

## ***Strongylium aciculatum* (Coleoptera: Tenebrionidae) and its Relatives**

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**Abstract** *Strongylium aciculatum* and its relatives are revised. Three named species and nine new species are dealt with. The former species are *Strongylium aciculatum* MÄKLIN, 1864, *S. hilare* MÄKLIN, 1864, and *S. irididorsale* MASUMOTO, 1999, and the latter are herein described under the names: *Strongylium taichii* sp. nov., *S. tanahrataense* sp. nov., *S. taipingense* sp. nov., *S. merklianum* sp. nov., *S. bouchardi* sp. nov., *S. maxwellense* sp. nov., *S. becvariorum* sp. nov., *S. maruyamaianum* sp. nov., and *S. schawalleriellum* sp. nov.

Taichi SHIBATA was one of the amateur coleopterists in Japan, who passed away at the age of eighty in the spring of 2007. He encouraged young people so earnestly that some leading specialists grew up in his school. He was well known for his interest in the family Tenebrionidae, just like the present authors. One of them met him several times in his life-time.

This paper, a study of the Southeast Asian strongyliine species, is dedicated to the memory of the late Mr. Taichi SHIBATA. It deals with twelve species, three known and nine new, all related to *Strongylium aciculatum* MÄKLIN, 1864.

The specimens examined in the present taxonomic study are submitted to the authors mainly from the collection of Ing. Stanislav BEČVÁŘ, České Budějovice, and partly from Dr. Wolfgang SCHAWALLER, Staatliches Museum für Naturkunde, Stuttgart, Dr. Ottó MERKL, the Natural History Museum, Budapest, Dr. Kiyoshi ANDO, Ehime University, Dr.

Alain DRUMONT, Institut Royal des Sciences Naturelles de Belgique, Dr. Munetoshi MARUYAMA, the Kyushu University Museum, and also from the authors' collection, which is now deposited in the National Museum of Nature and Science, Tokyo.

The authors wish to express their cordial thanks to the above mentioned persons. Deep appreciations are due to Dr. Makoto KIUCHI, Tsukuba City, for taking number of very clear photographs inserted in this paper.

The abbreviations used herein are as follows: NSMT – National Museum of Nature and Science, Tokyo; NMPC – National Museum, Prague, Czech Republic; SMNS – Staatliches Museum für Naturkunde, Stuttgart; HNHMB – Hungarian Natural History Museum, Budapest; AKC – ANDO Kiyoshi Collection; IRSNB – Institut Royal des Sciences Naturelles de Belgique.

### **The Species-group of *Strongylium aciculatum***

In his monograph concerning the “*Strongylium* and its allied forms”, MÄKLIN (1864) described two species, *Strongylium aciculatum* and *S. hilare*. He defined that these two possess common characteristics as follows: “Pronoto anterius multo magis convexo et ante marginem basalem fortius depresso, ante et in medio dilatato, postice contracto, subcordato, longitudinaliter haud impresso aut canaliculato; prosterno pone coxas sat depresso. – Species ex insulis Java et Borneo minoris magnitudinis.”

The species of this group can be commonly characterized that the pronotum is impressed along the lateral margins near the hind angles. In some species, the pronotum is toothed or angulated in the middle of lateral margins, the elytral punctures are partly, very weakly furnished with a pair of minute protuberances at each upper surface, and the male anterior tibiae are spined or angulated on the ventral faces. The relatives are distributed not only in Borneo and Java but also in Sumatra and the Malay Peninsula. Through a future detailed study, the range of distribution would be widened to the Indochina Subregion including Thailand, Myanmar, and some other areas of the Sunda Islands.

#### ***Strongylium aciculatum* MÄKLIN, 1864**

(Figs. 1, 13, 15, 27 & 39)

Original description by MÄKLIN, 1864 (p. 359): “Modice elongatum, sat convexum, fere subcylindricum, laetius aut obscurius cupreum, admodum nitidum, corpore subtus, antennis pedibusque nigris, femoribus basin versus abdomineque magis rufescentibus (interdum antennarum basi, corpore subtus pedibusque totis piceo-fufis); pronoto transverso, ante et in medio sat fortiter rotundato-dilatato, ante basin contracto, transversim sat convexo et secundum marginem basalem depresso, creberrime et distincte subaciculato-punctato; elytris striato-punctatis, punctis nonnihil elongates, minus crebre impressis, inter-

stittiis planis, obsolete punctulatis.

Longit. 10,6–11 m. m.: Latit. Hum. 4 m. m.

*Stenochia aciculata* DEJEAN, Cat. 3 éd., p. 232?

Habitat in insula Java: Mus. Academiae Alexandrinae Helsingforsiensis et V<sup>ri</sup> CI<sup>mi</sup> Westermann Hafniae.

Caput nigricans, parum aeneum aut cupreum, creberrime subtilius punctatum, fronte media obsoletius impressa; oculis valde approximatis. Antennae admodum graciles, capite cum prothorace dimidio fere longiores, apicem versus sensim parum dilatatae, nigrae, basin versus interdum magis rufescentes, articulo tertio sequenti plus quam quarta parte latiori, art. ultimis latitudine multo longioribus. Pronotum latitudine submediali dimidio fere brevius, subcordatum, ante et in medio sat fortiter rotundato-dilatatum, basin versus multo magis angustatum et sinuatim contractum, transversim sat convexum et secundum marginem basalem breviori spatio sinuatim depressum, obscurius virescenti-cupreum, modice nitidum, creberrime et distincte subaciculato-punctatum, angulis anticis obtusis, subrotundatis, posticis parum acutis et nonnihil productis, margine basali admodum elevato, subbisinuato. Scutellum triangulare, nigricans aut interdum rufescens, obsoletius impressum et sublaevigatum. Elytra pronoti basi quarta fere parte latiora, ad 2/3 partem totius longitudinis aequilata, praesertim paulo pone medium sat convexa, obscurius aut laetius cuprea, modice nitida, striato-punctata, punctis nonnihil elongatis, minus crebre impressis, ante apicem paulo minoribus, interstitiis planis, obsolete punctulatis. Corpus subtus et pedes ut supra descriptum est”.

*Specimens examined.* 1 ♂ (Fig. 1), 2 ♀ ♀, “Coll. I. R. Sc. N. B., Java – Togoe, 1902”, Ex. Coll. OBERTHÜR (IRSNB); 1 ex., Java merid., Palabuan, 1892, H. FRUHSTORFER (Collection of the Paris Museum → Coll. Masumoto → NSMT).

*Notes.* The elytral punctures are rarely and partly, very weakly furnished with a pair of minute protuberances at each upper edge (= elytral surface).

The type specimen of this species seems to have been lost in the past.

### *Strongylium taichii* sp. nov.

(Figs. 2, 16, 28 & 40)

Brownish black with feeble coppery tinge, elytra lighter in color, antennae with 1st and 2nd segments and apical parts of 11th segments, tarsi, mouth parts, gula and trochanters dark reddish brown; each surface except for basal parts of antennae and ventral side of head hardly shining, basal parts of antennae and ventral side of head gently shining; apical part of clypeus, antennae, ventral sides of tarsi and apical parts of abdomen haired. Body subparallel-sided, rather strongly convex longitudinally.

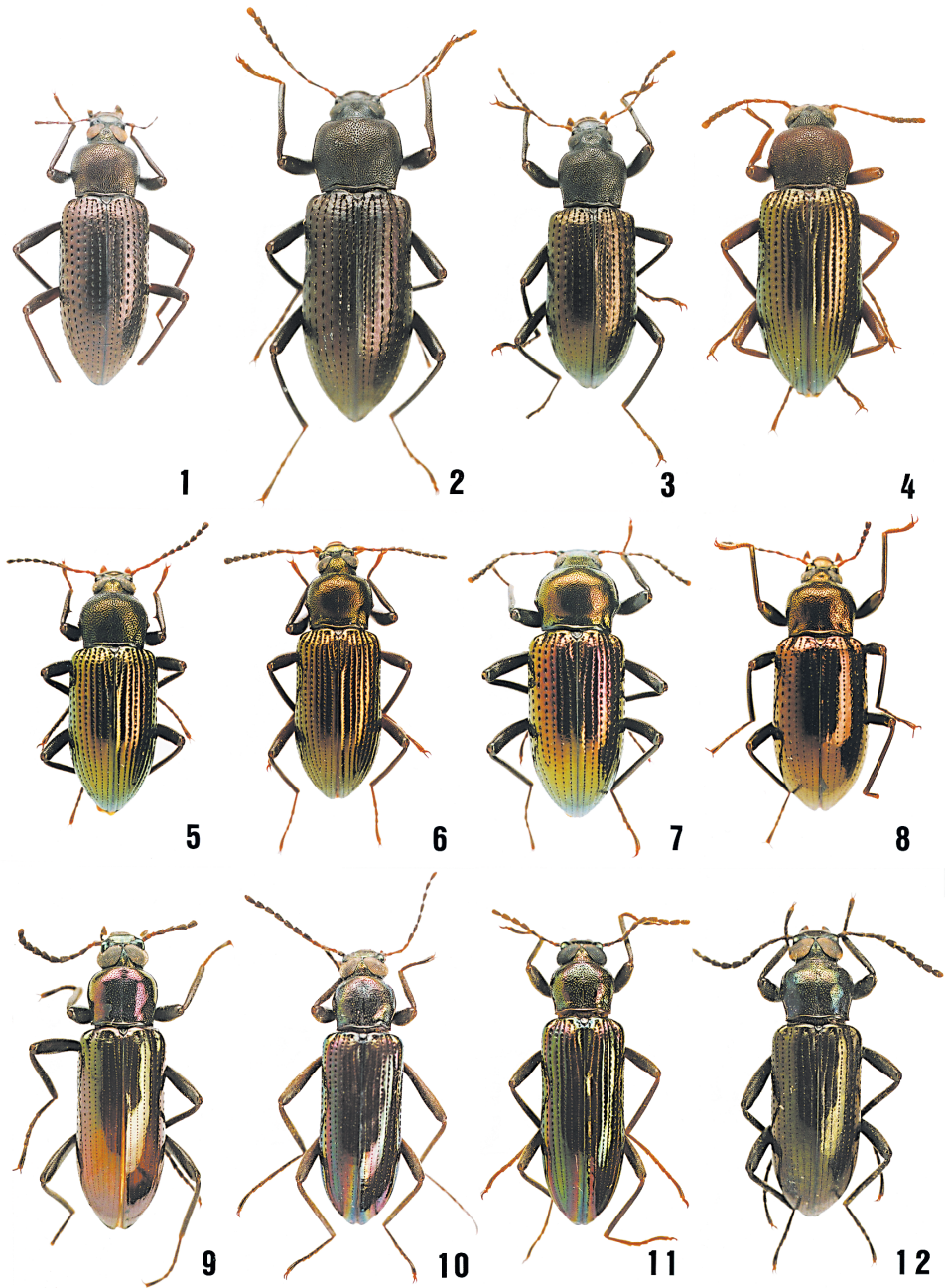
Head subdecagonal, feebly covered with isodiametric microsculpture, with areas behind eyes gently grooved; clypeus semicircular, flattened in basal half, bent ventrad in front, rather closely and finely punctate, each puncture with a minute bent hair, fronto-

clypeal border curved and deeply sulcate, lateral parts of the sulcus extending to outer margins; genae oblique and raised, rather sparsely punctulate, with outer margins rounded; frons rather steeply inclined anteriorly, closely, strongly punctate, with impunctate areas just behind the fronto-clypeal border and at postero-medial part, distance between eyes (at the narrowest point) about 0.6 times the width of an eye diameter; vertex gently convex, closely, somewhat rugoso-punctate. Eyes subreniform, moderately convex laterad, obliquely inlaid into head. Antennae subfiliform, reaching basal 1/4 of elytra, ratio of the length of each segment from base to apex: 0.27, 0.23, 0.56, 0.43, 0.35, 0.36, 0.29, 0.28, 0.26, 0.26, 0.36.

