curved at lateral view in *P. chlorophana*. Possibly, at least in some cases this species is confused with *P. cantonensis* when reported from Taiwan and other regions.

Psylliodes chujoe Madar, 1960

Material examined. **Kaohsiung County.** Taiwan: Kaohsiung, Shihshan logging trail, 01–03.X.2008, leg. M.-H. Tsao, 2 exx. (TARI).

Remarks. New to Taiwan. The species was described from Japan (Kyushu). The specimens at our disposal differ somewhat from the type specimen (after original description) by the denser punctate vertex and pronotum, and smaller size – 4 mm. In the revision of Japanese *Psylliodes* (Takizawa 2005) the key thesis and diagnosis relating to *Psylliodes chujoe* differs clearly from the original description in many characters such as much smaller body size, shape and denser punctuation of pronotum. This may suggest that the real *P. chujoe* remained unknown to the author. Meanwhile, in the key of Japanese *Psylliodes* by Kimoto & Takizawa (1994) the characters and figures of aedeagus correspond to the original description.

Psylliodes subrugosa Jacoby, 1885

Material examined. **Kaohsiung County.** Taiwan: Kaohsiang, Tengchih, 19.XI.2008, leg. C.-T. Yao, 1 ex. (TARI); the same locality, 05–13.XI.2008, leg. C.-T. Yao, 1 ex. (TARI); the same locality, 25.XI.–03.XII.2008, leg. C.-T. Yao, 1 ex. (TARI). **Nantou County.** Taiwan: Nantou, Tatchia, 17–24.III.2007, leg. C.-S. Tung, 1 ex. (TARI).

Remarks. New to Taiwan. The species is distributed in Japan, Russia (Far East: Sakhalin), and China (Döberl 2010).

Psylliodes viridana Motschulsky, 1858 (Fig. 5)

Psylliodes palleola Motschulsky, 1866, **syn. n.**

Psylliodes angusticollis Baly, 1874, **syn. n.**

Type material examined. *Psylliodes viridana*: Lectotype, male: *Psylliodes viridana* Motch. Ceylon / Lectotypus *Psylliodes viridana* Mts. L. Medvedev design. (ZMUM); Paralectotypes: *Psylliodes viridana* Motch. Mt. Nuva Ell. Ceyl. / Paralectotypus *Psylliodes viridana* Mts. L. Medvedev design., 5 exx. (ZMUM).

Psylliodes angusticollis: Holotype: Type H.T. / Baly coll. / *Psylliodes angusticollis* Baly Japan (BMNH).

Psylliodes palleola: Lectotype, male: *Psylliodes palleola* Motch. Ceylon / Lectotypus *Psylliodes pallescens* Mts. L. Medvedev design. (ZMUM)

Additional material examined. **Taoyuan County.** Taiwan: Taoyuan, Lalashan, 22.VII.2008, leg. H.-J. Chen, 1 ex. (TARI), the same locality, 02.IV.2009, leg. C.-F. Lee, 1 ex. (TARI); Taiwan: Taoyuan, Hsuanyuan, 12.VI.2008, leg. S.-F. Yu, 1 ex. (TARI), the same locality, 16.III.2008, leg. M.-H. Tsao, 1 ex. (TARI). **Taipei City.** Taiwan: Taipei, Sanchih, 20.III.2008, leg. H.-J. Chen, 1 ex. (TARI); Taiwan: Taipei, Shihlim, 13.III.2008, leg. H.-J. Chen, 1 ex. (TARI); Taiwan: Taipei, Wulai, 04.III.2008, leg. S.-F. Yu, 1 ex. (TARI). **Kaohsiung County.** Taiwan: Kaohsiang, Tengchih, 19.XI.2008, leg. C.-T. Yao, 1 ex. (TARI), the same locality, 17.XII.2008, leg. C.-T. Yao, 1 ex. (TARI), the same locality, 05.II.2009, leg. M.-H. Tsau, 1 ex. (TARI); Taiwan: Kaohsiang, Shihshan, logging trail, 01–03.X.2008, M.-H. Tsao, 17 exx. (TARI), the same locality, 06.II.2009, leg. S.-F. Yu & M.-H. Tsau, 5 exx. (TARI), the same locality, 24.III.2009, leg. M.-H. Tsou, 1 ex. (TARI), the same locality, 19–24.XI.2008, leg. C.-T. Yao, 1 ex. (TARI); Taiwan: Kaohsiang, Chuyunshan logging trail, 24.III.2009, leg. C.-F. Lee, 6 exx. (TARI). **Taichung District.** Taiwan: Taichung, Kukuan,



