Taxonomic Notes on the Tribe Mecysolobini (Coleoptera, Curculionidae), with Descriptions of Three New Taxa from Japan

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Abstract A key to genera and subgenera of the tribe Mecysolobini is prepared as a temporary compilation from HELLER (1918), PAJNI & DHIR (1987) and Voss (1956–62) for aiming to clarify the systematic position of the new subgenus *Nipponomerus*. *Pseudmesalcidodes* PAJNI et DHIR, 1987, is newly synonymized with *Sternuchopsis* HELLER, 1917, because of the similarity of their type-species: *pectoralis* and *waltoni*. A new subgenus and two new species are described in the tribe Mecysolobini: *Neomecyslobus* (*Nipponomerus* subg. nov.), *Neomecyslobus* (*Nipponomerus*) masatakai sp. nov., type-species of the subgenus, from Japan (Ryukyus: Amami-Oshima, Ishigaki-jima and Yonaguni-jima Isls.), and *Merus* (*Merus*) unifasciatus sp. nov. from Taiwan and Japan (Ryukyus: Okinawa-hontô and Ishigaki-jima Isls.). A list of Japanese species is given with three new combinations: *Neomecyslobus* (*Nipponomerus*) nigrofasciatus (KôNO), comb. nov. [Alcides], Cylindralcides takahashii (KôNO), comb. nov. [Alcides].

The tribe Mecysolobini (former Alcidinae or Alcidodinae) includes many characteristic weevils with beautiful markings and is rather well-known at the species level (HAAF, 1960–1964, etc.), but is confused on the taxonomy at the generic and subgeneric levels mostly due to the proposal of higher taxa for the limited species and partly due to the ignorance of the International Code of Zoological Nomenclature by several authors. HELLER (1918) first attempted to divide the genus *Alcides* into six subgenera without designation of the type-species. Voss (1956–1962) proposed four taxa fragmentarily in several different types of classification, but HAAF ignored these subdivisions in his series

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of regional revisions and placed all species in *Alcidodes*, an apparent junior synonym of *Mecysolobus*, in disregard of the rule of priority, and divided the African species into four groups. PAJNI & DHIR (1987) revised the higher taxa upon Indian species, but their work included many errors when viewed from the Code. Names of the higher taxa so far appeared in literature were corrected and enumerated by ALONSO-ZARAZAGA & LYAL (1999) by dividing the tribe into 19 generic group taxa. This treatment is, however, apparently insufficient for the system of the tribe Mecysolobini and many species-groups may be remained outside the system, as LYAL (1996) and LYAL & CURREN (2000) pointed out and claimed the need of the revision of higher classification. These authors, however, evaded the problem and revised the seed-infesting species all in *Alcidodes* in the excuse by adoption of the merely most commonly used name.

When our study on the higher taxa of the tribe Mecysolobini was initiated, Masataka SATÔ showed a specimen of doubtful position in 1963 to the senior author, which was unique in having simple claws and broad intercoxal distances in pro- and mesosterna. Its description has been withheld because of the insufficiency of materials for comparison, but now a new subgenus is decided to be proposed upon this species for the commemoration of the late Dr. Masataka SATÔ for his great contributions on entomology and to the memory of our mutual friendship over half a century.

Before going to the description of this subgenus, a temporary key to the genera and subgenera is compiled upon the available materials and literature by selecting characters following mostly after HELLER (1918), Voss (1956–1962), and PAJNI & DHIR (1987), and the system is a little different from that of ALONSO-ZARAZAGA & Lyal (1999). The key we present here are newly adopted some underside characters, but is apparently insufficient to cover the whole species in the tribe, because many species may remain not keyed out into any of the higher taxa, or the key-out taxa may include heterogeneous species. We, however, hope that the key will give a clue to initiate further study for the taxonomists when they feel the problems. In the following key, *Merus (Indomecyslobus)* PAJNI et DHIR, 1987, *M. (Pseudalcicodes)* Voss, 1962 and *Sternuchopsis (Robustal-cides)* HELLER, 1918 are not included since the ventral characters are not available from their descriptions.

