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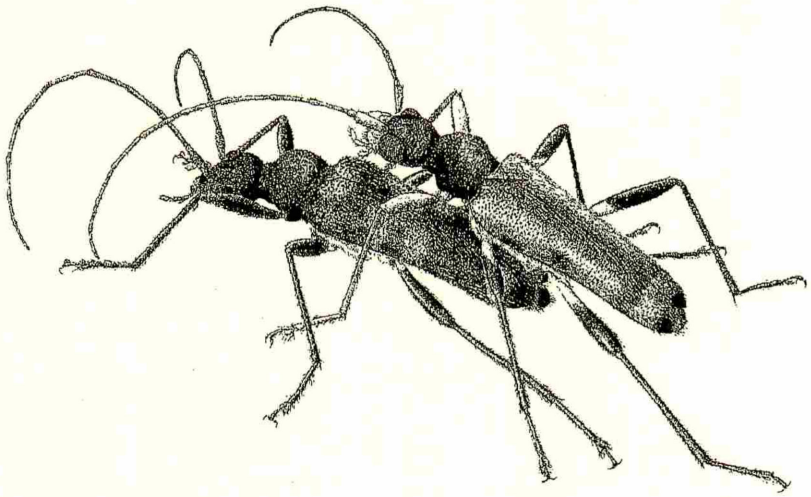

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Chrysomelidae of Sakhalin I

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Abstract An updated list of Chrysomelidae of Sakhalin is given. Part 1 includes four subfamilies of Donaciinae, Clytrinae, Cryptocephalinae, Chrysomelinae and records of 53 species from which 13 species are recorded from there for the first time. New combination, *Gonioctena honshuensis sachalinensis* L.MEDVEDEV, is established.

Key words Sakhalin, Chrysomelidae, Donaciinae, Clytrinae, Cryptocephalinae, Chrysomelinae

Two lists of chrysomelid beetles of Sakhalin exist by now and both of them are almost 30 years old. One list was composed by TAKIZAWA (1971) on the base of quite comprehensive explorations of Japanese entomologists during Karafuto (1905-1945) that occupied large part of Sakhalin southward 50°n. l. This list includes 69 species, but collecting places were indicated in shows former Japanese names which now disappeared from the maps. The second list independently was composed by MEDVEDEV (1972), but was published in such obscure source that it is very hard to find it even in Russia. This list includes 83 species and was based on remaining materials of Japanese entomologists and materials collected by Russian collectors in 1950-60-ies mostly in the environs of Yuzhno-Sakhalinsk and in a few points of Southern Sakhalin. Several new taxa of leaf-beetles were described from Sakhalin later (MEDVEDEV, 1973a). In 1978 for the purpose of nomenclatural unification, MEDVEDEV (1978) published special work and revised several taxa from Sakhalin and Kurile Islands described by Japanese authors and his own, and enumerated the total figure of 92 species for Sakhalin. And this figure remained almost unchanged (94 species) in the recent key to chrysomelids of the Russian Far East (MEDVEDEV, 1992).

In 1992, Yuri MIKHAILOV carried out entomological expedition to Sakhalin from mid-June till the end of August. The majority of time he spent in "Poronajsky" nature reserve (occupies Terpenija Peninsula and adjacent territory) and the results on Coleoptera were later published including chrysomelids (MIKHAILOV, 1996). His collections were also made around Yužhno-Sakhalinsk, at cape Slepikovskogo and along eastern coast of Kril'on Peninsula from Aniva to cape Kril'on. Numerous materials collected in 1991-1994 were amiably put at our disposal by Anatory BASARUKIN, local zoologist in Yuzhno-Sakhalinsk (Unfortunately, he tragically died in 1995). These materials proved to be unique as these were collected not only in the south but

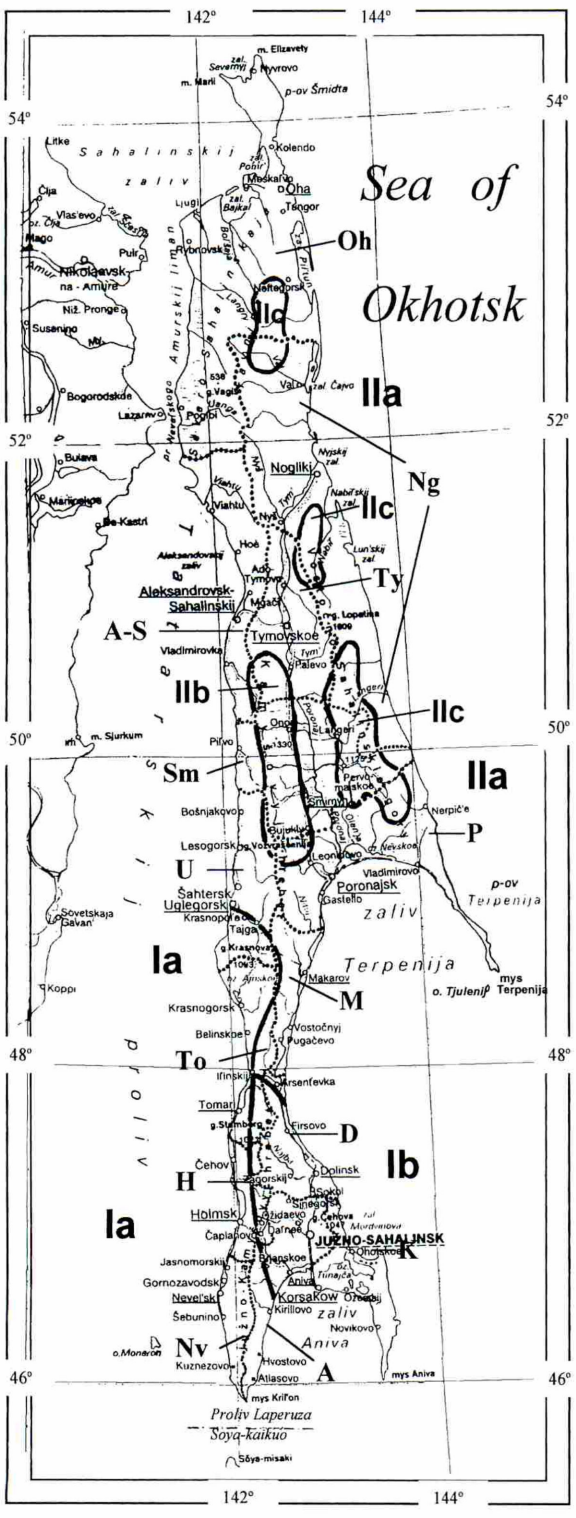

Fig. 1. Map of Sakahlin with zoogeographic units(thick lines; after KRENTZOV, 1948, 1965) and administrative districts (pointed line)

also in the extreme north and along NE coast. Chrysomelids from these places as well as from Terpenija Peninsula were firstly surveyed by specialists. And this made it possible to us add to the list more than 20 species not recorded from Sakhalin previously (some Alticinae are not yet determined).

There is always a problem of different treatment of some taxa of Sakhalin fauna: Russian entomologists compare them mostly with continental specimens and Japanese colleagues mostly with Japanese ones (MEDVEDEV, 1978). The best way of solving this problem is collaboration and this paper is an example. Masakazu HAYASHI revised Donaciinae using material from Sakhalin, Siberia and Japan and solved several problems remaining unclear till this paper.

In this list we use double indication for every species: zoogeographical district and administrative district (see Fig.1) for more detailed mapping. This also exclude misunderstanding of what Southern Sakhalin really is. It is not southward 50°n.l. as former Karafuto (as TAKIZAWA (1971) treated) but according to zoogeographical border (KURENTZOV, 1965). Also in the list findings after TAKIZAWA (1971) marked with one asterisk (*) and for former Japanese locality names are given Russian equiva-lents; findings after L. MEDVEDEV (1972) marked with two asterisks (**). If material in our collection is from the same place as in the mentioned sources it is unmarked. Species firstly recorded from Sakhalin are marked with "+". Date of collection

and collector's name are given only for such species. The determination of majority of them was proved by Prof. I. K. LOPATIN (Minsk, Byelorussia) and we acknowledge to him. If not indicated otherwise the material is preserved in the collection of Yuri MIKHAILOV (Yekaterinburg). We wish to express our special thanks to Mr. Shigehiko SHIYAKE (OMNH) and Dr. Masahiro ÔHARA (SEHU) for allowing accesses to the referred materials.

Abbreviations of depositories:

OMNH - Osaka Museum of Natural History, Osaka, Japan
SEHU - Systematic Entomology, Faculty of Agriculture, Hokkaido University, Sapporo, Japan (same as "the Entomological Institute, Hokkaido University" by Takizawa, 1971).

Abbreviations of localities (also on Fig. 1):

Zoogeographic units: I - Province of South Sakhalin and South Kurile Islands (Amur fauna) with districts; Ia - South-Western Sakhalin; Ib - South-Eastern Sakhalin; II - Sakhalin province with districts; IIa - Northern flat Sakhalin; IIb - Kamyshovyi mt. range; IIc - Mountain ranges of Eastern Sakhalin.

Administrative districts (from south to north, centers underlined): Nv - Nevel'skij; A + Ju-S - Anivskij and Juzno-Sahalinskij; K - Korsakowskij; H - Holmskij; D - Dolinskij; To - Tomarinskij; M - Makarovskij; U - Uglegorskij; P - Poronajskij; Sm - Smirnyhovskij; Ty - Tymovskij; A-S - Aleksandrovsk-Sahalinskij; Ng - Noglikskij; Oh - Ohinskij.

All names are given in Latin transliteration. Meaning of transliterated geographical terms:g., gora - mountain; hrebet - mt. range; liman - lagoon; m., mys - cape; oz., ozero - lake; p-ov, poluostrov - peninsula; pr., proliv - strait; ravnina - plain; zal., zaliv - bay, gulf.

Annotated list

Subfamily **Donaciinae**

1. *Donacia sparganii gracilipes* JACOBY, 1885

Donacia sparganii gracilipes: MEDVEDEV (1972, p. 97; 1978, p. 83; 1992, p. 545)

Record: Ib: K: 11♂♂10♀♀, Okhotskoe, 24-26. VII. 1990, O. TOMINAGA leg. (OMNH); Ju-S**; IIa: Oh: zal. Pil'tun

Note: *Donacia gracilipes* JACOBY was assigned to subspecies of *Donacia sparganii* AHRENS by MEDVEDEV (1978).

2. *Donacia aquatica* (LINNAEUS, 1758)

Donacia aquatica: MEDVEDEV (1972, p. 97; 1992, p. 545)

Record: Ib: Ju-S**

3. ***Donacia vulgaris*** ZSCHACH, 1788

Donacia vulgaris: MEDVEDEV (1972, p. 97; 1992, p. 546)
Record: Ib: Ju-S**

4. ***Donacia splendens*** JACOBSON, 1894

Donacia obscura splendens: MEDVEDEV (1972, p. 97; 1992, p. 546)
Record: Ib: Ju-S**; IIa: Oh: zal. Pil'tun

Note: *Donacia obscura* var. *splendens* JACOBSON was assigned to subspecies of *D. obscura* by MEDVEDEV (1973b, 1982). *D. splendens* resembles *D. obscura*, but they differs from each other in shape of median process of endophallus (HAYASHI, in review) . We recognized the name of *splendens* elevated from subspecies to species rank.

5. ***Plateumaris sericea sibirica*** (SOLSKY, 1872)

Plateumaris sericea: TAKIZAWA (1971, p. 172)
Plateumaris sericea sibirica: MEDVEDEV (1972, p. 97; 1992, p. 546)
Record: Ia: H: mys Slepikovskogo; Ib: K: Korsakow**; 39♂♂19♀♀, Okhotskoe, 25-26. VII. 1990, O. TOMINAGA leg. (OMNH); oz. Tunajca; A: Novoalexandrovsk**; IIa: M: 1♀, Zaozernaja (Kasiho)*, 10. VII. 1933, UCHIDA, OKADA, SAWAMOTO leg. (SEHU)

6. + ***Plateumaris shirahatai*** KIMOTO, 1971

Record: Ib: K: 5♂♂2♀♀, Ohotskoe, 25-26. VII. 1990, O. TOMINAGA leg. (OMNH)

7. ***Plateumaris weisei*** (DUVIVIER, 1885)

Plateumaris obsoleta: MEDVEDEV (1972, p. 97)
Plateumaris sachalinensis MEDVEDEV, 1973a, p.876;— MEDVEDEV (1978, p. 83; 1992, p. 547)
Plateumaris weisei: MEDVEDEV (1972, p. 98; 1992, p. 547)
Record: Ib: Ju-S**

Note: *P. sachalinensis* MEDVEDEV was recognized to be synonym of *P. wesei* by ASKEVOLD (1991).

8. ***Plateumaris amurensis*** WEISE, 1898

Plateumaris consimilis: TAKIZAWA (1971, p. 172);— MEDVEDEV (1978, p. 83)
Plateumaris amurensis: MEDVEDEV (1992, p. 547)
Record: K: 1♂, Solovjevka (Itinosawa)*, 1922, MATSUMURA leg. (SEHU)

Note: *P. amurensis* was recognized to be synonym of *P. wesei* (DUVIVIER) by ASKEVOLD (1991). However, they differs from each other in several characters (e. g. MEDEVEDEV, 1992).

Subfamily **Clytrinae**

9. + ***Labidostomis amurensis*** HEYDEN, 1884

Record: IIa; Ty; 1 ♂, 10 km W Jasnoe, 5. VII.1993, A. M. BASARUKIN leg.; Oh; zal. Pil'tun; 1 ♂, tributary of river Paromai, 25. VII. 1991, A. M. BASARUKIN leg.

10. ***Smaragdina (Monrosiana) aurita nigrocyanea*** MOTSCHULSKY, 1860

Smaragdina aurita: TAKIZAWA(1971, p. 172)
Smaragdina aurita nigrocyanea: MEDVEDEV (1972, p. 98; 1978, p. 83; 1992, p. 552)
Record: Ib; A; ?(Takinosawa)*; Novoalexandrovsk**; Ju-S**

11. + ***Smaragdina (Monrosiana) aurita hammarstroemi*** JACOBSON, 1901

Record: IIa; Ty; 1 ♀, Tym' river, Uskovo, 1. VII. 1993, A. M. BASARUKIN leg.

Note: Only previous subspecies was considered to inhabit Sakhalin while this one only distributed in continental Far East (MEDVEDEV, 1978). But our finding corresponds well the position of *Smaragdina aurita hammarstroemi* in the current key: labrum and mandibulae black, smaller than previous subspecies (MEDVEDEV, 1992) and differs from *Smaragdina aurita nigrocyanea* from South Kurile Isls.

Subfamily **Cryptocephalinae**

12. + ***Pachybrachis hieroglyphicus*** (LAICHARTING, 1781)

Record: IIa: Oh: zal. Pil'tun: 3 ♂ ♂4 ♀ ♀, tributary of river Paromai, 5-20.VII.1991, A. M. BASARUKIN leg.; 1 ♂, river Langry, 30. VII. 1991, A. M. BASARUKIN leg.

13. + ***Pachybrachis amurensis*** L.MEDVEDEV, 1973a

Record: IIa; Oh; zal. Pil'tun; 1 ♂3 ♀ ♀, tributary of river Paromai, 20 & 30. VII. 1991, A. M. BASARUKIN leg.; 1 ♂, Ljugi, 30. VIII. 1992, A. M. BASARUKIN leg.; 1 ♀, oz. Giljako-Abunak, 14.VIII.1991, A. M. BASARUKIN leg.

14. ***Cryptocephalus (Asionus) hirtipennis*** FALDERMANN, 1835

Cryptocephalus yamadai: TAKIZAWA (1971, p. 173)
Cryptocephalus hirtipennis: MEDVEDEV (1972, p. 98; 1978, p. 84; 1992, p. 557); MIKHAILOV (1996, p. 389)
Record: Ib; Ju-S; g.Čehova; D: Novoalexandrovsk**; IIa: P: Sobolinoe; Sm: Smirnyh (Keton)*; Ty: Jasnoe; Oh: zal. Pil'tun

15. ***Cryptocephalus*** (***Homalopus***) ***coryli*** (LINNAEUS, 1758)

Cryptocephalus coryli: MEDVEDEV (1972, p. 99; 1992, p. 558)
Record: Ib: Ju-S**

16. ***Cryptocephalus*** (s.str.) ***ochroloma*** GEBLER, 1830

Cryptocephalus ochroloma: TAKIZAWA (1971, p. 173); — MEDVEDEV (1992, p. 558)
Record: IIa; Sm; Smirnyh (Keton)*; Ty; Jasnoe; Tym' river; Uskovo

17. ***Cryptocephalus*** (s.str.) ***nitidulus*** FABRICIUS, 1787

Cryptocephalus approximatus: TAKIZAWA (1971, p. 173; 1975, p. 426); — MEDVEDEV (1992, p. 558)
Record: Ib; A; Novoalexandrovsk (Konuma)*

Note: The only finding was recorded by TAKIZAWA (1971) firstly as *C. approximatus* but after revision the same author corrected it to *C. nitidulus* (TAKIZAWA, 1975). The most interesting that *Cryptocephalus nitidulus* was known before from Europe and West Siberia and from the Far East recorded only from Japan and Sakhalin.

18. ***Cryptocephalus*** (s.str.) ***splendens*** KRAATZ, 1879

Cryptocephalus splendens : TAKIZAWA (1971, p. 173); — MEDVEDEV (1972, p. 99; 1992, p. 558)
Record: Ia: U: Uglegorsk**; Ib: A: Novoalexandrovsk (Konuma)*; K: Korsakow (Otomari)*, Solovjevka (Itinosawa)*, ? Lesnoe (Otiho)*; oz. Tunajca (Tomunai)* ; Ju-S; IIa: Ty: Jasnoe

19. ***Cryptocephalus*** (s.str.) ***sexpunctatus*** (LINNAEUS, 1758)

Cryptocephalus sexpunctatus: TAKIZAWA (1971, p. 173); — MEDVEDEV (1972, p. 99; 1992, p. 559); — MIKHAILOV (1996, p. 389)
Record: Ia: U: Uglegorsk**; Ib: A: Novoalexandrovsk; Ju-S**; K: Utesnoje; P: Terpenija Peninsula, Kotikovo

20. ***Cryptocephalus*** (s.str.) ***krutovskyi triangulifer*** JACOBSON, 1926

Cryptocephalus karafutonis: TAKIZAWA (1971, p. 175)
Cryptocephalus triangulifer: MEDVEDEV (1978, p. 84)
Cryptocephalus krutovskyi triangulifer: MEDVEDEV (1972, p. 99; 1992, p. 560)
Record: IIa: Oh: zal. Pil'tun; Ng: Nabil'skij zal.: Katangli; ?Nyš (Adatuimi)*

21. + ***Cryptocephalus*** (s.str.) ***luridipennis luridipennis*** SUFFRIAN, 1854

Record: IIa: Oh: zal. Pil'tun: tributary of river Paromai, 20 & 30. VII. 1991, 1 ♂1♀, A. M. BASARUKIN leg.

Note. *Cryptocephalus luridipennis pallescens* KRAATZ was recently recorded from Japan and distinguished from closely related *Cryptocephalus instabilis* BALY (TAKIZAWA et al., 1998). This also helped us to check our determination and extremely melanized dorsal colour pattern proves nominotypical subspecies.

22. ***Cryptocephalus*** (s.str.) ***janthinus*** GERMAR, 1824

Cryptocephalus janthinus: MEDVEDEV (1972, p. 99; 1992, p. 561)

Record: Ib: A: Novoalexandrovsk; Ju-S**

23. ***Cryptocephalus*** (s.str.) ***caerulescens*** C.SAHLBERG, 1839

Cryptocephalus matsumurai: TAKIZAWA (1971, p. 173)

Cryptocephalus caerulescens: MEDVEDEV (1972, p. 99; 1978, p. 84; 1992, p. 561)

Record: Ib: A: Novoalexandrovsk**; K: Korsakow (Otomari)*; Ju-S: g. Čehova; D: Dolinsk (Otiai)*; Sm: Smirnyh (Keton)*

24. ***Cryptocephalus*** (s.str.) ***parvulus*** MULLER, 1776

Cryptocephalus obliquostriatus: TAKIZAWA (1971, p. 173)

Cryptocephalus parvulus: MEDVEDEV (1972, p. 99; 1978, p. 84; 1992, p. 561); MIKHAILOV (1996; p. 389)

Record: Ib: A: Novoalexandrovsk; Ju-S (Toyohara)*; IIa: P: Trudovoe; Oh: zal. Pil'tun; Ljugi

25. ***Cryptocephalus*** (***Burlinius***) ***confusus*** SUFFRIAN, 1854

Cryptocephalus punctiger: TAKIZAWA (1971, p. 173)

Cryptocephalus confusus: MEDVEDEV (1972, p. 99; 1978, p. 84; 1992, p. 561)

Record: Ia: Nv: Nevel'sk (Honto)*; Ib: A: Novoalexandrovsk; K: Korsakow (Otomari)*; oz. Tunajca (Tomunai)*; Ju-S: g. Čehova; D: Dolinsk**; IIa: Oh: zal. Pil'tun; Ljugi, oz. Sladkoe; Ng: Katangli

26. ***Cryptocephalus*** (***Burlinius***) ***bilineatus*** (LINNAEUS, 1758)

Cryptocephalus bilineatus: TAKIZAWA (1971, p. 173); — MEDVEDEV (1972, p. 99; 1992, p. 562)

Record: Ia: Nv**; H: mys Slepikovskogo; Ib: K: oz. Tunajča (Tomunai)*; ?Lesnoe (Otiho)*; Ju-S (Toyohara)*; IIa: M: Gornoe (Tirie)*; Ty: Jasnoe; Oh: zal. Pil'tun

27. ***Cryptocephalus*** (***Burlinius***) ***nigrofasciatus*** JACOBY, 1885

Cryptocephalus nigrofasciatus: TAKIZAWA (1971, p. 173) —; MEDVEDEV (1992, p. 562)

Record: Exact localities unknown.