Pronotum somewhat short barrel-shaped in dorsal view, about 1.2 times as wide as long, widest at the middle; apex nearly straight and rimmed, the rim covered with isodiametric microsculpture and finely punctate in middle, and tapering laterad; base bisinuous, covered with isodiametric microsculpture, punctulate, strongly bordered by a groove, which is angulate in lateral parts; sides steeply declined to lateral margins, which are rimmed, weakly produced laterad in middle, very slightly sinuous before base; front angles obtuse, with rounded corners, hind angles subrectangular; disc moderately convex, longitudinally, weakly concave on midline in anterior part, depressed in posterior parts on each side, weakly ridged along lateral margins in basal 1/5, with area between the ridges and lateral margins grooved, covered with isodiametric microsculpture, closely punctate, each puncture with a minute bent hair at anterior part near pronotal surface. Scutellum triangular with rounded sides, slightly wider than long, gently elevated, weakly covered with isodiametric microsculpture, scattered with shallow minute punctures, each with a bent fine hair.

Elytra about 2.1 times as long as wide, 3.2 times the length and 1.2 times the width of pronotum, widest at apical 4/9, weakly narrowed at basal 1/4; dorsum strongly convex, highest at basal 4/9; disc with rows of elongated punctures, these in antero-lateral parts becoming larger, most of those are unclearly furnished with a pair of minute protuberances at each upper edge; intervals flattened in major parts, weakly convex in apical parts, covered with isodiametric microsculpture, scattered with microscopic punctures, each with a minute bent hair, 1st, 3rd, 7th and 8th intervals, 3rd and 7th connected with each other in apical parts; humeri slightly produced antero-laterad; apices weakly, roundly produced.

Terminal segment of maxillary palpi subsecuriform, with outer side gently curved and longer than inner side and shorter than apex; mentum subtrapezoidal, rather strongly convex, with apex indented medially; gula transversely aciculate, bordered from neck by a pair of impressions. Prosternum narrow, covered with isodiametric microsculpture, rugulose, depressed between coxae, with prosternal process triangular, depressed and rimmed; mesosternum short, strongly depressed in anterior part, covered with isodiametric microsculpture and sparsely punctulate, convex in areas before coxae; metasternum rather short and wide, longitudinally impressed on midline, gently convex in lateral parts, covered with isodiametric microsculpture, feebly wrinkled, scattered with punctures in basal and lateral parts. Abdomen weakly covered with isodiametric microsculpture, wrinkled in basal parts in 1st



Figs. 1–12. Habitus of *Strongylium* spp., males. — 1, *S. aciculatum* MÄKLIN; 2, *S. taichii* sp. nov., holotype; 3, *S. tanahrataense* sp. nov., holotype; 4, *S. taipingense* sp. nov., holotype; 5, *S. melkianum* sp. nov., holotype; 6, *S. bouchardi* sp. nov., holotype; 7, *S. maxwellense* sp. nov., holotype; 8, *S. becvariorum* sp. nov., holotype; 9, *S. hilare* MÄKLIN; 10, *S. irididorsale* MASUMOTO, holotype; 11, *S. maruyamaianum* sp. nov., holotype; 12, *S. schawalleriellum* sp. nov., holotype.

to 4th sternites, minutely punctate, each puncture with a fine hair; anal sternite sparsely pubescent in apical part, with rounded apex.

Male protibiae with a tooth face at basal 2/5 on ventro-internal face; ratios of the lengths of pro-, meso- and metatarsal segments: 0.20, 0.12, 0.15, 0.17, 0.81; 0.91, 0.40, 0.34, 0.26, 0.89; 1.12, 0.39, 0.32, 0.92. Female protibiae only becoming bolder apicad, with ventro-internal face very slightly angulate at basal 1/3, then very weakly gouged at apical 1/3.

Male genitalia 2.03 mm in length, elongated subfusiform and tapering apicad in dorsal view, gently curved in lateral view; fused lateral lobes 0.90 mm in length, with feebly prolonged apices.

Body length: 11.0–12.5 mm.

Holotype: ♂, West Malaysia, Pahang, Cameron Highlands, Tanah Rata, Gunung Jasar, 1,400–1,500 m, 20–25. I. 1995, S. BEČVÁŘ, J. & S. leg. (NMPC). Paratypes: 3 exs., same data as the holotype; 6 exs., West Malaysia, Pahang, Cameron Highlands, Tanah Rata, Gn. Jasar, 12–15. II. 1998, S. BEČVÁŘ leg.; 2 exs., West Malaysia, Pahang, Gn. Jasar, Tanah Rata, Cameron Highlands, 19–25. VI. 1995, S. BEČVÁŘ leg.; 4 exs., W. Malaysia, Pahang, Cameron Highlands, Tanah Rata, Gn. Jasar, 2–3. III. 1998, S. BEČVÁŘ leg.; 5 exs., same locality, 12–15. XI. 1999, S. BEČVÁŘ leg.; 2 exs., West Malaysia, Pahang, Cameron Highlands, Brinchang, Gunung Beremban, 1,600 m, 18–19. I. 1995, S. BEČVÁŘ, J. & S. leg.; 2 exs., Malaysia, Pahang, Cameron Highlands, Parit Falls, degraded rainforest, from fungus-grown, stumps at night, No. 91, 27. III. 1995, O. MERKL leg. (HNHMB); 1 ex., Malaysia, W. Pahang, Cameron Highlands, Tanah Rata, 1,500–1,800 m, 22–26. I. 1996, P. PACHOLÁTKO leg.

*Notes.* This new species resembles *Strongylium aciculatum* MÄKLIN, 1864, originally described from Java, but can be distinguished from the latter by the body slightly slenderer, with the head wider and more closely punctate, with eyes more convex laterad; the pronotum more quadrate, less convex dorsad, with punctures hardly fused longitudinally, and the elytra longer, more strongly striato-punctate in antero-medial parts, the punctures more closely set.

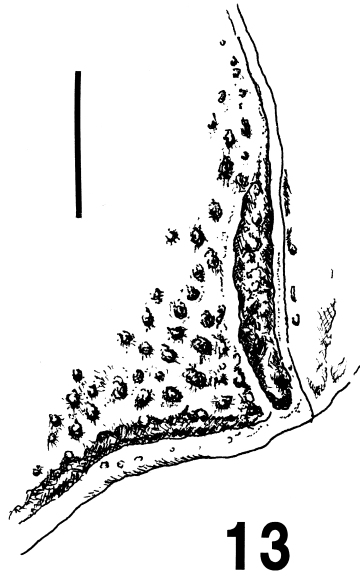
The specific name is given to the memory of the late Mr. Taichi SHIBATA.

***Strongylium tanahrataense* sp. nov.**

(Figs. 3, 17, 29 & 41)

Blackish brown with feeble coppery tinge, head, pronotum, femora and tibiae piceous, elytra cupreous, with feeble brassy tinge in lateral parts, antennae, mouth parts and tarsi dark yellowish brown to reddish brown; head, pronotum and scutellum gently shining, elytra weakly, somewhat sericeously shining, ventral side of head rather vitreously shining, remaining parts (*e.g.*, pro-, meso- and metasterna, and abdomen) weakly shining; each surface except for antennae and tarsi hardly haired. Body rather elongated fusiform, gently constricted in posterior parts of pronotum, rather strongly convex longitudinally.

Fig. 13. *S. aciculatum* MÄKLIN; right hind angle of pronotum. Scale: 0.5 mm.



Head subdecagonal, weakly covered with isodiametric microsculpture; clypeus semi-circular, flattened in basal half, bent ventrad in front, rather closely finely punctate, each puncture with a minute bent hair, fronto-clypeal border curved and deeply sulcate, the sulcus extending to outer margins; genae oblique and raised antero-laterad, rather sparsely punctulate, depressed in areas before eyes, with outer margins rounded; frons gently inclined antierad, somewhat obliquely flattened, rather closely, strongly punctate, the punctures often connected with one another, with an impunctate area just behind the fronto-clypeal border, distance between eyes about 0.57 times the width of an eye diameter; vertex gently convex, closely, obliquely rugoso-punctate. Eyes subreniform, weakly convex laterad, rather noticeably obliquely inlaid into head. Antennae subfiliform, reaching about basal 1/4 of elytra, ratio of the length of each segment from base to apex: 0.32, 0.13, 0.41, 0.39, 0.34, 0.32, 0.31, 0.30, 0.28, 0.27, 0.34.

Pronotum wider than long (6 : 5), widest at the middle; apex nearly straight, covered with isodiametric microsculpture and scattered with microscopic punctures in central part, rimmed in lateral parts; base gently bisinuous, covered with isodiametric microsculpture and finely punctate, strongly bordered by groove, which is angulate in lateral parts; sides steeply declined to lateral margins, which are rimmed, roundly produced laterad in middle, and weakly sinuous before base; front angles obtuse with rounded corners, hind angles rectangular with acutely projected corners; disc moderately convex, weakly depressed in antero-medial part, also depressed in posterior parts on each side, ridged along lateral margins in basal 1/4, with areas between the ridges and lateral margins grooved, weakly cov-

ered with isodiametric microsculpture, closely punctate, each puncture with a bent minute hair on anterior side near pronotal surface. Scutellum subcordate, gently elevated, very weakly depressed in medial part, weakly covered with isodiametric microsculpture, scattered with shallow minute punctures, each with a bent fine hair.

Elytra about twice as long as wide, 3.3 times the length and 1.34 times the width of pronotum, widest at apical 3/7, weakly narrowed at basal 1/4; dorsum rather strongly convex, highest at basal 3/7; disc with rows of oblong or elongated rhombic punctures, many of them unclearly furnished with a pair of minute protuberances at each upper edge, those in interior and posterior parts becoming smaller, more closely set than in external parts, and longitudinally connected with very shallow grooves with one another; intervals flattened in major parts, weakly convex in apical parts, covered with isodiametric microsculpture, scattered with microscopic punctures, each with a minute bent hair, 1st interval and 9th, 3rd and 6th, 4th and 5th, 7th and 8th connected respectively with each other in apical parts; humeri weakly swollen antero-laterad; apices weakly, roundly produced.

Terminal segment of maxillary palpi subsecuriform, with outer side nearly straight, longer than inner side and shorter than apex; mentum subtrapezoidal, rather strongly convex antero-medially, with apex somewhat bisinuous; gula almost smooth, bordered from neck by a pair of impressions. Prosternum narrow, covered with isodiametric microsculpture, coarsely ruguloso-punctate, gently depressed between coxae, with prosternal process subpentagonal, depressed and rimmed; mesosternum short, strongly depressed in anterior part, weakly covered with isodiametric microsculpture and sparsely punctulate, convex in areas before coxae; metasternum longitudinally depressed on midline, gently convex on both sides, weakly covered with isodiametric microsculpture, scattered with punctures in basal and lateral parts. Abdomen weakly covered with isodiametric microsculpture, wrinkled in basal parts, minutely punctate, each puncture with a fine hair; anal sternite with rounded apex.

