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**On the *Stenus* LATREILLE 1797 from Taiwan with non-spotted
elytra (Coleoptera, Staphylinidae)
(327th Contribution to the Knowledge of Steninae)**

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Abstract: 31 new species of the genus *Stenus* LATREILLE are described from Taiwan: *Stenus ascendor* nov.sp., *S. cirriostentans* nov.sp., *S. houhanmontis* nov.sp., *S. hseuhmontis* nov.sp., *S. kuanmontis* nov.sp., *S. permodestus* nov.sp., *S. permolestus* nov.sp., *S. perfectus* nov.sp., *S. perodiosus* nov.sp., *S. perpauper* nov.sp., *S. perpauperculus* nov.sp., *S. perpastus* nov.sp., *S. perpinguis* nov.sp., *S. perplicatus* nov.sp., *S. perpropinquus* nov.sp., *S. perpunctus* nov.sp., *S. perpusillus* nov.sp., *S. perrarus* nov.sp., *S. perscitus* nov.sp., *S. persculptus* nov.sp., *S. persculpturatus* nov.sp., *S. persimplex* nov.sp., *S. perspicabilis* nov.sp., *S. persubtilis* nov.sp., *S. pertenuis* nov.sp., *S. pertricosus* nov.sp., *S. perturbator* nov.sp., *S. perversor* nov.sp., *S. pervilis* nov.sp., *S. pervenustus* nov.sp., *S. sugayai* nov.sp.. New species records for Taiwan and new characters of hitherto incompletely known species are presented. A key to the non-spotted *Stenus* species from Taiwan is provided.

Key words: Coleoptera, Staphylinidae, Taiwan, Oriental region, taxonomy, *Stenus*, new species, new records.

Introduction

This paper is the second part of the revision of the Taiwanese *Stenus* LATREILLE, in which the non-spotted species are treated. A great portion of the material was provided by my friend Aleš Smetana, who has been several times in Taiwan and studied carefully the mountainous fauna. So many new apterous species came to light. Other materials were provided by my dear friend Shun-Ichiro Naomi and by Yasutoshi Shibata. Finally the material, which already has been published was critically examined.

As in my contributions 300ff the traditional subgenera are neglected here, new species are attributed to (more or less) monophyletic groups (e.g. PUTHZ 2008).

Most of the new species belong to the group of *Stenus cephalotes* SHARP (NAOMI in press), which includes species with different abdominal characters: unmarginated, marginated with a threadlike tergosternal suture and marginated with distinct paratergites. To indicate their relationship I choosed in most cases names with the prefix "per-". All this species have oval paraglossae (about as in fig. 46).

The group of *S. cephalotes* seems to have evolved very fast in Taiwan. Since the species are apterous and mountainous, one may expect that there still are existing many other species which have not been collected until now.

Material and methods

The material referred to below is deposited in the following public institutions and private collections:

BPBM.....Bernice P. Bishop Museum, Honolulu
 cN.....coll. Naomi (Chiba)
 cP.....private collection V. Puthz, Schlitz
 cSh.....coll. Shibata (holotypes to be deposited in the Entomology collection of the Tokyo University of Agriculture)
 cS.....coll. Smetana (Ottawa)
 cT.....cT (Shanghai Normal University)
 FMCh.....Field Museum of Natural History, Chicago
 MHNG.....Muséum d'histoire naturelle, Geneva
 NHMB.....Naturhistorisches Museum Basel
 NHML.....The Natural History Museum, London
 NHMW.....Naturhistorisches Museum Wien
 TMB.....Természettudományi Múzeum, Budapest
 USNM.....U.S. National Museum, Washington, D.C.
 ZMB.....Museum für Naturkunde, Berlin

The morphological studies were carried out using a stereoscopic microscope (Leitz) and a Carl Zeiss compound microscope. A digital camera (Nikon Coolpix 995) was used for the photographs. The REM-photo was provided by Prof. O. Betz and his crew (University of Tübingen). Measurements have been taken through the binocular (1 unit = 0.025 mm). The genitalia are embedded in Euparal (soluble in alc. abs.).

The following acronyms are used: DE= average distance between eyes; ED= emargination depth of sternite 9 of male; EL= greatest length of elytra; EW= greatest width of elytra; HT= holotype; HW= head width; LS= length of sternite; PL= pronotal length; PM = proportional measurements (1 unit = 0,025 mm); PT/T = paratype/s; PW= pronotal width; SL= sutural length of elytra.

Taxonomic results

Stenus ascendor nov.sp. (Figs 13, 15)

Type material: Holotype (♂) and 4♂♂-paratypes: Taiwan: Hualien Hsien: near Juisui, 29.III.1984, Y. Shibata. Paratypes: 2♀♀: ibidem, 400m, 26.III.1980, idem; 1♂: ibidem, 3.VIII.1981, idem; 2♂♂: Taipei Hsien: Wulai, 24.-30.IV.1972, A. Yoshii.- HT and PTT in coll. Shibata (Tokyo), PTT also in cP.

Description: Black, strongly shiny, coarsely and densely punctuate, pubescence long, dense, semierect on forebody, erect on abdomen. Antennae, maxillary palpi and legs reddish yellow. Clypeus blackish, labrum brown, anterior margin lighter, both densely pubescent.

Length: 4.2-5.0mm (forebody: 2.3-2.5mm).

PM of the HT: HW: 34.5; DE: 15; PW: 22; PL: 27; EW: 31; EL: 32; SL: 25.

M a l e : Sternites 3 and 4 simple, sternite 5 with a shallow and short posteromedian impression with sparser punctation than laterally, sternite 6 with a distinct posteromedian impression, which is finely and sparsely punctate, posterior margin shallowly emarginate, sternite 7 shallowed along middle, finely and very densely punctate and pubescent anteriorly, much sparser posteriorly. Sternite 8 (fig. 13). Sternite 9 serrate at posterior margin. Tergite 10 very broadly rounded at smooth posterior margin. Aedeagus (fig. 15), apical portion of median lobe truncate; parameres about as long as median lobe, with about 20 apical setae, which are of different breadth.

F e m a l e : Sternite 8 at posterior margin broadly rounded. Valvifer serrate apically. Tergite 10 as in the male.

Head slightly broader than elytra, frons narrow, concave, with two shallow longitudinal furrows, median portion nearly flat; punctation moderately coarse and moderately dense, diameter of punctures about as large as basal cross section of antennal segment 3, interstices larger than half diameter of punctures, often also larger than punctures. Antennae slender, when reflexed the last two segments exceeding beyond the posterior margin of pronotum, penultimate segments 2x as long as broad. Pronotum distinctly longer than broad, sides moderately convex; no impressions; punctation coarse and very dense, diameter of punctures as large as apical cross section of antennal segment 2 or slightly larger, interstices distinctly smaller than half diameter of punctures. Elytra subquadrate, shoulders prominent, sides slightly divergent posteriad, posterior margin deeply emarginate; no impressions; punctation as on pronotum, interstices in average very slightly larger. Abdomen cylindric, basal furrow of anterior segments very deep, tergite 7 with a distinct membranous fringe apically; punctation on tergites 3-6 coarse, on the first tergites about as dense as on frons, on tergite 6 somewhat sparser; tergite 7 with the punctation anteriorly moderately fine, becoming much finer posteriad, interstices twice and more as large as punctures, tergite 10 very finely and very sparsely punctate. Legs slender, metatarsi three fifths as long as metatibiae, segment 1 slightly longer than the three following segments combined, much longer than the last segment; segment 4 deeply and broadly bilobed. The whole insect without groundsculpture.

C o m p a r a t i v e n o t e s : This new species belongs to the group of *Stenus cylindricollis* BOHEMAN (PUTHZ 1973a: 83), in which it resembles many species. From the relatives with long erect abdominal pubescence it may be distinguished as follows: from *S. angusticollis* EPPELSHEIM by smaller, less coarsely punctate elytra, from *S. bhutanus* PUTHZ and *S. cylindricollis* FAUVEL by much smaller elytra and sparser punctation of frons, from *S. crinitus* L. BENICK furthermore by less dense abdominal punctation. Regarding the aedeagus the new species resembles strongly *S. thanonensis* ROUGEMONT from Thailand, but has a broader head, slightly different ventral characters of male, a median lobe with a broader apical portion and more stout setae at the parameres. From exoskeletal characters also *S. plagiocephalus* L. BENICK (which recently was discovered on Ishigaki Island) is similar, but has a very different aedeagus (see PUTHZ 2012b) and a distinctly coarser punctate tergite 7.

E t y m o l o g y : This species lives on bushes, therefore I name it "*ascendor*" = ascender.

***Stenus cirriostentans* nov.sp. (Fig. 27)**

Type material: Holotype (♂) and 3♂♂, 3♀♀-paratypes: Taiwan: Nantou Hsien: near Tsuifeng, 2200m, 22.VIII.1976, Y. Shibata. Paratypes: 4♂♂, 11♀♀: same locality as HT, 29.VII. and 20.VIII., 21.VIII.1976, idem.- HT and PTT in coll. Shibata (Tokyo), PTT also in cP.

Description: Apterous, black, forebody moderately shiny, abdomen brilliant, fore-body coarsely punctate, punctuation of pronotum and elytra very shortly coalescent, anterior punctuation of abdomen coarse and dense, posterior punctuation fine and sparse; pubescence long, erect on abdomen. Antennae yellowish brown, club infuscate. Maxillary palpi yellowish, segment 3 infuscate. Legs yellowish brown. Clypeus black, labrum blackish brown, sparsely pubescent. Abdominal segment 3 with very narrow paratergites, the following segments only with a very fine line laterally. Tarsal segment 4 simple.

Length: 2.6-3.1 mm (fore-body: 1.3-1.5 mm).

PM of the HT: HW: 25.5; DE: 12; PW: 19; PL: 19; EW: 23; EL: 19; SL: 14.

Male: Metasternum slightly impressed, moderately coarsely and densely punctate, interstices very shallowly reticulate. Sternites 3-7 simple, sternite 7 medially more densely punctate than laterally; sternite 8 with a broad and shallow apical emargination (LS: ED= 53:3). Sternite 9 acute apicolaterally. Aedeagus (fig. 27), apical portion of median lobe broadly rounded, anterior margin of expulsion clasp acute on both sides; parameres nearly as long as the median lobe, with about 12 long apical setae.

Female: Sternite 8 broadly rounded posteriorly. Valvifer acute apicolaterally. Spermatheca about as in fig. 16 (PUTHZ 2009): spermathecal duct with a coiled portion medially, a tiny collum, infundibulum slender, at least 4x as long as broad.

Head broader than elytra, frons moderately broad, longitudinal furrows distinct, median portion nearly as broad as each of the lateral portions, elevated, slightly exceeding the level of medial eye margins; punctuation coarse and very dense on lateral portions, sparser on median portion, diameter of punctures about as large as apical cross section of antennal segment 2, interstices laterally much smaller than half the diameter of punctures, larger medially, sometimes larger than diameters of punctures. Antennae short, when reflexed extending to the posterior third of pronotum, penultimate segments about as long as broad. Pronotum as broad as long, broadest in anterior half, sides convex anteriorly, concave posteriorly with a broad longitudinal impression medially, a shallow transverse constriction near anterior margin and a shallow transverse impression in posterior half on each side; punctuation coarser than on frons, very dense, very slightly coalescent, the median impression impunctate, diameter of punctures at least as large as apical cross section of antennal segment 2. Elytra sub-trapeziform, much narrower than head, about as long as broad, shoulders oblique, sides feebly convex, slightly narrowed behind, posterior margin broadly emarginate; sutural impression indistinct, humeral impression very shallow; punctuation slightly coarser than on pronotum, also slightly coalescent, diameter of punctures at least as large as widest cross section of antennal segment 2. Abdomen elliptic, basal furrows of first segments moderately deep, tergite 7 with a narrow, sometimes incomplete membranous fringe apically; punctuation of tergite 3 and the bases of tergites 4 and 5 coarse and dense, on the rest increasingly finer and sparser, punctures on tergite 7 nearly as large as one eye facet at dorsal eye margin, interstices four times or more as large as punctures; tergite 10 nearly smooth. Legs slender, metatarsi nearly as long as four fifths of the metatibiae, segment 1 about as long as the 3 following segments combined, nearly twice as long as the last segment. Fore-body with a very shallow reticulation, abdomen smooth.

Comparative note: This new species belongs to the *S. cirrus*-group and resembles several other Taiwanese species very much. For identification see key.

Etymology: Because of the erect pubescence of the abdomen I name this species "*cirriostentans*" (Lat.= presenting setae).

***Stenus perpusillus* nov.sp. (Figs 17, 50)**

Type material: Holotypus (♂) and 1♂, 2♀♀- paratypes: TAIWAN: Ilan Hsien: Taipingshan 1950m, 13.VII.1993, A. Smetana (T 150): HT and PTT in coll. Smetana (Ottawa), 1 PT in cP.

Description: Micropterous, slightly shiny, foreparts coarsely and very densely punctate, abdomen moderately coarsely to finely, densely punctate. Maxillary palpi yellowish. Antennae and legs reddish yellow.

Length: 2.5-2.7mm (forebody: 1.2mm).

PM of the HT: HW: 26.3; DE: 14; PW: 19.5; PL: 19; EW: 23.3; EL: 20; SL: 14.5.

Male: Metasternum shallowly impressed, coarsely and densely punctate. Anterior sternites simple, sternite 6 broadly shallowed medially, sternite 7 with a horseshoe like impression in posterior two thirds, which is finely and densely punctate and pubescent. Sternite 8 with a very shallow apical emargination (LS: ED= 40:2). Sternite 9 with moderately long teeth apicolaterally. Aedeagus (fig. 17), median lobe broadly rounded distally, expulsion hooks connected medially; parameres distinctly longer than median lobe, with 10 long setae in apical quarter.

Female: Sternite 8 obtuse-angled at posterior margin. Valvifer with a moderately long tooth apicolaterally. Spermatheca (fig. 50).

Head broader than elytra, frons with broad longitudinal furrows, median portion as broad as each of the lateral portions, distinctly extending beyond the level of median eye margins; punctation moderately coarse and very dense, diameter of punctures about as wide as median cross section of antennal segment 3, interstices much smaller than half diameter of punctures, larger on actual middle of median portion. Antennae short, when reflexed not extending toward the posterior margin of the pronotum, penultimate segments slightly longer than broad. Pronotum about as long as broad, sides strongly convex, distinctly concave in posterior half, an oblique lateral impression in posterior half and a distinct longitudinal impression medially; punctation coarse and very dense but only slightly confluent, diameter of punctures about as wide as apical cross section of antennal segment 2, interstices smaller than half diameter of punctures. Elytra trapeziform, distinctly broader than long, punctation yet coarser than on pronotum, very dense but only slightly confluent. Abdomen cylindrical without any lateral margination, basal furrows of anterior segments deep, no membranous fringe at posterior margin of tergite 7; punctation moderately coarse anteriorly, punctures of tergite 4 nearly as large as basal cross section of antennal segment 3, interstices slightly smaller than diameter of punctures, punctures of tergite 7 nearly as wide as one eye facet at medial exo margin, interstices nearly as wide as punctures, tergite 10 moderately finely, moderately densely punctate. Legs moderately robust, metatarsi about two thirds as long as metatibiae, segemen1 distinctly longer than the two following segments combined, about as long as segments 4+5 combined, segment 4 narrowly bilobed. The whole insect with fine microsculpture.

Comparative notes: This new species belongs to the large group of *S. cephalotes* SHARP (NAOMI, in press). It resembles closely *S. perpropinquus* nov.sp., from which it may be distinguished by the sexual characters. In the new species the head is slightly broader, the abdominal punctation slightly finer and less dense as in the compared species.

Etymology: Since this species belongs to the very small species I name it "*perpusillus*" (Lat.= very small).

***Stenus perpropinquus* nov.sp. (Figs 5, 26, 51)**

Type material: Holotypus (♂) and 7♂♂, 9♀♀- paratypes: TAIWAN: Hualien Hsien: Taroko N. P., Nanhushi Hut, 2220m, 8.V.1990, A. Smetana (T 48). Paratypes: 6♂♂: as HT, 12.V.1990, idem (T 55); 1♂: ibidem 2200m, 11.V.1990, idem (T 53); 2♂♂, 6♀♀: Ridge SE Nanhushi Hut, 2700m, 11.V.1990, idem (T 52).- HT and PTT in coll. Smetana (Ottawa), PTT also in cP and cTang.

Description: Same as in *S. perpusillus* nov.sp. (see above).

Length: 2.4-2.9mm (forebody: 1.3-1.4mm).