28. *Cryptocephalus* (*Burlinius*) *frontalis* MARSHAM, 1802

Cryptocephalus frontalis: MEDVEDEV (1972, p. 99; 1992, p. 562)
Record: Ib: Ju-S**; IIa: Oh: Ljugi, oz. Sladkoe; zal. Pil'tun

29. +*Cryptocephalus* (*Burlinius*) *labiatus* (LINNAEUS, 1761)

Record: Ia: H: 1 ♂, mys Slepikovskogo, 6-8.VII.1990, A. M. BASARUKIN leg.; To: 1 ♀, oz. Baklanje, 1-3.VIII.1994 A. M. BASARUKIN leg.; IIa: Ng: 2 ♂♂, Katangli, 9-14.VIII.1992, A. M. BASARUKIN leg.; Oh: 1 ♂1 ♀, between Moskal'vo and Nekrasovka, 27. VIII. 1993, A. M. BASARUKIN leg.

30. *Cryptocephalus* (*Burlinius*) *exiguus amiculus* BALY, 1873

Cryptocephalus kiyosatonus: TAKIZAWA (1971, p. 173)
Cryptocephalus exiguus amiculus: MEDVEDEV (1972, p. 99; 1978, p. 84; p.1992, p. 562)
Record: Ia: Nv: Zavety Il'icha (Tarantomari)*; H: Čehov**; Ib: A: Novoalexandrovsk (Konuma)*; K: Korsakow (Otomari)*, Solovjevka (Itinosawa)*, ? Lesnoe (Otiho)*; oz. Tunajca (Tomunai)*; Ju-S (Toyohara)*; D: Starodubskoe (Sakaehama)*; Sokol (Otani)*; IIa: M: Zaozernaja (Kasiho)*; Sm: Smirnyh (Keton)*; Ty: g.Lopatina

31. + *Cryptocephalus* (*Burlinius*) *flavoscutellaris* L. MEDVEDEV, 1973a

Record: IIa: Oh: 1 ♀, Ljugi, oz. Sladkoje, 27. VIII. 1992, A. M. BASARUKIN leg.

32. *Melixanthus pumilio* (SUFFRIAN, 1854)

Cryptocephalus pumilio: TAKIZAWA (1971, p. 173); — MEDVEDEV (1972, p. 99)
Melixanthus pumilio: MEDVEDEV (1992, p. 562)
Record: Ia: U: Krasnopol'e**; Ib: Ju-S (Toyohara)*; A: Novoalexandrovsk**
Note: Combination was established by MEDVEDEV (1982).

Subfamily **Chrysomelinae**

33. *Chrysolina* (*Lithopteroides*) *exanthematica exanthematica* WIEDEMANN, 1821

Chrysolina exanthematica: MEDVEDEV (1972, p. 99; 1992, p. 566)
Record: Ib: A: Novoalexandrovsk**

34. *Chrysolina* (*Allohypericia*) *koltzei brunneipennis* (MATSUMURA, 1911)

Chrysolina brunneipennis: TAKIZAWA (1971, p. 173)
Chrysolina koltzei brunneipennis: MEDVEDEV (1972, p. 100; 1978, p. 84; 1992, p. 566)

Record: Ib: A: Novoalexandrovsk**; K: Korsakow (Otomari)*; Ju-S (Toyohara)*; D: Dolinsk (Otiai)*; Firsovo (Odasamu)*; Starodubskoe (Sakaehama)*; Sokol (Otani)*; IIa: Sm: Pil'vo (Pileo)*; Ty: Tymovskoe (Tuimohu)*; Kirovskoe (Ruikohusukoe)*

35. + *Chrysolina* (s.str.) *staphylaea* (LINNAEUS, 1758)

Record: IIa: Ng: Nabil'skij zal.: 1 ♂, Katangli, 10. VIII. 1992, A. M. BASARUKIN leg.

36. *Chrysolina* (*Erythrochrysa*) *polita* (LINNAEUS, 1758)

Chrysolina polita: MEDVEDEV (1992, p. 566)

Record: Exact localities unknown

37. *Chrysolina* (*Anopachys*) *aurichalcea aurichalcea* (GEBLER, 1825)

Chrysolina aurichalcea: TAKIZAWA (1971, p. 173); MEDVEDEV (1972, p. 99)
Chrysolina aurichalcea aurichalcea: MEDVEDEV (1992, p. 566)

Record: Ia: Moneron Island (Kaiba-to)*; Nv: Mys Kril'on**; Gornozavodsk (Tokonbo)*; Ib: A: Novoalexandrovsk; K: Solovjevka (Itinosawa)*; oz. Tunajča; Ju-S (Toyohara)*; D: Sokol (Otani)*; IIa: M: Pugacevo; U: Sahtersk**; Ty: Tymovskoe (Tuimohu)*

Note: The original description was prepared by GEBLER and included in the paper of MANNERHEIM, later the former pointed out his authorship. However all later authors attributed the authorship to MANNERHEIM, but the real author is GEBLER (BIEN'KOWSKI, 1998).

38. *Chrysolina* (*Anopachys*) *lineigera* (JACOBSON, 1901)

Chrysolina watanabei: TAKIZAWA (1971, p. 173)
Chrysolina lineigera: MEDVEDEV (1992, p. 567)

Record: Ib: A: Novoalexandrovsk; K: Solovjevka (Itinosawa)*; Utesnoe

39. *Chrysolina* (*Hypericia*) *difficilis yezoensis* (MATSUMURA, 1911)

Chrysolina yezoensis: TAKIZAWA (1971, p. 173)
Chrysolina difficilis yezoensis: MEDVEDEV (1978, p. 84; 1992, p. 567)

Record: Ib: A: Novoalexandrovsk (Konuma)*; D: Dolinsk (Otiai)*; Sokol (Otani)*

Note: *Chrysolina yezoensis* was assigned to subspecies of *Chrysolina difficilis* by MEDVEDEV (1978) .

40. *Chrysolina* (*Bechynea*) *nikolskyi* (JACOBSON, 1898)

Chrysolina nikolskyi: TAKIZAWA (1971, p. 173); — MEDVEDEV (1972, p. 100; 1978, p. 84; 1992, p. 567)

Record: Ia: Nv: Gornozavodsk**; Zavety Il'icha (Tarantomari)*; H: âehov (Noda)*; Novoselovo (Kurasi)*; Čaplanovo; To: Krasnogorsk**; Ib: A: Kril'on Peninsula: Hvostovo; K: Solovjevka (Itino-

sawa)*; Ju-S; D: Dolinsk (Otiai)*;Vzmorje (Horo)*; Sokol (Otani)*; IIa: M: Zaozernaja (Kasiho)*; Pugačevo (Mototomari)*; P: Gastello (Nairo)*

41. + *Phaedon concinnus* STEPHENS, 1834

Record: IIa: Ty: 2 ♀♀, Uskovo, 1. VII. 1993, A. M. BASARUKIN leg.

42. *Prasocuris phellandrii* (LINNAEUS, 1758)

Prasocuris phellandrii: TAKIZAWA (1971, p. 174); — MEDVEDEV (1972, p. 100; 1992, p. 569)
Record: IIa: M: Makarov (Siritoru)*

43. + *Sternoplatys fulvipes fulvipes* MOTSCHULSKY, 1860

Record: Oh: 1♀, Ljugi, oz. Sladkoe, 27-31. VIII. 1992, A. M. BASARUKIN leg.

44. + *Phratora* (*Chaeroceta*) *vulgatissima* (LINNAEUS, 1758)

Record: A: 4 ♂♂2 ♀♀, Novoalexandrovsk, 1. IX. 1994, A. M. BASARUKIN leg.

45. *Phratora* (s.str.) *obtusicollis* MOTSCHULSKY, 1860

Phratora inhonesta: TAKIZAWA (1971, p. 174)
Phratora obtusicollis: MEDVEDEV (1972, p. 100; 1978, p. 85; 1992, p. 570)
Record: Ia: Nv: Zavety Il'icha (Tarantomari)*; U: Uglegorsk**; Ib: A: Novoalexandrovsk (Konuma)*; Ju-S (Toyohara)*; D: Dolinsk (Otiai)*;Vzmorje (Horo)*; Sokol (Otani)*; IIa: M: Zaozernaja (Kasiho)*; P: Poronajsk (Horonai-gawa)*

46. *Phratora* (s.str.) *laticollis* (SUFFRIAN, 1851)

Phratora laticollis: MEDVEDEV (1972, p. 100; 1992, p. 571); — MIKHAILOV (1996, p.@)
Record: IIa: U:Šahtersk**; P: Trudovoe; Sobolinoe

47. *Paropsides soriculatus* SWARTZ, 1808

Paropsides duodecimpustulata: TAKIZAWA (1971, p. 174); — MEDVEDEV (1972, p. 100)
Paropsides soriculatus: MEDVEDEV (1992, p. 577)
Record: Ia: Nv: Mys Kril'on**; Ib: Ju-S (Toyohara)*; D: Sokol (Otani)*; IIa: Ng: ?Nogliki (Nuio)*

48. *Gonioctena viminalis rufus* (KRAATZ, 1879)

Gonioctena viminalis: TAKIZAWA (1971, p. 175)
Gonioctena viminalis rufus: MEDVEDEV (1972, p.101; 1978, p. 85; 1992, p. 572)
Record: Ib: A: Novoalexandrovsk**; IIa: Ty: Jasnoe; Ng: ?Nyš (Adatuimi)*

49. *Gonioctena linnaeana bergrothi* (JACOBSON, 1901)

Gonioctena linnaeanus: MEDVEDEV (1972, p. 101)
Gonioctena linnaeana bergrothi: MEDVEDEV (1992, p. 574)
Record: Ib: A: Novoalexandrovsk **; Vysokoe

50. +*Gonioctena flavicornis* (SUFFRIAN, 1851)

Record: Ib: A: 2♂♂, river Ljutoga, Vysokoe, 22. VII. 1993, A. M. BASARUKIN leg.; Ju-S: 1♂, environs of Yuzhno-Sakhalinsk, 15. VII. 1991, A. M. BASARUKIN leg.; IIa: Ty: 1♂2♀♀, Jasnoe, 5. VII. 1993, A. M. BASARUKIN leg.; Ng: 1 ♂, Nabil'skij zal., Katangli, 10. VIII. 1992, A. M. BASARUKIN leg.

51. *Gonioctena honshuensis sachalinensis* L. MEDVEDEV comb. nov.

Gonioctena chujoi MEDVEDEV, 1966, p. 41; — TAKIZAWA (1971, p. 173)
Gonioctena chujoi sachalinensis MEDVEDEV, 1968, p. 84; — MEDVEDEV (1972, p.@; 1992, p. 574); — MIKHAILOV (1996, p. 389)

Record: Ib: A: Novoalexandrovsk**; K: Utesnoje; Ju-S; D: Vzmorje (Horo)*; IIa: P: Terpenija peninsula: Kotikovo; Sobolinoe; Ty: Tymovskoe (Tuimohu)*; Jasnoe; g. Lopatina; Ng: Nabil'skij zal.: Katangli

Note: *Gonioctena chujoi* L. MEDVEDEV, 1966 described from South Kurile Isls. proved to be synonym of *G. honshuensis* NAKANE, 1963 (KIMOTO, 1989). But later two subspecies of the former species were described: *G. chujoi sachalinensis* L. MEDVEDEV and *G. chujoi ochotense* L. MEDVEDEV (IVLIEV et al., 1968: 84). We studied original descriptions of *G. honshuensis* (NAKANE, 1963: 19), *G. chujoi* (MEDVEDEV, 1966: 41-42) and two subspecies of the latter species. Also we studied series of *G. honshuensis* from Nagano Pref., Japan (M. HAYASHI leg.) and series of *G. chujoi sachalinensis* from East Sakhalin (Y. MIKHAILOV leg.) and South Sakhalin (A. BASARUKIN leg.) and came to the conclusion to establish new combination: *Gonioctena honshuensis sachalinensis* L. MEDVEDEV for the specimens from Sakhalin.

At the same time, distinctive features from original description (IVLIEV et al, 1968): smaller size and shorter aedeagus with broader apical process, proved to be not operating. But we discover the set of features which really distinguish two subspecies.

G. honshuensis honshuensis NAKANE: apical angles of middle and hind tibiae produced in long and acute spines; femora and tibiae mostly black; frons black; black patches on pronotum well developed, sometimes enlarged and confluent; elytra mostly with spots.

G. honshuensis sachalinensis L. MEDVEDEV: apical angles of middle and hind tibiae produced in short and blunted spines; femora and tibiae yellow; frons yellow; black patches on pronotum small or almost indistinct; elytra mostly without spots.

According to original description (MEDVEDEV, 1966), specimens from South Kurile Isls. are somewhat intermediate between two subspecies but closer to nominotypical one .

52. *Gonioctena arctica* MANNERHEIM, 1853

Gonioctena springlovae: TAKIZAWA (1971, p. 173)

Gonioctena affinis: MEDVEDEV (1972, p. 101; — 1978, p. 85; 1992, p. 575); — MIKHAILOV (1996, p. 389)

Record: Ib: A: Kril'on Peninsula, Hvostovo; Novoalexandrovsk**; Ju-S**; D: Vzmorje (Horo)*; IIa: P: Sobolinoe; Sm: Bujukly (Hoe)*; Ty: Jasnoe

Note: GUSTAFSSON (1995) recognized that *G. affinis* is a junior subjective synonym of *G. arctica*.

53. *Gonioctena gracilicornis* (KRAATZ, 1879)

Gonioctena gracilicornis: MEDVEDEV (1972, p. 101; 1992, p. 575)

Record: Ib: A: Novoalexandrovsk**; Ju-S**

要　　約

Y. E. ミハイロフ・林　成多：サハリン産のハムシ科目録，1．——その第一部として，Donaciinae，Clytrinae，Cryptocephalinae，Chrysomelinaeの4亜科，53 種を記録した．その中の13 種はサハリンからの初記録である．また，*Gonioctena chujoi* MEDEVEDEVの亜種として記載された*sachalinensis* MEDVEDEVを *Gonioctena honshuensis* NAKANEの亜種として 扱った．

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(To be continued)

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Notes on the genus *Dioedus* from Sulawesi, with Descriptions of Two New species (Coleoptera: Tenebrionidae: Phrenapatini)

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Abstract Two new species, *Dioedus utsunomiyai* sp. nov. and *D. michihikoi* sp. nov., are described from southern Sulawesi. A key to the species from Sulawesi is also given.

In the Sulawesian fauna, *Dioedus fruhstorferi* BREMER, 1995 is the only known species of the genus.

Recently two new species of *Dioedus* LECONTE, 1862 were found in Sulawesi through the collecting trip to the Island by ANDO, one of the authors. Both new species are very similar to *D. girardi* BREMER, 1995 from India, but clearly separated mainly by the structure of pronotum. The only known species, *D. fruhstorferi*, which was originally described on the basis of a single specimen was also collected plentifully. In the present paper, we would like to provide the descriptions of these new species, a note on the habitat of *D. fruhstorferi* and a key to the Sulawesian species of the genus *Dioedus*.

Two species have been described from the Philippines, *Dioedus impressicollis* GEBIEN, 1913 and *Dioedus schultzei* GEBIEN, 1913. Unfortunately, the fate of the types of these Philippine species is unknown. The types could not be traced by H. J. BREMER. However, according to the size and to descriptions it is improbable that these two Philippine species are identical with these two newly described Sulawesian species.

Before going further, the first author wishes to express his sincere gratitude to Prof. Dr. Nobuo OHBAYASHI and Assistant Prof. Dr. Masahiro SAKAI, College of Agriculture, Ehime University, for their continuous guidance.

The holotypes will be deposited in the Entomological Laboratory of Ehime University.

The abbreviation used herein are the same as those in ANDO's previous papers.

Dioedus utsunomiyai sp. nov.

(Figs. 1–2)

Female. Oblong, subparallel-sided, distinctly convex above; colour testaceous to dark yellow, ventral side, mouthparts and femora more or less paler, scutellum darker than the rest of body, antennae dark reddish (in most of the specimens, body entirely black when they were alive).

Head raised except for longitudinally depressed frons, devoid of neck constriction, with punctures coarse, moderate to rather dense, becoming enlarged posteriorly; clypeus weakly convex forwards, gently and arcuately produced at apex; fronto-clypeal suture rounded posteriad; genae distinctly convex, with outer margin moderately rounded; frons depressed, sloping forwards, with punctures coarser than the other portion of head. Eyes comparatively small, weakly convex laterad, IE/TD = *ca.* 3.51–3.64. Antennae short, sparsely pubescent, with pubescence on distal 4 segments long and dense. Ventral side of head behind buccal fissure coarsely and rather shallowly punctate. Terminal segment of maxillary palpus spindle-shaped. Mentum obtrapezoidal, roundly emarginate at apex, with a medio-longitudinal carina, distinctly depressed at sides of the carina. Submentum transversely pentagonal, finely punctate. Gula triangular, weakly convex, smooth; gular suture clear.

Pronotum quadrate, strongly convex, abruptly descendant laterally, widest at basal 1/6, PW/PL = *ca.* 1.36-1.46; punctures irregular, rather coarse and dense, becoming denser laterad, but finer and sparser than those in *D. girardi*; apical angles weakly produced forwards, nearly rectangular; basal angles obtuse, entirely rounded; apical margin straight or feebly arcuate forwards in median 2/3; lateral margins more or less reflexed, very narrowly bordered, gently divergent from base to the widest point, thence weakly rounded to the middle, and rather strongly narrowed forwards in apical half; basal margin weakly arcuate posteriad, finely bordered. Scutellum transversely oval, depressed, with surface smooth.

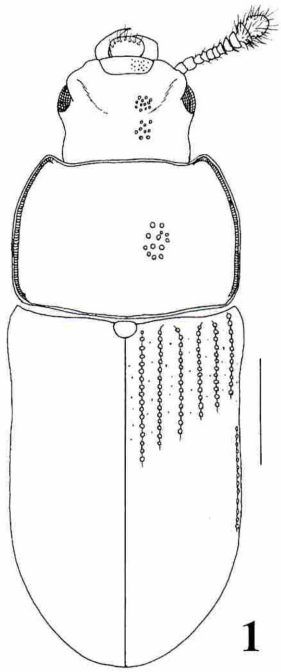
Elytra oblong or elongate, subparallel-sided, strongly convex, widest at about basal 2/5, EL/EW = *ca.* 1.35–1.56; lateral margins invisible from above, very narrowly bordered; striae deeply impressed, strial punctures large, dense and coarse, larger and much coarser than those in *D. girardi*, becoming slightly sparser and smaller in apical portion, interspace between them about half length of their diameter; intervals moderately convex, with fine and very sparse punctures along the middle (in *D. girardi* the punctures denser, distinctly arranged in row on each interval), 8th interval vertical and 9th undersurface (in *D. girardi* both 8th and 9th intervals vertical); elytral epipleuron broad, narrowed in basal 3/8, thence gradually broadened to apical 1/5, moderately or a little coarsely punctate.

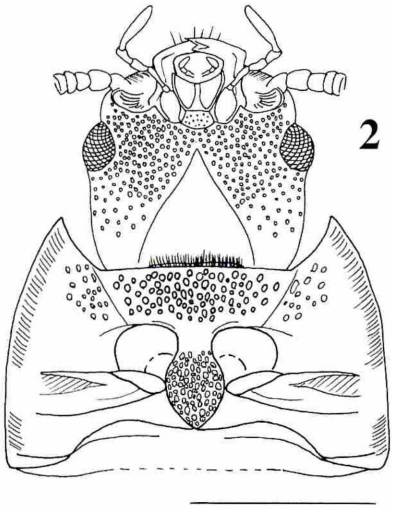
Prosternum long before procoxae, gently raised, hardly bordered at apex, densely covered with large rugoso-punctures; prosternal process guttiform, raised, slightly declined posteriorly and weakly pointed at apex, coarsely punctate and not bordered; propleuron ambiguously rugose, with large and fine punctures beside inner borders. Mesosternum ambiguously punctate, depressed at the posterior end. Mesepimeron much coarsely punctate. Metasternum flat on disc, excavate at the middle before apex, minutely and sparsely punctate on disc, coarsely and rather densely punctate on lateral portions; transverse sulci before metacoxae rudimental. Abdominal sternites strongly tapering towards apex, finely and moderately punctate though 5th sternite strongly and rather densely punctate; intercoxal process of 1st sternite acute-triangular; basal three sternites almost flat, 4th and 5th convex.

Legs short; femora robust; pro- and mesotibiae dilated towards apex, outer margin armed with 4 setae, of which the basalmost one is very small or vestigial; tarsi compactly articulate.

Length: 2.4–3.0 mm; width: 1.1–1.3 mm

Type series. Holotype: ♀, Puncak Palopo, C. of S. Sulawesi, 2. I. 2000, K. ANDO leg. Paratypes: 6 exs., same data as for the holotype; 6♀♀, ditto, 3. I. 2000, K. ANDO leg.; 3 exs., ditto, 3. I. 2000, Y. UTSUNOMIYA leg.; 1♀, Bulu Dua, alt. 720 m, S. Sulawesi, 3. I. 2000, K. ANDO leg.





Figs. 1–2, *Dioedus utsunomiyai* sp. nov.; 1, dorsal view; 2, ventral view of head and prothorax (Scale: 0.5 mm)

Notes. No male specimen was found, though nearly ten specimens were examined for sex by dissection.

This new species is very similar to *D. girardi* BREMER from India, but clearly separated from the latter by the characters in the following key.

1(2) Punctures on head much coarser; eyes moderate in size; clypeus depressed together with frons; outer margin of protibiae with 4 large spurs, in which the basalmost one is not minute; pronotum with lateral and basal borders strong, apical angles not produced, rounded and obtuse, apical margin weakly bisinuous in the middle, basal margin truncate; scutellum rounded, not transverse; elytra with strial punctures slightly denser, 9th interval vertical. Length: 2.89–3.43 mm; width: 1.175–1.45 mm. India. ..... *D. girardi* BREMER

2(1) Punctures on head much finer; eyes smaller; clypeus convex; outer margin of protibiae with 3 large and single small spur, in which the basalmost one is very minute; pronotum with lateral and basal borders weak, apical angles produced, almost rectangular, apical margin straight in middle, basal margin moderately rounded; scutellum transversely rounded; elytra with strial punctures slightly sparser, 9th interval faced to underside. Length: 2.4–3.0 mm; width: 1.1–1.3 mm. Sulawesi. ..... *D. utsunomiyai* sp. nov.

Etymology. The specific name is dedicated to Mr. Yasuhiro UTSUNOMIYA who also found this species at the same trip with the senior author.

Dioedus michihikoi sp. nov.

(Figs. 3–4)

Female. Oblong, subparallel-sided, convex above; colour yellow-brown, venter light yellow, scutellum darker than the rest of body, antennae reddish.