Male protibiae with an acute tooth at interior face at basal 1/3; ratios of the lengths of pro-, meso- and metatarsal segments: 0.19, 0.10, 0.12, 0.13, 0.73; 0.82, 0.48, 0.34, 0.30, 0.80; 0.91, 0.34, 0.24, 0.76. Female protibiae weakly becoming bolder apicad, with ventro-interior face very feebly gouged and haired in apical 3/5

Male genitalia 1.79 mm in length, elongated subfusiform, tapering apicad and very weakly constricted at the border of basal piece and lateral lobes in dorsal view, gently curved in lateral view; fused lateral lobes 0.80 mm in length, with feebly prolonged apices. Body length: 8.1–10.0 mm.

Holotype: ♂, West Malaysia, Pahang, Cameron Highlands, Tanah Rata, Gn. Jasar, 1,400–1,500 m, 12–15. II. 1998, S. BEČVÁŘ leg. (NMPC). Paratypes: 13 exs., same data as the holotype; 10 exs., West Malaysia, Pahang, C. Highlands, Tanah Rata, Gn. Jasar, 14–1,500 m, 20–25. I. 1995, S. BEČVÁŘ, J. & S. leg.; 11 exs., W. Malaysia, Pahang, Cameron Highlands, Tanah Rata, Gunung Jasar, 1,400–1,500 m, 20–25. I. 1995, S. BEČVÁŘ, J. & S. leg.; 3 exs., W. Malaysia, Pahang, Cameron Highlands, Gn. Jasar, 2–3. III. 1998, S. BEČVÁŘ leg.; 4 exs., West Malaysia, Pahang, Cameron Highlands, Brinchang, Gunung Beremban,



1,600 m, 18–19. I. 1995, S. BEČVÁŘ J. & S. leg.; 1 ex., Malaysia, Cameron Highlands, Gn. Beremban, 1–3. IV. 1990, A. RIEDEL leg.; 1 ex., Malaysia-Tanah Rata, 18. III. 1988, G. HANGAY leg.; 1 ex., Malaysia, Genting Hlds, 8–9. III. 1987, G. HANGAY leg.; 1 ex., Malaysia, Pahang, Cameron Highlands, Tanah Rata, from illuminated white-washed walls, No. 77, 23–31. III. 1995, O. MERKL leg. (HNHMB); 1 ex., Tanarata, Malaya, 28–30. III. 1974, Y. MIYAKE leg.; 1 ex., Malaysia, Pahang, Cameron Highlands, Tanah Rata Umg., Gunung Beremban, 1400 m, 26. II. 1997, Schuh & Lang leg.; 2 exs., W. Malaysia, Pahang, Cameron Highlands, 1500–1800 m, 22–23. I. 1999, P. PACHOLÁTKO leg.

*Notes.* This new species closely resembles *Strongylium aciculatum* MÄKLIN, 1864, originally described from Java, but can be distinguished from the latter by the body slenderer, with the head more closely punctate, clypeus less strongly raised, eyes shorter and less approximate with each other, the pronotum more strongly narrowed in basal part, pronotal punctures not ovate but rounded, and the elytra narrower, more closely and strongly punctured, intervals more noticeably covered with isodiametric microsculpture.

The specific name is derived from the collected place of the type locality.

***Strongylium taipingense* sp. nov.**

(Figs. 4, 14, 18, 30 & 42)

Dark reddish brown, major central part of head and margins of pronotum blackish, elytra with feeble coppery to brassy tinges, 1st intervals with feeble bronzy tinge, six basal segments and apical halves of 11th segment of antennae, mouth parts, gula and legs yellowish brown to reddish brown; head, pronotum and scutellum weakly shining, elytra somewhat sericeously, feebly metallicly shining, ventral surface gently shining; each surface except for antennae and tarsi hardly haired. Body subfusiform, weakly constricted in basal part of pronotum, moderately convex longitudinally.

Head subdecagonal, weakly covered with isodiametric microsculpture, with grooves along posterior parts of eyes; clypeus semicircular, flattened in basal half, bent ventrad in front, rather closely punctate, each puncture with a minute bent hair, fronto-clypeal border curved and deeply sulcate, the sulcus extending to outer margins; genae oblique and raised antero-laterad, punctulate, with outer margins rounded; frons steeply inclined anteriad, with area behind the fronto-clypeal border somewhat Y-shaped, almost vertical, and sparsely scattered with microscopic punctures, also with area between posterior parts of eyes shaped somewhat triangular, depressed and rather closely punctate, the punctures often connected with one another; interocular area narrow and ridged; vertex gently convex, closely, obliquely rugoso-punctate. Eyes subreniform, moderately convex laterad, rather noticeably, obliquely inlaid into head. Antennae subfiliform, reaching about basal 1/6 of elytra, ratio of the length of each segment from base to apex: 0.26, 0.11, 0.57, 0.39, 0.32, 0.31, 0.28, 0.29, 0.27, 0.25, 0.31.

Pronotum wider than long (7 : 5), widest at the middle; apex nearly straight, rimmed

in lateral parts, with central part sparsely scattered with microscopic punctures; base weakly bisinuous, covered with isodiametric microsculpture, and finely punctate, bordered by a groove, which is feebly sinuate in lateral parts; sides weakly declined to lateral margins, which are finely rimmed, produced angularly laterad in middle, and gently sinuous before base; front angles obtuse, hind angles rectangular; disc moderately convex, depressed in posterior part, impressed close to base on each side, weakly ridged along lateral margins in basal 1/4, grooved in area between the ridge and lateral margin, feebly covered with isodiametric microsculpture, closely punctate, each puncture with a minute bent hair on anterior side. Scutellum triangular with rounded sides, gently elevated, very weakly depressed in medial part, weakly covered with isodiametric microsculpture, scattered with shallow minute punctures in lateral parts, each with a microscopic bent hair.

Elytra about twice as long as wide, 3.6 times the length and 1.28 times the width of pronotum, widest at apical 4/9, weakly narrowed at basal 1/4; dorsum rather strongly convex, highest at basal 2/7, very slightly flattened in intero-medial part; disc with rows of punctures, which are longitudinally connected with grooves with one another (the grooves often interrupted in antero-lateral parts), many of them unclearly furnished with a pair of minute protuberances at each upper edge; intervals gently convex in anterior parts, covered with isodiametric microsculpture, scattered with microscopic punctures, each with a minute bent hair, 3rd, 7th and 8th intervals, and 4th and 6th connected with each other in apical parts; humeri slightly convex; apices weakly produced.

Terminal segment of maxillary palpi subsecuriform, with outer side feebly curved, shorter than inner side and apex; mentum subtrapezoidal, rather strongly convex anteromedially, with apex gently emarginate; gula transversely, weakly aciculate, bordered from neck by a pair of short impressions. Prosternum narrow, covered with isodiametric microsculpture, coarsely ruguloso-granulate, strongly convex between coxae, with prosternal process triangular, inclined apicad, and rimmed; mesosternum short, strongly depressed, weakly covered with isodiametric microsculpture and rugoso-punctulate, convex in areas before coxae; metasternum impressed on midline, gently convex on both sides, weakly covered with isodiametric microsculpture, scattered with punctures in basal and lateral parts. Abdomen weakly covered with isodiametric microsculpture, wrinkled in basal parts in three basal sternites, minutely punctate, each puncture with a microscopic bent hair; anal sternite sparsely pubescent in apical part, with rounded, very weakly produced apex.

Male protibiae with an obtusely angular projection on ventral face at basal 2/5; ratios of the lengths of pro-, meso- and metatarsal segments: 0.14, 0.11, 0.12, 0.13, 0.74; 0.81, 0.34, 0.31, 0.26, 0.80; 0.94, 0.32, 0.27, 0.83. Female protibiae becoming bolder apicad, with ventral face weakly gouged and haired in apical 3/5.

Male genitalia 1.85 mm in length, elongated subfusiform, tapering apicad and weakly constricted at the border of basal piece and lateral lobes in dorsal view, gently curved in lateral view; fused lateral lobes 0.81 mm in length, with feebly prolonged apices.

Body length: 9.4–10.0 mm.

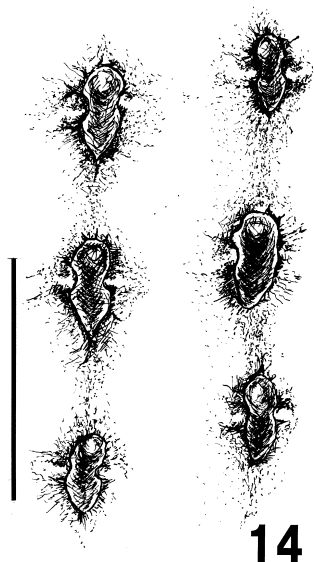


Fig. 14. *S. taipingense* sp. nov.; punctures on elytra. Scale: 0.5 mm.

Holotype: ♂, West Malaysia, Perak, Taiping, Bukit Larut (Maxwell Hill), 14. IV. 1996, S. BEČVÁŘ leg. (NMPC). Paratypes: 2 exs., same data as the holotype; 3 exs., W. Malaysia, Pahang, Cameron Highlands, Tanah Rata, Gn. Jasar, 12–15. II. 1998, S. BEČVÁŘ leg.; 6 exs., West Malaysia, Perak, Maxwell Hill, 900 m, above Taiping City, 12–16. I. 1995, S. BEČVÁŘ J. & S. leg.; 1 ex., (17–18 miles) Cameron Highlands, Pahang, Malaysia, 20. III. 1976, Kaoru SAKAI leg.; 1 ex., W. Malaysia, Pahang, Cameron Highlands, IV. 1995, FATT leg.

*Notes.* This new species also resembles *Strongylium aciculatum* MÄKLIN, 1864, originally described from Java, but can be distinguished from the latter by the body wider, with the head more closely punctate, eyes more approximate to each other, the pronotum wider, angularly produced at the middle of lateral margins, with pronotal punctures not ovate but rounded, and somewhat umbilicate in posterior part, and the elytra with rows of punctures obviously grooved, and intervals more noticeably covered with isodiametric microsculpture and aciculate.

The specific name is given after the place where the holotype was collected.

***Strongylium merkliaum* sp. nov.**

(Figs. 5, 19, 31 & 43)

Dark reddish brown, head, pronotum and scutellum brownish brown with feeble bronzy tinge, elytra with rather strong bronzy to brassy tinges, femora and tibiae brownish

black, tarsi, four basal segments of antennae reddish brown; head and pronotum gently, sericeously shining, scutellum and elytra sericeo-metallically shining, ventral surface except for prosternum gently shining, prosternum almost mat; each surface except for antennae and tarsi hardly haired. Body subfusiform, weakly constricted in posterior part of pronotum, moderately convex longitudinally.