Figs 5–7. 5. *Psylliodes viridana* Motschulsky: lectotype; 6–7. *Psylliodes yuae* sp. n.: 6. dorsal view; 7. lateral view.

16.VII.2007, leg. M.-H. Tsau, 1 ex. (TARI). **Hsinchu County**, Taiwan: Hsinchu, Talulintao, 17.II.2008, leg. M.-H. Tsao, 12 exx. (TARI); Taiwan: Hsinchu, Feifengshan, 05.III.2009, leg. S.-F. Yu, 6 exx. (TARI); Taiwan: Hsinchu, Hsinfeng, 31.III.2009, leg. S.-F. Yu, 4 exx. (TARI); Taiwan: Hsinchu, Wufeng, 17.II.2009, leg. S.-F. Yu, 1 ex. (TARI); Taiwan: Hsinchu, Paoerhshuiku, 04.XII.2008, leg. S.-F. Yu, 1 ex. (TARI).

Remarks. Comparison of the type material reveals clearly that *Psylliodes angusticollis* is conspecific with *Psylliodes viridana* by the characteristic impunctate vertex, body outline, structure of hind tibia, and aedeagus.

Examination of the lectotype of *Psylliodes palleola* reveals its significant similarity to *P. viridana*. The only exception is colouration of the body, which is entirely yellow including legs in *P. palleola* (Fig. 4) in contrast to greenish dorsum and dark legs in *P. viridana* (Fig. 5). So far, no pale species of *Psyllodes* have been found in the Oriental Region. The reason of this colouration is very likely that the type specimen appears to be a teneral adult, which is not fully coloured. This is additionally confirmed by the incompletely developed and partly folded right elytron and the weakly sclerotized abdominal ventrites and aedeagus. Type material of both species was collected at the same locality “Nuwara Eliya” in Sri Lanka. The lec-

totype of *P. palleola* was designated by Medvedev (2006) and erroneously labeled “Lectotypus *Psylliodes pallescens* Mts. L. Medvedev design.”; therefore, a new label with correct name is added to the specimen.

This species was previously reported for Taiwan from Kosempo (Kimoto & Takizawa 1997). Distributed also in S. India, Sri Lanka, Nepal, N. Vietnam, S. China, Korea, Japan, Russia (Far East: Primorskiy Terr., Sakhalin, South Kuriles) (Döberl 2010). The material from Taiwan was collected on *Solanum americanum* Miller, *S. lyratum* Thunberg, *S. peikuoensis* S. S. Ying (Solanaceae).

***Psylliodes yuae* sp. n.** (Figs 6, 7, 18–21)

Type material. Holotype, male: Taiwan: Taoyuan, Lalashan, 26.VI.2007, leg. S.-F. Yu (TARI); paratype: the same label data as holotype, 1 male, 1 female (TARI), 1 male (NC).

Description. Body (Figs 6, 7) elongate-oval, convex; dorsum shining black with metallic luster, ventral side black, antennae dark brown with three basal segments lighter, yellowish-brownish, tibiae and femora dark brown to nearly black, knees and tarsi light brown.

Head short, vertex rather convex, medially covered with sparse punctures, punctation at sides of vertex closely to eyes denser, surface between punctures smooth; ocular sulci well developed, deep, above eyes very wide and extremely deep, forming large impression containing large setiferous pore; frontal calli narrow, separated by frontal ridge, their surface rough, calli delineated by lines from vertex, in some cases area containing calli and nearest part of vertex coarsely puncture-wrinkle sculptured, sometimes calli indistinct; frontal ridge wide, flattened, nearly smooth, anterofrontal ridge flattened, weakly convex; eyes comparatively large, oval, convex; labrum moderately short and wide.