Temporary Key to Genera and Subgenera of the Tribe Mecysolobini

- 2(1) Tarsal claws connate at base, bifid in most species; pronotum with ocular lobes; second ventrite almost as long as or slightly shorter than first behind coxa, slightly longer than third.
- 3(4) Claw segment hardly coming out from third segment; antennal funicle robust, second to seventh segments transverse, successively becoming wider, second segment almost as long as third, seventh narrower than the first of club;

Katsura MORIMOTO and	l Hiroaki Kojima
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	procoxae lying in the middle of prosternum between submarginal sulcus and
	posterior margin; metasternum between meso- and metacoxae much longer
	than mesocoxaBrahmalcidodes PAJNI et DHIR, 1987.
4(3)	Claw segment projecting moderately or highly out of third segment; the latter deeply claft beyond the middle.
5(8)	Metasternum produced tubercle-like or triangular towards hind coxae.
6(7)	Seventh funicular segment narrower than first of club and separated from club
7(6)	Seventh funicular segment continuous with club
8(5)	Metasternum flat or bulged, not projected towards coxa.
9(22)	Metasternum between meso- and metacoxae much longer than mesocoxa; fifth tarsal segment projecting more than half its length out of third segment in general; body more or less parallel-sided.
10(21)	Seventh funicular segment narrower than first of club and more or less separated from club
	1857 (=Mecysolobus REITTER, 1905; Mecyslobus REITTER, 1913)11.
11(12)	Procoxae contiguous; metasternum bulged; pronotum punctulate
	Merus (Kismecyslobus Voss, 1956).
12(11)	Procoxae separated.
13(16)	Metasternum plane towards each hind coxa, pronotum granulate; prosternum between procoxae mostly narrower than mesosternal process.
14(15)	Tooth of fore femora finely serrate on exterior sideMerus (Merus s. str.).
15(14)	Tooth of fore femora with two additional small teeth on exterior side at base
16(13)	Contour of metasternum evenly arcuate ventrally in lateral aspect; prosternum between procoxae more than half the width of mesosternal process.
17(20)	Pronotum punctate at least in median area; elytra with intervals wider than striae at least on first to fourth intervals; body often metallic.
18(19)	Pronotum with scattered fine punctures; elytra with row of fine punctures in striae
19(18)	Pronotum with dense punctures; elytra with shallowly grooved narrow striae
20(17)	Pronotum granulate; elytra with deep striae
21(10)	Seventh funicular segment almost as wide as first of club and continuous with club; metasternum flat; prosternum between procoxae almost as wide as mesosternal process; elytra cylindrical, not broader than prothorax; rostrum often with a prominence on postmentum in male
22(9)	Metasternum between meso- and metacoxae about as long as mesocoxa, more or less bulged.

23(26)	Seventh funicular segment narrower than first segment of club and separate
	from club Neomecyslobus PAJNI et DHIR, 198724.
24(25)	Mesosternal process about as long as wide; femora more or less clavate; body
	cylindrical; elytra with scaly markings
	Neomecyslobus (Neomecyslobus s. str.).
25(24)	Mesosternal process short and very wide, about as great as the length of
	metasternum between meso- and metacoxae, almost as wide as prosternal
	process; femora almost of the same width throughout; body elliptical; elytra
	without scaly definite markings
	Neomecyslobus (Nipponomerus subg. nov.).
26(23)	Seventh funicular segment almost as wide as first segment of club and
	continuous with club27.
27(28)	Subapical tooth of fore tibiae conspicuous, sharp triangular; procoxae lying in
	the middle of prosternum between submarginal sulcus and basal margin;
	body elliptic Sternuchopsis (Mesalcidodes Voss, 1958), new placement.
28(27)	Subapical tooth of fore tibiae small and obtuse triangular if present; procoxae
	lying behind the middle of posternum; body oblong Sternuchopsis
	(Sternuchopsis s. str.) = Pseudmesalcidodes PAJNI et DHIR, 1987, syn. nov.

Nipponomerus subg. nov.

Systematic position: A subgenus of the genus Neomecyslobus PAJNI et DHIR, 1987, in the tribe Mecysolobini.