PM of the HT: HW: 27.7; DE: 14; PW: 20.5; PL: 20; EW: 24.8; EL: 21; SL: 16.

Male: Ventral characters as in *S. perpusillus*. Aedeagus (fig. 26), median lobe triangular narrowed toward rounded apex, expulsion hooks connected medially; parameres longer than median lobe, with 7-8 setae in apical quarter.

Female: Sternite 8 obtusely triangular at posterior margin. Valvifer with a moderately long tooth apicolaterally. Spermatheca (fig. 51).

Comparative notes: In most respects very similar to *S. perpusillus*, but the abdominal punctation denser and slightly less fine: punctures on tergite 4 as large as basal cross section of antennal segment 3, interstices distinctly smaller than punctures, punctures of tergite 7 slightly larger than one eye facet near medial eye margin, interstices distinctly smaller than punctures.- A reliable identification of this species is only possible by examining the sexual characters.

Etymology: Since this species is extremely close to *S. perpusillus* I name it "*perpropinquus*" (Lat.= very close).

***Stenus perpauper* nov.sp. (Figs 28, 53)**

Type material: Holotype (♂) and 8♂♂, 6♀♀-paratypes: TAIWAN: Nantou Hsien: Shanlinchi, 1650m, 16.V.1990, A. Smetana (T 60); Kaohsiung Hsien: 1♂, 5♀♀: Tengchih (1400m), 21.-23.VII.2000, H. Sugaya; 1♀: ibidem, 21.VII.2000, idem; 1♂, 1♀: ibidem, 2.XI.200, M. Maruyama; 1♂: ibidem, 20.IV.2001, H. Sugaya; 1♀: ibidem, 20.-30.IV.2004, idem. Chiayi Hsien: 1♂, 3♀♀: Fenchifu, 12.-13.XI.2000, H. Sugaya.- 1♀ (cf. det.): Nantou Hsien: Meifeng, 2130m, 3.V.1991, A. Smetana (T 62) (cS).- HT and PTT in coll. Smetana (Ottawa), PTT also in cN and in cP.

Description: Apterous, black with a brownish hue, slightly shiny, forebody coarsely and very densely punctate, abdomen moderately finely to finely, densely punctate. Antennae, maxillary palpi and legs reddish yellow.

Length: 2.6-2.9mm (forebody: 1.4-1.5mm).

PM of the HT: HW: 29; DE: 14; PW: 21.5; PL: 22.5; EW: 26.3; EL: 22.5; SL: 16.

M a l e : Metasternum shallowly impressed, coarsely and very densely punctate. Anterior sternites simple, sternite 7 finely and very densely punctate and pubescent along middle. Sternite 8 with a broad and shallow apical emargination (LS: ED= 48:4). Sternite 9 with long teeth apicolaterally. Aedeagus (fig. 28), apical portion of the median lobe broadly rounded, sometimes with the medial portion slightly prominent; parameres with 7-8 setae apically.

F e m a l e : Sternite 8 obliquely triangular at posterior margin. Valvifer with a long apicolateral tooth. Spermatheca (fig. 53).

Head broader than elytra, frons moderately broad with two broad longitudinal furrows, median portion about as broad as each of the lateral portions, distinctly but not much elevated, not exceeding the level of medial eye margins; punctation moderately coarse and very dense, diameter of punctures about as large as median cross section of antennal segment 3, interstices smaller than half diameter of punctures, can become slightly larger on actual middle of median portion. Antennae slender, when reflexed nearly extending to toward the posterior margin of the pronotum, penultimate segments nearly 1.5x as long as broad. Pronotum about as broad as long, sides convex, distinctly concave in posterior half; a very shallow oblique impression posterolaterally and a distinct longitudinal impression along middle; punctation coarse and very dense, slightly confluent near anterior and near posterior margin, diameter of punctures nearly as large as apical cross section of antennal segment 2, interstices distinctly smaller than half diameter of punctures, larger in the longitudinal impression, sometimes as large as two punctures combined. Elytra trapeziform, distinctly broader than long, impressions shallow (not conspicuous), punctation even coarser than on pronotum, punctures fully as large as apical cross section of antennal segment 2. Abdomen cylindrical, completely thread-like margined (no paratergites!), no apical membranous fringe at tergite 7; punctation moderately fine and variably dense anteriorly: punctures on tergite 4 less coarse than basal cross section of antennal segment 3, interstices as large or larger than punctures, punctures on tergite 7 very fine, finer than one eye-facet near medial eye margin, interstices mostly distinctly larger than punctures, tergite 10 very finely and sparsely punctate. Legs moderately slender, metatarsi nearly two thirds as long as metatibae, segment 1 much longer than the following two segments combined, somewhat longer than segment 4+5 combined; segment 4 deeply bilobed. The whole insect with dense microsculpture.

C o m p a r a t i v e n o t e s : This new species belongs to the large group of *S. cephalotes* SHARP and within this to a number of species with a thread-like abdominal margination. From the other apterous/micropterous Taiwanese species with the same abdominal character it is distinguished by the genitalia. From some of them furthermore by the relatively even elytra, which are dark and not distinctly brownish, and by the small size: Most similar to the new species *S. parpauperculus* nov.sp., from which it is distinguished by the sexual characters.

The punctation of the abdomen varies in single specimens, interstices can become larger or slightly smaller than diameter of punctures. This, together with minor differences in the shape of the apical portion of the median lobe, first led me to the assumption that the specimens of different populations might belong to different species. But since the shape of the spermatheca in all these populations do not show any convincing differences, I regard all the above quoted populations as belonging to the same slightly variable species.

E t y m o l o g y : Since it is a small inconspicuous species I name it "*perpauper*" (Lat. = very miserable).

***Stenus perpauperculus* nov.sp. (Figs 46, 52)**

T y p e m a t e r i a l : Holotype (♂) and 1♀-paratype: TAIWAN: Chiayi Hsien: Alishan, Nat. Scen. Area, Road 18 km 85 + Road to Youth Activation Center, ca. 2000m, forest litter, 11.IV.2006, S. Vit.- HT im MHNG, PT in cP (head in coll Betz, Tübingen).

D e s c r i p t i o n : As in *S. perpauper* nov.sp.

Length: 2.5-2.8mm (forebody: 1.4mm).

PM of the HT: HW: 28.5; DE: 14; PW: 21; PL: 21.5; EW: 26.5; EL: 22; SL: 16.

M a l e : Ventral characters as in *S. perpauper*. Aedeagus very similar so that of *S. perpauper*, apical portion of median lobe with a short, rounded, slightly prominent apex, distal portion of expulsion hooks slightly longer; parameres with 10 apical setae.

F e m a l e : Ventral characters as in *S. perpauper*. Spermatheca (fig. 52), infundibulum distinctly longer than in the compared species.

C o m p a r a t i v e n o t e s : This new species may be distinguished from *S. perpauper* by the slightly denser abdominal punctation: on tergite 7 interstices are about as large as punctures or only slightly smaller.

E t y m o l o g y : Since it is a small inconspicuous species and very near to *S. perpauper* I name it "*perpauperculus*" (Lat. = very miserable).

***Stenus perpastus* nov.sp. (Figs 3, 22, 54)**

T y p e m a t e r i a l : Holotype (♂) and 3♂♂, 2♀♀-paratypes: Taiwan: Kaohsiung Hsien: Kuanshan, Kuanshanshing Hut, 2950m, 18.IV.1992, A. Smetana (T 93). Paratypes: 1♂: same as HT, 3020m, 18.IV.1992, idem (T 90); 3♂♂, 6♀♀: Road above Tona Forest Station, km 16-17, 1700-1800, 28.IV.1998, idem (T 190); 3♂♂, 1♀: ibidem (Fork), 1850m, 29.IV.1998, idem (T 191); 1♂: Pingtung Hsien: Peitawushan trail at 1500m, 1.V.1992, idem (T 110).- HT and PTT in cS (Ottawa), PTT also in cP and cT.

D e s c r i p t i o n : Apterous, black, elytra dark brown (can be even lighter), slightly shiny, punctation of frons coarse and dense, that of pronotum and elytra, very coarse, very dense, slightly coalescent, punctation of abdomen moderately coarse and dense anteriorly, fine and dense posteriorly. Maxillary palpi reddish yellow. Base of antennae yellowish brown, club infusate. Legs yellowish brown.

Length: 2.5-3.1mm (forebody: 1.4-1.5mm).

PM of the HT: HW: 30; DE: 15; PW: 22.7; PL: 22.7; EW: 28; EL: 23; SL: 17.5.

M a l e : Metasternum shallowly impressed, coarsely and densely punctate. Sternites 3-6 simple, sternite 6 with a horse-shoe like impression in posterior two thirds, which is very finely and very densely punctate and pubescent, posterior margin very shallowly emarginate, sternite 7 with a long and broad median impression, punctation as previous, posterior margin with a moderately shallow emargination.. Sternite 8 (fig. 3) with a narrow apical emargination, which is as deep as one sixth of the sternite's length. Sternite 9 with long apicolateral teeth. Aedeagus (fig. 22), median lobe truncate at apex, expulsion hooks connected medially; parameres very long, broad, with 13-15 setae medially.

F e m a l e : Sternite 8 obliquely triangular at posterior margin, rounded medially. Valvifer with a long apicolateral tooth. Spermatheca (fig. 54).

Head slightly broader than elytra, frons about as in *S. perpauper*. Antennae and pronotum as in *S. perpauper*, but the punctation of the pronotum coarser and more confluent, diameter of punctures nearly as large as apical cross section of antennal segment 2. Elytra about as in the compared species, but with distinct longitudinal impressions in lateral half and near suture, the punctation slightly coarser, largest punctures as large as medial cross section of antennal segment 2. Abdomen about as in the compared species, the punctation slightly coarser. Microsculpture of the exoskeleton very dense and distinct, especially that of the elytra.

C o m p a r a t i v e n o t e s : This new species belongs also to the *S. cephalotes*-group and may be distinguished from its close relatives by the sexual characters.

E t y m o l o g y : Because this species is slightly more robust than f. e. *S. perpauper* I name it "*perpastus*" (Lat. =well fed).

***Stenus persculpturatus* nov.sp. (Figs 29, 57)**

T y p e m a t e r i a l : Holotype (♂) and 7♂♂, 2♀♀-paratypes: Taiwan: Pingtung Hsien: Peitawushan, Kuai-Ku Hut, 2325m, 21.V.1991, A. Smetana (T 88). Paratypes: 3♂♂, 4♀♀: ibidem, 22.V.1991, idem (T 90); 1♂♂, 9♀♀: ibidem, 2130m, 27.IV.1992, idem (T 101); 6♂♂, 7♀♀: Peitawushan above Kuai-Ku hut, 2750m, 22.V.1991 (T 89).- HT and PTT in coll. Smetana (Ottawa), PTT also in cP.

D e s c r i p t i o n : Apterous, black with brownish hue, elytra brownish, punctation about as in *S. perpastus* nov.sp.. Maxillary palpi yellowish. Antennae and legs as in *S. perpastus*.

Length: 2.8-3.3mm (forebody: 1.5-1.6mm).

PM of the HT: HW: 29.5; DE; 15; PW: 22; PL: 22; EW: 26.3; EL: 23; SL: 17.

M a l e : Metasternum flat, moderately coarsely, very densely punctate. Sternites 3-5 finer and denser punctate medially than laterally. Sternite 6 with a shallow triangular impression medially, which is very finely and very densely punctate and pubescent, sternite 7 with a broad, slightly divergent median impression, punctation and pubescence as previous, posterior margin broadly and shallowly emarginate. Sternite 8 about as in *S. perpastus*. Sternite 9 with long apicolateral teeth. Aedeagus (fig. 29), apical portion of median lobe triangularly narrowed, expulsion hooks separated; parameres with about 12 setae in apical third.

F e m a l e : Sternite 8 at posterior margin triangularly projection, apex rounded (about as in fig. 10). Valvifer with a long apicolateral tooth. Spermatheca (fig. 57), infundibulum short and broad.

C o m p a r a t i v e n o t e s : In most respects very similar to *S. perpastus* but the median portion of frons extending beyond the level of medial eye margins and the lateral margination of the abdominal segments even narrower, sometimes on segment 5 only traces of a thread-like line visible.- This species belongs also to the *S. cephalotes*-group. A reliable identification is only possible by examining the genitalia.

E t y m o l o g y : Since the impressions on pronotum and elytra are very distinct, I name this new species "*persculpturatus*" (Lat. =very distinctly sculptured).

***Stenus persculptus* nov.sp. (Figs 9, 25, 56)**

Type material: Holotype (♂) and 1♂, 3♀-paratypes: Taiwan: Kaohsiung Hsien: Kuanshan Trail above Kaunshanchi Riv., 2650m, 21.IV.1992, A. Smetana (T 95). Paratypes: 2♂♂, 2♀♀: ibidem 2550m, 21.IV.1992, idem (T 96); 2♂♂, 1♀: ibidem 2400m, idem (T 94); 2♂♂, 4♀♀: ibidem 2400m, 20.VII.1993, idem (T 158); 4♂♂, 7♀♀: ibidem 2550, 22.VII.1993, idem (T 160); 1♀: Kuanoshing Hut, 2950m, 18.IV.1992, idem (T 93); 6♂♂, 3♀♀: Pingtung Hsien: Peitawushan, Kuai-Ku Hut, 2125m, 22.IV.1992, idem (T 102); 10♂♂, 7♀♀: ibidem 2130m, 30.IV.1992, idem (T 108); 12♂♂, 27♀♀: Peitawushan ridge, 2800-2900m, 28.IV.1992, idem (T 105); 16♂♂, 7♀♀: Peitawushan above Kuai-Ku Hut, 2680m, 29.IV.1992, idem (T 106); 8♂♂, 17♀♀: ibidem 2750m, 29.IV.1992, idem (T 107); 2♀♀: Peitawushan trail at 1500m, 1.V.1992, idem (T 110).- HT and PTT in coll. Smetana (Ottawa), PTT also in cT and in cP.

Description: As in *S. persculpturatus* nov.sp.

Length: 2.8-3.3mm (forebody: 1.5-1.6mm).

PM of the HT: HW: 30.5; DE: 15.5; PW: 22.5; PL: 23; EW: 27.2; EL: 24; SL: 18.5

Male: Metasternum shallowly impressed, moderately coarsely, densely punctate. Ventral abdominal characters as in *S. persculpturatus*, but sternite 8 slightly deeper emarginate, emargination as deep as one fifth of the length of sternite. Aedeagus (fig. 25) very close to that of *S. persculpturatus*, but the apical portion of the median lobe more acute, the expulsion hooks different in shape.

Female: Sternite 8 at posterior margin triangularly projecting, apex nearly acute (fig. 9). Spermatheca (fig. 56), infundibulum short and broad.

Comparative notes: In most respects as *S. persculpturatus*, but the abdominal thread-like margination distinct and complete and the bump like elevated median portion of frons slightly broader impunctate. To identify this species examination of the sexual characters is necessary.

Etymology: Since the impressions on pronotum and elytra are very distinct, I name this new species "*persculptus*" (Lat. = distinctly sculptured).

***Stenus pervenustus* nov. spec. (Figs 24, 55)**

Type material: Holotype (♂) and 1♂, 2♀-paratypes: Taiwan: Kaohsiung Hsien: Peinantashan trail, 2400m, 4.VII.1993, A. Smetana (T 135). Paratypes: 24♂♂, 21♀♀: ibidem, 2500m, 4.VII.1993, idem (T 136); 1♀: ibidem, 2250m, 4.VII.1993, idem (T 137); 56♂♂, 37♀♀: ibidem, 2390-2490m, 6.VII.1993, idem (T 138); 8♂♂, 9♀♀: ibidem, 2080m, 6.VII.1993, idem (T 141); 5♂♂, 2♀♀: ibidem, 2450m, 2.V.1995, idem (T 170); 7♂♂, 1♀♀: ibidem, 2400m, 3.V.1995, idem (T 171); 2♀♀: Peinantashan trail, ridge at 2800m, 3.VII.1993, idem (T 134).- HT and PTT in coll. Smetana (Ottawa), PTT also in cP and in cT.

Description: As in *S. persculpturatus* nov.sp.

Length: 3.0-3.5mm (forebody: 1.5-1.6mm).

PM of the HT: HW: 30.5; DE: 16; PW: 23; PL: 23; EW: 28.5; EL: 25; SL: 18.