Pronotum subquadrate, in male 1.2–1.3 times as wide as long, nearly equal in length and width in female, rather convex, especially in anterior half and with sharply sloping sides; anterior margin straight, posterior margin forming obtuse angle, lateral edges weakly converging anteriorly, lateral margins nearly straight, thin and smooth, pronotum above anterior angles and along lateral margin distinctly convex, lateral side with clear rounded impression, anterolateral callosities large with well developed, large, projecting angle, posterolateral callosities also well developed, somewhat smaller and angularly projecting; pronotal surface covered with moderately small and shallow punctures, distance between them an average 1.5–2 times their diameter, surface between punctures smooth.

Elytra convex, at base together hardly wider than pronotal base; 1.5–1.6 times longer than wide, maximal width before middle; scutellum small, with obtuse apex, impunctate; humeral calli small, not very convex; sutural angle obtuse, epipleurae smooth; elytra with transversal shallow and narrow impression at basal margin; punctures in striae small, hardly larger than pronotal, not deep, distance between punctures in striae is about diameter of puncture, distance between striae 2–3 times diameter of puncture, striae not deep, well developed at whole distance; interstices flat or slightly convex, covered with a regular row of punctures smaller than striae, interstices between punctures smooth; apical part of second striae (the next after short scutellar) clearly impressed.

Legs thin and straight, first tarsomere of male protarsus poorly widened, just somewhat wider than in female; posterior tibia clearly curved (Fig. 18), inner ridge at tarsal articulation with tooth, first tarsomere of posterior tarsus short and straight.

Aedeagus (Figs 19, 20) with triangular apex, apical sides straight, from base to apex nearly parallel-sided, at ventral side with narrow and moderately deep furrow; at lateral view apex sinuate and curved, then straight and weakly gradually widened towards basal opening; tegmen typically Y-shaped.

Spermatheca (Fig. 22) with short collum, nodulus long and narrow, duct short and moderately thin, not coiled but curved at base.

Body length: male – 2.5–2.7 mm, female – 3.2; body width: male – 1.2–1.3 mm, female – 1.6.

Remarks. The new species is similar to *P. viridana* and *P. cantonensis* from China (Guandong). It differs from *P. viridana* in colouration, a much more convex vertex with distinct punctation on its surface, by, a significantly convex pronotum with smooth interstices, much more curved posterior tibia, and the shape and structure of aedeagus. The new species differs from *P. cantonensis* in colouration, proportions and shape of the body, the more convex vertex, much sparser punctation of pronotum and elytra, more curved posterior tibia and also in shape and structure of aedeagus and spermatheca.

The type material was collected on *Lycianthes lysimachioides* (Wall.) Bitter (Solanaceae).

Distribution. Taiwan (Taoyuan County).