Type-species: Neomecyslobus (Nipponomerus) masatakai sp. nov.

Etymology. Nippono (Nippon) + merus (name of the related genus).

Body elliptic, without definite scaly marking; elytra bicolorous, brownish with dark bands; antennae with first segment of funicle the longest, second longer than wide, seventh large, about as long as wide, dilated apically, setose alike club, club more bulged than seventh and weakly separable from it in outline; pronotum granulate; fore femora weakly or hardly dilated apically, with tooth obliquely truncate at apex, with three small denticles on exterior side; tarsi with second segment transverse, claw segment projected shortly from third; claws small, with inner tooth very small or obsolete; prosternum between procoxae very wide, almost as wide as mesosternal process, procoxae lying in the middle between submarginal sulcus and hind margin, prosternum deeply emarginate at anterior margin, submarginal transverse sulcus U-shaped and reaching basally at the bottom as far as or a little beyond the level between anterior margins of procoxae; mesosternal process between mesoc- and metacoxae as mesocoxa, and almost as great as the width of mesosternal process.

This subgenus comprises the following two species:

1(2) Claws simple, connate at base, inner teeth completely obliterated; scutellum minute, short linear, enclosed anteriorly by suture; elytra with a row of large

Katsura MORIMOTO and Hiroaki KOJIMA

punctures in striae, the latter a little wider than intervals; fore tibiae not expanded internally; body length: 3.5-4.2 mm....... N. masatakai sp. nov.
2(1) Claws bifid as in the other species of this tribe, inner teeth small but evident; scutellum small, semicircular, open anteriorly; elytra with intervals wider than striae; fore tibiae weakly expanded internally at basal third; body lengh: 5.3-6.4 mm.......N. nigrofasciatus (KôNO, 1928), comb nov.

Neomecyslobus (Nipponomerus) masatakai sp. nov.

(Figs. 1-8, 16-19)

M a l e. Body elliptic; head, rostrum, antennae and pronotum black, legs blackish to dark brownish, tarsi black, underside of thorax blackish, venter brownish black; elytra bicolored, basal and median bands between ninth intervals blackish to infuscate, these bands dilated internally and contiguous on first and second intervals, or median band often obscure or continuously infuscate from base; scaly marking absent, anterior margin of prothorax clothed only with plumose grayish scales from sides of pronotum behind apical margin to prosternum, the other area sparsely with grayish fine setae.

Head rugose, forehead between eyes narrower than rostrum, weakly depressed; rostrum slightly curved, much shorter than pronotum, subcylindrical, a little wider towards apex, densely punctate behind antennal insertions in irregular three rows, the punctures denser towards base on each side, with small punctures before antennal insertions; antennae inserted at middle, relative length (width) of segments from scape as 76(9.5): 18(8): 11(6): 7(6): 6(6.2): 6(7): 7(7): 10(13, 6.5 at base): club 26(16); first segment of club much greater than seventh of funicle.

Pronotum 1.3–1.5 times as wide as long, widest behind the middle, scarcely narrowed thence posteriorly, evenly rounded towards subapical constriction, truncate at apex, ocular lobes moderate; dorsum with granules of equal size behind the subapical constriction, sparsely with large punctures in subapical constriction, with small punctures at apical margin. Scutellum very small, short linear, about as long as the most basal puncture of first stria, enclosed by suture at base.

Elytra slightly wider than pronotum (20: 17–18), about 1.5 times as long as wide, parallel-sided on basal half, then gradually narrowing to apex, striae with large ovate punctures, which become smaller and weaker on declivity, intervals narrower than striae, rugulose.

Legs rather robust, fore femora slightly dilated apically from base, with tooth obliquely truncate at apex, with three denticles on exterior margin; hind femora hardly reaching fourth ventrite; tibiae robust, not enlarged internally in the middle; tarsi rather robust, second segment 1.3 times as wide as long, third segment transverse elliptic, 1.2 times as wide as long, notched to the middle; claws simple, connate at base.