Head subdecagonal, weakly covered with isodiametric microsculpture; clypeus semi-circular, weakly flattened in basal half, bent ventrad in front, transversely impressed in medial part, regularly scattered with rounded punctures, each with a minute bent hair, fronto-clypeal border curved and clearly sulcate, sulcus extending to outer margins; genae oblique and raised antero-laterad, irregularly punctulate, with outer margins obtusely produced; frons steeply inclined anteriorly, somewhat Y-shaped and almost impunctate in anterior and medial (in interocular space) parts, scattered with small punctures in posterior part; vertex gently convex, weakly depressed medially, more strongly, irregularly punctate than on clypeus, the punctures becoming closer and obliquely connected with one another posteriorly. Eyes convex laterad, rather noticeably obliquely inlaid into head, approximate with each other, with distance between eyes about 1/5 the width of an eye diameter. Antennae feebly widened apicad, reaching about basal 1/8 of elytra, ratio of the length of each segment from base to apex: 0.18, 0.09, 0.38, 0.28, 0.27, 0.25, 0.25, 0.24, 0.24, 0.25, 0.28.

Pronotum wider than long (4 : 3); apex very slightly produced on each side, finely rimmed in lateral parts, the rim scattered with microscopic punctures; base weakly bisinuous, straight opposite of scutellum, covered with isodiametric microsculpture and finely punctate, bordered by a groove, which is feebly sinuate in lateral parts; sides gently declined to lateral margins, which are finely rimmed, rounded laterad, and gently sinuous before base, with a pair of teeth slightly behind the middle; front angles obtuse, hind angles rectangular; disc gently convex, weakly covered with isodiametric microsculpture, closely punctate, each puncture umbilicate and with a microscopic hair, very weakly impressed close to base on each side, with a pair of impressions along lateral margins in basal 1/4. Scutellum triangular, with rounded sides, gently elevated, weakly covered with isodiametric microsculpture, sparsely scattered with shallow minute punctures in lateral parts, each with a microscopic hair.

Elytra about 1.84 times longer than wide, 3.16 times the length and 1.27 times the width of pronotum, widest at the middle; dorsum rather strongly convex, highest at basal 2/7, very slightly depressed along scutellar striole; disc with rows punctures, which are grooved in interior and posterior parts, many of them unclearly furnished with a pair of minute protuberances at each upper edge; intervals gently convex in anterior parts, covered with isodiametric microsculpture, scattered with microscopic punctures, each with a minute bent hair, 2nd and 8th intervals, 3rd and 7th, 4th and 6th connected with each other in apical parts, 2nd – 8th also connected with 3rd – 7th and also with 9th, and 4th – 6th also connected with 5th, respectively; humeri slightly convex; apices feebly produced.

Terminal segment of maxillary palpi subsecuriform, with outer side curved, almost of

the same length as inner side and shorter than apex; mentum subtrapezoidal, rather strongly convex antero-medially, flattened in lateral parts, with apex gently emarginate; gula smooth, bordered from neck by a pair of short impressions. Prosternum narrow, covered with isodiametric microsculpture, coarsely ruguloso-granulate, strongly convex between coxae, with prosternal process subcordate, covered with isodiametric microsculpture, coarsely rugose; mesosternum short, strongly depressed in anterior part, weakly covered with isodiametric microsculpture and wrinkled, convex in areas before coxae; metasternum impressed on midline, gently convex in lateral parts, weakly covered with isodiametric microsculpture, scattered with umbilicate punctures in basal and lateral parts. Abdomen weakly covered with isodiametric microsculpture, wrinkled in basal parts in three basal sternites, minutely punctate, each puncture with a microscopic bent hair; anal sternite with rounded apex.

Legs rather stout; male protibiae with a sharp tooth on ventral face at basal 2/5; ratios of the lengths of pro-, meso- and metatarsal segments: 0.13, 0.08, 0.10, 0.12, 0.49; 0.52, 0.29, 0.24, 0.17, 0.64; 0.65, 0.27, 0.18, 0.56. Female protibiae feebly becoming bolder apically, with ventral face weakly gouged and haired in apical 4/7.

Male genitalia 1.64 mm in length, elongated subfusiform, weakly constricted at the border of basal piece and lateral lobes in dorsal view, gently curved in lateral view; fused lateral lobes 0.78 mm in length, with gently prolonged apices.

Body length: 8.0–8.9 mm.

Holotype: ♂, West Malaysia, Perak, Taiping, Bukit Larut (Maxwell Hill), 14. IV. 1996, S. BEČVÁŘ leg. (NMPC). Paratypes: 1 ex., same data as the holotype; 1 ex., West Malaysia, Johor, Batu Pahat, Bukit Soga, 1. II. 1995, S. BEČVÁŘ, J. & S. leg.

*Notes.* This new species resembles the preceding new species *Strongylium taipingense* sp. nov., collected from the same locality, but can be distinguished from the latter by the body narrower and more strongly convex, with the eyes more remote with each other, the pronotum narrower with acuter teeth at the midst of lateral margins, pronotal punctures stronger, and obviously umbilicate, and the elytra with rows of punctures, which are more closely set, and intervals more strongly convex.

The specific name is given in honor of Dr. Ottó MERKL, the Hungarian Natural History Museum, who loaned us a series of materials for the present study.

### ***Strongylium bouchardi* sp. nov.**

(Figs. 6, 20, 32 & 44)

Male. Pale reddish brown, dorsal surface almost darker in color, head and scutellum bronzy, pronotum coppery in medial part and bronzy in lateral parts, elytra coppery in major central parts and bronzy in lateral parts; dorsal surface gently, metallicly shining, ventral surface except for prosternum weakly shining, prosternum almost alutaceous; each surface except for antennae and tarsi hardly haired. Body subfusiform, weakly constricted

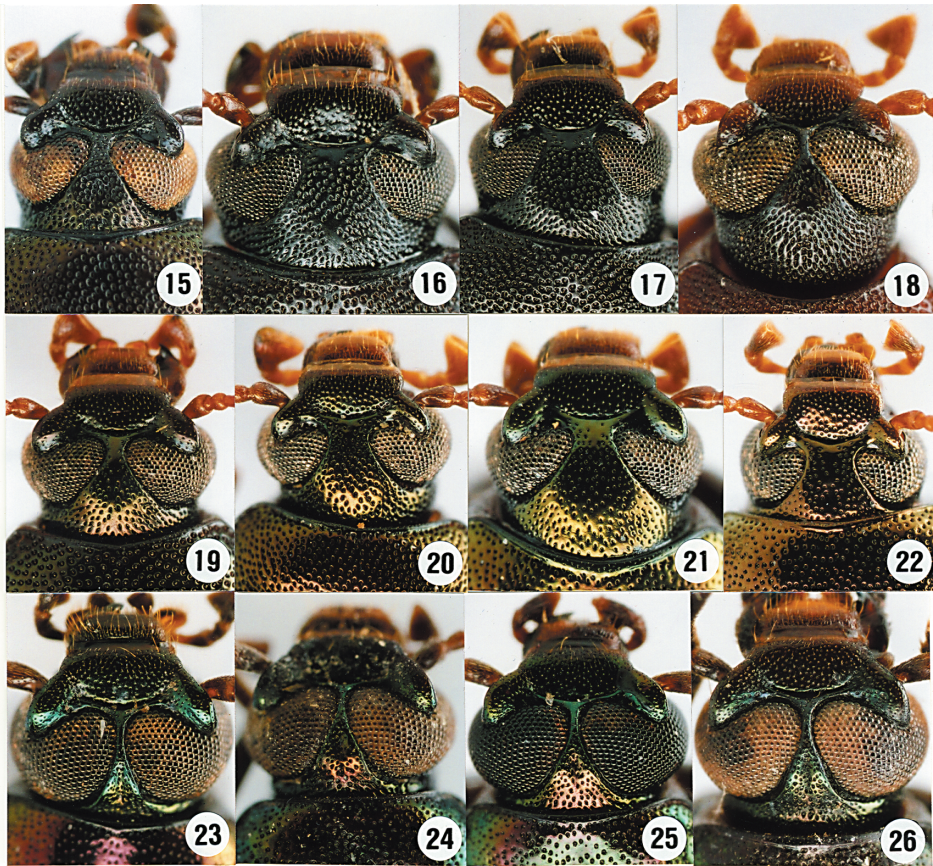
in basal part of pronotum, moderately convex longitudinally.

Head subdecagonal, sulcate behind eyes; clypeus semicircular, very weakly flattened in basal half, bent ventrad in front, closely punctate, each puncture with a minute bent hair, fronto-clypeal border curved and rather distinctly sulcate, the sulcus hardly extending to outer margins; genae oblique and rather strongly raised antero-laterad, irregularly punctulate, with outer margins rounded; frons rather steeply inclined antierad, almost impunctate in area behind fronto-clypeal border, closely, irregularly scattered with somewhat ovate punctures in remaining area, the punctures often fused one another; vertex gently convex, closely, irregularly punctate. Eyes subreniform, rather strongly convex laterad, obliquely inlaid into head, with distance between eyes about a half the width of an eye diameter. Antennae feebly widened apicad, reaching about basal 1/8 of elytra, ratio of the length of each segment from base to apex: 0.30, 0.13, 0.39, 0.37, 0.34, 0.30, 0.31, 0.32, 0.30, 0.29, 0.32.

Pronotum wider than long (5 : 4), widest slightly behind the middle; apex almost straight, finely rimmed; base gently bisinuous, straight opposite to scutellum, bordered by a groove, which is sinuate in lateral parts; sides steeply declined to lateral margins, which are finely rimmed, angular at the middle, and gently sinuous before base; front angles rounded, hind angles rectangular; disc strongly convex in anterior part, very shallowly impressed on midline, noticeably depressed in basal 1/5, gently impressed close to base on each side, weakly covered with isodiametric microsculpture, closely scattered with rather ovate punctures, each with a microscopic bent hair, ridged along lateral margins, the ridges becoming weaker antierad and faded around basal 1/3, grooved in area between the ridge and lateral margin, and the groove traceable to behind the middle angulations. Scutellum triangular with rounded sides, gently elevated, weakly depressed in antero-medial part, covered with isodiametric microsculpture, sparsely scattered with minute punctures in lateral parts, each with a microscopic hair.

Elytra about 1.86 times longer than wide, 3.14 times the length and 1.30 times the width of pronotum, widest at apical 3/7, weakly narrowed at basal 3/8; dorsum rather strongly convex, highest at basal 1/3, very slightly depressed along scutellar striae; disc with rows punctures, which are connected with one another by grooves in interior, anterior and posterior parts, also with one another by striae in the remaining parts, many of punctures unclearly furnished with a pair of minute protuberances at each upper edge; intervals noticeably convex in anterior parts, weakly covered with isodiametric microsculpture, microaciculate, scattered with microscopic punctures, each with a minute bent hair, 2nd intervals and 8th, 3rd and 5th, 5th and 7th, 8th and 9th connected with each other in apical parts, respectively, also 2nd and 3rd, 3rd and 7th, and 8th connected with each other; humeri slightly convex; apices feebly produced.