Head convex, distinctly depressed in the middle, coarsely and moderately punctate, with punctures minuter in anterior area, and larger and sparser than those in *D. girardi*; clypeus depressed, ascendant laterally, arcuately produced at apex; fronto-clypeal suture roundly engraved; genae distinctly convex, with outer margins evenly rounded (while in *D. girardi* parallel-sided briefly before eyes); frons depressed, with the depression broad triangular, reaching the middle of clypeus; vertex also depressed. Eyes rather large, roundly convex laterad, IE/TD = *ca.* 3.41. Antennae simple, terminal segment about 1.5 times as long as 10th; pubescence on distal 2 segments long and dense. Ventral side of head behind buccal fissure evenly and coarsely punctate except for smooth gular plate. Terminal segment of maxillary palpus lanceolate. Mentum obtrapezoidal, weakly emarginate at apex, evenly narrowed posteriad at sides, with a triangular longitudinal carina along midline, gently depressed at sides. Submentum transversely pentagonal, with some coarse punctures.

Pronotum quadrate, strongly convex, abruptly slanting laterally, widest at base, PW/PL = *ca.* 1.28; punctures fine and dense, and sparser than those in *D. girardi*; apical angles obtusely rounded, not produced forwards; basal angles obtuse, not making distinct angles; apical margin feebly notched at middle, weakly bisinuous; lateral margins narrowly and thickly bordered, subparallel-sided in basal half, and roundly narrowed forwards in apical half; basal margin neither produced nor bordered, weakly bisinuous in median 3/5. Scutellum oval, depressed, microscopically punctate.

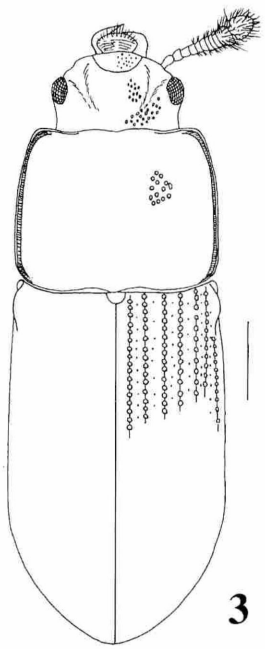
Elytra oblong, subparallel-sided, well convex, widest at about basal 2/5, EL/EW = *ca.* 1.56; lateral margins very narrowly bordered, invisible from above; striae deeply engraved, strial punctures moderate in size, irregular in density, larger and much coarser than those in *D. girardi*, and becoming sparser and slightly minuter apically; interspace between punctures nearly 0.5 to 0.7 times as long as the diameter of a puncture (in some striae the space more than the length of the diameter); intervals strongly convex, with sparse and minute aligned punctures in the middle, 9th faced downwards; elytral epipleuron narrow, slightly broadened posteriorly, finely punctate and covered with feeble rugosities.

Prosternum weakly raised, distinctly bordered at apex, sparsely and shallowly punctate; prosternal process linguiform, constricted anteriorly, steeply declined posteriorly behind coxae, bordered at sides and weakly pointed at apex, and finely and sparsely punctate; propleuron finely rugose, with large and spare punctures beside inner margins. Mesosternum moderately punctate. Mesepimeron coarsely punctate. Metasternum flat on disc, where the punctures are minute and dense, becoming much coarser and denser towards outer margins; transverse sulci before metacoxae weak but clear. Abdominal sternites narrow, raised medio-longitudinally, densely and irregularly punctate though 5th sternite coarsely punctate; intercoxal process of 1st sternite narrowlly triangular; basal three sternites almost flat; 4th sternite convex.

Pro- and mesotibiae dilated towards apex, outer margin of protibiae armed with 4 distinct and a single minute setae; tarsi rather slender.

Length: 3.6 mm; width: 1.5 mm

Holotype: ♀, Puncak Palopo, S. Sulawesi, 2. I. 2000, K. ANDO leg.



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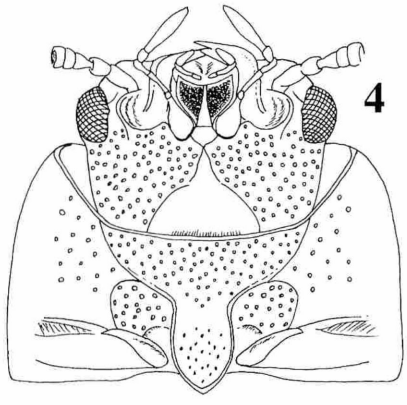

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Figs. 3–4, *Dioedus michihikoi* sp. nov.; 3, dorsal view; 4, ventral view of head and prothorax (Scale: 0.5 mm)

Notes. This species is also allied to *D. girardi* BREMER from India, but is apparently different from the latter by having the head more sparsely punctate, with median depression shallower; pronotum more sparsely punctate, not bordered at base, with apical and basal margin each bisinuous, lateral borders thicker (in the latter those are more flat and thinner); elytra with sparser strial punctures; elytral epipleuron narrower, finely punctate throughout and the surface uneven (while in the latter the surface smooth and the fine punctures are restricted along inner margins of anterior half); metasternum punctate even at middle; prosternum clearly bordered at apex.

Etymology. The specific name is dedicated to Mr. Michihiko ANDO, who aided us through the collecting in Sulawesi.

Dioedus fruhstorferi BREMER, 1995

Dioedus fruhstorferi BREMER, H., 1995: 49.

Specimens examined: 14 exs., Mt. Lompo Batang, S. C. Sulawesi, Indonesia, 25. XII. 2000, M. ANDO leg.; 23 exs., ditto, K. ANDO leg.

Notes. This species was discovered under bark of rather hard rotten wood in a virgin forest near the small native village of mountain area (ca. 1400m in alt.). This area was hidden in mist at least in the afternoon, the temperature was rather low throughout the term of the survey in spite of the location just under the equator.

Key to the *Dioedus*-species in Sulawesi

1. Genae extremely reflexed and raised at apex, which is seemingly like a horn. Length: 5.1 mm; width: 2.3 mm ..... *D. fruhstorferi* BREMER, 1995
— Genae convex, neither reflexed nor extremely raised 2
2. Pronotum bordered at base, with apical angles produced, base of pronotum roundly produced; scutellum transversely oval; eyes smaller; prosternal process not bordered at sides; elytral epipleuron broadened; metasternum excavate before apex. Length: 2.4–3.0 mm; width: 1.1–1.3 mm ..... *D. utsunomiyai* sp. nov.
— Pronotum not bordered at base, with apical angles not produced, base of pronotum bisinuous in middle; scutellum oval; eyes larger; prosternum bordered at apex, prosternal process bordered at sides; elytral epipleuron narrow, slightly broadened posteriorly; metasternum not excavate before apex. Length: 3.6 mm; width: 1.5 mm ..... *D. michihikoi* sp. nov.

要　　約

安藤清志．Hans J. BREMER：Sulawesi 島の *Dioedus* 属．——— *Dioedus* 属は Sulawesi 島では近年に記載された１種のみが知られていたが，今回著者らにより新たに２種が発見された．２新種は共にインドから記載された *D. girardi* BREMER に近縁であるが，おもに前胸背板の相違点などから新種と認められ記載した．また，これにより複数となった同地域産本属全種の検索表を付記した．本島より唯一の既知種であった *D. fruhstorferi* BREMER, 1995は，Paris 自然史博物館所蔵の19世紀に採集された一個体を基に記載されたが，今回 Sulawesi 島南部の山地帯（標高約1400m）にて多数の個体を得たので断片的ではあるがその生態を記録した．

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A New Species of *Proteinus* from Shikoku, Japan (Coleoptera: Staphylinidae: Proteininae)

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Abstract *Proteinus yoshidai* is described from Mt. Tsurugi, Tokushima Pref., Japan. A key to species-group and subgroup of Japanese *Proteinus* are given.

Up to the present six species are known from Japan in the genus *Proteinus* LATREILLE and a new species is added in this paper. In addition to their small size, *viz.* 1.1 to 2.4 mm in length, these species are similar in general appearance owing to external resemblance, especially in female, and not easy to classify without examining features in detail under high magnification. The important features are adopted for the subdivision of the genus into the species-group and subgroup as in the following key.

Recently I had an opportunity to examine many specimens of the genus *Proteinus* collected by Mr. Masataka YOSHIDA in Mt. Tsurugi, Tokushima Pref, Shikoku, Japan. This species is well similar in general appearance, structures of male genitalia and legs to *Proteinus sawadai* HAYASHI from Mt. Kisokoma, Honshu, Japan, but it is distinctly different in the structures of legs from the latter. Therefore, in this paper, I am going to describe it as a new species under the name *Proteinus yoshidai* and to investigate species groups of Japanese *Proteinus* by the features of male.

The holotype and five paratypes of the new species are preserved in the collection of the Osaka Museum of Natural History, Osaka; five paratypes are preserved in the Tokushima Museum of Natural Science and the rest are preserved in the author's collection.

Before going into further details, I wish to express my deep gratitude to Mr. Masataka YOSHIDA (Tokushima City) for his kind offer of many interesting materials, and sincerely thank Dr. Katsura MORIMOTO, the Emeritus Professor of Kyushu University (Department of Agriculture), Fukuoka, for his kindness of critical reading the manuscript of this paper.

Proteinus of Japan is divided into 2 main species-groups, each into 2 subgroups by the male features as in the following key:

1(4) First segment of protarsi elongate, almost as long as the following 4 segments combined together; meso- and metatrochanter, meso- and metatibiae bearing minute granules on apical portions; male genitalia thick, subampullar ..... *sawadai*-group

2(3) Parameres of male genitalia absent ..... *sawadai*-subgroup
(*sawadai* HAYASHI, *yoshidai* sp. nov)

3(2) Parameres of male genitalia present, well developed ..... *tateoitoi*-subgroup
(*tateoitoi* HAYASHI)

4(1) First segment of protarsi short, at most a half length of the following 4 segments combined together;

mid-legs and hind one without granules on trochanters and tibiae; male genitalia rather thin, subfusiform in ventral view, semicircular in lateral view with sharp, curved or sinuate horn-like process ..... *crassicornis*-group

5(6) Fourth segment of maxillary palpi elongate-conical, distinctly tapering from base to acute tip ..... *crassicornis*-subgroup
(*crassicornis* SHARP, *shibatai* HAYASHI)

6(5) Fourth segment of maxillary palpi cylindrical, not tapering apicad ..... *ezoensis*-subgroup
(*gotoi* HAYASHI, *ezoensis* HAYASHI)

Proteinus yoshidai sp. nov

(Figs. 1–9)

Body suboval, widest at about posterior third of elytra, moderately convex above and shiny. Colour blackish brown to black; mouth organs piceous; pronotum very narrowly reddish brown at lateral and basal margins; antennae with basal 2 segments pale yellow and the following 3 to five ones often paler in female; elytra dark brown with epipleura dark yellowish brown; legs pale yellow, with femora brownish. Length: 1.7–2.1 mm.

Male. Head about three-fourths as wide as pronotum, feebly convex medially, very minutely and sparsely punctulate. Antennae(Fig. 1) rather long, reaching close to base of pronotum, basal 5 and 11th segments more or less longer than wide, 6th segment nearly as long as wide, 7th to 10th transverse; slender in 3rd to 7th segments, moderately clavate in apical 4 segments; 1st segment slightly longer and thicker than 2nd; 3rd nearly two-thirds as long as and much slenderer than 2nd; 4th a half as long as and slightly slenderer than 3rd; 5th nearly as long as and slightly thicker than 4th; 6th slightly shorter and slenderer than 5th; 7th segment nearly as long as 6th, from which to 10 segments each slightly longer and thicker than the preceding; 10th nearly as long as 4th; 11th the longest, about as long as the preceding 2 segments combined together and nearly 1.4 times as long as wide. Last segment of maxillary palpi subcylindrical.

Pronotum much wider than long (12.0 : 7.0), nearly two-thirds as wide as and much shorter than elytra (5 : 11), widest just behind the middle; front margin feebly emarginate, basal one finely bordered except near basal angles, largely arcuate but feebly bisinuate; sides from the widest points arcuate and more strongly narrowed in front than behind and nearly straight in basal third; front angles widely rounded, basal ones subrectangular and not produced; disc very minutely and sparsely punctulate as on head, rather strongly convex, shallowly depressed near basal angles, not impressed medially but vaguely so in front of scutellum.

Elytra subquadrate, slightly wider than long (35 : 33), a little more strongly narrowed basad than apicad, widest at about apical third, vaguely and widely depressed in basal third, minutely and very sparsely punctured but the punctures are much larger than those on pronotum; sides feebly arcuate, apical margin gently rounded in each half; disc very coarsely and weakly reticulate. Wings markedly developed, large and about 1.5 times as long as body.

Abdomen finely and transversely reticulate, sparsely and finely punctured with short, cilia-like pubescence, the punctures a little finer than those on pronotum and a little coarser on sternites than on tergites, and the pubescence a little longer on sternite than on tergites; 8th sternite widely and deeply emarginate at the middle of hind margin.

Legs (figs. 3–5) thick, stout and rather short, with 1st segment of each tarsus elongate, at

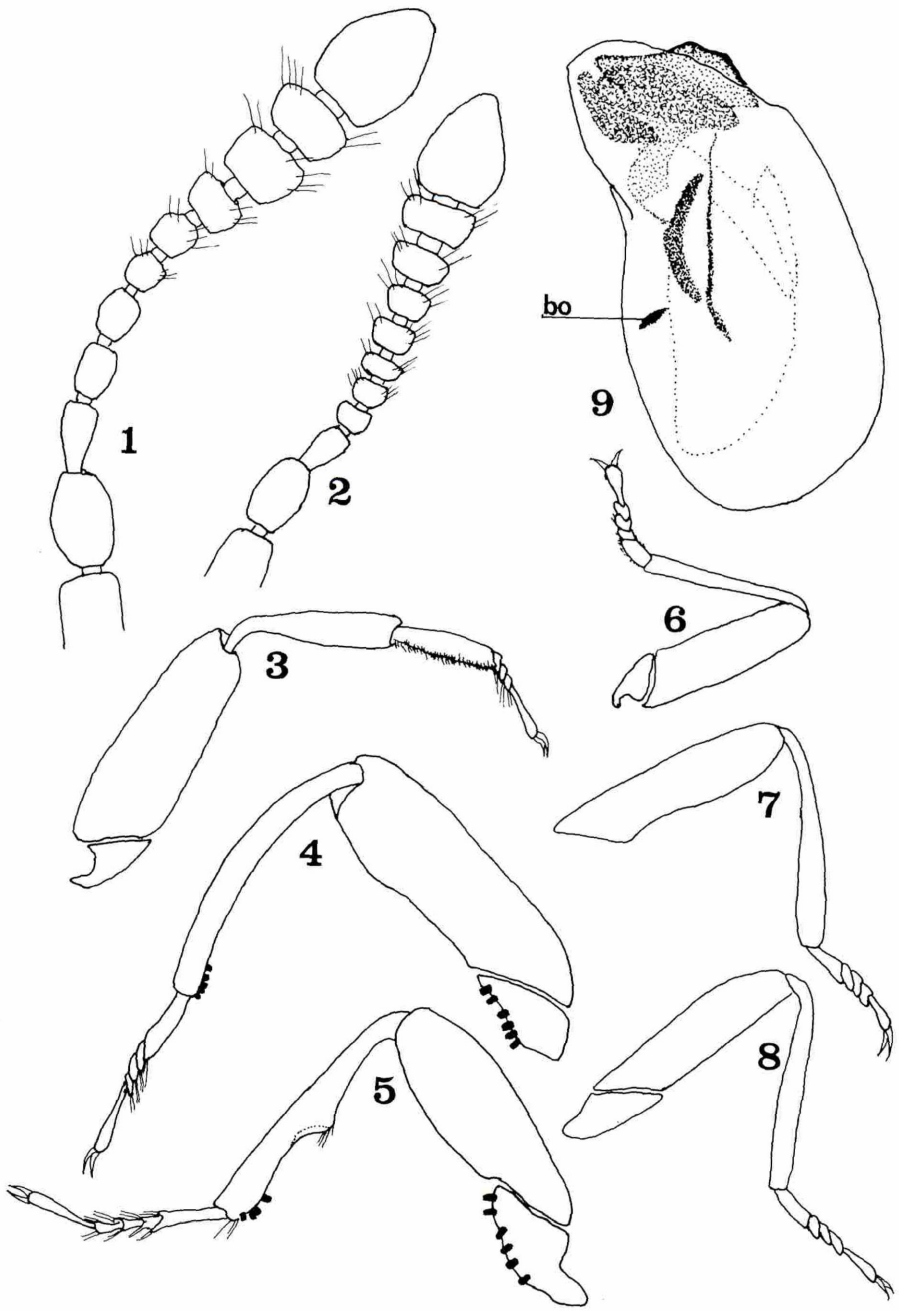

Fig. 1-9, *Proteinus yoshidai* sp. nov.; 1, male antenna; 2, female antenna; 3, male fore leg; 4, male mid-leg; 5, male hind leg; 6, female fore leg; 7, female mid-leg; 8, female hind leg; 9, male genitalia (bo=basal orifice).

least as long as the following 3 segments combined together; protibiae thick, strongly curved near base and thickened distally; protarsi long, slightly longer than protibia and dilated in basal 4 segments, with 1st segment elongate-oblong and nearly as long as the following 4 segments combined together, 2nd to 4th segments very short, and 5th segment elongate and a little longer than the preceding 3 segments combined together; mesotrochanter subtriangular, bearing about 7 minute tubercles at hind margin; mesotibiae gently incurved, subcylindrical, with about 10 or more minute tubercles on inner side of apical portion; metatrochanter dilated, subrhomboidal, with 6 minute tubercles at lateral half of hind margin; metatibiae nearly straight, feebly curved at base, strongly thickened distally but markedly and deeply hollowed out in distal half of inner face, bearing about 5 minute tubercles on apical portion of inner face and acute at proximal angle of the hollow, which fringed with a few fine setae at the angle and apical portion of the ventral margin.

Male genitalia (Fig. 6) subampullar, weakly curved ventrad in apical third, and apical orifice open in apical face.

Female. Antennae (Fig. 2) relatively short and thicker; 4th to 10th segments strongly transverse. Legs (Figs. 7–9) simple and slender; trochanter and tibiae not tuberculate; tarsi slender, with 1st segment of each tarsi much shorter than the following 3 segments combined together. Abdomen with 8th sternite nearly straight at hind margin.

Holotype: ♂, Ryôtsurugidani (alt. 1800 m), Mt. Tsurugi, Tokushima Pref., 11. IX.–10. X. 1999, M. YOSHIDA. Paratype: 22♂♂2♀♀, same data as the holotype.

Specimens examined: 2♂♂1♀, same data as the holotype.

The present new species is close to *Proteinus sawadai* HAYASHI from Mt. Kisokomagatake, Nagano, Japan, but it is easily distinguished from the latter by different structures of pronotum, legs and male genitalia. Namely, in the latter species the pronotum is weakly but distinctly impressed medially, mesotrochanters and mesotibiae bear more numerous tubercles (about 8 and 20 in number), also the metatrochanters are numerously tuberculate, and metatibiae bears about 30 tubercles.

Etymology. Specific name of the new species is given after Mr. M. YOSHIDA, who is an eager coleopterist in Tokushima for a long time.

要　　約

林　靖彦：日本産チビハバビロハネカクシの一種. ——— 日本産チビハバビロハネカクシ属 *Proteinus* の種は現在6種が知られているが，新たに四国・剣山から未記載種が見つかり，*Proteinus yoshidai* と命名した．本種は *P. sawadai* に近縁であるが，前胸背板中央に溝がないこと，中，後転節，脛節の小顆粒の数を異にしていることなどで区別できる．本属の種は微小で分かりにくいものの，日本産の種は雄の二次性徴や雄交尾器，小顎肢末節の形態などから4種群で構成されていると考えられるため，検索表で各種群の特徴を示した．

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Tiger Beetles of Myanmar (Burma) Collected by Mr. Shinji NAGAI and his Fellow Workers (Coleoptera: Cicindelidae)

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Abstract Tiger beetles taken in Myanmar are reported. The number of tiger beetles known from Myanmar is raised up to 111. *Therates nagaii*, *miyamai*, *yamaokai* and *Calochroa nosei* are described as new species. They are characterized by size, shape of aedeagus and elytral coloration.

The authors received a rich material of tiger beetles collected by Messrs. Kozaburo HAYASHI, Satoshi KOIWAYA, Hiroshi MIYAMA, Shinji NAGAI, Akihiko TAKENAKA, Hiroyuki WAKAHARA and Yukio YAMAOKA from Kachin State of Myanmar (Burma) for study. This material includes four new species, eight species new to the fauna of Myanmar and many new data for their distributions. In this paper, every specimen is recorded in detail according to the locality of Myanmar today under respective species in confirmation of the present distribution, because previous records were mostly made by R. GESTRO and W. HORN in the second half of the last century from Burma of old regime.

In regard to the new species, the holotypes are temporally preserved in the private collection of Mr. Yukinobu NOSE in Osaka, but will transferred as soon as possible to the collection of the public institution in the Union of Myanmar on the instruction of the government office concerned.

Tricondyla macrodera tuberculata CHAUDOIR, 1860

Specimens examined: 1♀, S Kumon Range, Down Ban vill. (Dombon), 600 m, Kachin State, N Myanmar, 11. V. 2000, Y. YAMAOKA leg.; 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 14. V. 2000, H. MIYAMA leg.; 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 15. V. 2000, S. NAGAI leg.; 1♂, S Kumon Range, Mt. Shwe Taung, 1200–1300 m, Kachin State, N Myanmar, 4. VII. 2000, A. TAKENAKA leg.; 1♀, S Kumon Range, Mt. Shwe Taung, 1200–1300 m, Kachin State, N Myanmar, 13. VII. 2000, A TAKENAKA leg.; 1♂, S Kumon Range, Mt. Shwe Taung, 1200–1300 m, Kachin State, N Myanmar, 15. VII. 2000, A. TAKENAKA leg.; 1♀, S Kumon Range, Mt. Shwe Taung, 1900 m, Kachin State, N Myanmar, 20. VII. 2000, H. MIYAMA leg.

New state record from Burma. Previously the species was known from north eastern India.