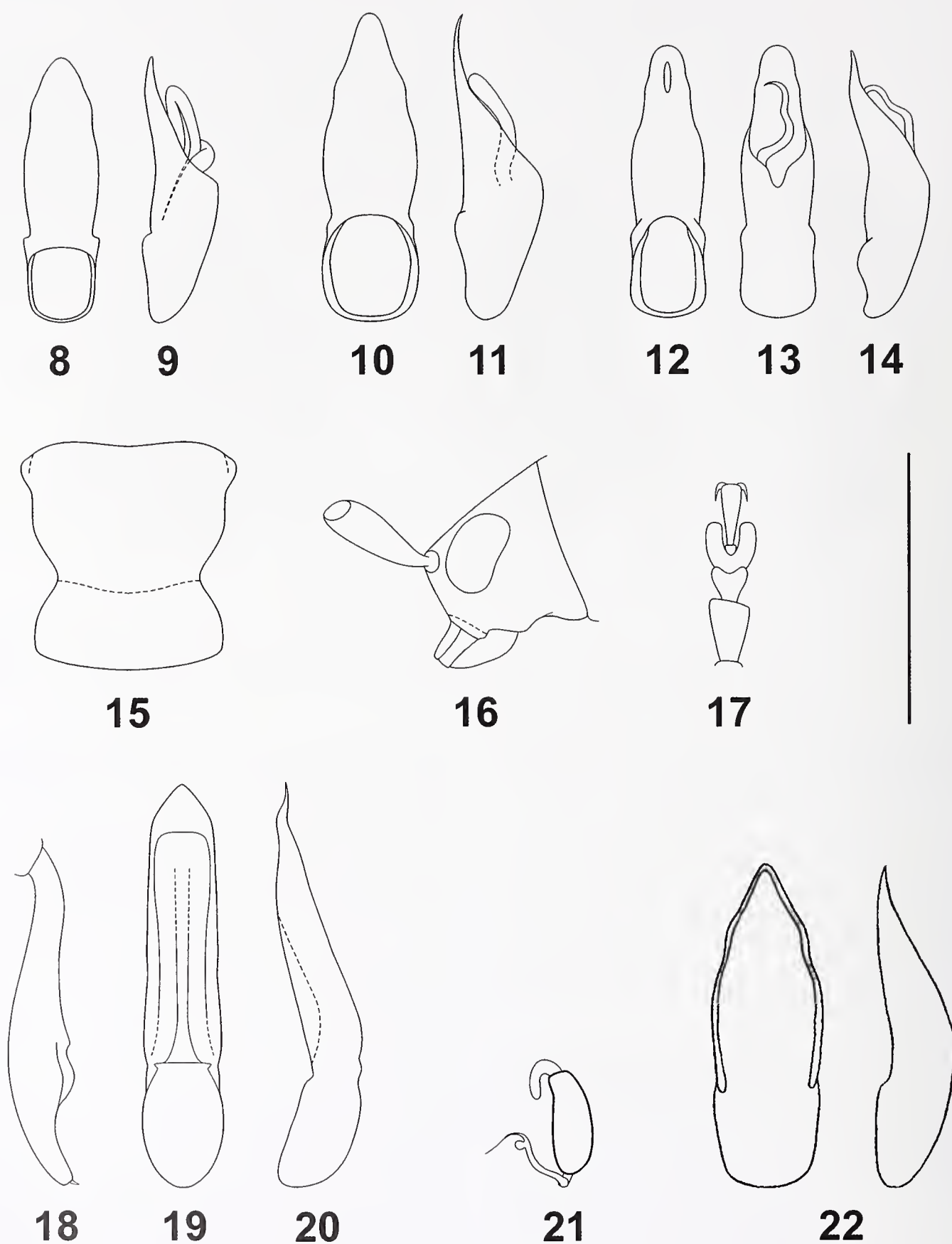
Etymology. The species is named after Mrs. Su-Fang Yu, who collected the type specimens.

Taiwanoliprus endonis Komiya, 2006

Material examined. **Yilan County.** Taiwan: Ilan, Mingchi, 12.IV.2009, leg. M.-H. Tsou, 1 male (TARI); the same locality, 05.IV.2009, 1 male (TARI).

Remarks. Previously known from the type locality in Taoyuan County. The material was collected on *Ampelopsis* sp. (Vitaceae).

In the original description, differences between *Taiwanoliprus wenroni* and of *T. endonis* as stated by the author are based mostly on colouration of the body, structure of elytral apex and aedeagus. *Taiwanoliprus wenroni* is entirely yellowish whereas *T. endonis* with dorsum reddish brown, underside and apical 2/3 of hind femora blackish brown. In the material at our disposal, a specimen identified as *T. endonis* possesses colouration of *T. wenroni* but without emarginate apex of elytron and with the shape of aedeagus as in *T. endonis*. The colouration of other specimen is lighter than in the original description of *T. endonis*. It can be suggested that colouration of the species of this genus is rather variable and could not be a reliable character for distinguishing of species. The structure of aedeagi of both species is rather similar and normally lies within the limits of intraspecific variability as often presented in alticines. Additional study is necessary to either confirmation for species status or synonymization of *T. wenroni*.