Terminal segment of maxillary palpi subsecuriform, with outer side gently curved, longer than inner side and shorter than apex; mentum subtrapezoidal, rather strongly convex antero-medially, flattened in lateral parts, with apex gently emarginate; gula smooth,



Figs. 15–28. Male heads. — 15, *Strongylium aciculatum* MÄKLIN; 16, *S. taichii* sp. nov., holotype; 17, *S. tanahrataense* sp. nov., holotype; 18, *S. taipingense* sp. nov., holotype; 19, *S. melkianum* sp. nov., holotype; 20, *S. bouchardi* sp. nov., holotype; 21, *S. maxwellense* sp. nov., holotype; 22, *S. becvariorum* sp. nov., holotype; 23, *S. hilare* MÄKLIN; 24, *S. irididorsale* MASUMOTO, holotype; 25, *S. maruyamaianum* sp. nov., holotype; 26, *S. schawalleriellum* sp. nov., holotype.

bordered from neck by a pair of short impressions. Prosternum narrow, covered with isodiametric microsculpture, coarsely ruguloso-punctate, strongly convex between coxae, with prosternal process roundly produced and rimmed; mesosternum short, strongly depressed in anterior part, weakly covered with isodiametric microsculpture and aciculate, convex in areas before coxae; metasternum impressed on midline, weakly convex in lateral parts, feebly covered with isodiametric microsculpture, sparsely scattered with minute punctures in middle, and also with umbilicate punctures in basal and lateral parts. Abdomen weakly covered with isodiametric microsculpture, rather longitudinally wrinkled in basal parts in

three basal sternites, minutely punctate, each puncture with a microscopic bent hair; anal sternite with rounded apex.

Protibiae weakly gouged in apical 3/5 of ventral face; male meso- and metafemora very weakly curved interiad, ratios of the lengths of pro-, meso- and metatarsal segments: 0.17, 0.11, 0.10, 0.12, 0.58; 0.53, 0.27, 0.20, 0.12, 0.65; 0.66, 0.27, 0.19, 0.67.

Genitalia 1.71 mm in length, elongated subfusiform, tapering apicad in dorsal view, gently curved in lateral view; fused lateral lobes 0.79 mm in length, gently narrowed, with rounded apices.

Body length: 8.5 mm.

Female. Unknown.

Holotype: ♂, Borneo, Sabah, Trus Madi Mt., 1,200–1,500 m, V. 1995, D. BOUCHARD leg. (NMPC).

*Notes.* This new species resembles the preceding new species *Strongylium merklilianum* sp. nov., collected from Perak, West Malaysia, but can be distinguished from the latter by the eyes more approximate to each other, the pronotum wider but more noticeably narrowed in posterior parts, more closely punctate, the punctures somewhat ovate, and the male protibiae not toothed.

The specific name is given in honor of the collector, who obtained the holotype.

### *Strongylium maxwellense* sp. nov.

(Figs. 7, 21, 33 & 45)

Dark brownish black, three basal segments and apical halves of 11th of antennae, mouth parts and tarsi reddish brown, head bronzy to brassy, pronotum coppery to bronzy, scutellum somewhat piceous, elytra coppery, and brassy in sutural intervals and lateral parts; head and pronotum rather strongly, metallicly shining, scutellum, legs and abdomen gently shining, elytra metallicly, feebly sericeously shining, pro- and mesosterna alutaceous, metasternum weakly shining in major central part; each surface except for antennae and tarsi hardly haired. Body subfusiform, weakly constricted in posterior parts of pronotum, rather strongly convex longitudinally.

Head subdecagonal, covered with isodiametric microsculpture, deeply sulcate behind eyes; clypeus semicircular, weakly flattened in basal half, bent ventrad in front, scattered with small punctures, each with a microscopic bent hair, fronto-clypeal border curved and rather distinctly sulcate in middle, the sulcus hardly extending to outer margins; genae obliquely raised, irregularly punctulate, with outer margins roundly produced; frons steeply inclined anteriorly, almost impunctate in area just behind fronto-clypeal border, irregularly scattered with punctures in the remaining area; vertex gently convex, rather closely, irregularly punctate, the punctures often weakly fused with one another laterad. Eyes subreniform, rather strongly convex laterad, obliquely inlaid into head, with distance between eyes



about 0.4 times the width of an eye diameter. Antennae very feebly widened apicad, reaching about basal 1/8 of elytra, ratio of the length of each segment from base to apex: 0.33, 0.18, 0.39, 0.33, 0.31, 0.27, 0.26, 0.28, 0.26, 0.27, 0.30.

Pronotum wider than long (4 : 3), widest slightly behind the middle; apex almost straight, rimmed in lateral parts; base gently bisinuous, straight opposite to scutellum, sparsely scattered with microscopic punctures, boldly bordered by a groove, which is sinuate in lateral parts; sides rather steeply declined to lateral margins, which are rather boldly rimmed, angular at the middle, and rather noticeably sinuous before base; front angles rounded, hind angles rectangular; disc strongly convex in major anterior part, depressed and flattened in remaining parts (in basal 1/6), very shallowly depressed on midline, rather noticeably so in basal 2/5, gently, triangularly impressed close to base on each side, closely scattered with rather ovate punctures, each with a microscopic bent hair, further, very sparsely scattered with round microscopic punctures, with deep impressions in basal 1/4 along lateral margins. Scutellum triangular, with rounded sides, gently elevated, weakly depressed in antero-medial part, very weakly covered with isodiametric microsculpture, sparsely scattered with microscopic punctures in lateral parts.

Elytra about 1.97 times longer than wide, 3.02 times the length and 1.13 times the width of pronotum, widest at the middle, feebly narrowed at basal 1/3; dorsum rather strongly convex, highest at basal 2/7, slightly depressed along scutellar striole, with a pair of low swellings in external parts of the depression; disc with rows of punctures, which are connected with one another by grooves in interior, anterior and posterior parts, and rarely, unclearly furnished with a pair of minute protuberances at each upper edge; intervals weakly convex, very weakly covered with isodiametric microsculpture, feebly microaciculate, scattered with microscopic punctures, each with a minute bent hair, sutural intervals gently convex and forming a ridge from the area behind scutellar striole to apices, 2nd intervals and 8th, 3rd and 7th, also 4th and 6th connected with each other in apical parts; humeri weakly convex; apices feebly produced.

Terminal segment of maxillary palpi subsecuriform, with outer side gently curved, longer than inner side and shorter than apex; mentum subtrapezoidal, rather strongly convex antero-medially, weakly covered with isodiametric microsculpture, closely punctate, with apex weakly emarginate; gula very smooth, bordered from neck by a pair of short impressions. Prosternum narrow, covered with isodiametric microsculpture, coarsely ruguloso-punctate, strongly convex between coxae, with prosternal process somewhat cordate, gently depressed posteriad, covered with isodiametric microsculpture, transversely wrinkled; mesosternum short, depressed in anterior part, very weakly covered with isodiametric microsculpture and irregularly impressed, convex in areas before coxae; metasternum impressed on midline, weakly convex in lateral parts, feebly covered with isodiametric microsculpture, weakly aciculate and sparsely scattered with minute punctures in middle, and also with umbilicate punctures in lateral parts. Abdomen weakly covered with isodiametric microsculpture, rather longitudinally wrinkled in basal parts in three basal sternites, minutely

punctate, each puncture with a microscopic bent hair; anal sternite with rounded apex.

Male protibiae weakly angulate in basal 2/7 of interior face (female unknown); ratios of the lengths of pro-, meso- and metatarsal segments: 0.16, 0.09, 0.10, 0.12, 0.67; 0.73, 0.36, 0.31, 0.26, 0.77; 0.83, 0.39, 0.29, 0.79.

Male genitalia 1.89 mm in length, elongated subfusiform, tapering apicad in dorsal view, gently curved in basal part in lateral view; fused lateral lobes 0.84 mm in length, gently narrowed apicad, with rounded apices.

Body length: 8.3–9.1 mm.

Holotype: ♂, West Malaysia, Perak, Taiping, Bukit Larut (Maxwell Hill), 14. IV. 1996, S. BEČVÁŘ leg. (NMPC). Paratypes: 2exs., same data as the holotype; 1ex., N. Sumatra, Lembah Harau Res., N. from Payakumbuh, 7. IV. 1996, S. BEČVÁŘ J. & S. leg.

*Notes.* This new species resembles the preceding new species *Strongylium merkli-anum* sp. nov., collected from the same locality as this type specimen (Perak, West Malaysia), but can be distinguished from the latter by the body stouter and more metallicly shining, with the head more moderately punctate, eyes less approximate to each other, the pronotum wider but more noticeably narrowed in posterior parts, more closely punctate, the punctures not umbilicate, the elytra with intervals less convex, and the male protibiae not sharply toothed.

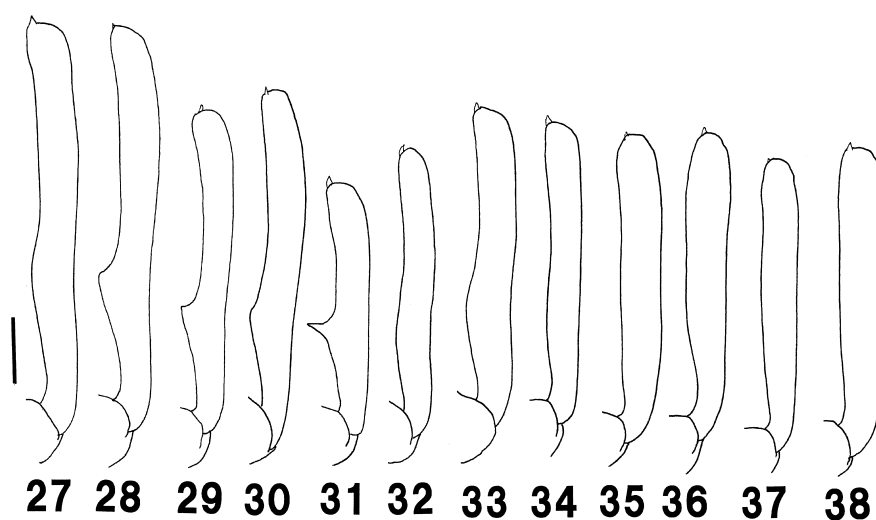
The specific name of this new species is given after Maxwell Hill, from which the types were collected.

### *Strongylium becvariorum* sp. nov.

(Figs. 8, 22, 34 & 46)

Brownish black, two basal segments and basal and apical parts of 3rd to 5th segments of antennae, mouth parts, coxae and tarsi yellowish brown, head, pronotum and scutellum dark coppery with brassy tinge in lateral parts, elytra coppery with reddish tinge; head and pronotum rather strongly, metallicly shining, scutellum and legs gently shining, elytra metallicly, feebly sericeously shining, prosternum alutaceous, meso- and metasterna and abdomen gently shining; each surface except for antennae and tarsi hardly haired. Body subfusiform, gently narrowed in posterior parts of pronotum, rather strongly convex longitudinally.