Prosternum broadly emarginate at apex, fringed with branched setae; submarginal transverse sulcus definite, its bottom reaching posteriorly a little beyond the level between the anterior margins of procoxae; prosternum between procoxae 0.8 times as

230



Figs. 1–8. Neomecyslobus (Nipponomerus subg. nov.) masatakai sp. nov. — 1, Underside; 2, antenna; 3, claws of fore leg; 4, fore tarsus; 5, fore leg; 6, tegmen and parameres; 7, 8, aedeagus, dorsal and lateral aspects.

wide as procoxae, almost as wide as mesosternal process; procoxae lying in the middle of prosternum between submarginal sulcus and posterior margin; mesosternal process transverse, short, declivitous, as wide as distance between meso- and metacoxae; metasternum weakly bulged between meso- and metacoxae and very narrowly perpendicular at transverse sulcus before metacoxa. Venter with dense punctures; median length of ventrites in proportion from base as 10:5:4:4:5, first ventrite behind coxa 6, all sutures definite.

Male aedeagus parallel-sided and evenly rounded at apex, with setae behind apical margin, tegmen ringed, parameres rather long, contiguous internally at base.

F e m a l e. Similar to male except rostrum as long as pronotum, with faintly weaker punctures before antennal insertions and first ventrite not longitudinally depressed in the middle.

Length: 3.5–4.2 mm (excluding rostrum).

Holotype: ♂ (Type No. 3239, Kyushu Univ.), Mt. Bannadake, Ishigaki-jima, Ryukyus, 20-IV-1992, H. KOJIMA leg.

Paratypes: 1♂, Kubura-Hikawa, Yonaguni-jima, Ryukyus, 21~22–IV–1993, H KOJIMA leg.; 1[♀], Mt. Omotodake, Ishigaki-jima, Ryukyus, 19–VI–1977, H. IRIE leg.;

Katsura MORIMOTO and Hiroaki KOJIMA

167, Hatsuno, Amami-Ôshima, 13-VI-1962, M. SATÔ leg.

Distribution. Japan (Amami-Ôshima, Ishigaki-jima and Yonaguni-jima Isls. in the Ryukyus)

Notes. The present new species is characteristic in having the simple claws with connate base, broad intercoxal processes between pro- and mesocoxae, and short linear scutellum. The former character was first confirmed by MARSHALL (1918) on "Alcides" delta and ephippiaus and the present species is the third one in the Mecysolobini. Color pattern of the elytra is variable, blackish bands are conspicuous on a specimen from Amami-Ôshima, but are obscure in the other specimens.

Merus (Merus) unifasciatus sp. nov.

(Figs. 9-15, 20, 21)

M a l e and f e m a l e. Derm black, antennal clubs, fore tibiae excepting base and part of tarsi often reddish brown, generally clothed with sparse short appressed setae; prothorax with five narrow stripes of grayish fulvous scales, median stripe narrow, of the same width throughout, dorsolateral stripes oblique, weakly dilated towards hind angles of pronotum, lateral stripes on pleura often ill-defined; elytra with following markings of the same scaly coloration: a round spot on intervals 5 and 6 at one-third from base, weakly oblique transverse band from interval 9 at one-third from apex to top of declivity, which is slightly narrower than median stripe of pronotum and interrupted by stria 1, a short stripe on interval 3 on declivity, being narrowly distant from apex and widely so from the scaly band; underside with fulvous scales, which are dense on prosternum before coxae, anterior and posterior corners of metepisterna, and side margins of ventrites.

Head with punctures dense between eyes and becoming finer posteriorly; forehead between eyes with dense scales. Rostrum in male long and slender, 1.1-1.2 times the length of pronotum, scarcely dilated apically, closely punctate above antennal scrobe in lateral aspect, and more finely so on dorsum of apical half in the median part and apex; antennal insertion at a third from apex; rostrum in female longer, 1.8-1.9 times as long as pronotum, antennal insertion at a little beyond the middle. Antennal funicle with first segment clavate, relative length (width) from scape to club as 158(20): 33(14): 32(11): 12(12): 12(12): 12(12): 14(13): 22(21): 55(24), seventh segment dilated apically and separated from club by weak difference of outline, pubescent alike club.