Figs 8–22. 8–17. *Lipromorpha alutacea* Nadein, sp. n. 8–14. Aedeagus. 8. ventral view, Anmashan; 9. lateral view; 10. ventral view, Hsitou; 11. lateral view; 12. ventral view, holotype, Tengchih; 13. holotype, dorsal view; 14. lateral view; 15. prothorax, dorsal view; 16. head, lateral view; 17. fore tarsus of male. 18–21. *Psylliodes yuae* sp. n. 18. right posterior tibia, inner side; 19. aedeagus, ventral view, holotype; 20. aedeagus, lateral view; 21. spermatheca; 22. *Lipromorpha montana* Chûjô, aedeagus, ventral view and lateral view (after Kimoto & Takizawa 1997).

Pseudoliprus kimotonis Komiya, 2006

Material examined. **Taoyuan County.** Taiwan: Taoyuan, Lalashan, 14.V.2009, leg. C.-F. Lee, 3 exx. (TARI); the same locality, 02.IV.2009, leg. H.-G. Chen, 2 exx. (TARI); the same locality, 01.IV.2009, leg. C.-F. Lee, 4 exx. (TARI). **Yilan County.** Taiwan: Ilan, Mingchi, 05.IV.2009, leg. M.-H. Tsou, 2 exx. (TARI). **Taipei County.** Taiwan, Taipei Hsien, Fu-Shan LTER site, lake shore, meadow, swept, 25.III.2003, leg. L. Papp & M. Foldvari, 1 ex. (HNHM). **Xitun District.** Taiwan, Taichung Hsien, Anmashan Mts, 24°14'28.9" N 120°56'45.8" E, 1800 m, dry creek bed, 5.IV.2003, leg. L. Papp & M. Foldvari, 1 ex. (HNHM).

Remarks. Previously known from Nantou County and Chiayi (East District) after original description. The material was collected on *Actinidia callosa* Lindl. (Actinidiaceae).

Pseudoliprus saigusai Kimoto, 1970

Material examined. **Nantou County.** Taiwan: Nantou, Tatchia, 20.VII.2009, leg. S.-F. Yu, 7 exx (TARI).

Remarks. Previously known from various localities of Nantou County (Kimoto & Takizawa 1997). The material was collected on *Polygonum cuspidatum* Sieb. & Zucc. (Polygonaceae).

Lipromorpha shirozui Kimoto, 1970

Material examined. **Yilan County.** Taiwan: Ilan, Fushan, Chilwuyuan, 20.III.2009, leg. C.-F. Lee, 4 exx. (TARI); Taiwan: Ilan, Mingchi, 05.IV.2009, leg. M.-H. Tsou, 1 ex. (TARI); the same locality, 16.VIII.2008, leg. M.-H. Tsou, 3 exx. (TARI). **Taipei County.** Taiwan: Taipei, Yangmingshan, 07.IX.2007, leg. S.-F. Yu, 1 ex. (TARI); Taiwan, Taipei county, Pi Hu, 3.IV.2002, at light, Gy. Fabian & O. Merkl, 1 ex. (HNHM). **Kaohsiung County.** Taiwan: Kaoshiang, Tengchih, 05.II.2009, leg. S.-E. Yu, 1 ex. (TARI).

Remarks. Previously reported from Nantou County (Kimoto & Takizawa 1997).

Lipromorpha alutacea Nadein, sp. n. (Figs 1–3, 8–17)

Type material. Holotype, male. **Kaohsiung County:** Taiwan: Kaoshiang, Tengchih, 05.II.2009, leg. S.-F. Yu (TARI); Paratypes: the same locality, 2 exx. (TARI), 3 exx. (NC); the same locality, 18.II.2007, leg. S.-F. Yu, 4 exx.;

the same locality, 26.V.2009, leg. C.-F. Lee, 1 exx. (TARI); Taiwan: Kaoshiang, Shihshan logging trail, 24.III.2009, leg. M.-H. Tsou, 2 exx. (TARI). **Nantou County.** Taiwan: Nantou, Hsitou, 06.V.2009, leg. C.-F. Lee, 1 ex. (TARI). **Taichung County.** Taiwan, Taichung Hsien, Anmashan Mts, 24°14'28.9" N 120°56'45.8" E, 1800 m, 1800 m, dry creek bed, 5.IV.2003, leg. L. Papp & M. Foldvari, 1 male (HNHM); Taiwan: Taichun, Anmashan, 22.IX.2007, leg. M.-H. Tsou, 1 female. (TARI).