Male: Metasternum shallowly impressed, coarsely and densely punctate. Sternites 3 and 4 very finely and very densely punctate and pubescent medially, sternite 5 with a shallow median impression, punctation and pubescence as previous, sternite 6 with a horse-shoe like impression in posterior two thirds, its punctation even finer and denser than in previous sternites, posterior margin very shallowly emarginate, sternite 7 with a broad and long median impression, punctation and pubescence as previous, posterior margin with a moderately deep, narrow posterior emargination. Sternite 8 with a narrow

emargination nearly in posterior quarter of the sternite. Sternite 9 with moderately long apicolateral teeth. Aedeagus (fig. 24), apex of median lobe triangularly narrowed and curved dorsally, expulsion hooks connected medially; parameres slightly longer than median lobe, with 10-15 apical setae.

F e m a l e : Sternite 8 at posterior margin triangularly projecting, apex rounded. Valvifer with a moderately long tooth apicolaterally. Spermatheca (fig. 55), infundibulum about twice as long as broad.

C o m p a r a t i v e n o t e s : Having regard to the variability in most respects as *S. persculpturatus* and *S. persculptus*. This species may be also distinguished from its close relatives by examining the sexual characters.

E t y m o l o g y : Because this species is not very conspicuous I name it "*pervenustus*" (Lat. =very modest).

***Stenus persubtilis* nov.sp. (Figs 30, 60)**

T y p e m a t e r i a l : Holotype (♂) and 3♂♂-paratypes: Taiwan: Nantou Hsien: Meifeng, 2130m, 10.VII.1993, A. Smetana (T 146). Paratypes: 2♂♂: ibidem, 3.V.1991, idem (T 82); 2♂♂, 4♀♀: ibidem, 2.V.1993, idem (T 96); 25♂♂, 13♀♀: ibidem, 4.V.1998, idem (T 199); 2♂♂, 3♀♀: Meifeng, 6.V.2000, H. Sugaya; 8♂♂, 9♀♀: ibidem, 26.X.2000, idem; 3♂♂, 1♀: Tsuifeng, 22.VII.1988, S. Nomura; 4♂♂, 2♀♀: near Tsuifeng, 2200m, 28.VII.1973, Shibata; 3♂♂, 2♀♀: ibidem, 23.VIII.1973, idem; 1♂: ibidem, 27.VII.1974, idem; 1♂: Nanshanchi, 850m, 24.VIII.1973, Shibata.- HT and PTT in coll. Smetana (Ottawa), PTT also in cN, cSh, cT and in cP.

D e s c r i p t i o n : Apterous, slightly shiny, dark brown to blackish, forebody coarsely and very densely punctate, slightly coalescent on pronotum, abdominal punctation moderately coarse and dense anteriorly, moderately fine and dense posteriorly. Maxillary palpi yellowish. Base of antennae yellowish brown, club infusate. Legs yellowish brown.

Length: 2.6-3.1mm (forebody: 1.3-1.4mm).

PM of the HT: HW: 27.5; DE: 14; PW: 20; PL: 20.5; EW: 25; EL: 21; SL: 15.5.

M a l e : Metasternum shallowly impressed, coarsely and densely punctate, interstices smaller than half diameter of punctures. Anterior sternites simple, sternite 7 very finely and very densely punctate and pubescent posteromedially. Sternite 8 with a shallow, moderately broad apical emargination (LS: ED about 45:3). Sternite 9 with long, light colored apicolateral teeth. Aedeagus (fig. 30), apical portion of median lobe very short, broadly rounded, expulsion hooks separated; parameres much longer than median lobe, with about 11 apical setae.

F e m a l e : Sternite 8 obtusely angled triangular at posterior margin, apex narrowly rounded. Valvifer with a long apicolateral tooth. Spermatheca (fig. 60), infundibulum at least 3x as long as broad.

Head distinctly broader than elytra, frons with two broad longitudinal furrows, median portion about as broad as each of the lateral portions, distinctly elevated, exceeding the level of medial eye margins; punctation coarse and very dense, diameter of punctures about as large as medial cross section of antennal segment 3, interstices distinctly smaller than half diameter of punctures, larger on actual middle of the median portion, where they can become slightly larger than diameter of punctures. Antennae short, when reflexed extending nearly to the posterior margin of the pronotum, penultimate segments

about one third longer than broad. Pronotum about as broad as long, sides convex, slightly concave posteriorly; a shallow oblique impression in posterior lateral half, a short longitudinal impression medially; punctation coarser than on frons, very dense, slightly confluent, diameter of punctures as large as largest cross section of antennal segment 3 (distinctly smaller than apical cross section of antennal segment 2). Elytra trapeziform, much broader than long, impressions shallow, not conspicuous, punctation slightly coarser than on pronotum, very dense, diameter of punctures about as large as apical cross section of antennal segment 2. Abdomen ellipsoid, completely margined, paratergites oblique, those of tergite 5 as broad as base of metatibiae, moderately densely punctate; basal furrows of anterior tergites deep, tergite 7 without an apical membranous fringe; punctation on tergite 3 resembling that of frons, dense, that on tergite 7 moderately fine and moderately dense, diameter of punctures about as large as an eye facet near medial eye margin, interstices at most as large as punctures. Legs moderately slender, metatarsi slightly shorter than two thirds of the metatibiae, segment 1 slightly longer than the two following segments combined, about as long as the claw segment. Forebody densely, abdomen shallowly reticulate.

Comparative notes: This new species belongs to the *S. cephalotes*-group and resembles many species with distinct, oblique paratergites. From most of them it may be distinguished by the comparatively even elytra and the distinctly elevated median portion of frons, from all by the aedeagus and/or the spermatheca.

Etymology: Since it is a small species with moderately coarse punctation I name it "*persubtilis*" (Lat.= delicately built).

***Stenus pervilis* nov.sp. (Figs 8, 31, 58)**

Type material: Holotype (♂) and 13♂♂, 4♀♀-paratypes: Taiwan: Nantou Hsien: Nankaoshan trail, Yuenhai Hut, 2350m, 4.V.1992, A. Smetana (T 112). Paratypes: 38♂♂, 21♀♀: ibidem, 2000-2150m, 8.V.1992, idem (T 120).- HT and PTT in coll. Smetana (Ottawa), PTT also in cT and in cP.

Description: About as in *S. persubtilis* nov.sp.

Length: 2.4-3.0mm (forebody: 1.3-1.4mm).

PM of the HT: HW: 27.5; DE: 14.5; PW: 20.3; PL: 21; EW: 25.5; EL: 20.5; SL: 16.

Male: Ventral characters as in *S. persubtilis*. Aedeagus (fig. 31), apical portion of median lobe triangularly pointed, expulsion hooks connected medially; parameres with 8-9 apical setae.

Female: Sternite 8 and Valvifer as in the compared species. Spermatheca (fig. 58), about as in *S. persubtilis*.

In nearly all respects extremely similar to *S. persubtilis*, only the punctation on tergite 7 is slightly finer and less dense, interstices often as large as punctures.

Comparative notes: This new species is clearly distinct from *S. persubtilis* by the aedeagus.

Etymology: Since this species is so closely resembling *S. persubtilis* I name it "*pervilis*" (Lat.= very cheap).

***Stenus sugayai* nov.sp. (Figs 11, 18, 19, 59)**

Type material: Holotype (♂) and 18♂♂, 37♀♀-paratypes: Taiwan: Taichung Hsien: Anmashan, 2600m, 8.IV.2002, H. Sugaya. Paratypes: 2♀♀: ibidem, 2650-2750m, 1.V.1990, A. Smetana (T 35); 1♂♂, 2♀♀: ibidem 2230m, 4.V.1990, idem (T 43); 2♂♂, 1♀: Hsiaohsueh Shan, 2650-2750m, 1.V.1990, idem (T 34); 2♂♂: Nantou Hsien: Piluchi, 27.III.1986, Y. Shibata.- HT and PTT in coll. Naomi (Kyuushu University), PTT also in cSh, coll. Smetana, cT and in cP.

Description: About as in *S. persubtilis* nov.sp.

Length: 2.5-3.1mm (forebody: 1.4-1.5mm).

PM of a ♂-PT: HW: 28,8; DE: 15; PW: 21; PL: 22; EW: 26.3; EL: 23; SL: 16.5.

Male: Ventral characters as in *S. persubtilis*. Aedeagus (figs 18, 19), apical portion of median lobe slightly different (short in single specimens), narrowly rounded at slightly prominent apex, expulsion hooks connected medially; parameres much longer than median lobe, with 8-9 long setae in apical half.

Female: Stenite 8 and Valvifer as in *S. persubtilis*. Spermatheca (fig. 59), infundibulum more than 3x as long as broad.

In nearly all respects very similar to *S. persubtilis*, except in the genitalia.

Comparative note: This new species should be identified by the aedeagus.

Etymology: This species is dedicated to its collector, Mr. H. Sugaya.

***Stenus perplicatus* nov.sp. (Figs 34-36, 61)**

Type material: Holotype (♂) and 1♂-paratype: Taiwan: Nantou Hsien: Meifeng, 2130m, 4.V.1998, A. Smetana (T 199). Paratypes: 2♀♀: ibidem, 3.V.1991, idem (T 61); 3♂♂, 1♀: ibidem, 10.VII.1993, idem (T 146); 7♂♂, 9♀♀: ibidem, 2100m, 26.X.2000, H. Sugaya; 2♀♀: ibidem, 6.V.2001, idem; 1♂, 1♀: Nankaoshan trail, 2080-2150m, 8.V.1992, A. Smetana (T 120); 6♂♂, 2♀♀: Pingtung Hsien: Shouchia, 300m, 5.XI.2000, H. Sugaya.- HT and PTT in coll. Smetana (Ottawa), PTT also in cN, cT and in cP.

Description: About as in *S. persubtilis* nov.sp.

Length: 2.5-3.3mm (forebody: 1.4-1.5mm).

PM of the HT: HW: 29.5; DE: 15; PW: 22; PL: 23; EW: 26.5; EL: 23.5; SL: 17.5.

Male: Ventral characters as in *S. persubtilis*. Aedeagus (fig. 34), apical portion of median lobe triangularly narrowed (figs 35, 36), apex narrowly rounded, expulsion hooks connected medially; parameres with 7-10 apical setae.

Female: Sternite 8 and valvifer as in the compared species. Spermatheca (fig. 61), infundibulum comparatively short and broad.

In all respects very similar to *S. persubtilis* except in the genitalia.

Comparative notes: This new species may be distinguished from its relatives by the genitalia.

Etymology: Since this species is extremely similar to *S. persubtilis* I name it "*perplicatus*" (Lat.= very intricate).

***Stenus perturbator* nov.sp. (Figs 7, 62)**

Type material: Holotype (♂) and 1♂, 1♀-paratypes: Taiwan: Taitung Hsien: Hsinkangshan above Chengkang, 900m, 19.IV.1998, A. Smetana (T 184). Paratypes: 1♀: ibidem, 800m, 27.IV.1995, idem (T 168); 1♀: ibidem, 800m, 12.IV.1998, idem (T 180); 2♂♂, 1♀: ibidem, 750m, 18.IV.1998, idem (T 182); 2♀♀: ibidem, 750m, 21.IV.1998, idem (T 185); 2♂♂, 3♀♀: ibidem, 550-600m, 22.IV.1998, idem (T 187).- HT and PTT in coll. Smetana (Ottawa), PTT also in cN, cT and in cP.

Description: Apterous, slightly shiny, black with brownish hue, forebody coarsely and very densely punctate, abdominal punctation moderately fine and moderately dense anteriorly, slightly finer, moderately dense posteriorly. Maxillary palpi yellowish brown. Base of antennae and legs yellowish brown, antennal club infuscate.

Length: 2.5-3.1mm (forebody: 1.4-1.6mm).

PM of the HT: HW: 29.5; DE: 15; PW: 22; PL: 22; EW: 27.5; EL: 22; SL: 14.

Male: Metasternum shallowly impressed, coarsely and densely punctate, interstices somewhat smaller than half diameter of punctures. Medial punctation of sternite 3-5 finer and denser than lateral punctation, sternite 6 with a shallow triangular impression posteromedially, which is extremely finely punctate and pubescent, sternite 7 with a broad oval median impression, punctation and pubescence as in sternite 6, posterior margin with a very narrow and short apicomedial excision. Sternite 8 (fig. 7). Sternite 9 with long apicolateral teeth. Aedeagus about as in *S. perpastus* nov.sp. (fig. 22), the apical portion of median lobe slightly longer; internal structures and parameres about as in *S. perpastus*.

Female: Sternite 8 at posterior margin obtusely angled triangular, apex narrowly rounded. Valvifer with a ± long apicolateral tooth. Spermatheca (fig. 62), infundibulum slender, at least 4x as long as broad.

Very similar to *S. persubtilis* nov.sp. but slightly larger, punctation of pronotum coarser, diameter of punctures about as large as apical cross section of antennal segment 3, also the elytral punctation slightly coarser, both dense but not coalescent; abdominal punctation less dense, interstices often slightly larger than punctures.

Comparative notes: This new species is the sister species of *S. perpastus* nov.sp., from which it is easily distinguished by distinct paratergites; from other close relatives it may be distinguished as can be seen in the key.

Etymology: Since this species is very close to *S. perpastus* but has complete paratergites I name it "*perturbator*" (Lat.= the confuser).

***Stenus persimplex* nov.sp. (Figs 6, 37, 63)**

Type material: Holotype (♂) and 6♂♂, 3♀♀-paratypes: Taiwan: Ilan Hsien: Shan-Mi Lake, 24°22'43"N, 121°44'12"E, 1100m, 10.V.1995, A. Smetana (T 177). Paratypes: 1♂: ibidem, 1120m, 9.V.1995, idem (T 174); 1♂: ibidem, 1110m, 10.V.1995, idem (T 185).- HT and PTT in coll. Smetana (Ottawa), PTT also in cP.

Description: As in *S. perturbator* nov.sp.

Length: 2.3-3.0mm (forebody: 1.3-1.4mm).

PM of the HT: HW: 26.8; DE: 13.5; PW: 19.8; PL: 20; EW: 24; EL: 19; SL: 14.

Male: Metasternum shallowly impressed, moderately coarsely, densely punctate.

Sternites 3-5 simple, sternite 6 with finer and denser punctation and pubescence medially, sternite 7 slightly shallowed in posterior middle, medial punctation and pubescence fine and very dense. Sternite 8 with a moderately broad apical emargination (fig. 6). Sternite 9 with long apicolateral teeth. Aedeagus (fig. 37), apical portion of median lobe short, triangularly narrowed, apex rounded, expulsion hooks contiguous medially; parameres much longer than median lobe, with about 7-9 apical setae.

F e m a l e : Sternite 8 and Valvifer as in *S. persubtilis*. Spermatheca (fig. 63), infundibulum about 3x as long as broad.

In most respects very similar to *S. persubtilis*, but the median portion of frons less elevated, the elytral punctation slightly coarser, the abdominal punctation distinctly sparser, interstices mostly distinctly larger than diameter of punctures.

C o m p a r a t i v e n o t e s : This species also should be identified by the genitalia; see also the key.

E t y m o l o g y : This species has no very remarkable characters, therefore I name it "*persimplex*" (Lat.= very simple).

***Stenus perrarus* nov.sp. (Figs 39, 64)**

T y p e m a t e r i a l : Holotype (♂) and 3♂♂-paratypes: Taiwan: Taoyuan Hsien: Takuanshan Forest, 1650m, 17.IV.1990, A. Smetana (T 5). Paratypes: 2♂♂, 1♀: Taipeh Hsien: Fushan, 27.IV.1999, H. Sugaya.- HT and PTT in coll. Smetana (Ottawa), PTT also in cN and in cP.

D e s c r i p t i o n : About as in *S. perturbator* nov.sp.

Length: 2.5-3.1mm (forebody: 1.3-1.4mm).

PM of the HT: HW: 28.8; DE: 15; PW: 21.5; PL: 23.5; EW: 27.8; EL: 23; SL: 16.

M a l e : Ventral characters as in *S. persimplex* nov.sp., but the apical emargination of sternite 8 less deep and broader (LS: ED= 51:3). Aedeagus (fig. 39), apical portion of median lobe very short, convexely narrowed, apex narrowly rounded, expulsion hooks not contiguous medially; parameres much longer than median lobe, with 9-10 apical setae.

F e m a l e : Sternite 8 at posterior margin obtusely angled triangular, apex nearly acute. Valvifer as in *S. perturbator*. Spermatheca (fig. 64), infundibulum at least 3x as long as broad.

In many respects very similar to *S. persubtilis*, but the median portion of frons less elevated, the elytral punctation slightly coarser, the abdominal punctation slightly less dense, interstices on last tergites distinctly larger than punctures.

C o m p a r a t i v e n o t e s : This new species resembles extremely *S. persimplex* nov.sp., but the head is slightly less broad, the sexual characters are different. For identification see key.