Head subdecagonal, grooved along posterior parts of eyes; clypeus flattened in major basal part, bent ventrad in front, rather closely scattered with small punctures, each with a microscopic bent hair, fronto-clypeal border curved and impressed in middle, the impression extending to outer margins; genae obliquely raised, irregularly punctulate, with outer margins roundly produced; frons gently inclined anteriad, nearly vertical in area behind fronto-clypeal border, weakly flattened in posterior part (in area between posterior parts of eyes), rather sparsely, irregularly scattered with larger punctures than those on clypeus; vertex gently convex, rather closely, irregularly punctate. Eyes rather large, subreniform,



Figs. 27–38. Male right protibiae. — 27, *S. aciculatum* MÄKLIN; 28, *S. taichii* sp. nov., holotype; 29, *S. tanahrataense* sp. nov., holotype; 30, *S. taipingense* sp. nov., holotype; 31, *S. melkianum* sp. nov., holotype; 32, *S. bouchardi* sp. nov., holotype; 33, *S. maxwellense* sp. nov., holotype; 34, *S. becvariorum* sp. nov., holotype; 35, *S. hilare* Mäklin; 36, *S. irididorsale* MASUMOTO, paratype; 37, *S. maruyamianum* sp. nov., holotype; 38, *S. schawalleriellum* sp. nov., holotype. Scale: 0.5 mm.

strongly convex laterad, obliquely inlaid into head, with distance between eyes about 0.67 times the width of an eye diameter. Antennae very feebly widened apicad, reaching about basal 1/8 of elytra, ratio of the length of each segment from base to apex: 0.34, 0.16, 0.36, 0.32, 0.29, 0.28, 0.29, 0.27, 0.27, 0.32.

Pronotum wider than long (5 : 4), widest slightly before the middle; apex very slightly emarginate, wholly rimmed; base gently bisinuous, widely produced in middle, rather boldly bordered by a groove, which is sinuous in lateral parts, the border sparsely scattered with microscopic punctures; sides rather steeply declined to lateral margins, which are rather finely rimmed, not angulate but rounded, and sinuous before the base; front angles rounded, hind angles rectangular; disc strongly convex in major anterior part, depressed in posterior parts, and also depressed rather longitudinally in anterior and basal parts, somewhat triangularly impressed close to base on each side, closely punctate, each puncture with a microscopic bent hair, further, very sparsely scattered with microscopic punctures, very feebly ridged along lateral margins in basal 1/4 and grooved in area between the ridge and lateral margin. Scutellum triangular with rounded sides, gently elevated, weakly depressed in major antero-medial part, very weakly covered with isodiametric microsculpture, sparsely scattered with microscopic punctures in lateral parts, each with a microscopic puncture.

Elytra about 1.49 times longer than wide, 3.20 times the length and 1.32 times the width of pronotum, widest at apical 3/7, weakly narrowed basad and moderately so apicad from the widest areas; dorsum rather strongly convex, highest at basal 2/7, weakly depressed along scutellar striole, with a pair of low swellings in external parts of the depression; disc with rows of somewhat ovate punctures; intervals hardly convex, very weakly microaciculate, sparsely scattered with microscopic punctures, each with a microscopic bent hair, sutural intervals gently convex from the areas behind scutellar strioles to apices, 3rd intervals and 5th, 3rd, 7th, 8th and 9th connected with each other in apical parts; humeri weakly convex; apices feebly produced.

Terminal segment of maxillary palpi subsecuriform, with outer side gently curved, longer than inner side and shorter than apex; mentum subtrapezoidal, gently convex anteromedially, ruguloso-punctate, flattened in lateral parts, with apex weakly emarginate; gula microscopically wrinkled, bordered from neck by a pair of short impressions in anterior parts. Prosternum narrow, covered with isodiametric microsculpture, ruguloso-punctate, strongly convex between coxae, with prosternal process with a small, acutely projected apex; mesosternum short, depressed and rugulose in anterior part, convex in areas before coxae; metasternum impressed on midline, weakly convex in lateral parts, very weakly covered with isodiametric microsculpture, rugose in basal part, sparsely scattered with minute punctures in middle, each with a microscopic bent hair, those becoming larger in lateral parts. Abdomen very weakly covered with isodiametric microsculpture, rather longitudinally wrinkled in two basal sternites, basal parts of 3rd and lateral parts of 4th sternites, minutely punctate, each puncture with a microscopic bent hair; anal sternite closely, finely punctate in posterior and lateral parts with rounded apex.

Protibiae in shape similar to both sexes, feebly becoming bolder apicad, with interior face weakly gouged and haired in apical 3/5; ratios of the lengths of pro-, meso- and metatarsal segments: 0.18, 0.11, 0.13, 0.14, 0.64; 0.56, 0.29, 0.27, 0.23, 0.62; 0.63, 0.26, 0.18, 0.64.

Male genitalia 1.96 mm in length, elongated subfusiform, tapering apicad in dorsal view, gently curved in basal part in lateral view; fused lateral lobes 0.84 mm in length, very weakly prolonged apicad, with rounded apices.

Body length: 7.8–9.4 mm.

Holotype: ♂, Sabah, N. Borneo, 2. IV. 1988, M. ITO leg. (NSMT). Paratypes: 2 exs., Sabah, Crocker Range NP, Gn. Emas, 6–18. VI. 1996, 1,600 m, J. KODADA leg. (SMNS); 1 ex., Borneo: Sabah, Crocker range, Gunung Alab, 1,700 m, 23–29. V. 1998, KODADA & CIAMPOR leg. (SMNS); 2 exs., Malaysia, Sabah Prov., Banjaran Crocker Mts., Gunung Alab peak, 1,650–1,800 m, 30. IV.–27. V. 1996, M. ŠTRBA & R. HERGOVITS leg.; 1 ex., Borneo, Sabah, Kinabalu N. P., Headquarters, 1,500–1,600 m, at light, 13. XI. 1996, D. GRIMM leg. (a paratype of *Strongylium irididorsale* MASUMOTO) (SMNS); 1 ex., Malaysia-Sabah, Gunung Emas, 27–31. V. 2001, Jiří STOLARCZYK leg.; 1 ex., Mt. Kinabalu, N. Borneo, H. Q., 6. VI. 1979, H. MATSUDA leg.; 1 ex., (BORNEO, E. MALAYSIA), 16 Mi.

NW of Keningau, alt. 1,400 m, Sabah, 12–19. VIII. 1993, N. OHBAYASHI leg.

*Notes.* This new species somewhat resembles the preceding new species *Strongylium maxwellense* sp. nov., collected from West Malaysia, Perak, but can be distinguished from the latter by the body slenderer, with the head narrower, eyes more strongly convex, the pronotum narrower, without lateral teeth, only finely rimmed margins, more strongly punctate, the elytra with rows of punctures, which are not striated, almost flat.

The specific name is given after Messrs. Stanislav BEČVÁŘ, J. & S., who provided us with a rich material for the present study. They were shot by Lao soldiers when they researched insects at about 100 km North of Vientiane. Mr. S. BEČVÁŘ, the Senior was sadly died, and the Junior very fortunately survived.

### *Strongylium hilare* MÄKLIN, 1864

(Figs. 9, 23, 35 & 47)

Original description by MÄKLIN, 1864 (p. 360): “Modice elongatum, sat convexum, capite et pronoto obscure virescenti-cupreis, elytris aurichalceis, nitidis, antennarum basi, corpore subtus pedibusque saturatius rufis, antennis apicem versus, tibiis anticis, femoribus pone medium tibiisque posterioribus basin versus nigricantibus; pronoto transverso, ante et in medio sat fortiter rotundato-dilatato, ante basin contracto, transversim sat convexo, in medio antice et secundum marginem basalem depresso, creberrime subtilius, sed distincte punctato; elytris punctato-striatis, punctis haud elongatis, sat dense impessis, interstitiis fere planis, subtilissime et vix conspicue punctulatis.

Longit. 9 m. m.; Latit. hum. 3,5 m. m.

Habitat in insula Borneo; Coll. V<sup>n</sup> Cl<sup>mi</sup> Motschulsky”.

*Specimens examined:* 1 ♂ (Fig. 9), [ E. Malaysia ] Bandukan Park, Keningau, Sabah, 30. VI. 1993, Christop. ADRIAN leg., Coll. H. J. BREMER, *Strongylium hilare* MÄKLIN, H. J. BREMER det. 1994; 1 ex., Borneo, Sabah, Crocker Mt., Gunong Emas Umg., 15–27. IV. 1993, JENIS & ŠTRBA leg., Coll. H. J. BREMER, *Strongylium hilare* MÄKLIN, H. J. BREMER det., 1994, Zool. Staatsslg., München; 2 exs., Borneo, Sabah, Trus Madi Mt., 1,200 – 1,500 m, V. 1995, D. BOUCHARD leg.; 1 ex., Borneo, Sabah, Crocker Range N. P., Keningau, 900 – 1,200 m, 16–20. XI. 1996, W. SCHAWALLER leg. (SMNS); 1 ex., Kimanis Road, nr. Keningau, Sabah, Borneo, 5. V. 1994, no collector name; 1 ex., Nr. Keningau, Sabah, N. Bor., 22. IV. 1988, M. ITO leg.; 1 ex., Nr. Keningau, Sabah, N. Bor., 15. IV. 1988, M. ITO leg.; 1 ex., Nr. Keningau, Sabah, N. Bor., 22. IV. 1988, M. ITO leg.; 1 ex., Nr. Keningau, Sabah, N. Bor., 23. IV. 1988, M. ITO leg.; 1 ex., Keningau, 1,000 m, Sabah, N. Borneo, Malaysia, 7–12. IX. 1980, Y. GUNJI leg.; 2 exs., near Keningau, Sabah, E. Malaysia, 2. I. 1982, M. TOYAMA leg.; 1 ex., Kimanis Road, Keningau, N. Borneo, 3. III. 1994, no collector name; 1 ex., Crocker Range, 1,000 – 1,400 m, Nr. Keningau, Sabah, N. Borneo, 16–20. IV. 1988, N. KOBAYASHI leg.; 1 ex., Keningau, Sabah, 15. V. 1891, M. TAO leg.; 1 ex., Head Quarter, Sabah, 30. IV.

1981, M. TAO leg.; 1 ex., Ranau, Borneo, 22. VI. 1983, S. NAGAI leg. (NSMT, as a paratype of *S. irididorsale*).

*Notes.* The type specimen of this species also seems to be lost in the past.