Prothorax transverse (20:17), widest just before the base, with sides gently rounded, shallowly constricted near apex, dorsal apical margin truncate, ocular lobes moderate; dorsum weakly convex longitudinally, with shiny granules of unequal size excepting apical area beyond subapical constriction. Scutellum not enclosed, small, oval, shiny.

Elytra wider than pronotum, elongate, 7/4 times as long as wide, widest at shoulders and very gradually narrowing posteriorly, sutural area not flattened at base; striae with rather large deep punctures, many of the septa between them being somewhat

232

Notes on the Tribe Mecysolobini



Figs. 9-15. Merus (Merus) unifasciatus sp. nov. — 9, Claws of fore leg; 10, fore tarsus; 11, fore leg; 12, hind leg; 13, antenna; 14, 15, aedeagus, dorsal and lateral aspects.

raised and uniting laterally with adjoining intervals, which form irregular and rugose surface between striae 1 and 5, lateral striae outside the 6 rather regular; intervals between 1 and 4 as high as septa of striae, those of 5 to 9 convex, regular. Legs slender, hind femora almost reaching the caudal margin of ventrite 5; all femora with a sharp tooth, its outer slope slightly convex and finely crenulate; front tibiae with faint subapical prominence and setal tufts, but no tooth, bisinuate on inner edge, with rounded weak submedian expansion; tarsi with segment 2 longer than wide, segment 3 almost as long as wide, widest at apical third, notched to a third from base, claw segment rather slender, exposed more than half from the notch.

Relative width of intercoxal distance of prosternum : mesosternum : metasternum as 1:3:5. Venter with first ventrite behind coxa hardly longer than second, the latter slightly longer than third, which is as long as fourth; first ventrite weakly depressed in male.

Male aedeagus slightly narrowing from base to near ostium, strongly narrowed thence apically with rounded margins and strongly prolonged apically as very slender process; internal sac with conical spinules on whole surface excepting innermost part, the spinules minute on dorsal side near ostium, large at sides, moderate on the rest.



Figs. 16-19. Habitus photographs of *Neomecyslobus* and *Merus* spp. — 16-19. N. (Nipponomerus subg. nov.) masatakai sp. nov. (16, paratype from Yonaguni-jima; 17, holotype; 18, 19, paratype from Amami-Ôshima, rostrum distorted at base); 20, 21, M. (Merus) unifasciatus sp. nov. (20, female; 21, male).

Length: 5.5–7.0 mm (excl. rostrum).

Holotype: ♀ (Туре No. 3240, Kyushu Univ.), Mt. Omoto, Ishigaki-jima Is., Japan, 2–V–1976, Т. Таканаsні leg.

Paratypes: Awa, Okinawa Is., 2° , 15–V–1971, K. MIYAGI leg. Mt. Katuu, Nago, Ishigaki-jima, 6^{7} , 4° , 15–VII–2006, H. HIRANO leg. Ishigaki-jima, 1^{7} , 2° , 15–V–1936, MASAKI leg. Fenchihu, Chi Yai Hsien, Taiwan, 1^{7} , 1° , 7–VII–1965, T. NAKANE leg.; 2° , 12–IV–1965, T. SHIRÔZU leg.; 1^{7} , 11–IV–1965, S. MIYAMOTO leg. Nanshanchi, Wenchuan Hsien, Taiwan, 1° , 27–IV \sim 4–V–1972, T. MIKAGE leg.

Distribution. Japan (Ryukyus: Okinawa-hontô and Ishigaki-jima Isls.), Taiwan. *Etymology*. Name of this new species is taken from the pattern of the scaly band

on elytra.

Host plant. Mr. HIRANO confirmed the oviposition into the stem of *Strobilanthes tashiroi* HAYATA (Okinawa-suzumushisô in Japanese) (Acanthaceae) and found larvae inside the stem.