E t y m o l o g y : Since I only saw few specimens I name this new species "*perrarus*" (Lat.= very rare).

***Stenus perspicabilis* nov.sp. (Figs 10, 21, 65)**

Type material: Holotype (♂) and 4♂♂, 5♀♀-paratypes: Taiwan: Kaohsiung Hsien: Kuanshan trail above Kaunshanchi River, 2550m, 21.IV.1992, A. Smetana (T 96). Paratypes: 15♂♂, 15♀♀: same as HT, 22.VII.1993, idem (T 160); 1♂, 2♀♀: Anmashan, 2225m, 2.V.1990, idem (T 37); 1♂: ibidem, 2.V.1990, idem (T 38); 2♂♂, 2♀♀: ibidem, 3.V.1990, idem (T 42); 1♂, 2♀♀: ibidem, 14.V.1992, idem (T 130); 1♂: Anmashan Creek, 2136m, 12.V.1992, idem (T 125); 10♂♂, 7♀♀: Peinantashan trail, 2080m, 8.VII.1993, idem (T 141); 2♂♂, 2♀♀: ibidem, 2020m, 7.V.1993, idem (T 143); 4♂♂, 8♀♀: ibidem, 2000m, 7.V.1993, idem (T 144); 1♂, 2♀♀: ibidem, 1950m, 8.VII.1993, idem (T 145); 1♂: Kuanshan trail above Kaunshanchi River, 2550m, 22.VII.1993, idem (T 160); 1♂, 1♀: Hsuehshan Chi-Ka, 2463m, 6.V.1991, idem (T 67); 20♂♂, 18♀♀: Tengchih, 2100m, 19.-22.IV.2003, H. Sugaya. Hualien Hsien: 1♂: Taroko National Park, Chungyantienshi (River) Waterfall, 2300m, 10.V.1990, A. Smetana (T 50); 2♀♀: ibidem, 2280m, idem (T 51); 1♀: ibidem, Nanhushi Hut, 2220m, 12.V.1990, idem (T 54); 1♂, 4♀♀: ibidem, idem (T 55). Ilan Hsien: 1♂: Taipingshan, 1820m, 15.VII.1993, idem (T 153). Taoyuan Hsien: 1♂, 2♀♀: Takuanshan Forest, 1600m, 17.IV.1990, idem (T 3); 4♂♂, 5♀♀: Lalashan, 2000m, 17.-18., 18. and 19.XI.2000, H. Sugaya.- HT and PTT in coll. Smetana (Ottawa), PTT also in cN, cT and in cP.

Description: About as in *S. persubtilis* nov.sp.

Length: 2.43.0mm (forebody: 1.4-1.5mm).

PM of the HT: HW: 28.7; DE: 14; PW: 22; PL: 22.5; EW: 27.8; EL: 23; SL: 18.

Male: Metasternum shallowly impressed, coarsely and densely punctate, interstices nearly as large as half diameter of punctures. Sternite 3 simple, sternite 4 with a broad, round median impression in posterior half, which is finely and densely punctate and pubescent, sternite 5 with a very broad and deep impression in posterior half, which is extremely finely punctate and pubescent, posterior margin very shallowly emarginate, sternite 6 principally as sternite 5, but the impression even deeper, the apical emargination deeper, sternite 7 with a broad median impression becoming shallower posteriorly, punctation and pubescence same as on preceding sternites. Sternite 8 with a narrow subtriangular emargination in about posterior sixth. Sternite 9 with comparatively long, light apicolateral teeth. Aedeagus (fig. 21), median lobe triangularly narrowed, apex rounded, expulsion hooks long, separated; parameres with its narrow apical portion distinctly exceeding the median lobe, with about 17-19 setae in apical third.

Female: Sternite 8 (fig. 10). Valvifer with a long and light apicolateral tooth. Spermatheca (fig. 65), infundibulum short and broad.

Head slightly (or not) broader than elytra, median portion of frons not or distinctly exceeding the level of medial eye margins. Pronotum and elytra with deep impressions, punctation coarser than in *S. persubtilis*, but punctures smaller than medial cross section of antennal segment 2. Abdominal punctation dense, interstices on tergite 7 smaller than punctures.

Comparative notes: This is a comparatively robust species, which may be identified by the relatively narrow head and the sexual characters. It is the sister species of *S. hagogromo* NAOMI (described from Iriomote, Ishigaki and Yonaguni Is.). Although the aedeagus of both species are similar, they are distinct by the abdominal margination: in *S. hagogromo* the abdominal segments 4-6 have only a narrow tergo-sternal suture, in *S. perspicabilis* there are two suture-lines which include paratergites. This is a further example of the plasticity of the character of abdominal margination in the *S. cephalotes* group.

E t y m o l o g y : Since this species is remarkable by the strong ventral sexual characters of the male I name it "*perspicabilis*" (Lat.= remarkable).

***Stenus perpinguis* nov.sp. (Figs 4, 20, 66)**

T y p e m a t e r i a l : Holotype (♂) and 9♂♂, 13♀♀-paratypes: Taiwan: Nantou Hsien: Yushan National Park, Mun-Li Cliff, 2700m, 18.V.1991, A. Smetana (T 86). Paratypes: 2♂♂, 6♀♀: ibidem, 13.V.1991, idem (T 79). Chiayi Hsien: 3♂♂, 12♀♀: ibidem, 27.IV.1990, idem (T 28); 3♂♂, 1♀: Yushan National Park, Ta-Ta Ghia, 2750m, 27.IV.1990, idem (T 27).- HT and PTT in coll. Smetana (Ottawa), PTT also in cN and in cP.

D e s c r i p t i o n : About as in *S. persubtilis* nov.sp.

Length: 3.0-3.7mm (forebody: 1.6-1.8mm).

PM of the HT: HW: 32; DE: 16; PW: 25; PL: 25; EW: 30; EL: 26; SL: 20.

M a l e : Metasternum broadly and shallowly impressed, punctation coarse and dense, interstices smaller than half diameter of punctures. Anterior sternites simple, sternite 5 with a very short, broad, shallow, impunctate impression near posterior margin, sternite 6 and 7 each with a broad and deep median impression, which is extremely finely and densely punctate and pubescent, posterior margin very shallowly emarginate. Sternite 8 (fig. 4). Sternite 9 with long, light apicolateral teeth. Aedeagus (fig. 20), median lobe triangularly narrowed, apex acute, expulsion hooks contiguous; parameres much longer than median lobe, with about 10+2 long setae in apical third.

F e m a l e : Sternite 8 at posterior margin slightly projecting, rounded. Apicolateral tooth of valvifer long. Spermatheca (fig. 66), infundibulum narrow and long.

Distinctly larger than *S. persubtilis*, median portion of frons comparatively flat, not distinctly exceeding beyond the level of medial eye margins. Pronotum and elytra with very deep impressions, median impression of pronotum broad and broadly impunctate. Abdominal punctation less dense than in *S. persubtilis*, interstices on tergite 7 distinctly larger than punctures.

C o m p a r a t i v e n o t e s : This new species is the largest of the Taiwanese species of the *S. cephalotes*-group. Beside of the sexual characters it may be distinguished from most of the close relatives by the strong impunctate median impression of the pronotum and by the relatively sparse punctation of the posterior abdomen.

E t y m o l o g y : Because of its robust habitus I name this species "*perpinguis*" (Lat.= very plump).

***Stenus perodiosus* nov.sp. (Figs 12, 38, 67)**

T y p e m a t e r i a l : Holotype (♂) and 17♂♂, 19♀♀-paratypes: Taiwan: Nantou Hsien: Yushan National Park, 1.8 km W Pai-Yun Hut, 3375m, 17.V.1991, A. Smetana (T 85). Paratypes: 11♂♂, 9♀♀: ibidem, 2 km W Pai-Yun Hut, 3350m, 16.V.1991, idem (T 84); 1♂, 1♀: Yushan National Park, Mun-Li Clif, 2700m, 13.V.1991, idem (T 79).- HT and PTT in coll. Smetana (Ottawa), PTT also in cN, cT and in cP.

D e s c r i p t i o n : About as in *S. persubtilis* nov.sp.

Length: 2.5-3.5mm (forebody: 1.4-1.6mm).

PM of the HT: HW: 29; DE: 15; PW: 21; PL: 21; EW: 26.5; EL: 23; SL: 17.

M a l e : Metasternum shallowly impressed, moderately coarsely and moderately

densely punctate, interstices often as large as half diameter of punctures. Anterior sternites simple, sternite 7 finer and denser punctate and pubescent posteromedially. Sternite 8 with a very shallow apical emargination (LS: ED= 50:2). Sternite 9 with comparatively short apicolateral teeth (fig. 12). Aedeagus (fig. 38), apical portion triangularly narrowed, apex acute, expulsion hooks connected medially; parameres slightly longer than median lobe, with about 8-9 apical setae.

F e m a l e : Sternite 8 at posterior margin slightly projecting, apex moderately broadly rounded. Valvifer with a comparatively short apicolateral tooth. Spermatheca (fig. 67), infundibulum more than 3x as long as broad.

About as *S. persubtilis*, but the elytra with deep longitudinal impressions in lateral half and near suture; median portion of frons distinctly exceeding the level of medial eye margins; longitudinal impression of pronotum deep, broadly impunctate and deeply reticulate, dull; abdominal punctation throughout very dense.

C o m p a r a t i v e n o t e : This new species resembles many similar species with deep elytral impressions, from which it should be distinguished by examining the sexual characters.

E t y m o l o g y : Because of its great similarity with other species of the group and the difficulty to identify this species I name it "*perodiosus*" (Lat.= very odious).

***Stenus perpunctus* nov.sp. (Figs 42, 68)**

T y p e m a t e r i a l : Holotype (♂) and 1♂, 3♀-paratypes: Taiwan: Taichung Hsien: Hsuehshan above Shah-Liu-Gien Hut, 3220m, 2.V.1991, A. Smetana (T 69). Paratypes: 2♀: ibidem, 3150m, 8.V.1991, idem (T 71); 3♂♂, 5♀♀: ibidem, 3200m, 8.V.1991, idem (T 72); 2♀♀: Hsuehshan, Hsuehshan-Tun-Feng, 3170m, 7.V.1991, idem (T 69); 2♂♂, 1♀: ibidem, 11.V.1991, idem (T 76).- HT and PTT in coll. Smetana (Ottawa), PTT also in cP.

D e s c r i p t i o n : About as in *S. persubtilis* nov.sp.

Length: 2.8-3.2mm (forebody: 1.5-1.6mm).

PM of the HT: HW: 30; DE: 16; PW: 23.5; PL: 22.5; EW: 28; EL: 24; SL: 19.

M a l e . Metasternum broadly impressed, coarsely and densely punctate posteriorly, very sparsely punctate anteriorly,. Anterior sternites more finely and less densely punctate medially than laterally, sternite 6 very shallowly impressed in posterior middle, finely and sparsely punctate, sternite 7 shallowed along middle, finely and densely punctate and pubescent. Sternite 8 with a moderately broad, shallow apical emargination (LS: ED= 49:3). Sternite 9 with comparatively short blackish apicolateral teeth. Aedeagus (fig. 42), in outline resembling that of *S. perodiosus*, but the apical portion of median lobe much longer, the expulsion hooks of different shape; parameres distinctly longer than median lobe, with 7-8 apical setae.

F e m a l e : Sternite 8 and Valvifer as in *S. perodiosus*. Spermatheca (fig. 68), infundibulum comparatively short and broad.

Median portion of frons distinctly exceeding the level of medial eye margins, narrowly impunctate; pronotum with deep impressions, median impression impunctate; elytra distinctly uneven, coarsely and densely punctate, diameter of punctures at least as large as apical cross section of antennal segment 2; abdomen densely punctate, but interstices often larger than punctures.

Comparative notes: This new species may be distinguished from many of its relatives by the strongly elevated median portion of frons, by the short apicolateral teeth of sternum 9, by the coarse elytral punctation, the length and the sexual characters.

Etymology: Because of the strongly punctate elytra I name this new species "*perpunctus*" (Lat.= strongly punctate).

***Stenus perversor* nov.sp. (Figs 32, 69)**

Type material: Holotype (♂) and 34♂♂, 23♀♀-paratypes: Taiwan: Nantou Hsien: Houhanshan, 3175m, 15.V.1991, A. Smetana (T 59). – HT and PTT in coll. Smetana (Ottawa), PTT also in cN, cT and in cP.

Description: About as in *S. persubtilis* nov.sp.

Length: 2.5-3.0mm (forebody: 1.4-1.5mm).

PM of the HT: HW: 28; DE: 15; PW: 20.5; PL: 20; EW: 25; EL: 21.5; SL: 16.5.

Male: Metasternum shallowly impressed, moderately coarsely, densely punctate, interstices smaller than half diameter of punctures. Anterior sternite simple, sternite 7 finer and denser punctate and pubescent medially than laterally. Sternite 8 with a moderately broad, shallow apical emargination (LS: ED= 51:2). Sternite 9 with comparatively short, blackish apicolateral teeth. Aedeagus (fig. 32), median lobe narrowly rounded apically, expulsion clasp strong; parameres nearly as long as median lobe, with about 6 apical setae.

Female: Sternite 8 obtusely angled triangular at posterior margin, apex narrowly rounded. Valvifer with a short apicolateral tooth. Spoermatheca (fig. 69) with an oval infundibulum.

Median portion of frons strongly elevated, in most specimens narrowly impunctate; pronotum and elytra in most (not in all) specimens with deep impressions, punctation coarser than in *S. persubtilis* and more distinctly coalescent, diameter of elytra punctures slightly larger than apical cross section of antennal segment 2; punctation of tergite 7 dense, interstices mostly smaller than punctures.

Comparative note: This new species may be distinguished from most of its close relatives by the oval infundibulum, from all by the aedeagus.

Etymology: Since this species makes the identification of very close species more difficult I name it "*perversor*" (Lat.= the spoiler).

***Stenus permolestus* nov.sp. (Figs 40, 70)**

Type material: Holotype (♂) and 18♂♂, 6♀♀-paratypes: Taiwan: Nantou Hsien: Nankaoshan, 1.5 km SW Tenchi Hut, 2830m, 6.V.1992, A. Smetana (T 116). Paratypes: 1♂: Nankaoshan, 2.5 km SW Tenchi Hut, 2710m, 6.V.1992, idem (T 115); 2♂♂, 1♀: Tenchi Hut, 2830m, 6.V.1992, idem (T 119); 2♂♂, 1♀: Nankaoshan trail, 2060-2150m, 8.V.1992, idem (T 120); 20♂♂, 17♀♀: Houhuanshan, Kuenyang, 3050m, 27.IV.1990, idem (T 29).- HT and PTT in coll. Smetana (Ottawa), PTT also in cN, cT and in cP.

Description: About as in *S. persubtilis* nov.sp.

Length: 2.8-3.4mm (forebody: 1.5-1.6mm).

PM of the HT: HW: 30.8; DE: 16.5; PW: 22.5; PL: 23; EW: 28.5; EL: 24; SL: 19.

Male: Metasternum shallowly impressed, moderately coarsely, densely punctate, interstices smaller than half diameter of punctures. Anterior sternites simple, sternite 7 in posterior middle finer and denser punctate than laterally. Sternite 8 with a very shallow, broad apical emargination (LS: ED= 51:1.5). Sternite 9 with comparatively short, blackish apicolateral teeth. Aedeagus (fig. 40), apical portion of median lobe triangularly narrowed, apex rounded, expulsion hooks connected medially; parameres longer than median lobe, with 9-12 apical setae.

Female: Sternite 8 at posterior margin slightly projecting, rounded apically. Valvifer with a short apicolateral tooth. Spermatheca (fig. 70), infundibulum slender, 3x as long as broad.

Median portion of frons strongly elevated, distinctly exceeding beyond the level of medial eye margins; pronotum and elytra with deep impressions, punctation of pronotum strongly, but only shortly, confluent, punctation of pronotum and elytra coarser than in *S. persubtilis*, diameter of elytral punctures slightly larger than apical cross section of antennal segment 2; abdominal punctation dense, interstices on tergite 7 distinctly smaller than punctures.

Comparative note: This new species has to be identified by examining the sexual characters.

Etymology: Since the identification of this new species is very difficult, I name it "*permolestus*" (Lat.= very vexatious).