*72. Contribution towards the knowledge of Cicindelidae

Tricondyla mellyi CHAUDOIR, 1850

Specimens examined: 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 14. V. 2000, Y. YAMAOKA leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 2. VI. 2000, S. NAGAI leg.; 1♂, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 5. VI. 2000, S. KOIWAYA & H. WAKAHARA leg.; 1♂, S Kumon Range, Mt. Shwe Taung, 1270 m, Kachin State, N Myanmar, 12. VII. 2000, A. TAKENAKA leg.

Neocollyris (*Neocollyris*) *nepalensis* NAVIAUX, 1994

Specimen examined: 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 19. VI. 2000, S. NAGAI leg.

New state record from Burma. Previously the species was known from Nepal and north eastern India.

Neocollyris (*Orthocollyris*) *attenuata* (REDTENBACHER, 1848)

Specimen examined: 1♀, Tanbe vill., 60 km N Myitkyna, nr junction Malihka riv. & Ayeyarwady riv., Kachin State, N Myanmar, 6. V. 2000, Y. YAMAOKA leg.

Neocollyris (*Leptocollyris*) *linearis linearis* (SCHMIDT-GOEBEL, 1846)

Specimen examined: 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 14. V. 2000, Y. YAMAOKA & S. NAGAI leg.

Neocollyris (*Leptocollyris*) *discretegrossescuplta* (W. HORN, 1942)

Specimens examined: 1♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 1. VI. 2000, S. KOIWAYA & H. WAKAHARA leg.; 1♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 12. VI. 2000, S. KOIWAYA & H. WAKAHARA leg.; 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 17. VI. 2000, H. MIYAMA leg.

New state record from Burma. Previously the species was known from Laos and Vietnam.

Neocollyris (*Leptocollyris*) *variicornis* (CHAUDOIR, 1864)

Specimens examined: 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 14. V. 2000 S. NAGAI leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 15. V. 2000, S. NAGAI leg.; 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 19. VI. 2000, S. NAGAI leg.

Neocollyris (*Pachycollyris*) sp.

Specimen examined: 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 15. V. 2000, S. NAGAI leg.

This remarkable species is represented by one female specimen only. It seems to be a close relative of *N. assamensis* NAVIAUX, 1995, but the authors refrain from naming and are waiting for further material, especially collecting of the male.

Neocollyris (*Pachycollyris*) *tricolor* NAVIAUX, 1991

Specimens examined: 1♂, 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 1. VI. 2000, H. MIYAMA leg.

New state record from Burma. Previously the species was known from Thailand and Laos.

Neocollyris (*Pachycollyris*) *smithii* (CHAUDOIR, 1864)

Specimens examined: 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 17. V. 2000, A. TAKENAKA leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 2. VI. 2000, S. NAGAI leg.; 1♂, S Kumon Range, Mt. Shwe Taung, 1200–1300 m, Kachin State, N Myanmar, 16. VII. 2000, A. TAKENAKA leg.

New state record from Burma. Previously the species was known from north eastern India.

Heptodonta pulchella (HOPE, 1831)

Specimen examined: 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 17. VI. 2000, H. MIYAMA leg.

New state record from Burma. Previously the species was known from north India, Nepal, Vietnam, Laos, China (Yunnan).

Therates cribratus FLEUTIAUX, 1893

Specimen examined: 1♂, S Kumon Range, Mt. Shwe Taung, 1200 - 1300 m, Kachin State, N Myanmar, 5. VII. 2000, A. TAKENAKA & K. HAYASHI leg.

New state record from Burma. Previously the species was known only from Laos.

Therates nagaii n. sp.

(Figs. 3, 6–8, 11–13)

Description. Total length (without labrum): males 5.8–6.3 mm (mean: 6.0 mm; n = 5), females 6.8–7.5 mm (mean: 7.1 mm; n = 8).

Head. Shining black, with blue green reflection. Mandibles yellowish, teeth brownish. Labrum (Figs. 3, 6, 7) as long as wide, yellowish, with six to seven apical teeth and one lateral

tooth. Labial and maxillary palpi yellowish. Antennae of medium length, filiform, reaching the shoulders in females, a little longer in males, scape with a single apical bristle, joints second to fifth glabrous, the others finely and evenly pubescent; scape yellowish above, black on underside and all the other joints brownish black. Clypeus hairless and almost completely reddish brown. Frons smooth.

Thorax. Pronotum shining black, with blue green reflection, longer than wide, more constricted in front than at back, transverse furrows strong, middle line and lateral lines nearly obsolete.

Elytra shining black, with basal and apical hump, distinctly punctuated in anterior half, shallower in posterior half, with a tiny sutural tooth and angular lateral edge at apex, a little concave between them. Elytral markings (Figs. 11-13) comprising a brownish yellow humeral lunula, a brownish yellow basal dot, a yellow central dot, orientated diagonally from front outside to back inside if isolated and an isolated large light yellow apex, basal three spots frequently connate embracing a black spots.

Underside yellowish. Legs yellowish, tarsal joints darkened at apex.

Male genitalia as figured (Fig. 8), 1.5 mm in total length.

Holotype: ♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 28. V. 2000, S. NAGAI leg. (for type depository refer to introduction). Paratypes (3 paratypes in J. WIESNER Coll., 9 paratypes in Y. NOSE Coll.): 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 14. V. 2000, Y. YAMAOKA & S. NAGAI leg.; 2♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 15. V. 2000, S. NAGAI leg.; 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 27. V. 2000, S. NAGAI leg.; 3♂♂, 4♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 28. V. 2000, S. NAGAI leg.; 1♀, S Kumon Range, Mt. Shwe Taung, 1200–1300 m, Kachin State, N Myanmar, 18. VII. 2000, A. TAKENAKA leg.

Distribution. *Th. nagaii* is known only from South Kumon Range, Zan Phut and Mt. Shwe Taung.

Remarks. The new species resembles somewhat *Th. murzini* WIESNER, 1999 in the elytral maculation, but the central dot is located nearer the apex than in *Th. murzini*, and the aedeagus is much shorter, and the apex is not so prominent as in *Th. murzini*.

Etymology. Dedicated to one of the discoverers of this species, Mr. Shinji NAGAI.

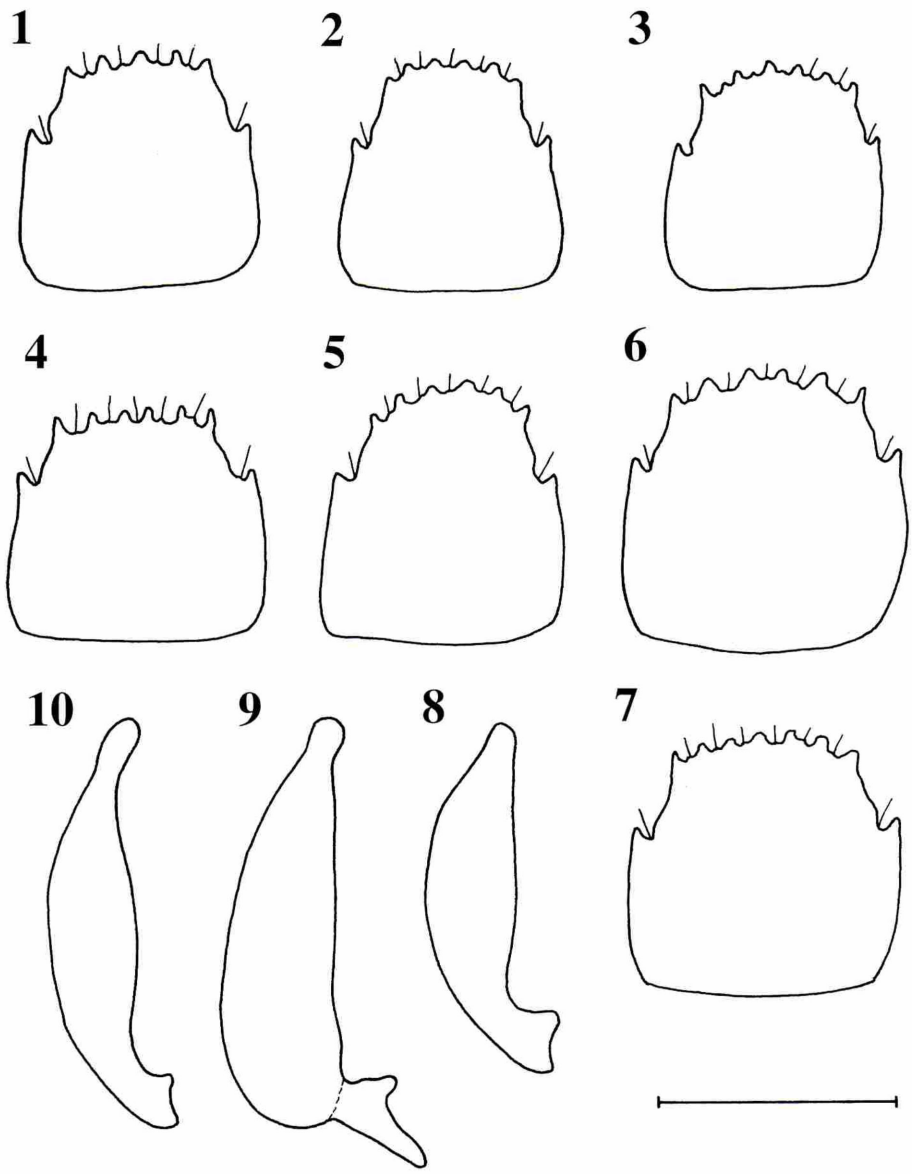
Therates miyamai n. sp.

(Figs. 2, 4, 9, 14–15)

Description. Total length (without labrum) 5.8–7.3 mm (mean: 6.6 mm; n = 20).

Head. Shining black, with blue green reflection. Mandibles yellowish, teeth brownish. Labrum (Figs. 2, 5) a little longer than wide, yellowish, with six apical teeth and one lateral tooth. Labial and maxillary palpi yellowish. Antennae of medium length, filiform, larger at the apex, reaching shoulders in females, a little longer in males, scape with a single apical bristle, joints second to fifth glabrous, the others finely and evenly pubescent; scape yellowish above, black on underside and all the other joints. Clypeus hairless. Frons smooth, sometimes with several shallow furrows in middle and a sparsely depression between orbital plates.

Thorax. Pronotum shining black, with blue green reflection, as long as wide, constricted



Figs. 1-7, Labrum of *Therates* spp. nov.; 1–3, holotype: 1, *Therates yamaokai* n. sp.; 2, *Therates miyamai* n. sp.; 3, *Therates nagaii* n. sp.; 4–7, paratype (female): 4, *Therates yamaokai* n. sp.; 5, *Therates miyamai* n. sp.; 6, *Therates nagaii* n. sp.; 7, *Therates nagaii* n. sp. Figs. 8–10, aedeagus of holotype: 8, *Therates nagaii* n. sp.; 9, *Therates miyamai* n. sp.; 10, *Therates yamaokai* n. sp. (Scale: 1 mm)

anteriorly and posteriorly in the same way, transverse furrows strong, middle line and lateral lines nearly obsolete.

Elytra shining black, with basal and apical humps, distinctly punctuated in anterior half, nearly distincted in posterior half, with a tiny sutural tooth and rounded lateral edge at apex, straight between them. Elytral markings (Figs. 14-15) comprising a brownish yellow humeral lunula, a brownish yellow basal dot, which is sometimes connected with the former, a yellow

transverse central dot and a very short and light yellow apical one.

Underside brownish black. Legs yellowish, femora darker, tibiae and tarsal joints darkened at apex.

Male genitalia as figured (Fig. 9), 1.9 mm in total length.

Holotype: ♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 27. V. 2000, S. NAGAI leg. (for type depository refer to introduction). Paratypes (4 paratypes in J. WIESNER Coll., 15 paratypes in Y. NOSE Coll.): 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 15. V. 2000, S. NAGAI leg.; 1♂, 2♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 22. V. 2000, S. NAGAI leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 24. V. 2000, H. MIYAMA leg.; 2♂♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 27. V. 2000, S. NAGAI leg.; 6♂♂, 2♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 28. V. 2000, S. NAGAI leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 29. V. 2000, S. NAGAI leg.; 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 31. V. 2000, H. MIYAMA leg.; 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 2. VI. 2000, H. MIYAMA leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 17. VI. 2000, Y. YAMAOKA leg.

Distribution. *Th. miyamai* is known only from South Kumon Range, Zan Phut.

Remarks. The new species resembles *Th. probsti* WIESNER, 1988 in the elytral maculation but is smaller and the aedeagus is definitely different in shape, not ending in a thin tip but forming a knobbed apex.

Etymology. Dedicated to one of the discoverers of this species, Mr. H. MIYAMA.

Therates yamaokai n. sp.

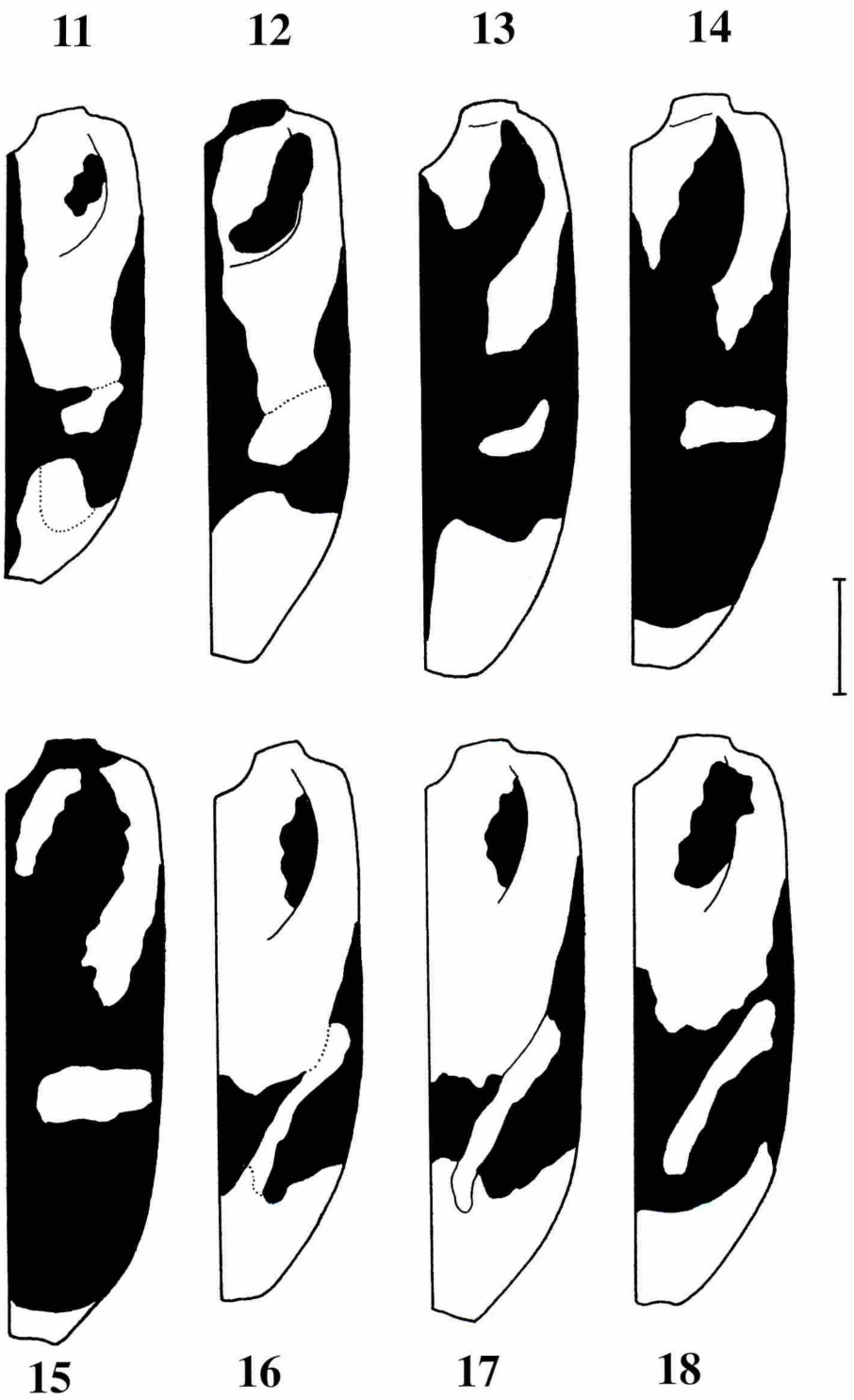
(Figs. 1, 4, 10, 16–18)

Description. Total length (without labrum) 6.3–7.3 mm (mean: 6.9 mm; n = 24).

Head. Shining black, with blue green reflection. Mandibles yellowish, teeth brownish. Labrum (Figs. 1, 4) a little wider than long, yellowish, with 5 to 6 apical teeth and one lateral tooth. Labial and maxillary palpi yellowish. Antennae long, filiform, reaching the first half of elytra in males, first third in females, scape with a single apical bristle, joints second to fifth glabrous, the others finely and evenly pubescent; scape yellowish above, black on underside and joints second to fourth and basal half of joint fifth, rest brownish. Clypeus hairless. Frons smooth, sometimes with a shallow furrow in middle and a sparsely depression lengthwise between orbital plates.

Thorax. Pronotum shining black, with blue green reflection, a little longer than wide, constricted anteriorly and posteriorly in the same way, transverse furrows strong, middle line and lateral lines nearly extinct.

Elytra shining black, with basal and apical humps, distinctly punctuated in anterior half, shallower inposterior half, with a tiny sutural tooth and rounded lateral edge at apex, straight between them. Elytral markings (Figs. 16–18) comprising a large brownish yellow humeral lunula, a light yellow middle band and a light yellow apical macula on nearly one fourth of elytral apex; the humeral lunula expanded nearly all over basal half except for outer half of the basal hump; the middle band diagonally from outer middle to posterior inside and connected



Figs. 11-18, right elytron of *Therates* spp. nov.: 11–13, *Therates nagaii* n. sp.: 11, holotype; 12, paratype (female); 13, paratype female. Figs., 14–15, *Therates miyamai* n. sp.: 14, holotype; 15, paratype (female). Figs. 16–18, *Therates yamaokai* n. sp.: 16, holotype; 17, paratype (female); 18, paratype (female). (Scale: 1 mm)

with the light yellow apical macula and the humeral lunula in most cases.

Underside yellowish. Legs yellowish, tarsal joints darkened at apex.

Male genitalia as figured (Fig. 10), 1.7 mm in total length.

Holotype: ♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 28. V. 2000, S. NAGANO leg. (for type depository refer to introduction). Paratypes (4 paratypes in J. WIESNER Coll., 19 paratypes in Y. NOSE Coll.): 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 14. V. 2000, Y. YAMAOKA & S. NAGAI leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 21. V. 2000, S. NAGAI leg.; 2♂♂, 4♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 27. V. 2000, S. NAGAI leg.; 3♂♂, 7♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 28. V. 2000, S. NAGAI leg.; 3♂♂, 2♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 29. V. 2000, S. NAGAI leg.; 1♂, S Kumon Range, Mt. Shwe Taung,1200 m, Kachin State, N Myanmar, 26. VI. 2000, H. MIYAMA leg.

Distribution. *Th. yamaokai* is known only from South Kumon Range, Zan Phut and Mt. Shwe Taung.

Remarks. The new species goes down to No. 5 of the identification key given by WIESNER 1996: 505, but is different at first sight from *Th. mandli* PROBST, 1986 and *Th. pseudomandli* PROBST & WIESNER, 1996 by the yellow abdomen.

Etymology. Dedicated to one of the discoverers of this species, Mr. Y. YAMAOKA.

Calochroa octonotata (WIEDEMANN, 1819)

Specimens examined: 2♀♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 16. VI. 2000, S. NAGAI leg.; 5♂♂ 53♀♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 18. VI. 2000, S. NAGAI leg.; 4♂♂, 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 19. VI. 2000, S. NAGAI leg.; 3♂♂, 4♀♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 22. VI. 2000, H. MIYAMA leg.

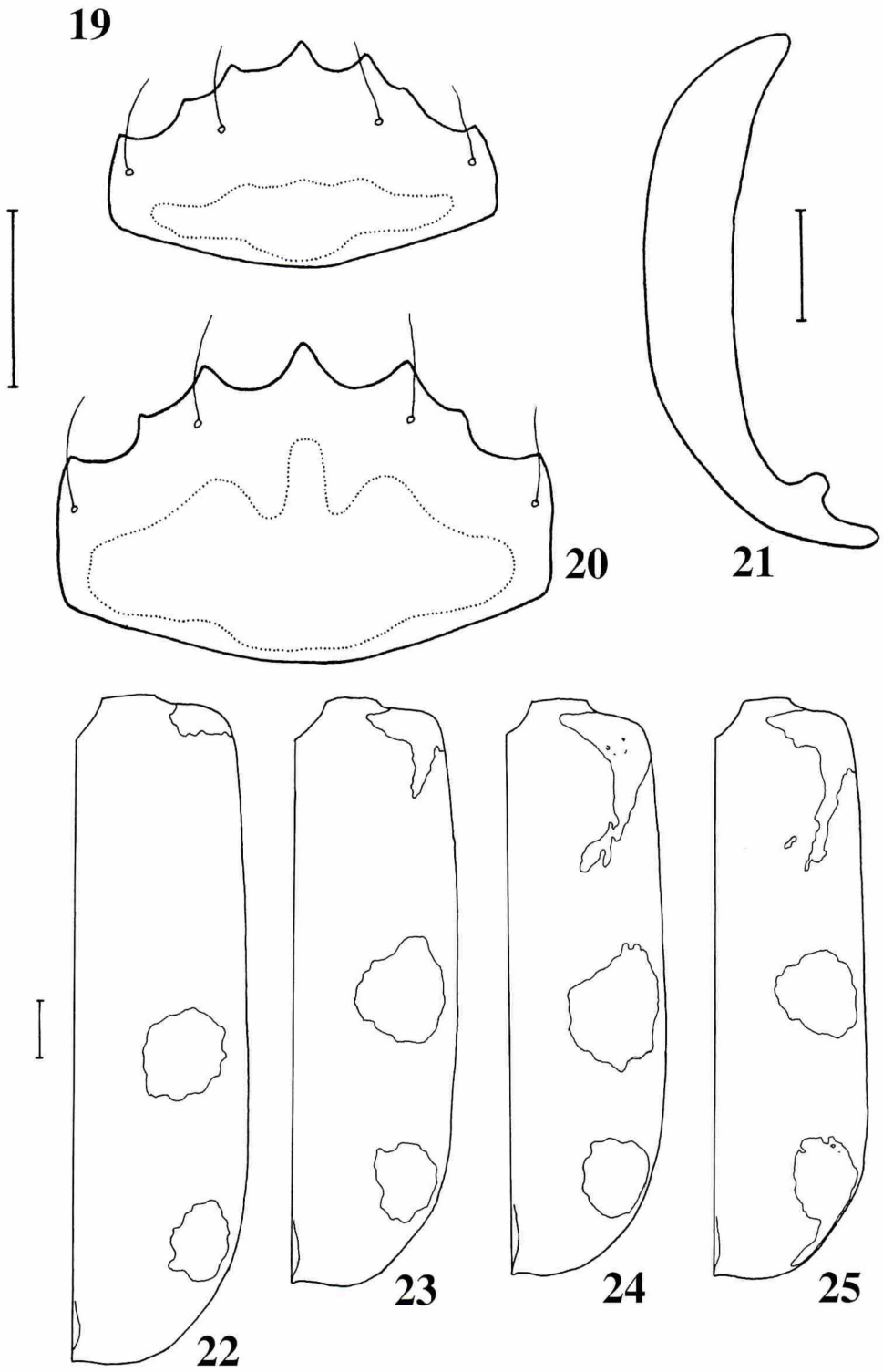
Calochroa nosei n. sp.