***Strongylium irididorsale* MASUMOTO, 1999**

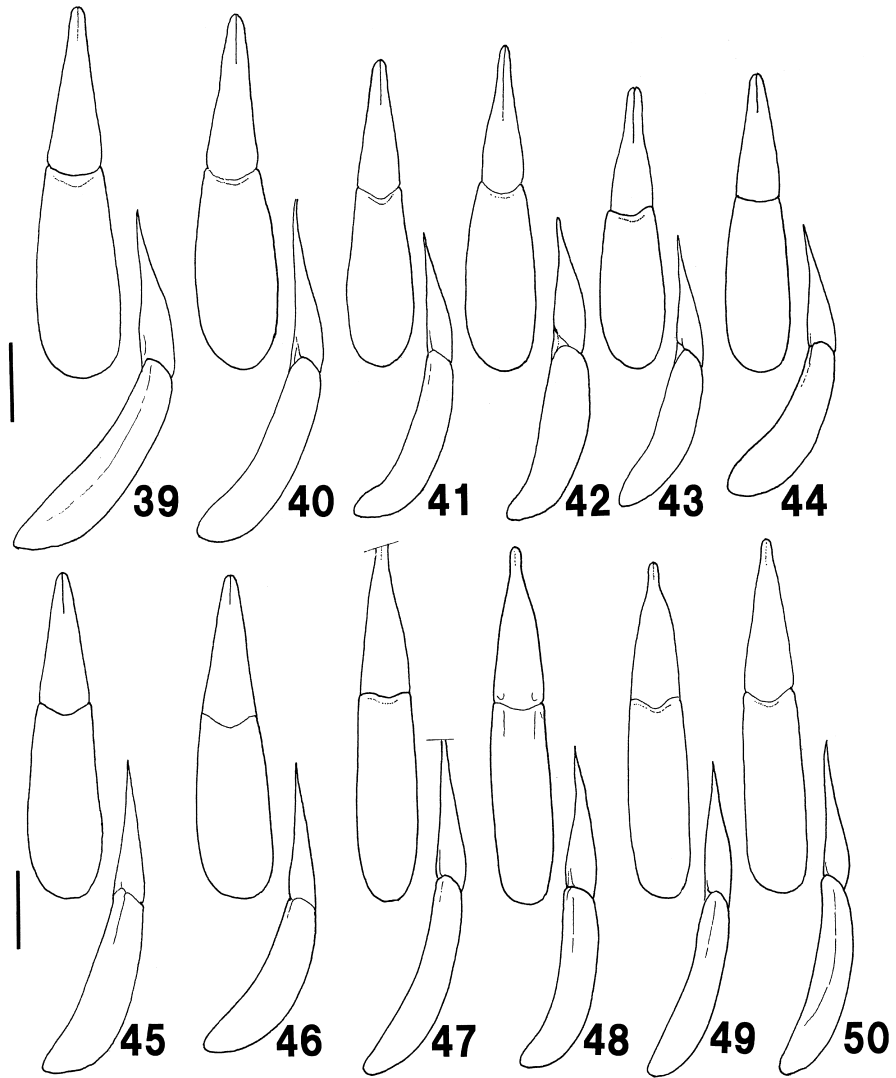
(Figs. 10, 24, 36 & 48)

Original description by MASUMOTO, 1999, (p. 350): "Blackish brown, dorsal surface darker in colour, head partly with greenish lustre, pronotum with an iridescent metallic patch, the central part of which is darkened green, surrounded by purple and yellowish green bands (whole of pronotum almost purplish in some individuals); elytron with an iridescent elongate metallic patch, the central part of which is dark green, and surrounded by purple and yellow green bands, 1st intervals greenish golden, 8th and 9th with greenish blue. Rather elongate; moderately convex longitudinally, though weakly flattened in middle.

Head semicircular, finely punctate; clypeus transversely hexagonal, flattened in posterior part, bent downwards in front, fronto-clypeal border very slightly arcuate and deeply sulcate; genae oblique, raised outwards, with rounded outer margins; frons T-shaped, gently inclined forwards, with impression in posterior part between eyes; vertex inclined posteriorly, concealed under pronotum. Eyes large, approximate to each other, obliquely inlaid into head, strongly convex laterad, with a groove along each hind margin. Antennae subfiliform, reaching basal 1/4 of elytra, ratio of the length of each segment from base to apex: 0.46, 0.20, 0.58, 0.41, 0.54, 0.44, 0.42, 0.41, 0.39, 0.42, 0.58.

Pronotum 1.25 times as wide as long, roundly produced laterad, widest at the middle; apex weakly produced and finely bordered, the border interrupted in the middle; base slightly bisinuous, bordered from disc by deep sulcus, area between the border and posterior margin ridged and sparsely scattered with microscopic punctures; sides gently declined to lateral margins, which are finely ridged and visible from above; front angles rounded, hind angles subrectangular with slightly acute corners; disc moderately convex, frequently punctate, sparsely scattered with far smaller punctures among larger ones, longitudinally depressed in medial part and transversely so in basal 1/5, with a pair of oblique impressions at basal 1/5, and also with a sulcus along each lateral margin close to base. Scutellum short linguiform, elevated, very weakly microshagreened, sparsely scattered with microscopic punctures.

Elytra 2.34 times as long as wide, 3.85 times the length and 1.30 times the width of pronotum, widest at base, gradually narrowed apicad, though very slightly constricted at basal 1/3; dorsum strongly convex, though the middle part is flattened and very weakly sinuous, highest at the basal 2/5; disc with rows of punctures, which are somewhat ovate, closely set in inner portion, and sparsely so in lateral portions, 1st and 2nd rows connected with each other near base, 5th rows deeply impressed close to base; humeri feebly swollen; apices simply, roundly produced.



Figs. 39–50. Male genitalia. — 39, *S. aciculatum* MÄKLIN; 40, *S. taichii* sp. nov., holotype; 41, *S. tanahrataense* sp. nov., holotype; 42, *S. taipingense* sp. nov., holotype; 43, *S. melkianum* sp. nov., holotype; 44, *S. bouchardi* sp. nov., holotype; 45, *S. maxwellense* sp. nov., holotype; 46, *S. becvారిorum* sp. nov., holotype; 47, *S. hilare* MÄKLIN; 48, *S. irididorsale* MASUMOTO, holotype; 49, *S. maruyamaianum* sp. nov., holotype; 50, *S. schawalleriellum* sp. nov., holotype. Scale: 0.5 mm.

Male anal sternite very feebly depressed in apical part. Legs without modification; ratios of the lengths of pro-, meso- and metatarsomeres: 0.29, 0.21, 0.23, 0.25, 1.20; 1.80, 0.80, 0.62, 0.49, 1.27; 1.63, 0.58, 0.40, 1.13.

Male genitalia elongated fusiform, gently curved in lateral view, 2 mm in length and 0.3 mm in width; fused lateral lobes prolonged, 0.8 mm in length, with slightly spatulate apices.

Body length: 8.5–10.5 mm.

Holotype: ♂, near Keningau, Sabah, N. Borneo, 22. III. 1988, M. ITO leg. Data of the paratypes are herein omitted.

*Specimens examined*: 2 exs., near Keningau, Sabah, N. Borneo, 22. III. 1988, M. ITO leg. (including the holotype); 2 exs., (Borneo, E. Malaysia), 16 Mi. NW of Keningau, Alt. 1,400 m, Sabah, 12–19. VIII. 1983, Y. NOTSU leg.; 1 ex., Keningau, Sabah, N. Borneo, 31. V. 1992, M. ITO leg.; 1 ex., Nr. Keningau, Sabah, Borneo, 28. IV. 1994, no collector name; 1 ex., [Malaysia], Headquarters, (alt. 1,500 – 1,700 m), Mt. Kinabalu, Sabah, 16. IV. 1976, S. NAGAI leg.; 1 ex., Sabah, no detailed data, K. NAGAI leg. (paratypes, NSMT); 2 exs., Borneo, Sabah, Kinabalu N.P., Headquarters, 1,500–1,600 m, at light, 12. XI. 1996, D. GRIMM leg. (paratypes, SMNS); 1 ex., Borneo, Sabah, Crocker range, Gunung Alab, 1,700 m, 23–29. V. 1998, KODADA & CIAMPOR leg. (SMNS); 2 exs., Borneo – Sabah, Crocker Mt., 500 – 1,900 m, Gunung Emas, 6–21. VI. 1995, IVO JENIS leg.; 1 ex., Malaysia, Sabah, Gunung Emas – Crocker, 15–27. IV. 1993, M. ŠTRBA & I. JENIS leg.; 4 exs., Malaysia – Sabah Prov., Banjaran Crocker Mts., Gunung Alab peak, 1,650–1,800 m, 30. IV.–27. V. 1996, M. ŠTRBA & R. HERGOVITS leg.; 3 exs., Mt. Trus Madi, alt. 1,000 m, Sabah, Borneo, 6. IV. 1994, N. KANIE leg. (AKC); 1 ex., Mt. Trus Madi, alt. 1,300 m, Sabah, Borneo, 9–10. IV. 1994, N. KANIE leg. (AKC); 1 ex., Kimanis road, 10 miles nr. Keningau, 1,000 m, Sabah, Borneo, 18. IV. 1996, N. KANIE leg. (AKC).

*Notes*. This species closely resembles the preceding species, *Strongylium hilare* MÄKLIN, 1864, from Borneo, but can be distinguished from the latter by the body slightly smaller and slenderer, with the dorsal surface iridescently shining, the pronotum narrower and more closely, irregularly punctate, the elytra with rows of punctures weakly grooved, intervals very feebly convex, and the male genitalia differently shaped. In the original description, “whole of pronotum almost purplish in some individuals” is mentioned, but actually “some individuals” should be *Strongylium hilare*.

### *Strongylium maruyamaianum* sp. nov.

(Figs. 11, 25, 37 & 49)

Blackish brown, anterior parts of head, lateral parts of pronotum, basal margins of elytra, 1st intervals, major medial parts across 3rd, 4th and 5th intervals, and two lateral intervals greenish blue, posterior part of head, interior margins of greenish blue parts on pronotum, basal parts of elytra, lateral margins of 1st intervals, and internal margins of 7th



intervals golden with feeble coppery tinge, internal margins of golden parts on pronotum and areas surrounding large greenish parts of elytra purplish, major central part of pronotum dark green, antennae, mouth parts, and trochanters dark yellowish brown; anterior parts of head, lateral parts of pronotum and elytra rather strongly, metallicly shining, posterior part of head and major interior parts of pronotum metallicly shining, major central part of pronotum and scutellum gently shining, ventral surface feebly shining; each surface except for antennae and tarsi hardly haired. Body rather elongate, gently constricted in posterior parts of pronotum, moderately convex longitudinally.

Head rather transversely elliptical, grooved along areas in interior and posterior parts of eyes; clypeus short and semicircular, gently inclined anteriorly, weakly bent ventrad in front, scattered with small punctures, which become closer and smaller apically, each with a microscopic bent hair, fronto-clypeal border widely curved and impressed in middle, the impression hardly extending to outer margins; genae obliquely raised, irregularly punctulate, with outer margins obtusely produced; frons somewhat T-shaped, steeply inclined anteriorly, nearly vertical in area behind fronto-clypeal border, longitudinally impressed in posterior part (in area between posterior parts of eyes), rather closely, irregularly scattered with small punctures; vertex weakly convex, rather closely, irregularly punctate in middle, ruguloso-punctate in lateral parts. Eyes rather large, subovate in dorsal view, strongly convex laterad, obliquely, rather widely inlaid into head, approximate with each other, distance between eyes about 1/11 times the width of an eye diameter. Antennae very feebly widened apically, reaching about basal 1/9 of elytra, ratio of the length of each segment from base to apex: 0.39, 0.19, 0.35, 0.31, 0.32, 0.30, 0.29, 0.28, 0.31, 0.29, 0.30.

Pronotum wider than long (5 : 4), widest slightly before the middle; apex very slightly produced, wholly rimmed and sparsely punctulate; base feebly bisinuous, weakly produced in middle, rather strongly bordered by a groove, which is sinuous in lateral parts, with posterior margin sparsely punctulate; sides gently declined to lateral margins, which are bordered and rimmed, not angulate but rounded, and sinuous before the base; front angles rounded, hind angles rectangular, with acute corners; disc gently convex in major anterior part, depressed in posterior parts, longitudinally impressed in anterior and posterior parts on midline, also noticeably impressed along lateral margins in basal 1/4, irregularly punctate, each puncture with a microscopic bent hair, further, very sparsely scattered with microscopic punctures. Scutellum sublinguiform, gently elevated, smooth and flattened, sparsely scattered with microscopic punctures in lateral parts, each with a microscopic puncture.