***Stenus pertricosus* nov.sp. (Figs 44, 71)**

Type material: Holotype (♂) and 5♂♂, 5♀♀-paratypes: Taiwan: Nantou Hsien: near Tsuifeng, 2200m, 22.VIII.1976, Y. Shibata. Paratypes: 12♂♂, 28♀♀: same as HT, 28.VII., 22.VIII., 23.VIII.1973, 26.VII., 25.VIII.1974; 28.VII., 29. VII., 18.VIII., 20.VIII., 21.VIII.1976, 23.VII., 2.VIII., 11.VIII.1977, idem; 1♂, 2♀♀: near Meifeng, 2150m, 13.VIII.1981, idem; 3♂♂, 1♀♀: Meifeng, 2130m, 3.V.1991, A. Smetana (T 61); 1♂: ibidem, 10.VII.1993, idem (T 146); 2♂♂: ibidem, 4.V.1998, idem (T 199).- HT and PTT in coll. Shibata (Tokyo), PTT also in coll. Smetana, cN, cT and in cP.

Description: About as in *S. persubtilis* nov.sp.

Length: 2.8-3.4mm (forebody: 1.5-1.6mm).

PM of a ♂-PT from T 61: HW: 30; DE: 16; PW: 21.5; PL: 22; EW: 27.3; EL: 24; SL: 17.5.

Male: Metasternum distinctly impressed, moderately coarsely, densely punctate, interstices smaller than half diameter of punctures. Anterior sternites simple, sternite 6 finer and denser punctate and pubescent medially than laterally, sternite 7 with a shallow posteromedian impression, which is very finely and very densely punctate and pubescent. Sternite 8 with a shallow, moderately broad apical emargination (LS: ED= 53:3). Sternite 9 with comparatively short, blackish apicolateral teeth. Aedeagus (fig. 44), median lobe broadened in anterior half, apical portion obtusely angled narrowed, apex small and prominent, expulsion hooks connected medially; parameres slightly longer than median lobe, with about 6-7 apical setae.

Female: Sternite 8 at posterior margin feebly projecting, rounded apically. Valvifer with a short apicolateral tooth. Spermatheca (fig. 71), infundibulum narrow, 3x as long as broad.

Median portion of frons strongly elevated, distinctly extending beyond the level of medial eye margins; pronotum and elytra with deep impressions, punctation coarser than in *S. persubtilis*, diameter of elytral punctures at least as large as apical cross section of antennal segment 2; abdomen densely punctate, interstices on tergite 7 distinctly smaller than punctures.

Comparative note: This is a relatively large species, it may be distinguished from the close relatives as quoted in the key, best by the sexual characters.

Etymology: Since it is difficult to identify this species I name it "*pertricosus*" (Lat.= very intricate).

***Stenus permodestus* nov.sp. (Figs 33, 72)**

Type material: Holotype (♂) and 5♂♂, 3♀♀-paratypes: Taiwan: Nantou Hsien: Houhuanshan, Kuenyang, 3050m, 4.V.1991, A. Smetana (T 63). Paratypes: 3♂♂, 5♀♀: ibidem, idem (T 64); 4♂♂, 3♀♀: ibidem, 13.V.1995, idem (T 179).- HT and PTT in coll. Smetana (Ottawa), PTT also in cN and in cP.

Description: About as in *S. persubtilis* nov.sp.

Length: 2.7-3.2mm (forebody: 1.4-1.6mm).

PM of the HT: HW: 30; DE: 16; PW: 22; PL: 22; EW: 26.5; EL: 23.5; SL: 18.

Male: Metasternum shallowly impressed, moderately coarsely and moderately densely punctate, interstices mostly larger than half diameter of punctures. Anterior sternites simple, sternite 7 finer and denser punctate and pubescent medially than laterally. Sternite 8 with a broad and shallow apical emargination (LS: ED= 51:3). Sternite 9 with comparatively short, blackish apicolateral teeth. Aedeagus (fig. 33), apex of median lobe pointed, expulsion clasp broad; parameres as long as median lobe, with 8-9 apical setae.

Female: Sternite 8 at posterior margin feebly and roundly projecting. Valvifer with a short apicolateral tooth. Spermatheca (fig. 72), infundibulum slender, about 3x as long as broad.

Median portion of frons distinctly exceeding the level of medial eye margins; pronotum and elytra with deep impressions; abdominal punctation dense, interstices on tergite 7 distinctly smaller than punctures.

Comparative notes: This new species may be distinguished from *S. perversor* nov.sp., which has been found in about the same area, by the shape of the spermatheca with a relatively slender infundibulum, and by the aedeagus with a more pointed median lobe, from all other close relatives also by the sexual characters.

Etymology: Since this species has no exceptional characters I name it "*permodestus*" (Lat.= very modest).

***Stenus pertenuis* nov.sp. (Figs 41, 75)**

Type material: Holotype (♂) and 2♂♂, 3♀♀-paratypes: Taiwan: Kaohsiung Hsien: Creek 2 km E Tien Chih, Hwy 20, 2400m, 22.VII.1993, A. Smetana (T 161). Paratypes: 1♂: Kuanshan Trail above Kaunshanchi River, 2550m, 22.VII.1993, idem (T 160).- HT and PTT in coll. Smetana (Ottawa), PTT also in cP.

Description: About as in *S. persubtilis* nov.sp.

Length: 2.9-3.4mm (forebody: 1.5-1.6mm).

PM of the HT: HW: 31; DE: 16; PW: 22.5; PL: 23; EW: 27; EL: 25; SL: 19.5.

M a l e : Metasternum distinctly impressed, coarsely and densely punctate, interstices smaller than half diameter of punctures. Anterior sternites simple, sternite 7 finely and densely punctate and pubescent medially. Sternite 8 with a shallow, moderately broad apical emargination (LS: ED= 54:3). Sternite 9 with moderately long blackish apicolateral teeth. Aedeagus (fig. 41), apical portion of median lobe very broadly rounded ventrally, with a short triangular apex dorsally, expulsion hooks separated; parameres distinctly longer than median lobe, with about 8 apical setae.

F e m a l e : Sternite 8 obtusely angled triangular at posterior margin, apex rounded. Valvifer with a comparatively short apicolateral tooth. Spermatheca (fig. 75), infundibulum at least 4x as long as broad.

Median portion of frons distinctly exceeding the level of medial eye margins; elytra very uneven with deep longitudinal impressions, punctation coarser than in *S. persubtilis*, largest punctures as large as medial cross section of antennal segment 2; abdominal punctation dense, interstices on tergite 7 smaller than punctures.

C o m p a r a t i v e n o t e : This species has to be identified best by the sexual characters; see also key.

E t y m o l o g y : Because of the small body I name this species "*pertenuis*" (Lat.= very small).

***Stenus perfectus* nov.sp. (Figs 45, 74)**

T y p e m a t e r i a l : Holotype (♂) and 7♂♂, 3♀♀-paratypes: Taiwan: Nantou Hsien: Nankaoshan trail, Yuenhai Hut, 2350m, 4.V.1992, A. Smetana (T 112). Paratypes: 2♂♂, 1♀: Nankaoshan, Tenchi Hut, 2800m, 6.V.1992, idem (T 13); 35♂♂, 36♀♀: ibidem, 2900m, 6.V.1992, idem (T 14); 13♂♂, 12♀♀: ibidem, 2895m, 7.V.1992, idem (T 119); 8♂♂, 12♀♀: 2.5 km SW Tenchi Hut, 2720m, 6.V.1992, idem (T 115).- HT and PTT in coll. Smetana (Ottawa), PTT also in cN, cT and in cP.

D e s c r i p t i o n : About as in *S. persubtilis* nov.sp.

Length: 2.5-3.3 mm (forebody: 1.4-1.6mm).

PM of the HT: HW: 30; DE: 16; PW: 22; PL: 22.5; EW: 27; EL: 24; SL: 17.

M a l e : Metasternum shallowly impressed, coarsely and densely punctate, interstices smaller than half diameter of punctures. Anterior sternites simple, sternite 6 with a slightly finer punctation and pubescence medially, sternite 7 with finer and denser punctation and pubescence medially. Sternite 8 with a moderately shallow, moderately broad apical emargination (LS: ED= 47:3). Sternite 9 with short apicolateral teeth. Aedeagus (fig. 45), median lobe broadly subtruncate apically, expulsion hooks broad and short, separated; parameres longer than median lobe, with about 5-6 apical setae.

F e m a l e : Sternite 8 at posterior margin obtusely angled triangular, apex narrowly rounded. Valvifer with a short apicolateral tooth. Spermatheca (fig. 74) with a long and narrow infundibulum.

Median portion of frons distinctly exceeding the level of medial eye margins; pronotal and elytra impressions deep, punctation coarser than in *S. persubtilis*, elytral punctures becoming as large as median cross section of antennal segment 2; abdomen very densely

punctate, interstices on tergite 7 distinctly smaller than half diameter of punctures.

Note: Amongst the PTT from T 114 there was found a monstrous male, which has broader, upwards bent paratergites and a very coarse, irregular elytral punctation. This may indicate that the broadness and position of the abdominal margination is a plastic character. This case also may be regarded as an example of atavism (as my friend Naomi suggests).

C o m p a r a t i v e n o t e : Also this new species has to be identified by examining the sexual characters.

E t y m o l o g y : Because this species has a nice aedeagus I name it "*perfectus*" (Lat.= in good shape).

***Stenus perscitus* nov.sp. (Figs 43, 73)**

T y p e m a t e r i a l : Holotype (♂) and 8♂♂, 10♀♀-paratypes: Taiwan: Chiayi Hsien: Yushan National Park, Mun-Li Cliff, 2700m, 27.IV.1990, A. Smetana (T 28). Paratypes: 2♂♂: ibidem, 13.V.1991, idem (T 79); 1♂: Fenchihu, 2400m, 6.VIII.1976, Y. Shibata; 1♂: ibidem, 13.VIII.1983, idem; 1♂: Nantou Hsien: Piluchi, 18.VII.1988, S. Nomura; 1♂: near Tungfu, 2600m, 17.VIII.1973, S. Nakamura.- HT and PTT in coll. Smetana (Ottawa), PTT also in coll. Naomi, cSh and in cP.

D e s c r i p t i o n : About as in *S. persubtilis* nov.sp.

Length: 2.7-3.1mm (forebody: 1.5mm).

PM of the HT: HW: 28.8; DE: 15; PW: 21; PL: 21.5; EW: 26; EL: 22.5; SL: 17.

M a l e : Metasternum moderately shallowly impressed, coarsely and densely punctate, interstices smaller than half diameter of punctures. Anterior sternites simple. Sternite 7 finely and densely punctate posteromedially. Sternite 8 with a moderately narrow, shallow apical emargination (LS: ED= 49:3). Sternite 9 with moderately long, light apicolateral teeth. Aedeagus (fig. 43), resembling very much that of *S. pertenuis* nov sp., but the apical portion of median lobe different, the expulsion hooks contiguous, the parameres shorter, with about 6 apical setae.

F e m a l e : Sternite 8 at posterior margin obtusely angled triangular, apex narrowly rounded. Valvifer with a moderately long, light apicolateral tooth. Spermatheca (fig. 73) with a long and narrow infundibulum.

C o m p a r a t i v e n o t e : Also this species should be identified by the sexual characters.

E t y m o l o g y : Since this species is small and delicate I name it "*perscitus*" (Lat.= very delicate).

***Stenus houhanmontis* nov.sp. (Fig. 79)**

T y p e m a t e r i a l : Holotype (♂): Taiwan: Nantou Hsien: Houhanshan, 3175m, 15.V.1990, A. Smetana (T 59): in coll. Smetana (Ottawa).

D e s c r i p t i o n : Micropterous, black, nearly dull, head moderately coarsely, very densely punctate, pronotum coarsely and very densely, elytra coarsely and slightly coalescently punctate, abdomen moderately finely and moderately densely punctate; pubescence, short, recumbent. Segment 1 and base of segment 2 of maxillary palpi reddish yellow, remainder brown. Antennae dark brown. Legs dark brown, basal half of

femora chestnut-brown. Clypeus and labrum blackish, moderately densely pubescent.

Length: [2.3-] 2.7mm (forebody: 1.35mm).

PM of the HT: HW: 26; DE: 17; PW: 20.5; PL: 19.5; EW: 24.5; EL: 22; SL: 16.

M a l e : Metatibiae with a tiny preapical spur. Anterior sternites simple, sternite 7 shallowed in posterior middle, finely and densely punctate and pubescent. Sternite 8 with a shallow, moderately broad emargination in about posterior sixteenth of the sternite. Sternite 9 acute apicolaterally, but the apicolateral tooth not completely smooth laterally indicating rudimentary denticles. Aedeagus very close to that of *S. rugipennis* SHARP, but the expulsion hooks broader (fig. 79); parameres with 17 setae apically.

F e m a l e : Unknown.

Head broader than elytra, frons very broad with distinct longitudinal furrows, median portion about as broad as each of the lateral portions, distinctly elevated, exceeding the level of medial eye margins; punctuation moderately coarse, diameter of punctures about as large as medial cross section of antennal segment 3, interstices smaller than half diameter of punctures. Antennae short, when reflexed, extending to the posterior third of pronotum, penultimate segments about as long as broad. Pronotum slightly broader than long, sides strongly convex in anterior two thirds, moderately concavely narrowed behind; a very shallow longitudinal impression along middle; punctuation slightly coarser than on frons, also very dense, diameter of punctures about as large as apical cross section of antennal segment 2. Elytra sub-trapeziform, broader than long, shoulders moderately obtuse, sides distinctly but not much widened behind, posterior margin broadly emarginate; no distinct impressions; punctuation slightly coarser than that of the pronotum but slightly coalescent. Paratergites of the abdomen slightly declining ventrad, moderately broad, those of tergite 4 nearly as broad as antennal segment 2; basal furrows of anterior tergites moderately deep, tergite 7 without an apical membranous fringe; punctuation moderately fine anteriorly, fine posteriorly, interstices on tergite 3 nearly as large as punctures, larger on tergite 7, tergite 10 with few very fine punctures. Legs short, metatarsi two thirds as long as metatibiae, segment 1 slightly shorter than the 2 following segments combined, about as long as the last segment; Segment 4 deeply bilobed. The whole insect densely and deeply reticulate.

C o m p a r a t i v e n o t e s : This new species is closely related to the next two micropterous species, which all three are closely related to the macropterous species *S. rugipennis* SHARP and *S. suspectatus* PUTHZ. It may be distinguished from *S. kuanmontis* nov.sp. by the trapeziform elytra and much denser reticulation of the forebody, from *S. hseuhmontis* nov.sp. by coarser and denser punctuation of the pronotum and coarser, slightly coalescent elytral punctuation. For identification see also the key.

E t y m o l o g y : The name is derived from the type locality.

***Stenus kuanmontis* nov.sp. (Figs 78, 81)**

T y p e m a t e r i a l : Holotype (♀): Taiwan: Kaohsien Hsien: Kuanshan trail at Kuanshanchi River, 2400m, 20.IV.1992, A. Smetana (T 94): in coll. Smetana (Ottawa).

D e s c r i p t i o n : Brachypterous, black, moderately shiny, forebody moderately coarsely (frons) to coarsely (pronotum, elytra), very densely punctate, abdomen moderately coarsely (anteriorly) to moderately finely (posteriorly), densely punctate;

pubescence short, recumbent. Segment 1 and base of segment 2 of maxillary palpi reddish yellow, remainder brown. Antennae dark brown. Legs dark reddish brown. Clypeus and labrum blackish, moderately densely pubescent.

Length: [2.3-] 2.8mm (forebody: 1.4mm).

PM of the HT: HW: 26; DE: 16.5; PW: 20.8; PL: 20; EW: 26; EL: 24.5; SL: 19.

M a l e : Unknown.

F e m a l e : Sternite 8 (fig. 78). Valvifer serrate apicolaterally. Spermatheca (fig. 81), infundibulum short.

In many respects similar to *S. houhanmontis* nov.sp., but the head less broad, the actual middle of frons less densely punctate (interstices about as large as punctures). Elytra subquadrate, shoulders rectangular, nearly all punctures distinctly delimited, tergite 7 with a narrow but distinct membranous fringe apically, abdominal punctation slightly coarser and slightly denser, interstices on tergite 7 nearly as large as punctures. The whole insect has very faint microsculpture and is therefore distinctly more shiny than the compared species.

C o m p a r a t i v e n o t e s : This new species is also closely related to *S. rugipennis* SHARP and *S. suspectatus* PUTHZ, from which it may be easily distinguished by the much smaller elytra, the pointed sternite 8 of the female and the spermatheca. From *S. hseuhmontis* nov.sp. it may be distinguished by the subquadrate elytra, the apical membranous fringe of tergite 7, denser pronotal punctation, less elevated median portion of frons and by the shape of sternite 8 of the female and the spermatheca with a shorter infundibulum.