(Figs. 19-25)

Description. Total length (without labrum) 12.8–16.2 mm (mean: 14.1 mm; n = 20).

Head. Black above, with some green to blue reflection on lateral and frontal areas, clypeus and sensorial bristles near eyes; cheeks with violet reflection. Surface except two long sensorial bristles near eyes glabrous, slightly striated between eyes on cheeks. Labrum black with yellowish patch in various extension at base (Figs. 19–20), wider than long, with five pointed teeth in front, four long bristles near anterior edge. Mandibles with a small (female) or larger (male) yellowish spot at lateral base, black. Labial palpi yellowish, apical two joints black. Maxillary palpi yellowish, apical joint black. Antennae nearly reaching first half of elytra, scape and joints second to fourth glabrous, shiny black with greenish reflection, scape with a single apical bristle, joints fifth to eleventh black, finely and evenly pubescent.

Thorax. Pronotum subsquared, black with green or blue reflection laterally and in furrows, slightly wider than long, rounded at sides, distinctly narrowed posteriorly behind middle and bare; episterna bare, violet, mesepisterna of female with a distinct longitudinal furrow in the



Figs. 19-25, *Calochroa nosei* n. sp; 19, labrum of holotype; 20, ditto, ♀(paratype); 21, aedeagus of the holotype; 22-25, right elytron: 22, paratype, ♀; 23, holotype; 24, paratype, ♂; 25, paratype, ♂. (Scale: 1 mm)

middle. Scutellum black.

Elytra wider than head with eyes, subparallel-sided; apices microserulate, rounded, with distinct sutural edge; shoulders well marked, subsquared; surface smooth, ground colour black, all over covered with shallow dimples. Elytral yellowish markings (Figs 22–25) comprising round humeral, marginal and apical dot; humeral and apical dot sometimes enlarged and forming a lunula with very thin apex; epipleura black.

Underside black violet, with some green or blue reflections; abdominal sternites more or less covered with white hairs laterally, first abdominal segment more or less covered with white hairs all over, the rest glabrous. Legs long and slender, black, femora with green and violet reflections, all over covered with short bristles.

Male Genitalia. Total length 4.7 mm, tapered apically and bent at the tip (Fig. 21).

Holotype: ♂, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 27. V. 2000, K. HAYASHI leg. (for type depository refer to introduction). Paratypes (4 paratypes in J. WIESNER Coll., 15 paratypes in Y. NOSE Coll.): 13 ♂♂, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 27. V. 2000, K. HAYASHI leg.; 1 ♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 31. V. 2000, H. MIYAMA leg.; 1 ♂, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 31. V. 2000, Akihiko TAKENAKA leg.; 1 ♂ S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 4. VI. 2000, Yukio YAMAOKA, S. NAGAI & H. MIYAMA leg.; 1 ♂, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 17. VI. 2000, H. MIYAMA leg.; 1 ♂, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 23. VI. 2000, A. TAKENAKA leg.; 1 ♀, S Kumon Range, Mt. Shwe Taung,700 m, Kachin State, N Myanmar, 23. VI. 2000, H. MIYAMA leg.

Distribution. *C. nosei* is known from Namti and South Kumon Range, Zan Phut and Mt. Shwe Taung.

Remarks. *C. nosei* sp. nov. looks like a small *C. anometallescens* (W.HORN, 1893), but the elytral maculation in the latter is mostly present as a humeral dot instead of a humeral lunula. When a lunula is presented, its basal part tapers up to extinction. Male genitalia of *anometallescens* are longer (about 5.0 mm), longitudinal furrow of female mesepisterna much shallower.

Etymology. Dedicated to the sponsor of the recent Myanmar exploration, Mr. Yukinobu NOSE.

Lophyridia angulata angulata (FABRICIUS, 1798)

Specimen examined: 1 ♂, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 18. VI. 2000, S. NAGAI leg.

New state record from Burma. Previously the species was known from India, Nepal, Sri Lanka, Thailand, Laos, Vietnam, Malaysia, Sumatra, Sumbawa, Borneo, Philippines, Taiwan and China.

Lophyridia plumigera macrograptina ACCIAVATTI et PEARSON, 1989

Specimens examined: 2 ♂♂, 1 ♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N

Myanmar, 17. VI. 2000, S. KOIWAYA & H. WAKAHARA leg.

Lophyridia funerea assimilis (HOPE, 1831)

Specimens examined: 1♂, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 20. IV. 2000, S. KOIWAYA & H. WAKAHARA leg.; 1♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 30. V. 2000, S. KOIWAYA & H. WAKAHARA leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 30. V. 2000, A. TAKENAKA leg.; 5♂♂, 8♀♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 5. VI. 2000, S. KOIWAYA & H. WAKAHARA leg.; 5♂♂, 5♀♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 7. VI. 2000, S. KOIWAYA & H. WAKAHARA leg.; 13♂♂ 2♀♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 18. VI. 2000, S. NAGAI leg.; 2♂♂, 4♀♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 19. VI. 2000, S. NAGAI leg.; 1♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 12. VII. 2000, S. KOIWAYA & H. WAKAHARA leg.

Cosmodela virgula (FLEUTIAUX, 1893)

Specimens examined: 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 21. V. 2000, A. TAKENAKA leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 29. V. 2000, A. TAKENAKA leg.; 1 ♂, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 30. V. 2000, A. TAKENAKA leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 31. V. 2000, A. TAKENAKA leg.; 1♂, 2♀♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 31. V. 2000, S. KOIWAYA & H. WAKAHARA leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 1. VI. 2000, Y. YAMAOKA, S. NAGAI & H. MIYAMA leg.; 5♂♂, 1♀♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 16. VI. 2000, S. NAGAI leg.; 5♂♂, 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 17. VI. 2000, H. MIYAMA leg.; 1♂, 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 18. VI. 2000, S. NAGAI leg.; 3♂♂, 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 19. VI. 2000, S. NAGAI leg.

Lophyra (Lophyra) fuliginosa (DEJEAN, 1826)

Specimen examined: 1♂, 1 female, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 18. VI. 2000, S. NAGAI leg.

Lophyra (Spilodia) striolata striolata (ILLIGER, 1800)

Specimens examined: 1♀, Mytkina City, 200 m, Kachin State, N Myanmar, 6. V. 2000, H. MIYAMA leg.; 2♂♂, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 18. V. 2000, S. KOIWAYA & H. WAKAHARA leg.; 3♂♂, 2♀♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 22. V. 2000, S. KOIWAYA & H. WAKAHARA leg.; 2♂♂, 6♀♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 31. V. 2000, S. KOIWAYA & H. WAKAHARA leg.; 5♂♂, 4♀♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State, N Myanmar, 1. VI. 2000, S. KOIWAYA & H. WAKAHARA leg.; 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 18. VI. 2000, S. NAGAI leg.; 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 19. VI. 2000, S. NAGAI leg.

Lophyra (*Spilodia*) *lineifrons* (CHAUDOIR, 1865)

Specimens examined: 1♂, S Kumon Range, Down Ban vill. (Dombon), 600 m, Kachin State, N Myanmar, 11. V. 2000, Y. YAMAOKA leg.; 1♂, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 19. VI. 2000, S. NAGAI leg.

Cylindera (*Cylindera*) *delavayi* (FAIRMAIRE, 1886)

Specimens examined: 2♂♂, 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 19. V. 2000, S. NAGAI leg.; 1♂, 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 19. V. 2000, Y. YAMAOKA leg.; 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 20. V. 2000, H. MIYAMA leg.; 1♂, 3♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 21. V. 2000, S. NAGAI leg.; 4♂♂, 2♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 22. V. 2000, S. NAGAI leg.; 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 24. V. 2000, H. MIYAMA leg.; 4♂♂, 4♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 27. V. 2000, S. NAGAI leg.; 4♂♂, 4♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 28. V. 2000, S. NAGAI leg.; 1♂, 2♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 17. VI. 2000, Y. YAMAOKA leg.; 2♂♂, 6♀♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 18. VI. 2000, Y. YAMAOKA leg.

Cylindera (*Ifasina*) *foveolata* (SCHAUM, 1863)

Specimen examined: 1♂, Namti City, 300 m, Kachin State, N Myanmar, 9. V. 2000, H. MIYAMA leg.

Cylindera (*Ifasina*) *cyclobregma* ACCIAVATTI et PEARSON, 1989

Specimens examined: 5♂♂, S Kumon Range, Down Ban vill. (Dombon), 600 m, Kachin State, N Myanmar, 11. V. 2000, Y. YAMAOKA leg.; 2♀♀, S Kumon Range, Down Ban vill. (Dombon), 600 m, Kachin State, N Myanmar, 11. V. 2000, S. NAGAI leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 20. V. 2000, H. MIYAMA leg.

Cylindera (*Ifasina*) *fallaciosa* (W. HORN, 1897)

Specimens examined: 1♀, S Kumon Range, Down Ban vill. (Dombon), 600 m, Kachin State, N Myanmar, 11. V. 2000, Y. YAMAOKA leg.; 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 19. VI. 2000, S. NAGAI leg.

Cylindera (*Ifasina*) *spinolae spinolae* (GESTRO, 1889)

Specimens examined: 1♂, 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 14. V. 2000, H. MIYAMA leg.; 1♀, 15 km NW Putao, Manzhekhon vill., 800 m, Kachin State,

Tbable of Myanmar (Burma) Tiger Beetles

No.	species Myanmar ProvinceRecord (corresponding literature, N=recent one)	India	Burma	Thailand	Laos	China
1.	*Tricondyla macrodera tuberculata* CHAUDOIR, 1860 Kachin State (N)	X	X			
2.	*Tricondyla gestroi gestroi* FLEUTIAUX, 1893		X	X	X	X
3.	*Tricondyla mellyi* CHAUDOIR, 1850 Kachin State (N)		X	X	X	
4.	*Tricondyla cyanea annulicornis* SCHMIDT-GOEBEL, 1846		X	X	X	
5.	*Protocollyris brevilabris* (W.HORN, 1893)	X	X	X		
6.	*Neocollyris (Isocollyris) latissima* NAVIAUX, 1999 Kachin State (6)		X			
7.	*Neocollyris (Isocollyris) fulgida* NAVIAUX, 1999 Kachin State (6)		X			
8.	*Neocollyris (Neocollyris) bonellii bonellii* (GUÉRIN-MÉNEVILLE, 1834)	X	X	X	X	X
9.	*Neocollyris (Neocollyris) nepalensis* NAVIAUX, 1994 Kachin State (N)	X	X			
10.	*Neocollyris (Neocollyris) moesta moesta* (SCHMIDT-GOEBEL, 1846)		X	X	X	
11.	*Neocollyris (Neocollyris) cruentata* (SCHMIDT-GOEBEL, 1846)	X	X	X	X	
12.	*Neocollyris (Neocollyris) batesi* (W.HORN, 1892)	X	X	X		
13.	*Neocollyris (Neocollyris) orichalcina orichalcina* (W.HORN, 1896)	X	X		X	X
14.	*Neocollyris (Neocollyris) intermedia* NAVIAUX, 1995 Kayin State (5)		X	X	X	
15.	*Neocollyris (Neocollyris) fuscitarsis* (SCHMIDT-GOEBEL, 1846)	X	X	X	X	X
16.	*Neocollyris (Neocollyris) smaragdina* (W.HORN, 1894)	X	X			
17.	*Neocollyris (Neocollyris) saphyrina* (CHAUDOIR, 1850)	X	X	X	X	
18.	*Neocollyris (Neocollyris) diardi* (LATREILLE, 1822)		X			
19.	*Neocollyris (Neocollyris) similis* (LESNE, 1891)	X	X	X	X	X
20.	*Neocollyris (Neocollyris) rufipalpis* (CHAUDOIR, 1864)	X	X	X	X	X
21.	*Neocollyris (Orthocollyris) crassicornis crassicornis* (DEJEAN, 1825)	X	X	X	X	X
22.	*Neocollyris (Orthocollyris) attenuata* (REDTENBACHER, 1848) Kachin State (N)	X	X			
23.	*Neocollyris (Leptocollyris) linearis linearis* (SCHMIDT-GOEBEL, 1846) Kachin State (N)		X	X	X	X
24.	*Neocollyris (Leptocollyris) discretegrossesculpta* (W.HORN, 1942) Kachin State (N)		X		X	
25.	*Neocollyris (Leptocollyris) variicornis* (CHAUDOIR, 1864) Kachin State (N, 2)	X	X	X	X	
26.	*Neocollyris (Leptocollyris) subtilis brachycephala* (W.HORN, 1893)		X	X		
27.	*Neocollyris (Leptocollyris) rosea* NAVIAUX, 1995		X	X		
28.	*Neocollyris (Leptocollyris) variitarsis variitarsis* (CHAUDOIR, 1860)	X	X	X	X	X
29.	*Neocollyris (Leptocollyris) cylindripennis* (CHAUDOIR, 1864)		X	X		
30.	*Neocollyris (Stenocollyris) dohertyi* (W.HORN, 1895)		X	X		
31.	*Neocollyris (Pachycollyris) feae feae* (W.HORN, 1893)		X	X		
32.	*Neocollyris (Pachycollyris) tricolor* NAVIAUX, 1991 Kachin State (N)		X	X	X	
33.	*Neocollyris (Pachycollyris)smithii* (CHAUDOIR, 1864) Kachin State (N)	X	X			
34.	*Collyris mniszechii* CHAUDOIR, 1864		X	X	X	
35.	*Collyris dormeri* (W.HORN, 1998)	X	X		X	
36.	*Prothyma (Prothyma) scrobiculata* (WIEDEMANN, 1823)		X			
37.	*Prothyma (Paraprothyma) schmidtgoebeli schmidtgoebeli* W.HORN, 1895		X	X	X	
	Prothyma (Paraprothyma) schmidtgoebeli ?reconciliatrix (W.HORN, 1900)		X			
38.	*Prothyma (Genoprothyma) birmanica* RIVALIER, 1964		X			
39.	*Prothyma (Genoprothyma) shancola* SAWADA & WIESNER, 1998 Shan State (1)		X			
40.	*Heptodonta pulchella* (HOPE, 1831) Kachin State (N)	X	X		X	X
41.	*Heptodonta ferrarii ferrarii* GESTRO, 1893		X	X		
42.	*Heptodonta arrowi* W.HORN, 1900		X			
43.	*Heptodonta eugenia* CHAUDOIR, 1865		X	X	X	X
44.	*Pronyssa nodicollis* BATES, 1874 Kachin State (3)	X	X			
45.	*Rhytidophaena feae* (GESTRO, 1889) Kachin State (2)		X			
46.	*Rhytidophaena werneri* SAWADA & WIESNER, 1998 Mandalaya (1)		X			
47.	*Therates cribratus* FLEUTIAUX, 1893 Kachin State (N)		X		X	
48.	*Therates waagenorum* W.HORN, 1900	X	X	X		
49.	*Therates concinnus* GESTRO, 1888		X			

No.	species	Myanmar ProvinceRecord (corresponding literature, N=recent one)	India	Burma	Thailand	Laos	China
50.	*Therates murzini* WIESNER, 1999	Kachin State (4)		X			
51.	*Therates chenelli* BATES, 1878		X	X	X		
52.	*Therates* n. sp. prope *chenelli*	Kachin State (N)		X			
53.	*Therates myanmarensis* WIESNER, 1999	Kachin State (4)		X			
54.	*Therates* n. sp. prope *apiceflavus*	Kachin State (N)		X			
55.	*Therates* n. sp. prope *obliquus*	Kachin State (N)		X			
56.	*Therates obliquus* FLEUTIAUX, 1893			X			
57.	*Therates crebrepunctatus crebrepunctatus* W.HORN, 1923			X	X		
	Therates crebrepunctatus horni WIESNER, 1988			X			
58.	*Therates fruhstorferi vitalisi* W.HORN, 1913	Kachin State (4)		X		X	X
59.	*Calochroa flavomaculata* (HOPE, 1831)		X	X	X	X	X
60.	*Calochroa octonotata* (WIEDEMANN, 1819)	Kachin State (N)	X	X			
61.	*Calochroa interruptofasciata interruptofasciata* (SCHMIDT-GOEBEL, 1846)			X	X	X	X
62.	*Calochroa anometallescens* (W.HORN, 1893)			X	X		
63.	*Calochroa* n. sp. prope *anometallescens*	Kachin State (N)		X			
64.	*Calochroa cariana* (GESTRO, 1893)			X	X		
65.	*Calochroa mariae* (GESTRO, 1893)			X			
66.	*Calochroa octogramma octogramma* (CHAUDOIR, 1852)		X	X			X
67.	*Calochroa salvazai* (FLEUTIAUX, 1919)			X	X	X	
68.	*Calochroa assamensis* (PARRY, 1844)		X	X			
69.	*Calochroa bicolor bicolor* (FABRICIUS, 1781)		X	X	X		
	Calochroa bicolor corbetti (W.HORN, 1899)			X			
70.	*Lophyridia angulata angulata* (FABRICIUS, 1798)	Kachin State (N)	X	X	X	X	X
71.	*Lophyridia plumigera macrograptina* ACCIAVATTI & PEARSON, 1989	Kachin State (N)	X	X			
72.	*Lophyridia funerea funerea* (MACLEAY, 1825)		X	X	X	X	X
	Lophyridia funerea assimilis (HOPE, 1831)	Kachin State (N)	X	X			X
73.	*Cosmodela nagaii* SAWADA & WIESNER, 1999	Kachin State (2)		X			
74.	*Cosmodela duponti duponti* (DEJEAN, 1826)		X	X	X	X	X
75.	*Cosmodela virgula* (FLEUTIAUX, 1893)	Kachin State (N, 2)	X	X	X	X	X
76.	*Lophyra (Lophyra) fuliginosa* (DEJEAN, 1826)	Kachin State (N)		X	X	X	X
77.	*Lophyra (Lophyra) cancellata cancellata* (DEJEAN, 1825)	Kachin State (2)	X	X	X	X	X
78.	*Lophyra (Spilodia) striolata striolata* (ILLIGER, 1800)	Kachin State (N, 2)	X	X	X	X	X
79.	*Lophyra (Spilodia) lineifrons* (CHAUDOIR, 1865)	Kachin State (N)	X	X	X	X	
80.	*Lophyra atkinsonii* (GESTRO, 1893)			X			
81.	*Naviauxella davisoni* (GESTRO, 1889)			X	X	X	
82.	*Setinteridenta rhytidopteroides* (W.HORN, 1924)	Kachin State (2)	X	X			
83.	*Cylindera (Cylindera) delavayi* (FAIRMAIRE, 1886)	Kachin State (N)	X	X	X	X	X
84.	*Cylindera (Leptinomera) brendelliana* NAVIAUX, 1991			X	X		
85.	*Cylindera (Ifasina) foveolata* (SCHAUM, 1863)	Kachin State (N)	X	X	X	X	
86.	*Cylindera (Ifasina) cyclobregma* ACCIAVATTI & PEARSON, 1989	Kachin State (N)	X	X		X	
87.	*Cylindera (Ifasina) holosericea* (FABRICIUS, 1801)			X	X		X
88.	*Cylindera (Ifasina) viduata* (FABRICIUS, 1801)		X	X	X	X	X
89.	*Cylindera (Ifasina) fallaciosa* (W.HORN, 1897)	Kachin State (N)	X	X	X	X	X
90.	*Cylindera (Ifasina) spinolae spinolae* (GESTRO, 1889)	Kachin State (N)	X	X	X	X	
91.	*Cylindera (Ifasina) paucipilina* ACCIAVATTI & PEARSON, 1989		X	X	X	X	
92.	*Cylindera (Ifasina) subtilesignata* (MANDL, 1970)		X	X			
93.	*Cylindera (Ifasina) decempunctata* (DEJEAN, 1825)		X	X	X	X	
94.	*Cylindera (Ifasina) modica* (GESTRO, 1893)			X			
95.	*Cylindera (Ifasina) humillima* (GESTRO, 1893)			X			
96.	*Cylindera (Ifasina) sikhimensis* (MANDL, 1982)		X	X			
97.	*Cylindera (Ifasina) reductula* (W.HORN, 1915)		X	X			
98.	Cylindera (Ifasina) kaleea kaleea (Bates, 1866)	Kachin State (2)	X	X		X	X

No.	species Myanmar ProvinceRecord (corresponding literature, N=recent one)	India	Burma	Thailand	Laos	China
99.	*Cicindina iravaddica* (GESTRO, 1893)		X	X		
100.	*Cicindina minuta* (OLIVIER, 1790)	X	X	X	X	X
101.	*Cicindina mutata* (FLEUTIAUX, 1893)		X	X	X	
102.	*Cicindina agnata* (FLEUTIAUX, 1890)	X	X			
103.	*Cicindina venosa* (KOLLAR, 1836) Kachin State (2)	X	X	X		
104.	*Myriochile (Monelica) fastidiosa fastidiosa* (DEJEAN, 1825)	X	X			
105.	*Myriochile (Myriochile) sinica* (FLEUTIAUX, 1889) Kachin State (N)		X	X	X	X
106.	*Myriochile (Myriochile) dubia* (W.HORN, 1892)	X	X	X		
107.	*Hypaetha quadrilineata quadrilineata* (FABRICIUS, 1781)	X	X	X		
108.	*Hypaetha biramosa contracta* (FLEUTIAUX, 1893)		X	X		
109.	*Callytron andersoni* (GESTRO, 1889)		X	X	X	
110.	*Callytron limosum* (SAUNDERS, 1834)	X	X	X		X
111.	*Notospira phalangioides* (SCHMIDT-GOEBEL, 1846)		X			

N Myanmar, 22. V. 2000, S. KOIWAYA & H. WAKAHARA leg.; 1♂, S Kumon Range, Zan Phut (Makoutsup Hill), 700 m, Kachin State, N Myanmar, 29. V. 2000, A. TAKENAKA leg.; 1♂, 1♀, S Kumon Range, Zan Phut (Makoutsup Hill), 1200 m, Kachin State, N Myanmar, 2. VI. 2000, S. NAGAI leg.; 2♂♂, 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 17. VI. 2000, H. MIYAMA leg.; 2♀♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 18. VI. 2000, S. NAGAI leg.; 3♂♂, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 19. VI. 2000, S. NAGAI leg.; 1♂, S Kumon Range, Mt. Shwe Taung,700 m, Kachin State, N Myanmar, 23. VI. 2000, H. MIYAMA leg.