Elytra about 2.50 times longer than wide, 4.05 times the length and 1.31 times the width of pronotum, widest near base and at apical 3/7, weakly constricted at basal 3/7; dorsum gently convex, weakly undulate, highest at basal 1/10, 2/9 and 3/7, weakly depressed along scutellar striae, with a pair of very low swellings on external sides of the depression; disc punctato-striate, the punctures ovate to oblong, rather closely set in interior parts, 5th striae strongly impressed close to base; intervals gently convex, weakly covered with isodiametric microsculpture, very weakly, somewhat transversely microaciculate, sparsely

scattered with microscopic punctures, sutural intervals forming a low roof-like formation from behind scutellar striole to apices, 3rd intervals and 7th, 4th and 6th and 5th connected with each other in apical parts; humeri weakly convex; apices feebly produced.

Terminal segment of maxillary palpi subsecuriform, with outer side gently curved, longer than inner side and shorter than apex; mentum rather obtrapezoidal, convex and smooth in antero-medial part, depressed and ruguloso-punctate in lateral parts, with apex produced medially; gula smooth, bordered from neck by a pair of short impressions in anterior parts. Prosternum narrow, ruguloso-punctate, strongly convex between coxae, with prosternal process triangular, inclined and rugulose; mesosternum short, depressed and punctulate in anterior part, raised in areas before coxae, mesepisternum scattered with coarse punctures; metasternum impressed on midline, weakly convex in lateral parts, feebly covered with isodiametric microsculpture, ruguloso-punctate in basal part, sparsely scattered with minute punctures in middle, each with a minute bent hair, those becoming larger in lateral parts. Abdomen very weakly covered with isodiametric microsculpture, often weakly wrinkled in lateral parts, minutely punctate, each puncture weakly impressed posteriorly with a microscopic bent hair; anal sternite with rounded apex, closely, finely punctate, each puncture with a bent hair.

Male and female legs without modification; ratios of the lengths of pro-, meso- and metatarsal segments: 0.25, 0.13, 0.12, 0.14, 0.74; 1.08, 0.40, 0.32, 0.27, 0.77; 0.97, 0.29, 0.26, 0.75.

Male genitalia 1.84 mm in length, elongated subfusiform, tapering apicad in dorsal view, rather strongly curved in basal part in lateral view; fused lateral lobes 0.80 mm in length, noticeably prolonged apicad, with rather spatulate apices.

Body length: 9.0–11.3 mm.

Holotype: ♂, Tanah Rata, Cameron HLD, W. Malaysia, 20. IV. 2000, M. MARUYAMA leg. (NSMT). Paratypes: 1 ex., Malaysia, Pahang, Cameron Highlands, 19 miles' Station, 15. V. 1996, G. HANGAY leg.; 2 exs., Malaysia, Pahang, Cameron Highlands, 19 miles', ca. 900 m, 20. V. 1995, G. HANGAY leg. (HNHMB); 1 ex., West Malaysia, Pahang, Cameron Highlands, Tanah Rata, Gunung Jasar, 1,400–1,500 m, 20–25. I. 1995, S. BEČVÁŘ, J. & S. leg.; 12 exs., W. Malaysia, Pahang, Cameron Highlands, 11. IV. 1955, FATT leg.; 1 ex., W. Malaysia, Perak, Cameron Highlands, I. 1985, WONG leg. (SMNS).

*Notes.* This new species closely resembles *Strongylium irididorsale* MASUMOTO, 1999, collected from near Keningau, Sabah, N. Borneo, but can be distinguished from the latter by the body slightly slenderer, with the head shorter, eyes shorter and more strongly convex laterad, the pronotum with a medial impression in the posterior part, the elytra with stria punctures more elongate, intervals more convex, and the mesepisternum scattered with coarse punctures.

This species is named after Dr. Munetoshi MARUYAMA, who kindly submitted the holotype of this new species for the present study.

***Strongylium schawalleriellum* sp. nov.**

(Figs. 12, 26, 38 &amp; 50)

Dark reddish brown to blackish brown, head and lateral parts of pronotum weakly dark greenish blue, anterior and medial parts of pronotum in the specimen of the holotype with coppery to brassy tinges, in other type specimens dark blue, reddish purple, golden coppery and with greenish color bands, claws and mouth parts yellowish brown, elytra blackish brown in the holotype, reddish coppery to purple and somewhat iridescent in other types; head and pronotum weakly, metallicly shining, elytra moderately shining, ventral surface weakly, somewhat alutaceously shining; each surface except for antennae and tarsi hardly haired. Body rather elongate, gently constricted in posterior parts of pronotum, moderately convex longitudinally.

Head subdecagonal, with area in interior and posterior parts along eyes grooved; clypeus somewhat short hexagonal, gently inclined anteriorly, weakly bent ventrad in front, scattered with small punctures, which become closer and more minute apicad, each with a microscopic bent hair, fronto-clypeal border widely curved and deeply impressed in middle, the impression hardly extending to outer margins; genae gently, obliquely raised, irregularly punctulate, with outer margins obtusely produced; frons somewhat T-shaped and steeply inclined in anterior part, nearly vertical in area behind fronto-clypeal border, longitudinally impressed in posterior part (in area between posterior parts of eyes), closely ruguloso-punctulate; vertex weakly convex, rather closely, irregularly punctulate in middle, ruguloso-punctate in lateral and posterior parts. Eyes large, subreniform, strongly convex laterad, obliquely, rather widely inlaid into head, noticeably approximate with each other. Antennae feebly widened apicad, reaching basal 1/7 of elytra, ratio of the length of each segment from base to apex: 0.33, 0.15, 0.37, 0.28, 0.32, 0.31, 0.32, 0.31, 0.32, 0.29, 0.41.

Pronotum wider than long (5 : 4), widest slightly before the middle; apex very slightly produced, wholly rimmed and sparsely punctulate; base feebly bisinuous, weakly produced in middle, clearly bordered by a groove, which is very weakly sinuous in lateral parts, and rimmed, the rim punctulate, closely so in medial part; sides gently declined to lateral margins, which are bordered and rimmed, not angulate but rounded, and sinuous before the bases; front angles rounded, hind angles rectangular, with rather acute corners; disc gently convex in major anterior part, longitudinally depressed on midline, and also gently depressed in posterior part, weakly, somewhat triangularly impressed in posterior parts on each side, irregularly punctate, each puncture with a microscopic bent hair, further, very sparsely scattered with microscopic punctures, with noticeably impressions on the lateral borders in basal 1/6. Scutellum sublinguiform, gently elevated, depressed antero-medially, very weakly covered with isodiametric microsculpture, sparsely scattered with microscopic punctures in lateral parts, each with a microscopic hair.

Elytra about 2.13 times longer than wide, 3.33 times the length and 1.24 times the width of pronotum, widest at apical 3/8, weakly constricted at basal 1/3; dorsum rather strongly convex, highest at basal 1/4, weakly depressed along scutellar striole, with a pair

of very low swellings in external parts of the depression; disc with rows of ovate punctures, rather closely set in interior parts; intervals weakly convex, weakly covered with isodiametric microsculpture, sparsely scattered with microscopic punctures, sutural intervals forming a low roof-like ridge from behind scutellar striole to apices, 2nd and 8th intervals, 3rd and 7th, 4th and 6th, respectively, connected with each other in apical parts; humeri rounded and weakly convex; apices feebly produced.

Terminal segment of maxillary palpi subsecuriform, with outer side gently curved, longer than inner side and shorter than apex; mentum rather obtrapezoidal, convex in major antero-medial part, depressed and punctate in lateral parts, with apex produced medially; gula smooth, bordered from neck by a pair of short impressions in anterior parts. Prosteronum narrow, weakly covered with isodiametric microsculpture, ruguloso-punctulate, strongly convex between coxae, with prosternal process triangular, inclined posteriad, rather transversely wrinkled; mesosternum short, depressed and wrinkled in anterior part, raised and sparsely punctulate in areas before coxae, mesepisternum scattered with coarse punctures in interior part; metasternum impressed on midline, weakly convex in lateral parts, very weakly covered with isodiametric microsculpture and rugulose, sparsely, coarsely punctate in intero-basal part, scattered with minute punctures in middle, each with a minute bent hair, sparsely and shallowly punctate in lateral parts. Abdomen very weakly covered with isodiametric microsculpture, often weakly wrinkled in lateral parts, minutely punctate, each puncture weakly impressed posteriad with a microscopic bent hair; anal sternite rounded at apex closely, finely punctate, the punctures becoming smaller, closer and somewhat ovate apicad, each with a bent hair.

Male and female legs without modification; ratios of the lengths of pro-, meso- and metatarsal segments: 0.18, 0.13, 0.12, 0.14, 0.68; 0.89, 0.39, 0.30, 0.27, 0.76; 0.80, 0.29, 0.20, 0.73.

Male genitalia 2.14 mm in length, rather strongly elongated subfusiform, tapering apicad in dorsal view, gently curved in basal part in lateral view; fused lateral lobes 0.91 mm in length, with rather prolonged spatulate apices.

Body length: 6.7–9.3 mm.

Holotype: ♂, Sumatra, Bengkhulu, 20 km südl., Muko Muko, 16. VIII. 1991, ERBER leg., Urwald, 20 m, Lichtfang (SMNS). Paratypes: 1 ex., Indonesia–Sumatra, Payakumbuh (Harau Valley), –. I. 1991, R. DUNDA leg.; 1 ex., Indonesia, Sumatra occ., Payakumbuh (Harau Valley), –. I. 1991, (no collector's name).

*Notes.* This new species closely resembles *Strongylium hilare* MÄKLIN, 1864, collected from Borneo, but can be distinguished from the latter by the body slightly wider, the head with genae less strongly raised laterad, the pronotal apex slightly produced, wider and more strongly narrowed basad, the elytra more strongly punctate, and male genitalia longer.

The specific name is given after Dr. Wolfgang SCHAWALLER, who permitted the present authors to loan materials for their various studies concerning Asian tenebrionid beetles.

This study would be nothing but the first step of a detailed survey concerning the species-group of *S. aciculatum*. Presumably there occur a large number of unnamed relatives in Southeast Asia; therefore, the authors will continue to study about this group from now on.

## 要 約

益本 仁雄・秋田 勝巳： *Strongylium aciculatum* とその近縁種（ゴミムシダマシ科ナガキマワリ属）の研究。—— ナガキマワリ属 (*Strongylium*) と近縁属のレビジョン (MÄKLIN, 1864) の中に、前胸背板の後方外縁部が印刻される *Strongylium aciculatum* MÄKLIN, 1864, *S. hilare* MÄKLIN, 1864 がある。同様な特徴をもつ種としてこれらのほかに *S. irididorsale* MASUMOTO, 1999 が知られているが、故芝田太一氏追悼の研究として、これらの近縁種を取り上げた。上記 3 既知種のほか、9 新種を記載し、それぞれ、*Strongylium taichii* sp. nov., *S. tanahrataense* sp. nov., *S. taipingense* sp. nov., *S. merklianum* sp. nov., *S. bouchardi* sp. nov., *S. maxwellense* sp. nov., *S. becvariorum* sp. nov., *S. maruyamaianum* sp. nov., *S. schawalleriellum* sp. nov. と命名した。

今後の継続的な調査研究により、近縁種の大幅な追加が予想されるので、検索表は掲載しなかった。

## References

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