E t y m o l o g y : The name is derived from the type locality.

***Stenus hseuhmontis* nov.sp. (Figs 80, 82)**

T y p e m a t e r i a l : Holotype (♀) and 1♂-paratype: Taiwan: Taichung Hsien: Hseuhshan, Hseuhshan Mountain Park, 3750-3884m, 9.V.1991, A. Smetana (T 74).- HT and PT in coll. Smetana (Ottawa).

D e s c r i p t i o n : Micropterous, black, moderately shiny, forebody and anterior abdomen moderately coarsely, densely punctate, posterior punctation of abdomen moderately fine and moderately dense; pubescence short, recumbent. Segment 1 and base of segment 2 of maxillary palpi reddish yellow, remainder brown. Antennae dark brown. Legs dark brown, basal half of femora dark chestnut-brown. Clypeus and labrum blackish, moderately densely pubescent.

Length: 2.6-3.0mm (forebody: 1.4-1.5mm).

PM of the HT: HW: 28.5; DE: 17; PW: 22; PL: 20; EW: 27; EL: 23.5; SL: 18.

M a l e : Unknown.

F e m a l e : Sternite 8 (fig. 80). Valvifer seems to be acute apicolaterally but is rudimentarily slightly serrate. Spermatheca (fig. 82), infundibulum twice as long as broad.

In many respects close to *S. houhanmontis* nov.sp., but less densely reticulate and less coarsely, less densely punctate, elytral punctation as coarse as pronotal punctation, punctures distinctly delimited. Abdomen broader, paratergites also narrow but horizontal,

no membranous fringe at posterior margin of tergite 7; interstices on tergite 7 larger than punctures.

Comparative notes: From the close relatives *S. rugipennis* SHARP and *S. suspectatus* PUTHZ this new species may be easily distinguished by the smaller size, shorter, trapeziform elytra and the spermatheca, from *S. kuanmontis* nov.sp. by the trapeziform elytra, less dense pronotal punctation, horizontal paratergites and the missing apical membranous fringe at tergite 7.

Etymology: The name of this species is derived from the type locality.

New locality (province) records and additional remarks on already described species

***Stenus guttalis* FAUVEL 1895**

Material: 1♂, 2♀♀: Taichung Hsien: Wufeng, 100-200m, 14.IV.1990, A. Smetana (T 1) (cS, cP). First record from Taiwan.

***Stenus sucinigutta* PUTHZ 1991**

Material: 1♀: Taitung Hsien: Hsinkangshan above Chengkang, 550-600m, 22.IV.1998, A. Smetana (T 187) (cS).

***Stenus alienoides* PUTHZ 1981**

Material: 1♂: Nantou Hsien: Shuantung, 150m, 21.IV.1990, A. Smetana (cS); 3♂♂, 1♀: Lan Hsu Is., near Yehyu, 10.VII.1971, K. Mizusawa (cSh, cP).

***Stenus formosanus* L. BENICK 1914**

Material: 1♂: Nantou Hsien: Near Nanshanchi, 24.VII.1976, Y. Shibata (cSh).

***Stenus distans* SHARP 1889**

Material: 1♀: Kaohsiung Hsien: Hoozan [= Fengshan], X.1911, H. Sauter (DEI). First record from Taiwan.

***Stenus melanarius* STEPHENS 1833**

Material: Taipei Hsien: 1♀: Loloshan, 21.V.1980, H. Makihara (cN); 2♂♂, 2♀♀: near Yangmingshan, 24.VII.1983, Y. Shibata (cSh); 1♂, 1♀: Neismangchi, 28.VIII.1977, K. Matsuki (cSh); 1♀: Near Tzeen, 11.VIII.1977, idem (ibidem); 2♂♂: near Yunggho, 29.III.1974, idem (ibidem, cP); 1♂: Wulai, 28.VIII.1971, M. Nishikawa (cSh). Taoyuan Hsien: 11♂♂, 5♀♀: near Mt. Lalashan, 1600m, 24., 25.VII.1978, 23.VII.1982, 2.VIII.1983, 1.VIII.1985, Y. Shibata (cSh, cP); 3♂♂, 5♀♀: Mt. Lalashan, 17.IV.1981, H. Takemoto (cN, cP); 3♂♂, 1♀: Takuanshan Forest, 1600m, 17.IV.1990, A. Smetana (T 4)(cS, cP); 3♀♀: ibidem, 1650m, idem (T 5). Ilan Hsien: 1♂, 1♀: Chihuan, 18.IV.1981, H. Takemoto (cN); 2♀♀: Chyr Duan, 1200m, L. Lesage (cS); 18♂♂, 5♀♀, ibidem 1100m, 18.IV.1990, A. Smetana (T 8) (cS, cP); 2♀♀: ibidem, 19.IV.1990, idem (T 9) (ibidem); 3♀♀: ibidem, 1650m, idem (T 5) (ibidem); 39♂♂, 16♀♀: Taipingshan, 1820m, 15.VII.1993, A. Smetana (T 154) (cS, cP); 28♂♂, 41♀♀: ibidem (T 153)

(idem) (ibidem); 2♂♂, 20♀♀: ibidem, 1880m, 14.VII.1993, idem (T 152) (ibidem); 16♂♂, 12♀♀: Shen-Mi Lake, 24°22'43"N, 121°44'12"E, 1100m, 9.V.1995, idem (T 175) (ibidem); 1♂: ibidem (T 177) (ibidem); 2♀♀: Fushan Botanical Garden, 8.-11.IV.2002, O. Merkl (TMB); 1♂, 2♀♀: Mingchyh Forest Recreation Area, 1200m, 5.IV.2002, Fábian & Merkl (TMB). Taichung Hsien: 9♂♂, 5♀♀: Anmashan, 2120m, 1.V.1990, A. Smetana (T 36) (cS, cP); 7♂♂, 5♀♀: ibidem, 2150m, 13.V.1992, idem (T 129) (ibidem). Nantou Hsien: 1♂: Nanshanchi, 5.IV.1978, T. Niizato (cN); 1♂: near Nanshanchi, 31.III.1982, Y. Shibata (cSh); 1♂: near Meifeng, 2150m, 13.VIII.1981, idem (ibidem); 1♂: ibidem, 2130m, 10.VII.1993, A. Smetana (T 199) (cS); 1♀: Nankaoshan trail, 2050-2150m, 8.V.1992, idem (T 120) (ibidem); 1♂: Shuantung, 150m, 21.IV.1990, idem (T 14) (ibidem); 1♀: Sungchuankang, 3.VIII.1993, Y. Shibata (cSh); 2♀♀: near Hohuanshan, 3100m, 1.VIII.1983, Y. Shibata (cSh). Hualien Hsien: 5♂♂, 6♀♀: Taroko National Park, Duodyatunshan, 2650m, 8.V.1990, A. Smetana (T 46) (cS, cP); 1♂: ibidem, 13.V.1990, idem (T 56) (ibidem); 1♀: ibidem, Nanhushi Hut, 2200m, 11.V.1990, idem (T 53) (ibidem); 2♂♂, 3♀♀: near Juisui-spa, 19.VIII.1971, 26.III.1980, 29.III.1986, Y. Shibata (cSh, cP); 1♂, 2♀♀: Juisui, 29.III.1984, Idem (ibidem). Chiayi Hsien: 1♂, 1♀: Shenmu, 21.V.1980, H. Makihara (cN); 1♂: Alishan, Sister Ponds, 2180m, 26.IV.1990, A. Smetana (T 24) (cS); 3♂♂, 2♀♀: Alishan, 7., 8.VIII.1970, 2.VIII.1973, Y. Shibata (cSh, cP). Taitung Hsien: 2♂♂: Hsinkangshan above Chengkung, 800m, 27.IV.1995, A. Smetana (T 168) (cS); 1♂, 2♀♀: ibidem, 17.IV.1998, idem (T 180) (ibidem); 1♂, 1♀: ibidem, 550-60m, 22.IV.1998, idem (T 187) (ibidem); 1♀: near Kuanshan, 28.III.1980, Y. Shibata (cSh).

Note: This species was first recorded from Taiwan by CAMERON (1949) under the name "*S. verecundus* SHARP" from "Musha (= Nantou: Wushe). Most of the Taiwanese specimens have comparatively large (broad) elytra. First I thought, that this may be an indication for a separate subspecies. But measurements of some hundreds of specimens from Taiwan and from the mainland of China led to the result, that the Taiwanese specimens fit in the variability range of the nominate species.

***Stenus dissimilis* SHARP 1874**

Material: 16♂♂, 21♀♀: Kaohsiung Hsien: Takao, 24.VII.1907, Sumpfrand, H. Sauter (FMCh, cP).

***Stenus piliferus* MOTSCHULSKY 1857**

Material: 2♂♂, 2♀♀: Hsinchu Hsien, 8.IV.1980, K. Sugiyama (cN, cP); 1♂ 2♀♀: Ilan Hsien: Shen-Mi Lake, 24°22'43"N, 121°44'12"E, 1110m, 9.V.1995, A. Smetana (T 175) (coll. Smetana); 1♂, 2♀♀: Nantou Hsien: near Nanshanchi, 830m, 25.VII.1976, Y. Shibata (coll. Shibata, cP). First records from Taiwan.

***Stenus hirtellus* SHARP 1874**

Material: 1♀: Chiayi Hsien: Takezaki near Mt. Ari, 27.XI.1937, Y. Yano (NHML); 1♂: Kaohsiung Hsien: Takao, H. Sauter (FMCh).

***Stenus cicindeloides* (SCHALLER 1783)**

Material: Taipei Hsien: 1♂: Santiaoling, 19.XI.1957, T.C.Maa (BPBM); 1♂: Chinlungshan, 3.II.1974, K. Matsuki (cSh); 1♀: Waishuangshi, 4.IV.1974, idem (cSh); 1♀: Gongkuan, 23.XII.1976, idem (cSh); Nantou Hsien: 2♂♂, 24♀♀: near Nanshanchi, 24.VII.1976, Y. Shibata (cSh, cP); Ilan Hsien: 51♂♂, 60♀♀: Shen-Mi Lake, 24°22'43"N, 121°44'12"E, 1110m, 9.V.1995, A. Smetana (cS, cP).

***Stenus currax* SHARP 1874**

M a t e r i a l : Ilan Hsien: 1 ♀: Fushan Botanical Garden, 640m, 16.IX.2007, Rédel & Tsai (TMB); Nantou Hsien: 1 ♂, 2 ♀ ♀: Nanshanchi, Jenai, 2.V.1978, Y. Komiya (cSh, cP); 1 ♀: near Nanshanchi, 4.VIII.1978, Y. Shibata (cSh); Hualien Hsien: 1 ♀: near Juisui Spa, 400m, 26.III.1980, Y. Shibata (cSh); Kaohsiung Hsien: 1 ♀: Liukui, 1.V.1986, M. Ohara (cN); 1 ♂, 1 ♀: ibidem 17.VI.1989, M. Sugaya (cN, cP).

***Stenus bidenticollis* PUTHZ 1984**

M a t e r i a l : Nantou Hsien: 1 ♀: Jihyetuan, 16.V.1977, T. Niizato (cN); 1 ♀: Wushe, 14.V.1977, S. Imasaka (cN); 1 ♂: Lushanwenchuan, 28.V.1980, H. Makihara (cN); 1 ♂, 2 ♀ ♀: Nanshanchi, 5.IV.1978, T. Niizato (cN, cP); 1 ♂, 1 ♀: ibidem 18.V.1977, T. Niizato, 4.VIII.1978, Y. Shibata (cSh); Kaohsiung Hsien: 2 ♂ ♂: near Liukuei, 10.IV.1977, W. Suzuki (cSh, cP); 1 ♂: Shaping Forest Recreation Area, near Liukuei, swept, 19.-21.XI.2002, Ronkay & Merkl (TMB).

***Stenus hanami* HROMÁDKA 1979**

N o t e : This species was recorded from a female from Kaohsiung: Takao (PUTHZ 1981). Since no male has found hitherto, the identification may be wrong. A very close species is living in China and in the Ishigaki Island: *S. plagiocephalus* L. BENICK. Males are needed to decide, which species lives in Taiwan.

***Stenus depressus* PUTHZ 1973**

M a t e r i a l : Taoyuan Hsien: 3 ♂ ♂, 1 ♀: near Mt. Lalashan, 25.VII.1978, Y. Shibata (cSh, cP); Ilan Hsien: 3 ♂ ♂, 3 ♀ ♀: Shen-Mi Lake, 24°22'43"N, 121°44'12"E, 1110m, 9.V.1995, A. Smetana (T 175) (cS, cP); 1 ♀: ibidem, 10.V.1995, idem (T 177). First records from Taiwan.

***Stenus rugosipennis* CAMERON 1949**

M a t e r i a l : 1 ♂: Hualien Hsien. near Tzeen, 11.VIII.1977, Y. Shibata (cSh).

***Stenus pilicornis* FAUVEL 1895**

M a t e r i a l : Nantou Hsien: 2 ♀ ♀: near Lushan, 1200m, 29.VII.1973, 17.VII.1977, Y. Shibata (coll. Shibata); 1 ♀: Lushan Spa, 31.VII.1971, idem (cSh). 1 ♂, 1 ♀: Chiayi Hsien: Fenchih, 8.VII.1971, Y. Shibata, 3.IX.1971, M. Nishikawa (cSh, cP). Kaohsiung Hsien: 1 ♀: Road from Tengchih to Chyyuashan, 1400m, 25.IV.1990, A. Smetana (T 23) (cS). First records from Taiwan.

N o t e : This species seems to be extremely variable in exosclerotal characters. The ventral sexual characters of the males from various localities of the vast areal of the species are remarkably different. There are males, which have a sharp median carina on metasternum (fig. 48), other do not. All males have a similar aedeagus. Remarkable in this species is also the shape of the paraglossa, which seems to belong to a hitherto undescribed type (fig. 47). Probably this species has to be splitted into several species of subspecies.

Stenus mysterialis* PUTHZ 1984Stenus mysterialis* PUTHZ 1984: 111.

M a t e r i a l : Chiayi Hsien: 2 ♀♀: Alishan, 2300m, 8.IV.1965, Y. Hirashima, 26.VII.1982, Y. Shibata (Univ. Kyoto; cSh); 1 ♂: Alishan, Sister Ponds, 2180m, 26.IV.1990, A. Smetana (T 24) (coll. Smetana); 2 ♂♂: Fenchihu, 1500m, 2.-3.VII.1982, N. Nishikawa (cN, cP); 2 ♂♂, 3 ♀♀: near Tadongshan, 1800m, 11.VII.1978, 14.VIII.1983, Y. Shibata (cSh, cP).

D e s c r i p t i o n a l n o t e s : This species has been described from 2 females. From the new material the male sexual characters are described here:

M a l e : Metasternum flat, coarsely and densely punctate, interstices mostly smaller than half diameter of punctures, very shallowly reticulate. Sternite 3 simple, sternite 4 with a broad median impression in posterior half, which is coarsely and very densely punctate, sternite 5 and 6 each with a very broad and very deep median impression, of which the sides are strongly elevated posteriad, punctation and pubescence extremely fine and extremely dense, posterior margin broadly emarginate, sternite 7 anteriorly deeply, posteriorly shallowly impressed, punctation about as on previous sternites. Sternite 8 with narrow triangular excision in about posterior third. Sternite 9 with a long apicolateral tooth. Tergite 10 very broadly rounded at apical margin. Aedeagus (fig. 23), median lobe triangularly narrowed, apex narrowly rounded, expulsion hooks contiguous anteriorly; parameres slender with about 18-19 setae in apical third.

F e m a l e : Spermatheca (fig. 49).