Myriochile (*Myriochile*) *sinica* (FLEUTIAUX, 1889)

Specimen examined: 1♀, 15 km NW Namti, 400 m, Kachin State, N Myanmar, 18. VI. 2000, S. NAGAI leg.

Among 111 tiger beetle species known from Myanmar (Burma) at present, 23 species are endemic (= 20.7 %), 56 species are shared with India (= 50.5 %), 64 species with Thailand (= 57.8 %), 50 species with Laos (= 45.0 %) and 31 species with China (= 27.9 %) in distribution, and 17 species are known from Myanmar, India, Thailand, Laos andChina too.

Acknowledgement

The authors are indebted to Mr. Shinji NAGAI, who made this rich material available for our study.

要　　約

澤田博史 & Jürgen WIESNER：永井信二氏及び彼の友人グループ採集のミャンマー産ハンミョウ——永井信二氏からミャンマー北部カチン州産ハンミョウ科甲虫の同定依頼をうけ，調

べた結果ミャンマーから初めて記録される種が１２種あり，うち４種を新種と認めたので *Therates nagaii*, *Th. miyamai*, *Th. yamaokai* 及び *Calochroa nosei* と命名記載した．又，ミャンマー産ハンミョウをリストアップし，近隣の４カ国，タイ，インド，ラオス及び中国，との分布の異同をチェックした．

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SAWADA, H. & J. WIESNER,1998. Zwei neue Sandlaufkäfer-Arten aus Burma (Coleoptera: Cicindelidae), 51. Beitrag zur Kenntnis der Cicindelidae. *Ent. Zeitschr.* **108**, 8: 338–342. (1)

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——— 1999. Die Arten der Gattung *Pronyssa* (Coleoptera: Cicindelidae), 59. Beitrag zur Kenntnis der Cicindelidae. *Ent. Zeitschr.*. **109**, 6: 250–258. (3)

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Ent. Rev. Japan, 55 (2): 111, Dec. 31, 2000

Two New Records of Tiger Beetle Species from China (Coleoptera: Cicindelidae)

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Abstract *Heptodonta ferrarii ferrarii* and *Lophyra* (*Spilodia*) *lineifrons* are reported the first time from China.

The authors received for study two tiger beetle species, which were collected by Mr. Andre GORODINSKI (Moscow) in south western China. Referring to WIESNER (1992) both turned out to be new, even if not unexpected state records from China. In the following the collection data are listed.

Heptodonta ferrarii ferrarii GESTRO, 1893

Specimen examined: 1 ♀, Lintsan city env. (2200 m), 300 km SW Kunmin, SW Yunnan, China, 15. VI. 2000, A. GORODINSKI leg.

New state record from China. Previously the species was known from Burma and Thailand.

Lophyra (*Spilodia*) *lineifrons* (CHAUDOIR, 1865)

Specimen examined: 1 ♀, Lintsan city env. (2200 m), 300 km SW Kunmin, SW Yunnan, China, 15. VI. 2000, A. GORODINSKI leg.

New state record from China. Previously the species was known from north eastern India, Nepal, Bangladesh, Burma, Thailand, Malaysia, Cambodia, Laos and Vietnam.

Acknowledgement

The authors are indebted to MR. Andre GORODINSKI, who made the beetles available.

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Ent. Rev. Japan, 55 (2): 113–116, Dec. 31, 2000

Records of Ground Beetles (Coleoptera, Carabidae) Collected by a Malaise Trap from Bukit Soeharto, East Kalimantan

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Abstract Total 17 species of ground beetles collected by a malaise trap are recorded from Bukit Soeharto, East Kalimantan.

MAKIHARA *et al.* (2000) reported the effects of drought and fire on changes in the number of species and individuals in five families of coleopteran insects in the Tropical Rain Forest Research Project of Japan International Cooperation Agency (JICA).

In this paper, we are going to report the records of ground beetles collected by a malaise trap in its project between January and November 1998 from Bukit Soeharto, East Kalimantan.

The specimens examined are preserved in the Lake Biwa Museum, Kusatsu.

List of Species Collected

Subfamily **Harpalinae**

Trichotichnus sakaii N. ITO, 1996

Specimen examined: 1 ♂, Bukit Soeharto, East Kalimantan, 7. II. 1998, H. MAKIHARA leg.

Coleolissus cyanescens N. ITO, 1998

Specimens examined: 1 ♂, Bukit Soeharto, East Kalimantan, 7. III. 1998, H. MAKIHARA leg.; 1 ♀, ditto, 4. VII. 1998.

Subfamily **Odacanthinae**

Discrapeda brunnea CHAUDOIR, 1862

Specimens examined: 2♀♀, Bukit Soeharto, East Kalimantan, 3. I. 1998, H. MAKIHARA leg.; 1♂ 3♀♀, ditto, 10. I. 1998; 2♂♂ 3♀♀, ditto, 17. I. 1998; 2♂♂, ditto, 7. II. 1998; 1♀, ditto, 6.VI. 1998; 1♀, ditto, 13.VI. 1998; 1♂, ditto, 4. VII. 1998; 1♀, ditto, 11. VII. 1998; 1♀, ditto, 8. VIII. 1998.

Subfamily **Callistinae**

Chlaenius bimaculatus DEJEAN, 1826

Specimens examined: 2 ♂♂, Bukit Soeharto, East Kalimantan, 10. I. 1998, H. MAKIHARA leg.; 1♀, ditto, 17. I. 1998; 1♀, ditto, 4. VII. 1998.

Subfamily **Lebiinae**

Calleida corporaali ANDREWES, 1929

Specimens examined: 1♂, Bukit Soeharto, East Kalimantan, 18. IV. 1998, H. MAKIHARA leg.; 2♀♀, ditto, 25. IV. 1998; 1♀, ditto, 6.VI. 1998; 1♂, ditto, 15. VIII. 1998; 1♀, ditto, 17. X. 1998.

Anchista binotata (DEJEAN, 1825)

Specimens examined: 1♂, Bukit Soeharto, East Kalimantan, 24. I. 1998, H. MAKIHARA leg.; 1♀, ditto, 7. II. 1998; 1♀, ditto, 14. II. 1998.

Celanephes parallelus SCHMIDT-GÖBEL, 1846

Specimens examined: 2♂♂, Bukit Soeharto, East Kalimantan, 3. I. 1998, H. MAKIHARA leg.; 1♀, ditto, 10. I. 1998; 1♂, ditto, 17. I. 1998; 1♀, ditto, 24. I. 1998; 2♂♂, ditto, 14. II. 1998; 6♂♂ 8♀♀, ditto, 21. II. 1998; 2♂♂4♀♀, ditto, 28. II. 1998; 15♂♂19♀♀, ditto, 7. III. 1998; 14 ♂♂17♀♀, ditto, 14. III. 1998; 10♂♂12♀♀, ditto, 21. III. 1998; 3♂♂6♀♀, ditto, 28. III. 1998; 1♂, ditto, 4. IV. 1998; 1♀, ditto, 11. IV. 1998; 2♂♂6♀♀, ditto, 18. IV. 1998; 3♂♂2♀♀, ditto, 25. IV. 1998; 2♂♂, ditto, 2. V. 1998, 2♀♀, ditto, 9. V. 1998; 1♂, ditto, 16. V. 1998; 1♀, ditto, 20. VI. 1998; 1♂, ditto, 19. IX. 1998.

Dolichoctis parvicollis CHAUDOIR, 1869

Specimens examined: 1♂, Bukit Soeharto, East Kalimantan, 10. I. 1998, H. MAKIHARA leg.; 1♀, ditto, 24. I. 1998; 1♀, ditto, 14. II. 1998.

Brachyctis rugulosa CHAUDOIR, 1869

Specimen examined: 1 ♂, Bukit Soeharto, East Kalimantan, 17. I. 1998, H. MAKIHARA leg.

Lebia monostigma ANDREWES, 1923

Specimen examined: 1 ex., Bukit Soeharto, East Kalimantan, 28. VIII. 1998, H. MAKIHARA leg.

Peripristus ater (CASTERNAU de LAPORTE, 1835)

Specimen examined: 1 ♀, Bukit Soeharto, East Kalimantan, 7. III. 1998, H. MAKIHARA leg.

Serrimargo guttiger (SCHAUM, 1860)

Specimen examined: 1 ♀, Bukit Soeharto, East Kalimantan, 7. III. 1998, H. MAKIHARA leg.

Subfamily **Orthogoninae**

Orthogonius mniszechi CHAUDOIR, 1871

Specimens examined: 1 ♂, Bukit Soeharto, East Kalimantan, 23. V. 1998, H. MAKIHARA leg.; 2 ♀ ♀, ditto, 30. V. 1998; 1 ♂, ditto, 6. VI. 1998; 2 ♀ ♀, ditto, 13. VI. 1998; 1 ♂, ditto, 20. VI. 1998; 1 ♂, ditto, 18. VII. 1998; 2 ♀ ♀, ditto, 25. VII. 1998; 1 ♂, ditto, 12. IX. 1998.

Orthogonius doriae PUTZEYS, 1871

Specimens examined: 1 ♂, Bukit Soeharto, East Kalimantan, 17. I. 1998, H. MAKIHARA leg.; 1 ♀, ditto, 6. VI. 1998; 3 ♀ ♀, ditto, 4. VII. 1998; 1 ♂, ditto, 11. VII. 1998; 1 ♂, ditto, 18. VII. 1998; 1 ♀, ditto, 25. VII. 1998; 1 ♀, ditto, 8. VIII. 1998.

Orthogonius pilotus CHAUDOIR, 1871

Specimens examined: 2 ♂ ♂ 1 ♀, Bukit Soeharto, East Kalimantan, 10. VII. 1998, H. MAKIHARA leg.; 2 ♀ ♀, ditto, 4. VII. 1998.

Subfamily **Helluoninae**

Macrochilus vitalisi ANDREWES, 1920

Specimens examined: 1♀, Bukit Soeharto, East Kalimantan, 17. I. 1998, H. MAKIHARA leg.; 1♂, ditto, 24. I. 1998; 1♂, ditto, 16. V. 1998; 1♀, 7. XI. 1998.

Macrochilus asteriscus WHITE, 1844

Specimens examined: 1♂, Bukit Soeharto, East Kalimantan, 7. II. 1998, H. MAKIHARA leg.; 1♀, ditto, 18. VII. 1998.

要　　約

八尋克郎・伊藤　昇・槇原　寛：マレーズトラップで捕獲された東カリマンタンのゴミムシ．――「インドネシア熱帯降雨林研究計画プロジェクト」において，1998年1月～11月にマレーズトラップで捕獲された東カリマンタンの17種のゴミムシ類を報告した．

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MAKIHARA, H., H. KIMURA, K. YAHIRO and C. SOEYAMTO, 2000. The Effect of Droughts and Fires on Coleopteran Insects in Lowland Dipterocarp Forests in Bukit Soeharto, East Kalimantan. E. GUHARDJA, M. FATAWI, M. SUTISNA, T. MORI, S. OHTA (Eds.) Rainforest Ecosystems of East Kalimantan, EL Niño, Drought, Fire and Human Impacts, *Springer-Verlag* Tokyo 153-163.

Ent. Rev. Japan, 55 (2): 117–129, Dec. 31, 2000

Five New Species of the Genus *Stenolophus* (s. str.) from Subtropical Asia (Coleoptera; Carabidae; Harpalini)

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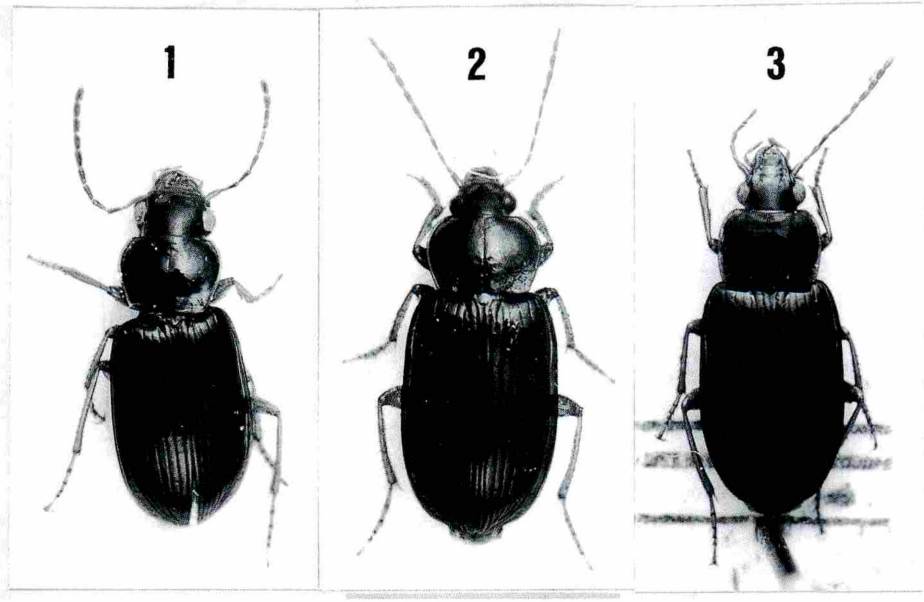
Abstract Five new species of the genus *Stenolophus* (s. str.), *Stenolophus impunctatus*, *S. persimilis*, *S. trichotichnoides*, *S. doiinthanonus* and *S. quadratus* are described from Laos, Vietnam, Thailand (two species) and Pakistan, respectively. These species have the pubescence only on the apex of 6th sternite and must be closely related to one another.

Until now many species of the genus *Stenolophus* STEPHEN, 1827 have been known from Asian region. Those are rather similar in general appearance, especially pronotum, one another. Recently I obtained an opportunity to examine numerous specimens of the genus *Stenolophus* and found some new species among them. A part of them are clearly different from typical *Stenolophus* in general appearance.

In this paper, I am going to describe five new species of the genus *Stenolophus* under the name, *Stenolophus* (*Stenolophus*) *impunctatus* from Laos, *S.* (*S.*) *persimilis* from Vietnam, *S.* (*S.*) *trichotichnoides* and *S.* (*S.*) *doiinthanonus* from Thailand, and *S.* (*S.*) *qudratus* from Pakistan. These species have the shape of body and the shape and puntation of pronotum different from the typical subgenus *Stenolophus*. Further those are peculiar in the 6th abdominal sternite only pubescent near apex instead of being pubescent wholly on the 3rd to the 6th and must be closely related one another. This characteristic is rather similar to the subgenus *Astenolophus* HABU, 1973.

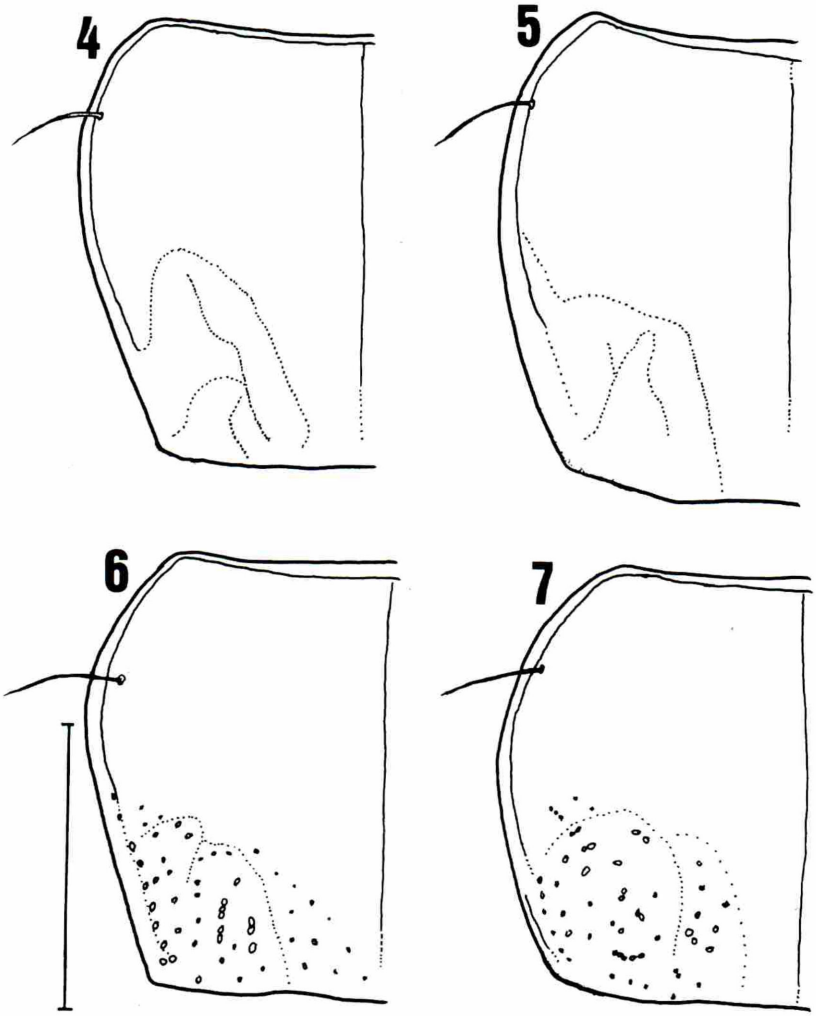


Figs. 1-3. Habitus of the genus *Stenolophus* spp.1, *Stenolophus* (*Stenolophus*) *persimilis* N. ITO, sp. nov.; 2, *S.* (*S.*) *trichotichnoides* N. ITO, sp. nov.; 3, *S.* (*S.*) *quadratus* N. ITO, sp. nov.

I wish to express my deep gratitude to Dr. Marin BAEHR of the Zoologische Startssammlung, München, Dr. Ottó MERKL of the Hungarian Natural History Museum, Budapest, Dr. Shun-Ichi UÉNO of the National Science Museum (nat.), Tokyo and Dr. Kimio MASUMOTO of Ôtsuma Women's college, Tokyo, for their kind offer of material. Concerning to the measurement of size, see the former papers of N. ITO.

Abbreviation of depository

ZSS: the Zoologische Staatssammlung, München.
HNHM: the Hungarian Natural History Museum, Budapest.
OMNH: the Osaka Museum of Natural History, Osaka.
NIc: the author's collection



Figs. 4-7. Pronota of the genus *Stenolophus* spp. 4, *Stenolophus* (*Stenolophus*) *impunctatus* N. ITO, sp. nov.; 5, *S.* (*S.*) *persimilis* N. ITO, sp. nov.; 6, *S.* (*S.*) *trichotichnoides* N. ITO, sp. nov. 7, *S.* (*S.*) *doiinthanonus* N. ITO, sp. nov.

Stenolophus* (*Stenolophus*) *impunctatus N. ITO, sp. nov.

(Figs. 4, 8, and 13–A)

Body oblong, black, shiny, fairly iridescent on pronotum and elytra;antennae, palpi and legs dark to moderately reddish brown, labrum and middle portions of mandibles dark reddish brown, lateral margins of pronotum light brown.

Head large, 0.76–0.79 times as wide as pronotum, rather convex on vertex, not punctate, with narrow interocular space two-thirds the width of head including eyes; labrum trapezoidal, truncate at apex; clypeus emarginate apically; clypeal suture scarcely impressed; frontal impressions deeply engraved throughout, reaching supraorbital grooves; eyes large, moderately prominent; temples short, rather steeply oblique backwards; genuine ventral margins of eyes narrowly separated from buccal fissure; antennae slender, long, reaching basal fifth of elytra, 3rd segment glabrous in apical fifth, as long as the 4th and twice the 2nd; mandibles robust, left mandible with small terebral tooth, right one sharp at apex, blunt and wide in terebral tooth and roundedly produced in retinacular tooth; palpi slender, 3rd segment of labial palpus as long as the 2nd; ligula parallel at sides, abruptly expanded just before truncate apex; paraglossae short, narrow, and not reaching ligular apex; epilobes narrow and parallel-sided; microsculpture clearly impressed, observed as isodiametric meshes.

Pronotum (Fig. 4) obtrapezoidal-shaped, very sparsely covered with extremely minute punctures, gently convex, widest slightly behind apical third, slightly wider than one and one-third as wide as long; sides clearly arcuate in front and straightly oblique behind from the widest point, rather widely reflected; apex weakly emarginate, with border widely interrupted in middle; base one-tenth wider than apex, weakly oblique at sides, truncate in middle, not bordered lengthwise; apical angles weakly protrudent, narrowly rounded; basal angles much larger than rectangle, not angulate; lateral furrows engraved in a line throughout; basal foveae small, rounded, and flattened; front transverse impression obscure but traceable like the hind one; median line finely carved, reduced near apex and base; microsculpture visible, though less clear than on head, consisting mixtures of isodiametric and transverse meshes.

Elytra narrowly oblong, three-fifths longer than wide, almost flattened on disc, without punctures; sides parallel in middle, gently sloping at humeri, abruptly curved just near apices, with shallow preapical sinus; apices widely and weakly arcuate on margins, rounded at tip, narrowly separate to each other; bases shallowly emarginate, widely rounded at humeral angles; striae more or less wide, moderately deepened, scutellar striole long; intervals flat or weakly convex on disc, gradually raised towards apices, a discal pore of 3rd interval situated near apical fourth and adjoining 2nd stria; marginal series three grouped, fore group consisting of 6, middle group of 4, and hind group of 4 umbilicate pores, the fore and middle groups widely separated to each other; microsculpture finely and transversely lined. Hind wings entirely developed.