This new species belongs to the subgenus Merus (=Mecysolobus) in having Notes. the following features: Body oblong; pronotum granulate; claw segment of tarsi slender, exposing more than half the length from the deep notch of segment 3; antennae with funicle 7 pubescent alike club, almost as wide as long, separated from club by the weak difference of outline; intercoxal distance of prosternum much narrower than that of mesosternum, procoxae lying behind the middle; intercoxal distance of metasternum slightly wider than that of mesosternum, metasternum plane towards each hind coxa; prothorax with three or five scaly stripes, elytra with one or two linear bands, the anterior one oblique or reduced to a spot, posterior one oblique or weakly so. The present new species constitutes the decursus species-group including M. decursus PASCOE, mellitus FAUST, morosus HAAF, pseudomellitus HELLER and venustus HAAF in having a band behind the middle and a spot on intervals 5 and 6 at one-third from base on elytra, and the extraordinary slender process at the apex of aedeagus may be another characteristic of this group. The present new species is easily recognized from them by the following points: pronotum with five stripes; elytra with posterior band slightly wider than median and as wide as dorsolateral stripes of pronotum, narrowly interrupted by suture; forehead between eyes with dense grayish scales completely concealing fovea; rostrum cylindrical, without denticles on the underside behind apex, without any trace of sulci or depressions on sides; aedeagus weakly bent ventrally at very slender and extraordinary long apical process.

Two specimens before us from Thailand (Doi Suthep and Chiang Mai) are very similar to the present new species, but the forehead is sparsely clothed with so fine setae that the fovea and punctures are freely visible, and the submedian expansion of the fore tibia is weaker.

A List of Mecysolobini in Japan

- 1. Merus (Merus) flavosignatus (ROELOFS, 1875) [Alcides]
- 2. Merus (Merus) unifasciatus MORIMOTO et KOJIMA, 2007
- 3. Merus (Merus) erro (PASCOE, 1871) [Alcides]
- 4. Merus (Merus) nipponicus (Konô, 1930) [Alcides]
- 5. Merus (Merus) piceus (ROELOFS, 1875) [Alcides]
- 6. Cylindralcides takahashii (Konô, 1930), comb. nov. [Alcides]
- 7. Sternuchopsis (Sternuchopsis) waltoni (Вонеман, 1844) [Alcides] [=albolineatus ROELOFS, 1875, this record from Japan is doubtful]
- 8. Sternuchopsis (Mesalcidodes) trifidus (PASCOE, 1870), comb. nov. [Alcides]
- 9. Neomecyslobus (Nipponomerus) masatakai MORIMOTO et KOJIMA, 2007
- 10. Neomecyslobus (Nipponomerus) nigrofasciatus (Konô, 1928), comb. nov. [Alcides]

Katsura MORIMOTO and Hiroaki KOJIMA

Acknowledgements

We wish to express our thanks to the late Dr. Masataka SATÔ and the following entomologists for their kindness in giving us the materials: H. HIRANO, H. IRIE, T. MIKAGE, K. MIYAGI, S. MIYAMOTO, T. NAKANE, T. SHIRÔZU and K. TAKAHASHI.

要 約

森本 桂・小島弘昭: アシナガゾウムシ族の分類ノートと日本から3新タクサの記載. — 世 界のアシナガゾウムシ族は HAAF による一連のモノグラフなどによって種レベルではかなりよ く解明されているが,属や亜属の高次分類は少数の種による簡単な記載や命名規約の無視などに よって混乱している. 今回,新タクサの記載に先立ち,手許にある標本と文献から可能な限り特 徴を整理して属と亜属の検索表を作成した. しかし,この検索表は明らかに満足のいくものでは なく,いくつかの種群は検索できず,また検索した属や亜属にも異質のものが含まれることから, 今後の改定が必要である. 今回はこのシステムに従って新亜属 Nipponomerus と2新種 Neomecyslobus (Nipponomerus) masatakai マサタカアシナガゾウムシ (奄美大島,石垣島,与那国島) と Merus (Merus) unifasciatus ヒトオビアシナガゾウムシ (沖縄本島,石垣島,台湾)を記載した.こ れら2種は写真によって既知種から容易に区別できる. 末尾に日本産種のリストを付けた.

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236

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