Note

In my key to the Taiwanese *Stenus* species with spotted elytra (PUTHZ 2011: 593f.) few species were forgotten at the end of the. The key should be completed as follows:

- 25 Pronotum and abdominal segments 3-6 reddish, tergite 8 with an apical emargination. A (fig. 1H, NAOMI 1990). 4.0-4.5mm (FB 2.1-2.3mm). India.Pakistan. Thailand. Vietnam. Malaysia. Indonesia. China (Yunnan, Hainan, Taiwan: Kaohsiung Hsien, Fujian, Guangdong). Japan.....*S. flavidulus paederinus* CHAMPION
- Pronotum and abdomen black, tergite 8 without any apical emargination.....26
- 26 Elytra yellowish at shoulders, tergite 7 reticulate. ♂: A (fig. 79, PUTHZ 2008). 4.8-5.8mm (FB 2.4-2.6mm). Taiwan: Ilan Hsien, Nantou Hsien, Hualien Hsien, Chiayi Hsien*S. flavohumeralis* PUTHZ
- Elytra with a reddish spot medially, tergite 7 not reticulate.....27
- 27 Punctuation of pronotum very dense, coalescent, abdomen densely punctate, elytra broader than long. ♂: A (fig. 69, PUTHZ 1969). S (fig. 10, PUTHZ 2011). 4.8-6.0mm (FB 2.3-2.5mm). Myanmar. India. Thailand. Laos. Malaysia. Indonesia. China (Yunnan, Taiwan: Taichung Hsien).....*S. guttalis* FAUVEL
- Punctuation of pronotum dense but punctures distinctly delimited, not coalescent, abdomen less densely punctate, elytra as long as broad or longer than broad.....28
- 28 Smaller: 4.0-4.5mm (FB 2.2-2.3mm). ♂: Sternite 9 triangularly pointed (fig. 43, PUTHZ 1991). A (fig. 44, l. c.). China (Sichuan, Taiwan: Ilan Hsien, Miaoli Hsien, Taichung Hsien, Nantou Hsien, Chiayi Hsien, Kaohsiung Hsien).....*S. changi* PUTHZ
- Larger: 6.0-7.0mm (FB 3.0mm). ♂: Sternite 9 serrate apicolaterally. A (fig. 14, Puthz 1991). China (Guangdong, Taiwan: Ilan Hsien, Nantou Hsien, Hualien Hsien, Taitung Hsien).....*S. sucinigutta* PUTHZ

Key to the Taiwanese *Stenus* species with non-spotted elytra

(A = aedeagus; S = spermatheca)

Key to the non-spotted *Stenus* of Taiwan

- 1 Tarsal segment 4 simple 2
 - Tarsal segment 4 bilobed 14
- 2 Abdominal margination broader, paratergites of tergite 4 at least as broad as antennal segment 2 3
 - Abdominal margination very narrow, distinct paratergites missing or paratergites of tergite 4 less broad than antennal segment 2 11
- 3 Segment 1 of metatarsi much longer than segment 5 7
 - Segment 1 of metatarsi about as long as segment 5 or shorter 4
- 4 Tergites without small basal carinae 5
 - First tergites with 4 small basal carinae 6
- 5 Abdomen coarsely and densely punctate, medial eye margins concave. ♂: A (fig. 12, PUTHZ 2012a). ♀: S (fig. 16, l. c.). 2.0-2.7mm (FB 1.3-1.4mm). China (Taiwan: Taoyuan-Taipei Hsien, Kaohsiung Hsien, Taitung Hsien). Japan *S. riukiensis* PUTHZ
 - Abdomen finely and densely punctate, medial eye margins straight. ♂: A (figs 33, 34, PUTHZ 2012a). ♀: no sclerotized S. 2.6-3.8mm (FB 1.5-1.9mm). China (Guizhou, Guangdong, Taiwan: Taoyan Hsien, Hainan, Hubei, Zhejiang, Shanghai, Shanxi). Vietnam. Laos *S. eurous* PUTHZ
- 6 Tergite 9 with long apicolateral spines, sternite 9 with strong and straight apicolateral teeth. ♂: A (fig. 4, PUTHZ 2006). ♀: S (fig. 3, l. c.). 2.9-4.0mm (FB 1.8-1.9mm). Taiwan: Ilan Hsien *S. immigratus* PUTHZ
 - Tergite 9 with short apicolateral spines, sternite 9 with short, slightly inward bent apicolateral teeth. ♂: A (fig. 128j, PUTHZ 2011b). ♀: No sclerotized S. 2.8-3.8mm (FB 1.6-2.1mm). Holarctis. Taiwan: Taipei Hsien, Taoyuan Hsien, Ilan Hsien, Taichung Hsien, Hualien Hsien, Nantou Hsien, Chiai Hsien, Taitung Hsien *S. melanarius melanarius* STEPHENS
- 7 Anterior tergites without basal carinae 8
 - Anterior tergite with basal carinae 12
- 8 Head broader, as broad or nearly as broad as elytra (HW: EW >0.90) 9
 - Head much narrower than elytra (HW: EW <0.90) 10
- 9 Frons deeply concave with deep longitudinal furrows, elevated median portion narrow. Sternum 9 serrate apically without a distinct acute tooth laterally. ♂: A (fig. 15, PUTHZ 2008). 3.5-4.3mm. China (Taiwan: Nantou Hsien, Chiayi Hsien). Japan *S. alienoides* PUTHZ
 - Frons moderately concave, longitudinal furrows shallower or indistinct, no distinctly delimited and elevated median portion. Sternum 9 with a distinct prominent tooth apicolaterally. ♂: A (fig. 39, PUTHZ 2008). 4.6-6.2mm. Taiwan: Taipei Hsien, Ilan Hsien, Taichung Hsien, Nantou Hsien, Chiayi Hsien, Kaohsiung Hsien, Pingtung Hsien *S. yanoianus* PUTHZ
- 10 Larger: 5.6-6.0mm. ♂: A (fig. 32, PUTHZ 2008). Taiwan: Hualien Hsien, Chiayi Hsien, Taitung Hsien *S. sauterianus* BERNHAUER
 - Smaller: 3.0-4.0mm. ♂: A (fig. 41, PUTHZ 2008). China (Taiwan: Taoyuan Hsien, Ilan Hsien, Nantou Hsien, Hubei, Shaanxi) *S. plumbivestis* PUTHZ
- 11 Smaller species, with long and erect abdominal pubescence. ♂: A (fig. 14, PUTHZ 2009). ♀: S unknown. 3.0-3.8mm. Taiwan: Nantou Hsien *S. cirrimicans* PUTHZ
 - Larger species, abdominal pubescence recumbent. ♂: A (fig. 37, PUTHZ 2008). ♀: no sclerotized S. 4.2-5.1mm. Taiwan: Taipei Hsien *S. insulanus* PUTHZ

- 12 Elytra subquadrate, abdominal punctation very coarse anteriorly, punctures of tergite 3 about as large as apical cross section of antennal segment 2 13
- Elytra trapeziform, abdominal punctation less coarse, punctures of tergite 3 about as large as medial cross section of antennal segment 3. ♂: A (fig. 1, PUTHZ 2006). Taiwan: Chiayi Hsien..... *S. pseudolus* PUTHZ
- 13 Elytra less broad (EW: EL \leq 1.05). ♂: A: Parameres shorter than median lobe. 4.5-5.3mm. China (Sichuan, Hongkong, Fujian, Taiwan: Taipei Hsien, Nantou Hsien, Tainan Hsien). Vietnam *S. formosanus* L. BENICK
- Elytra broader (EW: EL \geq 1.10). ♂: A (fig. 1, PUTHZ 1974), parameres longer than median lobe. 4.0-5.0mm. China (Sichuan, Fujian, Taiwan: Kaohsiung Hsien, Hubei, Shanxi, Beijing). Japan. Korea, Russia (Far East)..... *S. distans* SHARP
- 14 Abdomen unmarginated 15
- Abdomen marginated 28
- 15 Smaller species, FB \leq 2.0mm 16
- Larger species, FB $>$ 2.0mm 19
- 16 Brachypterous 17
- Macropterous 18
- 17 ♂: A (fig. 17). ♀: S (fig. 50). 2.5-2.7mm (FB 1.2mm). Taiwan: Ilan Hsien *S. perpusillus* nov.sp.
- ♂: A (fig. 26). ♀: S (fig. 51). 2.4-2.9mm (FB 1.3-1.4mm). Taiwan: Hualien Hsien *S. perpropinquus* nov.sp.
- 18 Sternum 9 serrate apically 19
- Sternum 9 acute apicolaterally 20
- 19 Tergite 10 with acute apicolateral teeth, between them emarginate (fig. 7, PUTHZ 1968), ♂: A (fig. 9, l. c.). China (Sichuan, Hongkong, Hainan, Taiwan: Kaohsiung Hsien). Japan *S. dissimilis* SHARP
- Tergite 10 without apicolateral teeth 20
- 20 Sternum 9 serrate at apical margin. 3.3-4.3mm (FB 1.8-2.0mm). China (Taiwan: Kaohsiung Hsien). Laos. Philippines. Indonesia (Lombok) *S. spurius* L. BENICK
- Sternum 9 with acute apicolateral teeth 21
- 21 ♂: Sternite 8 (fig. 2). 2.8-3.7mm (FB 1.7-1.9mm). China (Yunnan, Guangdong, Hongkong, Fujian, Taiwan: Hsinchu Hsien, Ilan Hsien, Nantou Hsien, Hunan, Anhui). Japan. Laos. Myanmar. Thailand. Vietnam. India. Bangla Desh. Sri Lanka. Nepal. Indonesia *S. piliferus piliferus* MOTSCHULSKY
- ♂: Sternite 8 (fig. 1). 2.5-3.5mm (FB 1.4-1.7mm). China (Yunnan, Hongkong, Fujian, Taiwan: Chiayi Hsien, Kaohsiung Hsien, Shanghai.) Vietnam. Japan. Sarawak *S. hirtellus* SHARP
- 22 Sternum 9 acute apicolaterally 23
- Sternum 9 serrate apically 24
- 23 Apical portion of meso- and metatibae infusate. Interstices on tergite 7 brilliant. A: E (fig. 1F, NAOMI 1990). 4.7-5.7mm (FB 2.4-2.7mm). Palaearctis. Taiwan: Taipei Hsien, Ilan Hsien, Nantou Hsien *S. cicindeloides* (SCHALLER)
- Legs completely yellowish-brown. Interstices on tergite 7 reticulate. A: E (figs 13-15, PUTHZ 1985). 4.0-4.7mm (FB 2.2-2.3mm). China (Fujian, Taiwan: Ilan Hsien, Nantou Hsien, Hualien Hsien, Kaohsiung Hsien). Vietnam. Thailand. Myanmar. Japan. Indonesia (Bali) *S. currax* SHARP
- 24 Tergite 7 with fine reticulation. Pronotum with special characters 25
- Tergite 7 without reticulation. Pronotum simple 26
- 25 Pronotum with a strong bifid hump. ♂: A (about as in fig. 1C, NAOMI 1990). 3.8-4.5mm (FB 2.3mm). Taiwan: Nantou Hsien, Chiayi Hsien, Tainan Hsien, Kaohsiung Hsien *S. bidenticollis* PUTHZ

- Pronotum without a median hump but with a moderately deep constriction on each side of the median line. ♂: A (fig. 7, PUTHZ 1984). 4.0-5.0mm (FB 2.3mm). Taiwan: Chiayi Hsien *S. compressicollis* PUTHZ
- 26 Median portion of frons slightly elevated and impunctate. ♂: Sternite 9 triangularly pointed (fig. 43, PUTHZ 1991). A (fig. 44, l. c.). China (Sichuan, Taiwan: Ilan Hsien, Miaoli Hsien, Taichung Hsien, Nantou Hsien, Chiayi Hsien, Kaohsiung Hsien) (aberrant specimens of)..... *S. changi* PUTHZ
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- 34 Tergite 10 triangular apically (fig. 45, PUTHZ l. c.). S (fig. 57, l. c.)..... *S. rugosipennis* CAMERON
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- 37 Abdominal segments 3-6 brilliant, without microsculpture 38
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- 39 Head about as broad as elytra. Tergite 7 with faint reticulation. ♂: unknown. ♀: S (fig. 21, Puthz 2009). 3.2-4.0mm (FB 1.8mm). Taiwan: Ilan Hsien *S. cirrivesititus* PUTHZ

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- 40 Abdominal punctation denser, interstices on tergite 5 at most 1.5x as large as diameter of punctures . ♂: A (fig. 3, l. c.). ♀: S (fig. 17, l.c.). 2.6-3.4mm (FB 1.4-1.5mm). Taiwan:Taichung Hsien *S. cirrivestis* PUTHZ
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Zusammenfassung

31 neue Arten der Gattung *Stenus* LATREILLE warden von Taiwan beschrieben: *Stenus ascendor* nov.sp., *S. cirriostentans* nov.sp., *S. houhanmontis* nov.sp., *S. hseuhmontis* nov.sp., *S. kuanmontis* nov.sp., *S. permodestus* nov.sp., *S. permolestus* nov.sp., *S. perfectus* nov.sp., *S. perodiosus* nov.sp., *S. perpaufer* nov.sp., *S. perpauferculus* nov.sp., *S. perpastus* nov.sp., *S. perpinguis* nov.sp., *S. perplicatus* nov.sp., *S. perpropinquus* nov.sp., *S. perpunctus* nov.sp., *S. perpusillus* nov.sp., *S. perrarus* nov.sp., *S. perscitus* nov.sp., *S. persculptus* nov.sp., *S. persculpturatus* nov.sp., *S. persimplex* nov.sp., *S. perspicabilis* nov.sp., *S. persubtilis* nov.sp., *S. pertenuis* nov.sp., *S. pertricosus* nov.sp., *S. perturbator* nov.sp., *S. perversor* nov.sp., *S. pervilis* nov.sp., *S. pervenustus* nov.sp., *S. sugayai* nov.sp.. Neu- und Erstmeldungen von anderen Arten und ergänzende Beschreibungen von bisher unzureichend bekannten Arten werden vorgelegt. Ein Bestimmungsschlüssel für die ungemakelten *Stenus* von Taiwan ist angefügt.