Ventral surface finely punctate on pro- and mesosterna and lateral portions of metasternum, sparsely pubescent on 4th and 5th sternites and densely so on 6th one; metepisternum steepy contracted behind, one-fourth longer than wide; 6th abdominal sternite in both sexes bisetose at each side, in ♂ shallowly emarginate and in ♀ weakly bisinuate at apex.

Hind femora bisetose; fore tibiae slender, weakly dilated apicad, clearly sulcate, bispinous apico-laterally, terminal spur lanceolate; mid tarsi of ♂ without ventral adhesive hairs in 1st segment, hind tarsi in ♂ as long as and in ♀ one-tenth shorter than the width of head, 1st segment one-seventh shorter than the 2nd and 3rd segments taken together, 2nd one-fourth longer

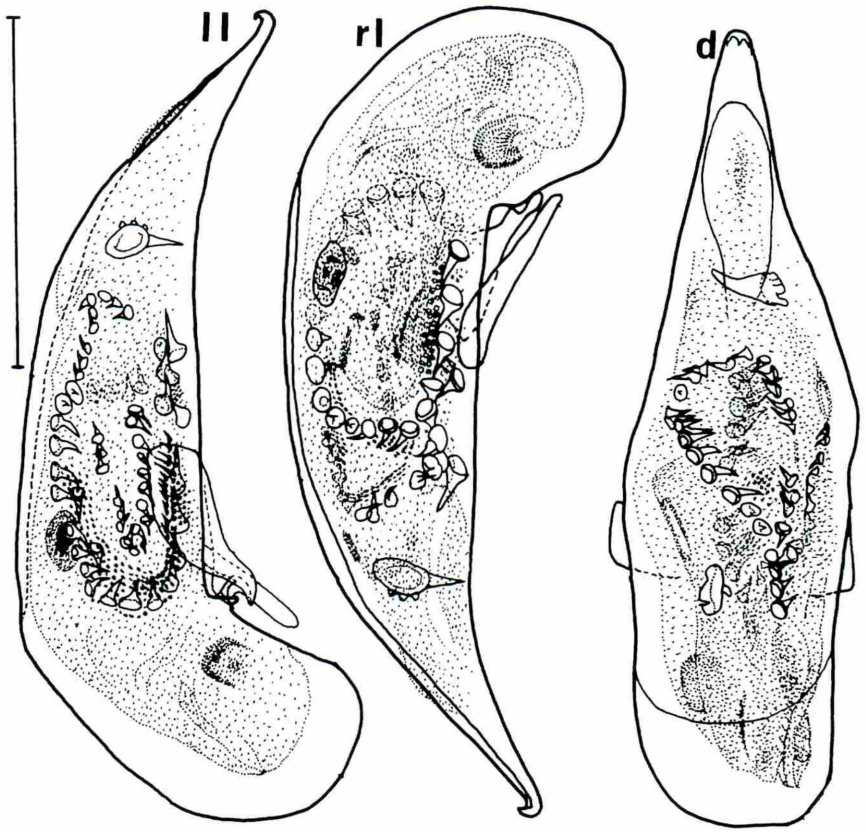


Fig. 8. Male genitalia of *Stenolophus* (*Stenolophus*) *impunctatus* N. ITO, sp. nov.d, dorsal aspect; ll, left lateral aspect; rl, right lateral aspect. (Scale: 1 mm)

than the 3rd and about twice the 4th.

Aedeagus (Fig. 8) thick, gradually tapered in apical two-fifths, minutely and sharply hooked obliqo-dorsad at apex, with large basal bulb; apical lobe somewhat elongate-triangular, rounded at apex; apical orifice small, inner sac armed with a large peg-shaped spine at apical third and a smaller one near basal bulb, a long and bending chain of seriate sclerites, and a shorter chain of the smaller sclerites along inner side of the former chain, and some small groups of the sclerites. Stylus (Fig. 13-A) weakly curved, slender, with a small spine along baso-ventral margin and a very short seta along baso-dorsal one; basal segment 4–6-setose apico-externally; valvifer with many short setae near apical margin.

Length: 7.3–8.6 mm. Width: 3.0–3.5 mm.

Holotype: ♂, Bolaven Plateau, 15°02'N, 106°35'E, alt. 800 m, 15Km SE of Ban Houaykong, Kong Lom (lake) env., Attapu Prov., South Laos, 18-30. IV. 1999, E. JENDEK and O. ŠAUŠA leg. Paratypes: 1♂, 4♀♀, same data as the holotype; 1♀, 20 Km NW of Louang Namthha, 21°09.2'N, 101°18.7'E, alt. 800 m, alt. 900±100 m, North Laos, 24–30. V. 1997, E. JENDEK and O. ŠAUŠA leg.; 2♂♂, Mon Angget, Chiang Mai, Thailand, 28. IV. 1992, N. ITO leg.; 1♂, Doi Inthanon, Chiang Mai, Thailand, 6–12. VI. 1990, MALICKY leg.; 1♂, ditto, 26. V.–3. VII. 1990; 1♂, ditto, 16–30. X. 1990; 1♀, ditto, 19–26. IX. 1990, (latter three paratypes preserved in ZSS).

This new species is allied to *Stenolophus* (*Stenolophus*) *agonoides* BATES 1883, but the eyes are larger, the pronotum is more widely reflected at sides, not bordered throughout on base, and with much sparser and minuter punctures, and the microsculptures are clearer.

The new species is also similar to *Stenolophus* (*Stenolophus*) *kurosai* TANAKA, 1962 but the body is more strongly microsculptured dorsally, the pronotum is not punctate in basal foveae and more narrowly reflected at sides, and the abdominal sternite in ♀ is not simlpy arcuate but bisinuate at apex.

Stenolophus* (*Stenolophus*) *persimilis N. ITO, sp. nov.

(Figs. 1, 5, 9, and 13–B)

This new species is closely allied to the previous new species in the shape and almost smooth surface of the pronotum and the bisinuate 6th abdominal sternite of ♀ at apex, but the pronotum is subangulate at basal angles instead of being fully rounded and more widely reflected at sides, the elytra are more clearly microsculptured, and the inner sac in aedeagus arms sclerites much smaller in both number and size and the more elongate sclerite near basal bulb.

Head large, three-fourths as wide as the pronotal width, gently elevated on vertex, sparsely

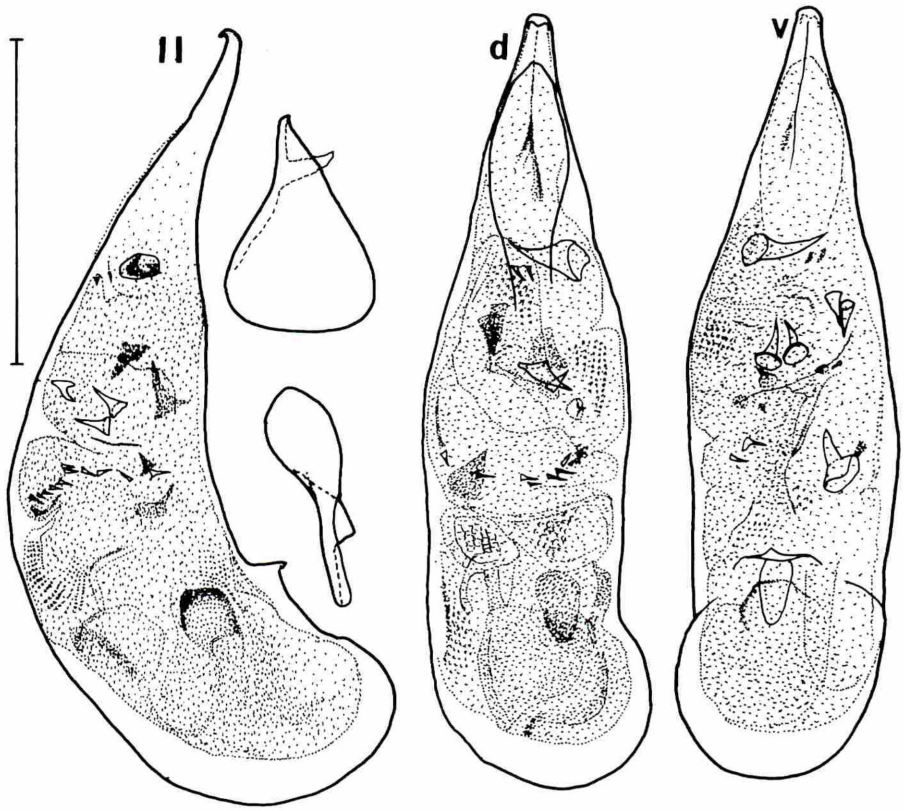


Fig. 9. Male genitalia of *Stenolophus* (*Stenolophus*) *persimilis* N. ITO, sp. nov.d, dorsal aspect; ll, left lateral aspect; v, ventral aspect. (Scale: 1 mm)

furnished with very minute punctures; labrum quadrate, not or weakly emarginate at apex; clypeal suture fine but clear throughout; interocular space more or less wide, about two-thirds of the width of head. Pronotum (Fig. 5) 1.35 times as wide as long, gently convex; sides gently arcuately convergent in front and straightly so behind, widely reflected; basal foveae each small, with a small and weak hump. Elytra a half longer than wide; humeral angles larger than rectangle, slightly angulate; marginal series composed three groups of umbilicate pores, fore group consisting of 6 pores, middle and hind groups of 4 pores, respectively. Ventral surface almost not punctate, smooth also on metasternum and metepisterna; metepisternum two-fifths longer than wide; 6th abdominal sternite in both sexes quadrisetose along apical margin. Hind femora bisetose along hind margin; fore tibiae clearly sulcate, apico-externally with two robust spines; mid tarsi of ♂ with biseriate adhesive hairs ventrally in 2nd to 4th segments, hind tarsi in ♂ as long as and one-tenth shorter in ♀ than the width of head, 1st segment four-fifths as long as the 2nd and 3rd taken together and a half longer than the 2nd, 3rd a half longer than the 4th.

Aedeagus (Fig. 9) stout in basal half, gradually thinned towards apex, sharply hooked obliquely dorsad at tip, with a large basal bulb; apical orifice small, inner sac armed with a large prg-shaped sclerite near apical third, with two pairs of a little small sclerites before the former, with a large and short sclerite a little before middle, and with a series of very small sclerites above the last one; ventral surface with a fine and longitudinal ridge. Stylus (Fig. 13-B) similar to the former species, but the setae of basal segment are a little shorter.

Length: 7.5–8.5 mm. Width: 3.2–4.1 mm.

Holotype: ♂, Deo Tram Ton, alt. 1,840 m, Lao Cai Province, North Vietnam, 11. X. 1994, S. UÉNO leg. (Preserved in NSMN). Paratypes: 1 ♂, same data as the holotype; 1 ♂, same locality and date as the holotype, alt. 1,850 m, S. NOMURA leg.; 1 ♀, same locality as the holotype, alt. 1,900 m, 10. V. 1995, Y. NISHIKAWA leg.; 2 ♂♂, Sa Pa, alt. 1,550 m, Lao Cai Province, North Vietnam, 10. V. 1995, S. UÉNO leg. (Preserved in NSMN and NIc); 1 ♂2 ♀♀,Da Lat, Da Thien (Valley of love)Lam Dong Prov., Vietnam, 18. X. 1988, S. MAHUNKA & VÁSÁRHELYI leg. (Preserved in HNHM)

Stenolophus (*Stenolophus*) *trichotichnoides* N. ITO, sp. nov.

(Fig. 2, 6, 10, and 13–C)

Body oval, similar in shape to *Trichotichnus* (s. str.) *szekessyi* (JEDLIČKA), black to slighly brownish black, shiny, with weakly iridescent lustre on pronotum and elytra in examples from Mon Angget and Doi Suthep and clearer lustre in example from Doi Ankhang; labrum, palpi, antennae and legs light brown, mandibles and apical portion of clypeus a little dark reddish brown.

Head somewhat small, a little less than two-thirds as wide as the pronotal width (0.62–0.64 in ratio), fairly convex, very sparsely and minutely punctate, with narrow interocular space 0.54–0.56 times as wide as the width of head; labrum quadrate, weakly arcuate apically; clypeus weakly elevated, truncate at apex; clypeal suture fine and shallow lengthwise; frontal impressions deep, arcuately divergent behind, reaching supraorbital grooves, spaces before the impressions well raised; eyes large and hemispherically prominent; temples each very short, forming a rectangle with neck constriction; genuine ventral margin of eye adjoining buccal fissure; mandibles stout, acute at tips, teeth small; antennae slender, more or less long, reaching

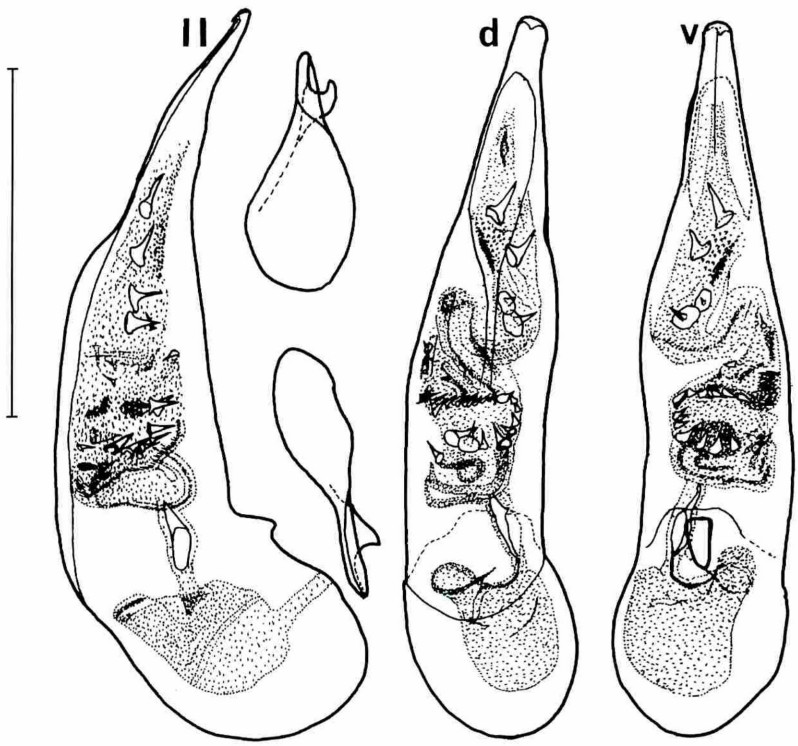


Fig. 10 Male genitalia of *Stenolophus* (*Stenolophus*) *trichotichnoides* N. Ito, sp. nov. d, dorsal aspect; ll, left lateral aspect; v, ventral aspect. (Scale: 1 mm)

basal fifth of elytra, 3rd segement glabrous in basal sixth, as long as the 4th and twice the 2nd; ligula hardly emarginate at sides, weakly arcuate apically; paraglossae small, slightly surpassing ligular apex; labial palpi somewhat massive, 3rd very sparsely short-pubescent, as long as the 2nd; epilobes of mentum narrow, parallel at sides; microsculpture clearly impressed as isodiametric meshes.

Pronotum (Fig. 6) subquadrate, widest at apical two-fifths, nearly a half wider than long, comparatively flatter than as usual; sides widely arcuate apicad and almost straightly convergent basad from the widest point, narrowly reflected; apex moderately to shallowly emarginate, bordered throughout; base three-tenths wider than apex, slightly oblique at sides, truncate in middle, unbordered lengthwise; apical angles weakly protruding, widely rounded; basal angles much larger than rectangle, angularly rounded; lateral furrows wholly engraved in a line; basal foveae somewhat wide, only flattened; front transverse impression shallow, somewhat clear to obscure, the hind one short, obscurer than the front one; median line fine, shallow, vanished near apex and base; surface mostly smooth, moderately punctate in lateral furrows and basal foveae; microsculpture weakly visible on disc, where those consist of transverse meshes, a little more clearly so in lateral furrows and basal foveae, where those consist of mixture with subsquare and isodiametric meshes.

Elytra suboval, 1.49–1.55 times as long as wide, fairly convex, without punctures; sides clearly rounded in humeri, slightly arcuate in middle, abruptly curved before shallow subapical

sinus; apices not produced, rather similar to those of tribe Lebini, weakly rounded at tips, widely separated from each other; bases shallowly emarginate, quite rounded at humeral angles; striae rather deep and wide, scutellar striole not long; intervals relatively raised, a discal pore of 3rd interval adjoining 2nd stria and situated near apical fourth; marginal series divided into three groups, fore one composed of 5–6 umbilicate pores, mid one of 4–5 pores, and hind one of 4 pores; surface finely, clearly and transversely microlined. Hind wings fully developed.

Ventral surface not punctate all over, wholly glabrous except apical portion of 6th abdominal sternite pubescent; metepisternum moderately contracted behind, one-fourth longer than wide; 6th abdominal sternite in both sexes subtruncate at apex, in ♂ unisetose and in ♀ bisetose at each side.

Hind femora bisetose; fore tibiae weakly dilated distad, sulcate in basal half, apico-externally bispinous, terminal spur widely lanceolate; tarsi long, 1st mid tarsal segment in ♂ baering adhesive hairs only at apex, hind tarsus one-fourth in ♂ and one-tenth in ♀ longer than the width of head, 1st segment hardly shorter than the 2nd and 3rd take together, 2nd one-third longer than the 3rd and twice the 4th.

Aedeagus (Fig. 10) thickened near large basal bulb, gradually thinned forwards, weakly arcuate near apex, with a small and sharp hook at tip; apical orifice small and narrow, inner sac possessing two pairs of two large peg-shaped sclerites near apical third, a group of three a little small ones and a series of slenderer and shorter ones a little before middle, and a long conical one near basal bulb; apical lobe subquadrate, three-fifths longer than wide; ventral surface finely and longitudinally ridged in middle of apex. Stylus (Fig. 13–C) well curved, armed with a small spine basally on ventral margin; basal segment five short spines along apical margin; valvifer five fine setae near apex.

Length: 7.3–7.8 mm. Width: 3.0–3.2 mm.

Holotype: ♂, Mon Angget, Chiang Mai, Thailand, 31. V. 1990, K. MASUMOTO leg. (Preserved in OMNH). Paratypes: 6♂♂, 1♀, same locality as the holotype; 1♀, Doi Ankhang, Chiang Mai, Thailand, 4. VI. 1991, Y. MANIT leg.; 2♀♀, Doi Suthep, Chiang Mai, Thailand, 13. VI. 1990, H. KONISHI leg.; 1♀, Chian Mai Zoo, Chiang Mai, Thailand, 15–22. VII. 1990, MALICKY leg.; 1♂, ditto, 27. VII–31. VIII. 1990 (Preserved in STS and NIc).

This new species is allied to *Stenolophus* (s. str.) *gonidius* BATES, 1890, judging from the original description, but is different from the latter in having the body not having bliuish rustre, the antennae fully lighter in color, and the pronotum entirely bordered at apex and not coarse in the punctures of basal foveae.

Further, in BATES's remark (1892) of *S. gonidius*, the following character is described: the anterior angles of the epistome are (as in *S. harpaloides*) produced, dentiform and separated from the middle part of the front edge by a small emargination. But such a productions are lacking in the new species.

Stenolophus* (*Stenolophus*) *doiinthanonus N. ITO, sp. nov.

(Figs. 7, 11, and 13–D)

This new species is closely allied to the former new species, *S. trichotichnoides*, but the body is a little more strongly shiny, the head is a little smaller (0.60–61 times as wide as the pronotal width), the pronotum is a little more widely reflected at sides, not simply convergent

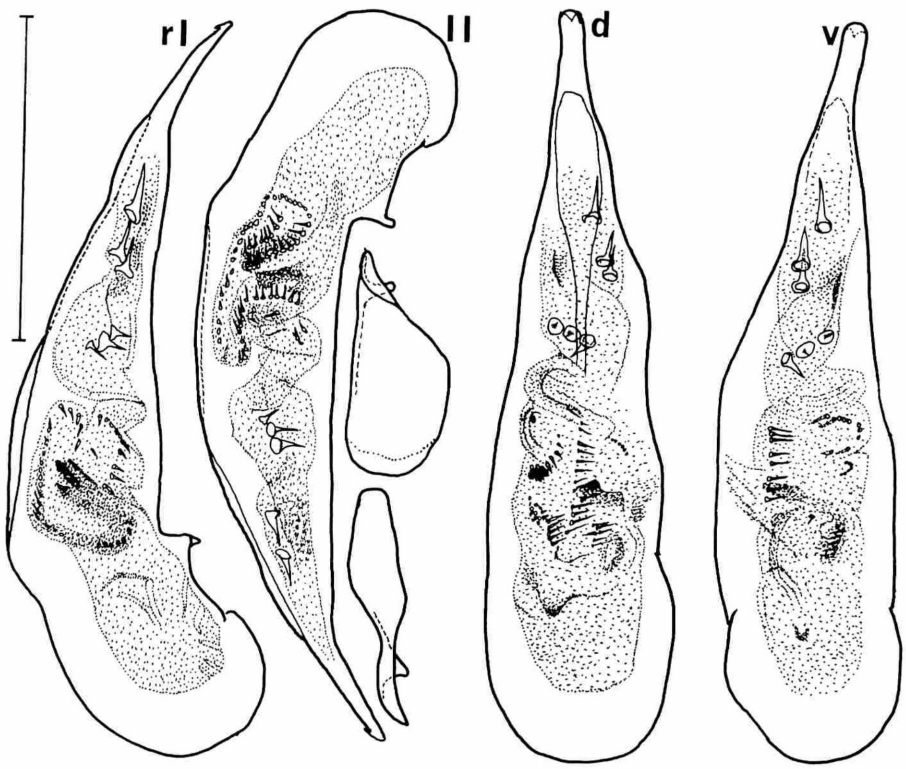


Fig. 11. Male genitalia of *Stenolophus* (*Stenolophus*) *doiinthanonus* N. ITO, sp. nov. d, dorsal aspect; ll, left lateral aspect; rl, right lateral aspect; v, ventral aspect. (Scale: 1 mm)

behind, though hardly sinuate just before base, weakly expanded in lateral furrows intead of being in a line throughout and a little narrower in basal angles.