Description. Dorsum, antennae, and legs yellowish-light brown, underside brown except last abdominal segment, apical two thirds of hind femora blackish brown; variations of colouration: sides of pronotum under lateral margin, short stripe on medial part of elytra, short stripe at lateral side of elytra below humeral calli dark brown to nearly black (Figs 1–3).

Head (Fig. 16) short, vertex nearly flat, its surface minutely shagreened, medially impunctate, with a few punctures bearing long setae at sides; frontal calli small, triangular, penetrating between antennal sockets, area above frontal calli triangularly concave and sometimes with shallow short suture, external angles of frontal calli sometimes with a shallow and short sulci reaching margin of eye; frontal part strongly raised, at lateral view vertex and frons forming nearly right angle, frons below antennal sockets triangular, flat, smooth, genae about twice shorter than longitudinal diameter of eye or shorter; labrum transverse, short, mandibulae short, their apices brown to blackish brown; eyes medium-sized, oval, strongly convex; antennae somewhat shorter than body length, 6th and 7th segment equal in length, 8th–10th segment shorter and thicker than previous four segments.

Pronotum (Fig. 15) 1.05–1.13 times longer than wide in male, and 1.07–1.10 times in female; anterior margin slightly curved medially, posterior margin weakly rounded, pronotal base shorter than anterior edge, sides with margin at anterior half, basal constriction deep, lateral sides behind anterolateral callosities more or less deeply grooved, at lateral view pronotal upperside nearly straight or feebly convex medially, anterolateral callosities large, convex, obtuse; pronotal surface densely punctate, distance between punctures do not exceed diameter of puncture, punctures shallow, comparatively large, interstices flat, distinctly and strongly shagreened, covered with short, dense, and decumbent hairs.

Scutellum small, triangular, acute, its surface similar to that of pronotum. Elytra nearly parallel-sided, barely widened just behind middle, 1.55–1.68 (1.61) times longer than width in male, 1.45–1.67 (1.59) times in female; humeral calli strongly raised, impunctate, hind wings completely developed; base of elytra strongly convex, then distinctly concave, apical half convex; apices rounded, sutural angle not acute, obtusely-rounded; punctures very large and deep, arranged in regular striae without tenden-

cy to confusion, punctures in stria dense, situated directly at each other, striae deeply engraved at whole distance, short scutellar row of punctures usually engraved deeper than others; interstices strongly costate, costae distinct from base to apex, short costa between short scutellar row and next row strongly raised, usually stronger than others, surface of costae impunctate, smoothly and minutely shagreened, each costa bears a row of long, semi-erect, comparatively dense hairs.

Femora distinctly swollen, fore tibiae apically curved; first tarsomere of male slightly broader than in female (Fig. 17).

Aedeagus (Figs 8–14) short, apical third narrow, weakly narrowing apically, apex rounded, medial third broad, nearly parallel-sided, basal third with large basal opening; dorsal opening bears long, thin, and strongly curved flagellum.

Body length: male – 1.9–2.4 mm, female – 2.2–2.5; width: male – 0.9–1.1 mm, female – 1.0–1.1.

Remarks. *Lipromorpha alutacea* resembles *L. montana* Chûjô, 1935 known from type locality in Chiayi County (Alishan), from which it differs in the shape of aedeagus: in *L. montana* (Fig. 22) the apical third of aedeagus is distinctly triangular and acute whereas the apex of *L. alutacea* is triangularly-rounded and obtuse or apical third in some specimens is rounded, not triangular (Figs 8–14); it also differs in the proportions of pronotum and in colouration, especially the black legs and basal segments of abdomen in *L. montana*, whereas the new species has only apical two third of hind femora brownish black.