Head weakly convex, very sparsely covered with very minute punctures; interocular space narrow, three-fifths of the width of head; clypeal suture fine, clearly shallow to more or less deep; genuine ventral margin of eye very narrowly separated from buccal fissure; mentum weakly produced at bottom of apical emargination. Pronotum (Fig. 7) weakly elevated, 1.46–1.49 times as wide as long; basal foveae relatively wide, slightly coarsely punctate. Elytra oval, 1.49–1.56 times as long as wide, flattened on disc; striae wide and deep, scutellar striole of moderate-length; intervals weakly convex, a discal pore of 3rd interval at apical fourth; marginal series composed of (5–6) + 4 + (4–5) umbilicate pores. Hind wings entire. Ventral surface quite smooth; metepisternum two-fifths wider tha long; 6th abdominal sternite in ♂ bisetose and in ♀ quadrisetose at outer margins, in both sexes weakly arcuate at apex. Hind femora bisetose along hind margin; fore tibiae sulcate in basal three-fourths, bi- or trispinous apicoexternally; 1st segment of mid tarsi in ♂ bearing adhesive hairs only at apex, hind tarsi nearly one-fifth in ♂ and one-twntieth in ♀ than the width of head, 1st segment one-seventh shorter than the 2nd and 3rd taken together and a half longer than the 2nd, 2nd one-third longer than the 3rd and twice the 4th. Aedeagus (Fig. 11) stout in basal half, thence gradually thinned apicad, gently curved obliqo-ventrad, minutely hooked dorsally; apical lobe narrowly opening, inner sac armed with two pairs of three peg-shaped sclerites,apical one arranged along left side and another a little before middle and arranged subrectangularly against the longitudinal direction, and

also with four series of slim spine-like sclerites between middle and basal bulb. Stylus (Fig. 13–D) gently arcuate; basal segment four tiny spines apically; valvifer long and fine setae and very small spines along apex.

Length: 7.1–8.2 mm. Width: 3.2–3.8 mm.

All types were collected in Doi Inthanon, Chiang Mai, Thailand, by MALICKY. Holotype: ♂, 21–28. VIII. 1990. (Preserved in ZSS). Paratypes: 1♂, same data as the holotype; 2♀♀, 28. VII.–4. IX. 1990; 1♂, 2♀♀, 3–10. X. 1989; 4♀♀, 10–17. VII. 1990; 2♀♀, 18–25. IX. 1990; 1♂, 1♀, 12–19. VI. 1990; 1♀, 26. III–2. IV. 1990; 1♀, 22–29. VII. 1990; 1♀, 29. V–5. VI. 1989; 2♀♀, 14–21. VIII. 1990; 1♂, 1–8. VIII. 1990; 1♀, 5–12. XII. 1989; 1♂, 17–24. VII. 1990; 2♂♂, 8–9. V. 1990; 1♂, 10–17. X. 1989; 1♂, 24–31. VII. 1990; 1♀, 1–8. VII. 1991; 1♂, 3–10. VII. 1990. (Prederved in ZSS and NIc).

Stenolophus (*Stenolophus*) *quadratus* N. ITO, sp. nov.

(Figs. 3, 12, and 13–E)

Body black, shiny, with rather clearly iridescent lustre on elytra, the lustre on pronotum slight; labrum, palpi, mandibles, antennae, lateral margings of pronotum and legs light reddish brown.

Head moderate-sized, two-thirds as wide as the width of head, gentle in convexity, with very sparse and minute punctures; labrum weakly convergent apicad, weakly arcuate at apex; clypeus somewaht swollen, subtriangularly produced at apical corners, straight between the productions; clypeal suture fine, shallow, sometimes obliterated in middle; frontal impressions moderately deep throughout; interocular space relatively wide, three-fourths of the width of head; eyes hemispherical, but not so large as the previous new species, *S. trichotichnoides*; temples very short, steeply convergent towards neck constriction; space between buccal fissure and genuine ventral margin of eyes very narrow; mandibles short, pointed at tips, terebral tooth of left mandible small and that of right one like hump, retinacular tooth of left one widely triangular and that of right one sharply produced and blunt at tips; antennae rather long and reaching basal fifth of elytra, 3rd segment pubescent in apical four-fifths, as long as the 4th and twice the 2nd; 3rd segment of labial palpus tumid, as long as the 2nd; ligula slightly widened distad, somewhat rounded at apex; paraglossae narrow, short, prolonged forwards a little beyond ligular apex; microsculpture clearly visible, consisting of mixtures with square and isodiametric meshes.

Pronotum quadrate, weakly declivous apico-laterad, almost flattened on disc, widest a little behind apical two-fifths, two-fifths wider than long; sides gently roundedly apicad and straightly or somewhat arcuately and weakly convergent basad from the widest point, more or less widely reflected; apex subtruncate to shallowly emarginate, clearly bordered lengthwise; base three-tenths wider than apex, weakly arcuate, unbordered throughout; apical angles rather widely rounded; basal angles a little larger than rectangle and not angulate; lateral furrows engraved in a line, gradually widened backwards from middle; basal foveae small, only flattened, only in which sparse punctures are scattered; front transverse impression vague and shallow, the hind one obsolete; median line shallow, thin, reduced near apex and base; microsculpture more or less clearly observed as fine transverse meshes.

Elytra rather widely oblong, 1.53–1.58 times as long as wide, almost flattened on disc,

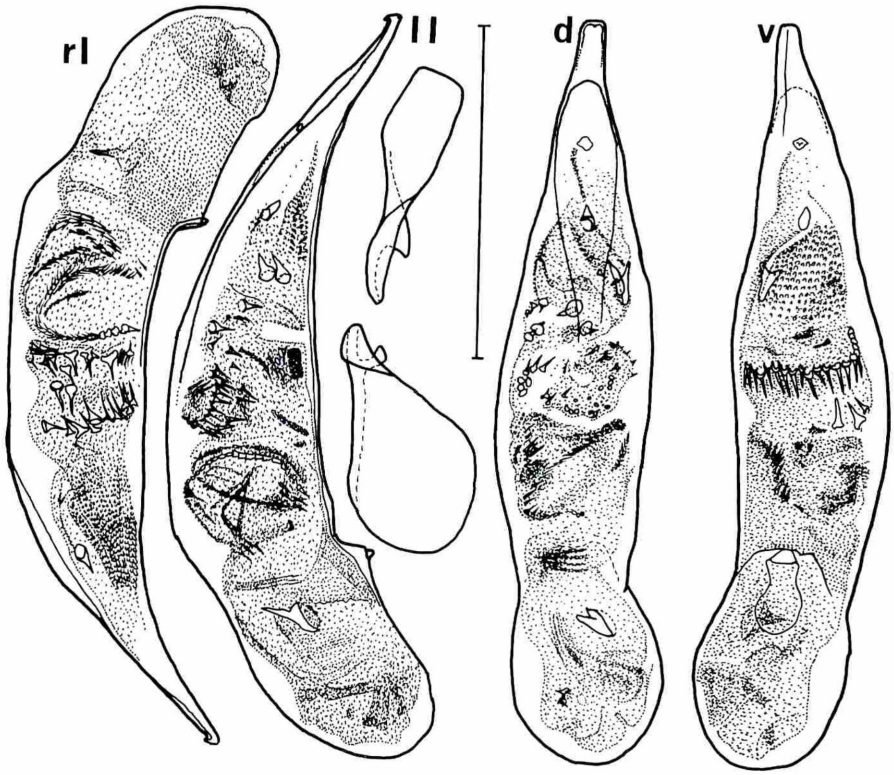


Fig. 12. Male genitalia of *Stenolophus* (*Stenolophus*) *quadratus* N. Ito, sp. nov. d, dorsal aspect; ll, left lateral aspect; rl, right lateral aspect; v, ventral aspect. (Scale: 1 mm)

rather steeply sloping towards sides and gently so apico-laterad; sides gently arcuate in humeri, subparallel medially, abruptly curved before preapical sinus which are somewhat deep; apices not produced backwards, widely and weakly arcuate, narrowly separated from each other; bases very shallowly emarginate, rounded at humeral angles; striae wide, deep, and clearly crenulate, scutellar striole moderate in length; intervals gently convex, gradually becoming more convex apicad and basad, a dorsal pore on 3rd interval at apical three-tenths; marginal series consisting of three groups, narrow in space between mid and hind groups, composed of (6–7) + (3–4) + (3–4) umbilicate pores; microsculpture relatively clear, visible as mixtures with transverse lines and meshes. Hind wings entire.

Ventral surface not punctate, sparsely pubescent apically on 6th abdominal sternite; metepisternum three-fifths longer than wide; 6th abdominal sternite in ♂ bisetose at outer margin and widely arcuate at apex, in ♀ quadrisetose and subtruncate.

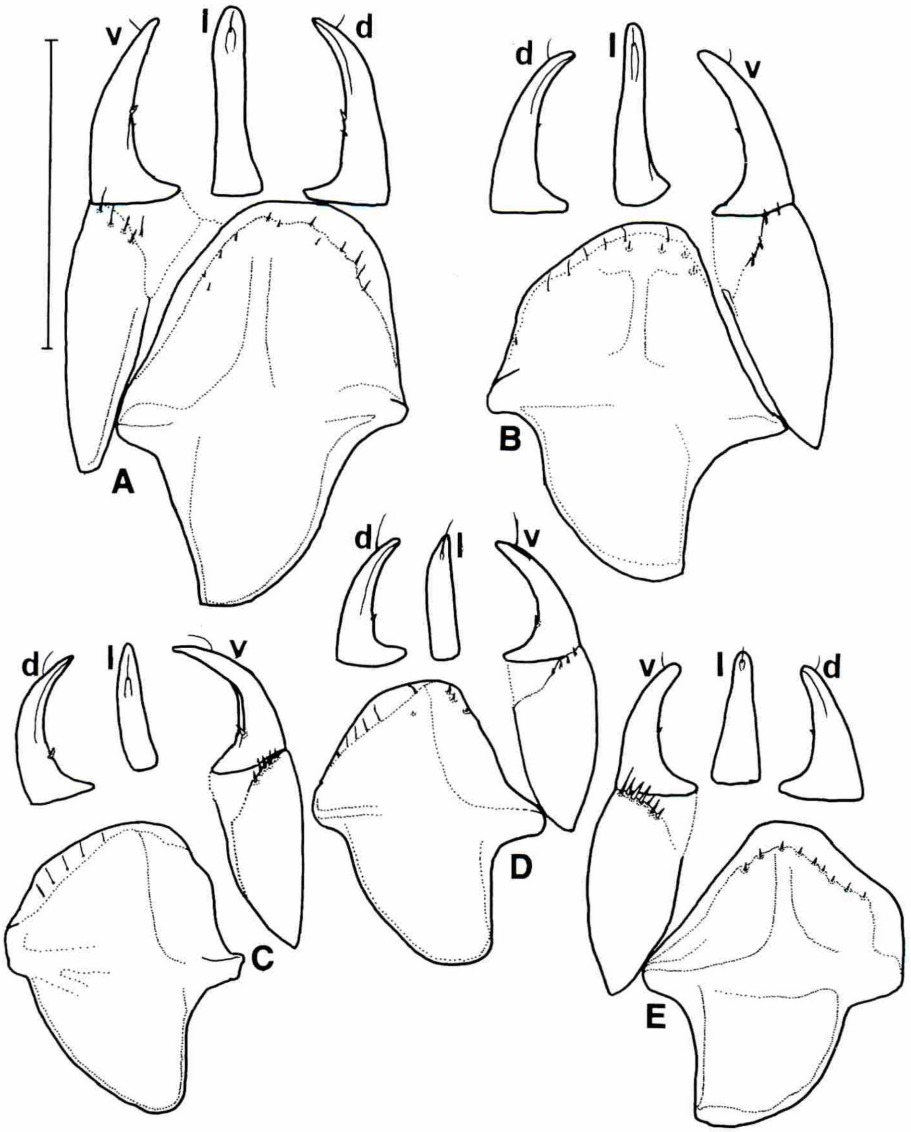
Hind margin bisetose; fore tibia clearly sulcate, bispinous apico-externally; tarsi not so long, 1st mid tarsal segment of ♂ closed with adhesive squamae in apical half, hind tarsus one-tenth longer in ♂ than and in ♀ as long as the width of head, nearly one-tenth longer than the 2nd and 3rd taken together, 3rd one-sixth shorter than the 2nd and twice the 4th;

Aedeagus (Fig. 12) not robust, weakly arcuate, gradually tapered distad from middle, minutely hooked dorsad; apical lobe elongate, subquadrate, twice as long as wide, subtruncate at tip; apical orifice small, inner sac bearing a peg-shaped sclerite near apical third, a pair of the

spine before the former sclerite, two separate spines before the pair, two series of elongate sclerites near middle, several raws of pin-shaped sclerites before the series, and a large sclerite and a pair of small sclerites in basal bulb; ventral surface finely ridged near apex. Stylus (Fig. 13–E) weak in curvature, with a small spine near middle of ventral margin and a short seta just before blunt tip; basal segment bearing several spines along apical margin; valvifer arranged with fine and short setae before apex.

Length: 7.5–8.0 mm. Width: 3.3–3.5 mm.

Holotype: ♂, Tathabaya, 73°25'E, 73°25'N, alt. 2,400 m, Kaghan Valley, 20 Km NE from



Figs. 13 Female genitalia of the genus *Stenolophus* spp. A, *Stenolophus* (*Stenolophus*) *impunctatus* N. ITO, sp. nov.; B, *S.* (*S.*) *persimilis* N. ITO, sp. nov.; C, *S.* (*S.*) *trichotichnoides* N. ITO, sp. nov. D, *S.* (*S.*) *doiinthanonus* N. ITO, sp. nov.; E, *Stenolophus* (*Stenolophus*) *quadratus* N. ITO, sp. nov.; d, dorsal aspect; l, lateral aspect; v, ventral aspect. (Scale: 0.5 mm)

Balakot, Himalaya Mts., Pakistan, 24. VII. 1994, B. HERCZIG, Gy. M. LÁSZLÓ and G. RONKAY leg. (Preserved in HNHM). Paratypes; 28♂♂, 30♀♀, same data as the holotype. (Preserved in HNHM and NIc).

This new species is similar to *S. kurosai*, but is easily distinguished from the latter by the antennae not darkened in 3rd segment and the following ones, the pronotum more sparsely punctate in basal foveae and more weakly convergent, and the elytra wholly black instead of being brownish near apico-lateral portions.

要　　約

伊藤 昇：アジア産 *Stenolophus* の５新種.———ラオス、ベトナム、タイ及びパキスタンから *Stenolophus* の５新種，*Stenolophus* (*Stenolophus*) *impunctatus*（ラオス），*S.* (*S.*) *persimilis*（ベトナム），*S.* (*S.*) *trichotichnoides*（タイ），*S.* (*S.*) *doiinthanonus*（タイ），および *S.* (*S.*) *quadratus*（パキスタン），を記載した。これらの種は、従来の典型的な本属の種とは全形および前胸背の形状・点刻状態の他，第六腹板先端近くにしか微毛を有しない点で異なっている。最後の特徴はむしろ *Astenolophus* 亜属に見られる特徴で、上記の種が近縁関係にあると推測される。

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   BLACKWELDER, R. E., 1936. Morphology of the coleopterous family Staphylinidae. Smiths. misc. Coll., 94 (13): 1-102
   —1952. The generic names of the beetle family Staphylinidae with an essay on genotypy. Bull. U.S. natn. Mus., 200: i-iv+1-483.
   MüLER, J., 1925. Terzo contributo alla conoscenza del genere Staphylinus L. Boll. Soc.ent.ital., 50: 40-48.
3. 報文中の採集または検視データは以下のように表記する．
   （例）3♂♂, 2♀♀, Amaishi, Hyôgo, 28. V. 1995, Y. HAYASHI leg.
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引用文献については，編集でチェック出来ないものもあるので，本誌の書式をよく確かめてください．また文献名の省略形式も充分確認してください．

人名（欧文）は全て大文字で打ち込んで下さい．中国，韓国，タイなど，日本と同じ順序による姓名表記の場合も，欧米式の姓名表記とします（つまり名，姓の順）．

投稿原稿，別刷について

従来超過ページ負担無しを１０ページまでとしていましたが，当分の間１６ページまでとします．また別刷は全て表紙付きとして，表紙代のみ学会負担とし，他の経費は著者負担とします．現在最も高くついているのが製本代です．

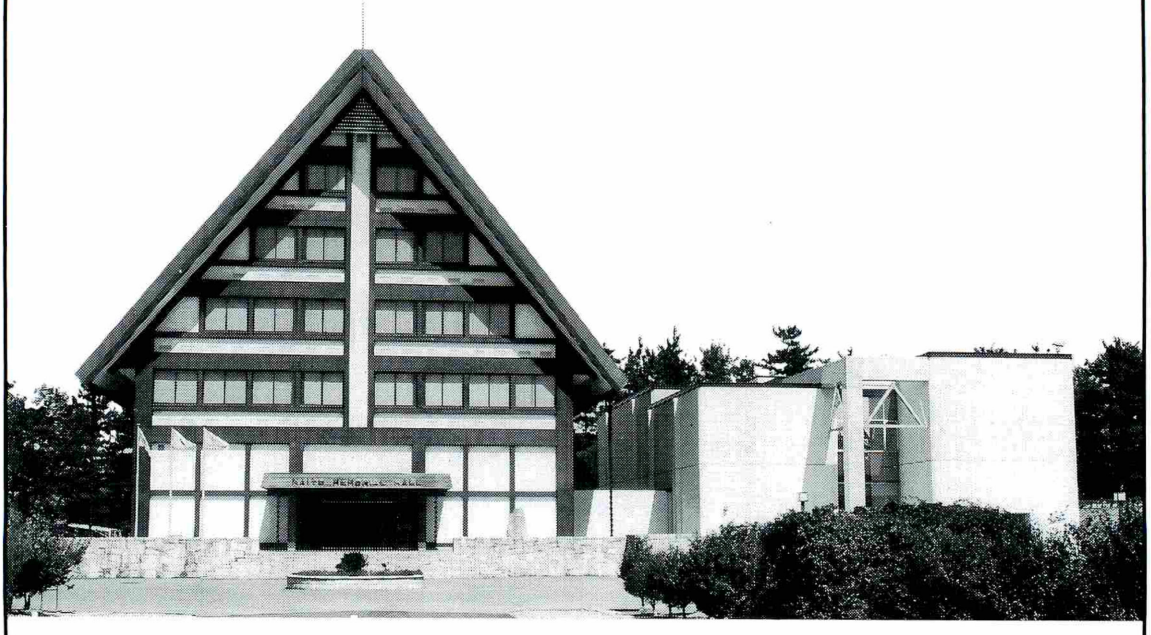
和文要約について

評論への投稿原稿には和文要約を必ず付けて下さい．学術用語で打ち出せない漢字もありますが，できるだけ努力します．

一日いれば、くすり博士。

いつの時代にも、どこの国でも、薬は「いつも健康で、長生きしたい」「早く病気をなおしたい」という願いをこめて生み出され、医学とともに進歩してきました。
その薬の歴史を物語る貴重な資料がわかりやすく展示され、だれでも自由に見られるのが「内藤記念くすり博物館」です。
岐阜県川島町のエーザイ川島工園の中にあり、展示や映像や付属薬用植物園などを楽しく見ているうちに、薬に関するいろいろなことを学ぶことができます。
入場無料・月曜日は休館です。

エーザイ川島工園は、自然林を残した約14万坪の敷地の中に製剤工場や研究所や博物館などの建物が点在しており、公園のような工場なので「工園」と名付けました。



内藤記念くすり博物館

〒501-61　岐阜県羽島郡川島町
☎ 058689-2101

エーザイ川島工園内

著　作　権

昆虫学評論および“ねじればね”に掲載された著作は原則として本会に属する．

1.. 執筆者自身が自分の著作の一部を複製・翻訳などの形で利用する場合，これに対して当会では原則的に意義申し立てしたり妨げることはしない．ただし，執筆者自身でも全文を複製の形で他の著作物に利用する場合に限り，事前に本会へ文書で申し出を行い，許諾を求めなければならない．

2. 第三者から論文の複製あるいは転載に関する許諾の要請があり，当会において必要と認めた場合は，執筆者に代わって許諾することがある．

投　稿　規　程

1. 投稿は原則として当学会員に限る．登載は原則的には受領順によるが，全額実費負担の原稿は優先的に取り扱うことが可能である．但しレフェリー制の導入により掲載の順位の変更がありうる（原稿は適当な方の校閲を受けたものであることが望ましい）．

2. 昆虫学評論には，当分の間，欧文原稿のみを掲載し，和文原稿は当面“ねじればね”に掲載されるものとする．但し，原著には和文要約をつけることとする．またプレートは当分の間廃止し，図版はすべて本文内に収めるtext figure 扱いとする．但し，著者負担によるカラー・プレートは認める．原稿の長さは刷り上がり10ページ以内とし，超過ページの印刷経費は著者負担とする．

3. 原稿（本文，図，表および表紙）は別記の要領で作成し，２部（一部はコピーで）を編集幹事に書留で郵送する．
本文をワードプロセッサーで作成した場合はDOSフォーマット化されたフロッピーに，またコンピューターで作成した場合はマッキントッシュまたはDOS-フォーマット化されたフロッピー（1.44MB）に，ストリップテキスト化した後それぞれ書き込んで，プリントアウトした原稿とともに同時に提出することが望ましい．フロッピーが提出されることによって校正や編集上の負担が著しく軽減される（当学会においてはPower Mac 7600/200にワードパーフェクトを乗せて編集している）．その他の詳しい原稿作成の要領については別ページを参照のこと．

4. 原稿の掲載上の体裁については編集委員に一任されたい．編集委員はレフェリーの意見に基づいて原稿の内容について著者に再検討や訂正を求めることがある．

5. 著者校正は原則として初校のみとする．校正での大幅な変更や追加は認めない．

6. 別刷は 50 部単位で作成し，費用は全額著者負担とする．

7. 原稿の送付，問い合わせ先は下記とする．
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和文原稿について

和文原稿は，原著に付ける和文要約を除いて，“ねじればね”誌上にのみ掲載の予定であるので，新しい分類学的処理を含む内容の論文の掲載は出来ません．“ねじればね”は年２回以上の発行として，１号８～16頁建てとする．分布，生態などの短報，分類学的な解説やノート，同定の手引き，その他役にたつ論説，情報など幅広い内容で紙面を作っていきたいと考えています．

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