The type material was collected on *Polygonum chinense* L. (Polygonaceae).

Distribution. Taiwan (Kaohsiung County, Nantou County, Taichung County).

Etymology. The species name refers to characteristic shagreened surface of head, pronotum, and elytral interstices.

Taxonomic note. The name *Lipromorpha cyanea* L. Medvedev, 2009 (Laos) is a junior primary homonym of *Lipromorpha cyanea* Chen et Wang, 1980 (China: Yunnan). In the original description the author stated that *L. cyanea* Medvedev is the only species with metallic blue colouration of the body among the continental species of the genus. That is not correct. According to the original descriptions the both species are highly similar to each other; hence, in view of the fact that Laos and Yunnan Province are bordering it can be suggested that they are conspecific. We do not propose a new replacement name because the genus currently is under taxonomic revision by the first author. The final decision will be based on the examination of the type material.

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REFERENCES

- Baly JS (1862) Description of new genera and species of Phytophaga. *Journal of Entomology* 1: 451–459
- Baly JS (1874) Catalogue of the phytophagous Coleoptera of Japan, with descriptions of species new to science. Part 2. *Transactions of the Entomological Society of London* 2: 161–217
- Döberl M (2010) Subfamily Alticinae. Pp. 491–563 in: Löbl, I. & Smetana, A. (eds.) *Catalogue of Palaearctic Coleoptera*. Volume 6. Apollo Books, Stenstrup
- Chen S, Wang, S (1980) New genera and species of Chinese Alticinae. *Entomotaxonomia* 2: 1–25
- Gruev B (1981) New data about some Chrysomelid beetles from China with a description of a new species of *Psylliodes* Latreille (Col., Chrysomelidae). *Entomological Review of Japan* 35: 71–76
- Jacoby M (1885) Descriptions of the phytophagous Coleoptera of Japan obtained by Mr. George Lewis during his second journey, from February 1880 to September 1881. – Part II. Halticinae and Galerucinae. *Proceedings of the Scientific Meetings of the Zoological Society of London*: 719–755
- Kimoto S (1970) Notes on the Chrysomelidae from Taiwan IV. *Kontyû* 38: 205–221
- Kimoto S, Takizawa H (1994) Leaf beetles (Chrysomelidae) of Japan. Tokai University Press, Tokyo, 539 pp.
- Kimoto S, Takizawa H (1997) Leaf beetles (Chrysomelidae) of Taiwan. Tokai University Press, Tokyo, 581 pp.
- Komiya Y (2006) Studies on the genus *Pseudoliprus* (Coleoptera, Chrysomelidae, Alticinae) in Taiwan, with descriptions of a new genus and four new species. *Japanese Journal of Systematic Entomology* 12: 1341–1160
- Madar J (1960) Zur Frage der zoogeographischen Verbreitung der *Chaetocnema concinnicollis* Baly mit Beschreibung zweier neuen Halticinen-Formen. *Mushi* 33: 47–49
- Medvedev LN (2006) To the knowledge of Chrysomelidae (Coleoptera) described by V. Motschulsky. *Russian Entomological Journal* 15(4): 409–417
- Medvedev LN (2009) Alticinae of Indochina. KMK Scientific Press, Moscow
- Motschulsky V (1858) Insectes des Indes orientales, 11^{ème} Série. *Études Entomologiques* 7: 20–122
- Motschulsky V (1866) Essai d'un catalogue des insectes de l'île de Ceylan. Supplément. *Bulletin de la Société Impériale des Naturalistes de Moscou* 39: 393–446
- Scherer G (1969) Die Alticinae des Indischen Subkontinentes (Coleoptera – Chrysomelidae). *Pacific Insects Monographs* 22: 1–251
- Scherer G (1982) Erichson-Typen im Zoologischen Museum Berlin. *Deutsche Entomologische Zeitschrift* 29: 479–481
- Takizawa H (2005) A revision of the genus *Psylliodes* Latreille in Japan (Chrysomelidae: Alticinae). *Insecta Matsumarana* (n. s.) 62: 175–185

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