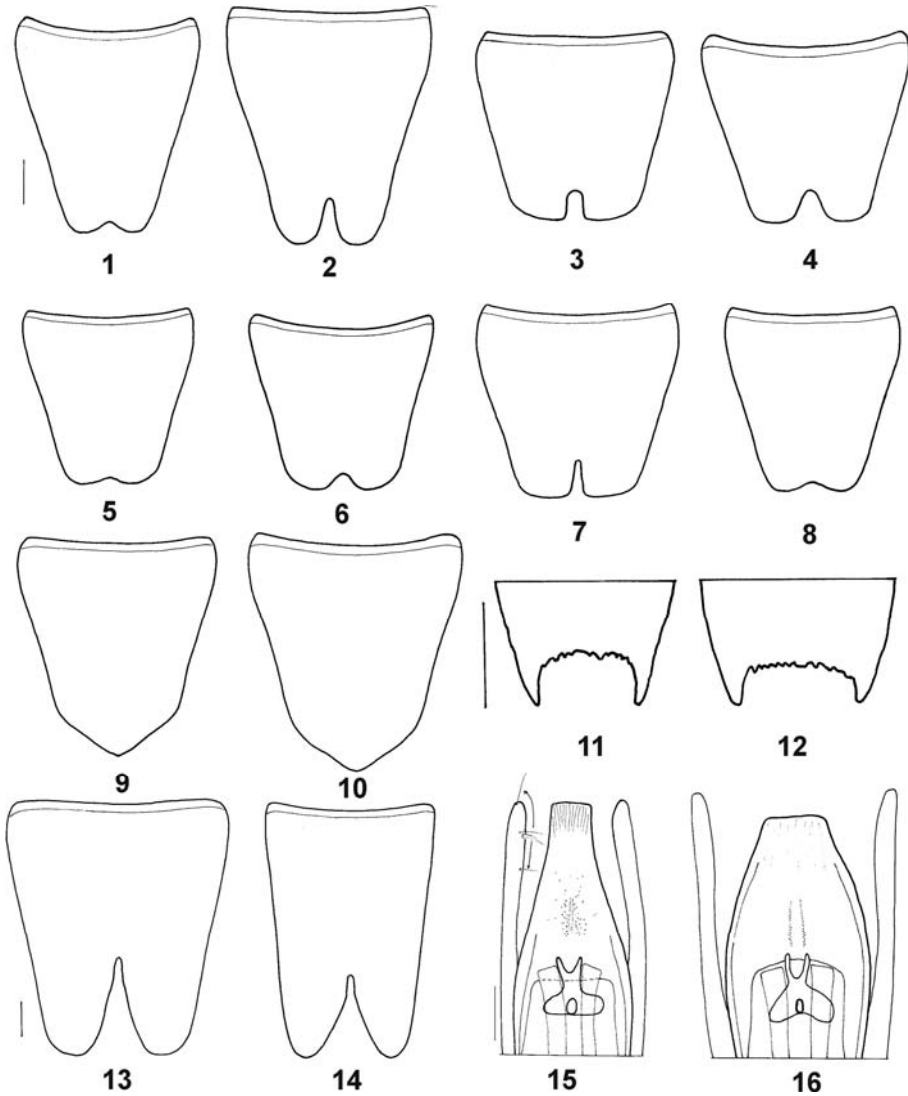
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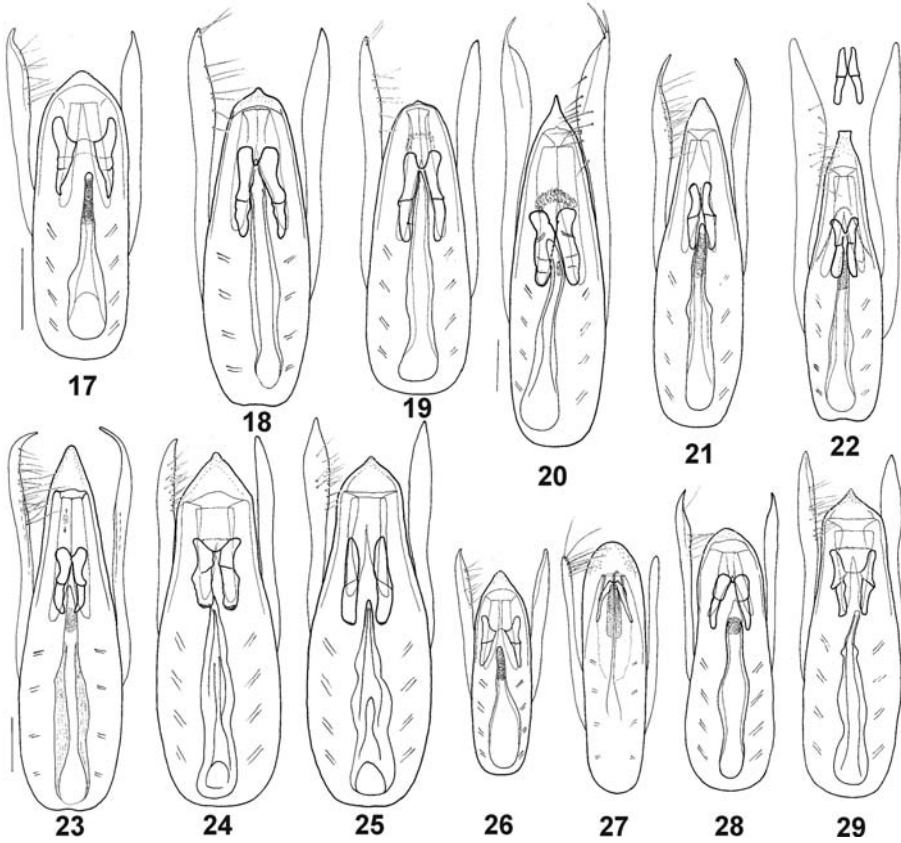
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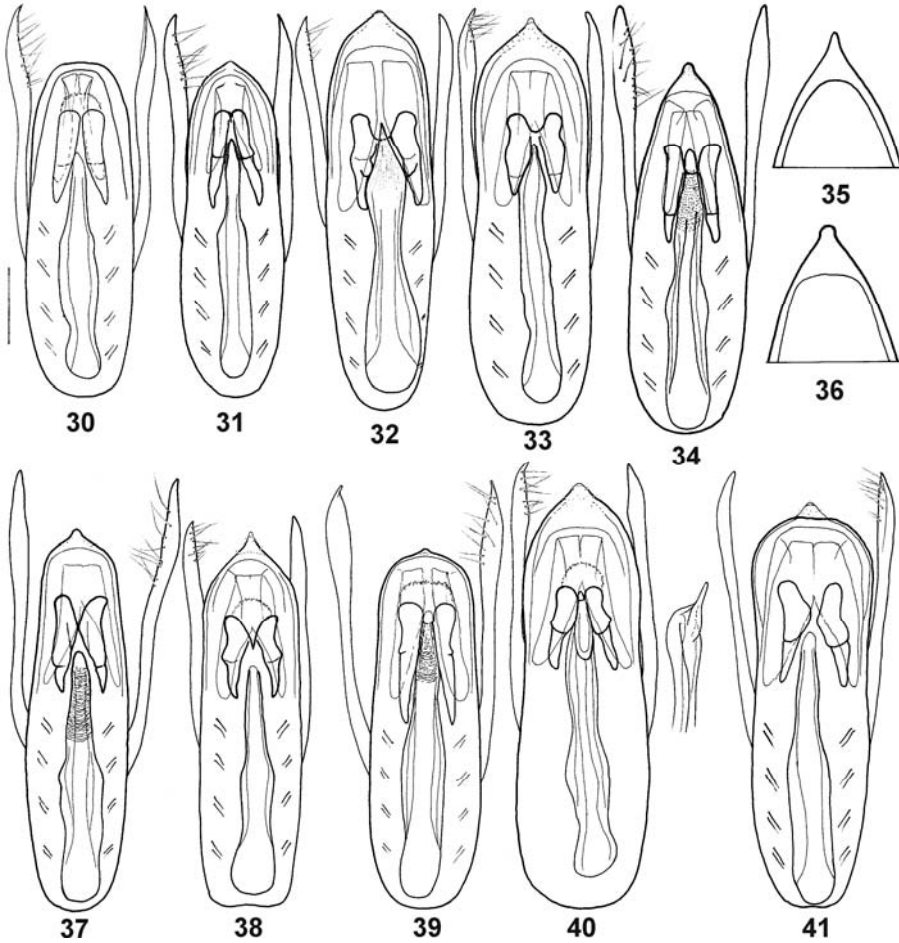
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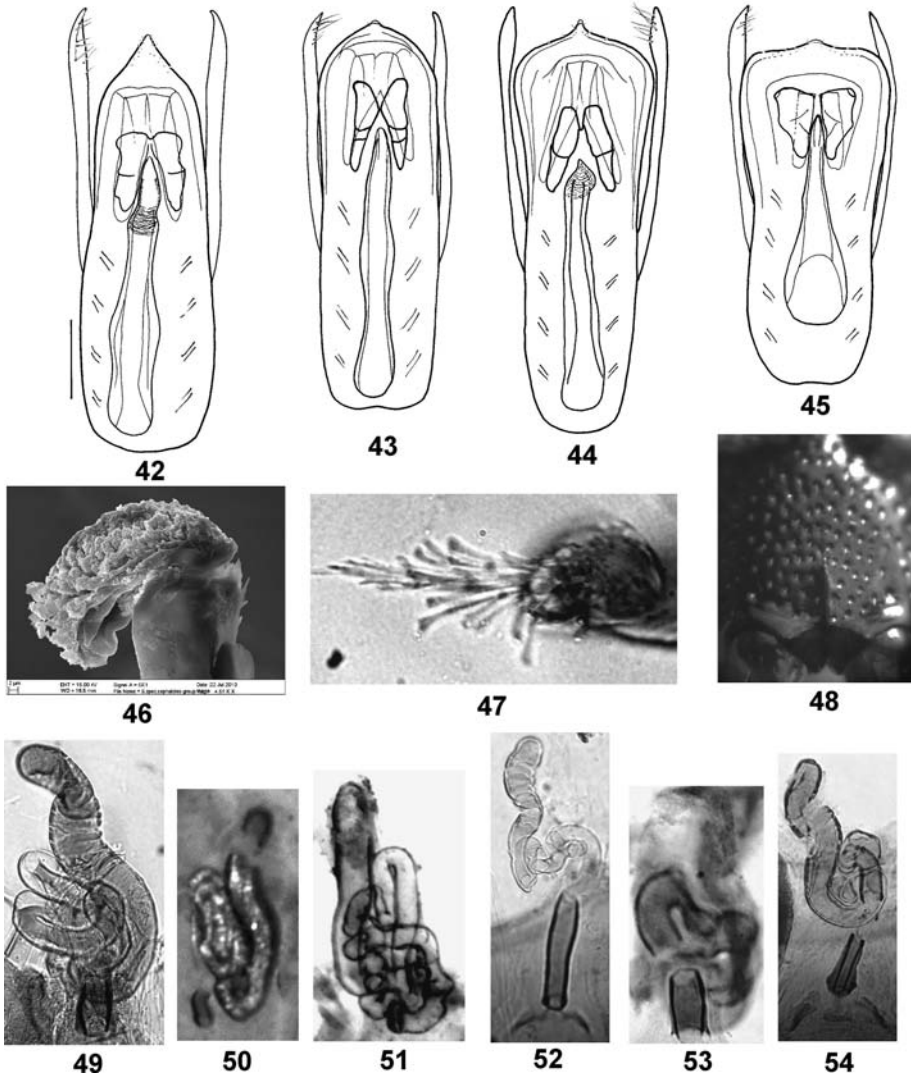
Figs 1-16: Sternite 8 of male (1-8, 13, 14) and of female (9, 10), posterior portion of sternite 9 of male (11, 12), anterior portion of aedeagus (15, 16) of *Stenus hirtellus* SHARP (1), *S. piliferus* MOTSCHULSKY (2), *S. perpastus* nov.sp. (3, PT), *S. perpinguis* nov.sp. (4, PT), *S. perpropinquus* nov.sp. (5, PT), *S. persimplex* nov.sp. (6, PT), *S. perturbator* nov.sp. (7, PT), *S. pervilis* nov.sp. (8, PT), *S. persculptus* nov.sp. (9, PT), *S. perspicabilis* nov.sp. (10, PT), *S. sugayai* nov.sp. (11, PT), *S. perodiosus* nov.sp. (12, PT), *S. ascendor* (13, 15, PT), *S. hanami* HROMÁDKA (14, 16, HT). – Scale bar = 0.1mm (1= 2-10; 11=12; 13=14; 15=16).



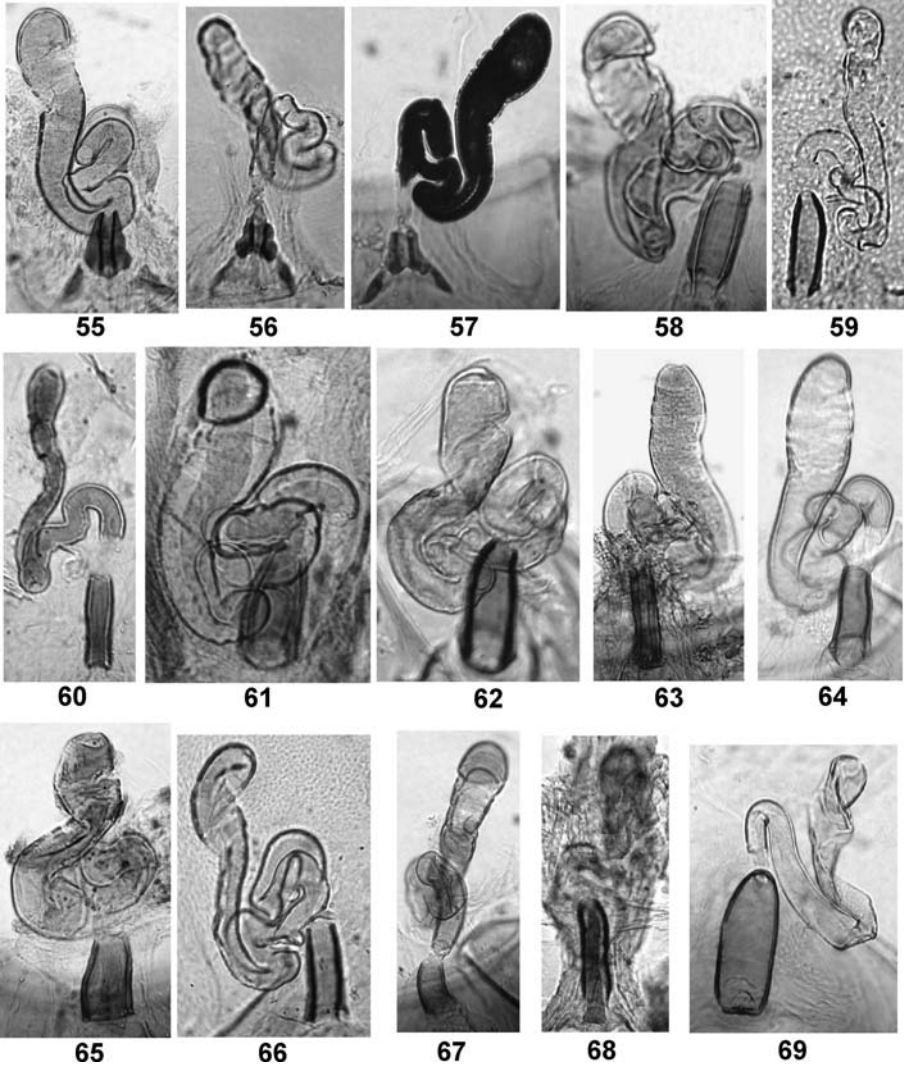
Figs 17-29: Ventral aspect of aedeagus of *Stenus perpusillus* nov.sp. (17, PT), *S. sugayai* nov.sp. (18, 19: Anmashan, PTT), *S. perpinguis* nov.sp. (20, T 28, PT), *S. perspicabilis* nov.sp. (21, Lalashan, PT), *S. perpastus* nov.sp. (22, T 92, PT), *S. mysterialis* PUTHZ (23, near Tadongshan), *S. pervenustus* nov.sp. (24, T 138, PT), *S. persculptus* nov.sp. (25, T 95, PT), *S. perpropinquus* nov.sp. (26, T 52, PT), *S. cirriostentans* nov.sp. (27, PT), *S. perpauper* nov.sp. (28, Fenchifu, PT), *S. persculpturatus* nov.sp. (29, T 101, PT). – Scale bar = 0.1mm (17= 18, 19, 20= 21-29).



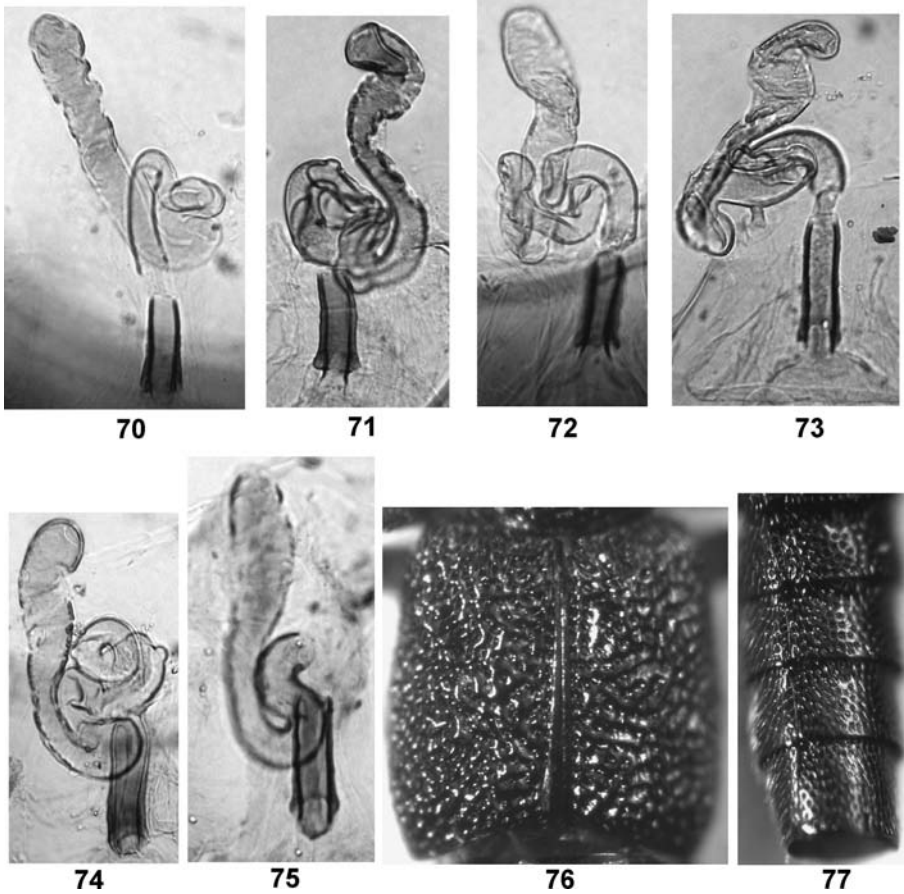
Figs 30-41: Ventral aspect of aedeagus (30-34, 37-41) outline of apical portion of aedeagus (35, 36) of *Stenus persubtilis* nov.sp. (30, T 146, PT), *S. pervilis* nov.sp. (31, T 12, PT), *S. perversor* nov.sp. (32, T 59, PT), *S. permodestus* nov.sp. (33, T 179, PT), *S. perplicatus* nov.sp. (34-36: Shouchia, PTT), *S. persimplex* nov.sp. (37, T 177, PT), *S. perodiosus* nov.sp. (38, T 85, PT), *S. perrarus* nov.sp. (39, T 5, PT), *S. permolestus* nov.sp. (40, T 119, PT), *S. pertenuis* nov.sp. (41, T 160, PT). – Scale bar = 0.1mm.



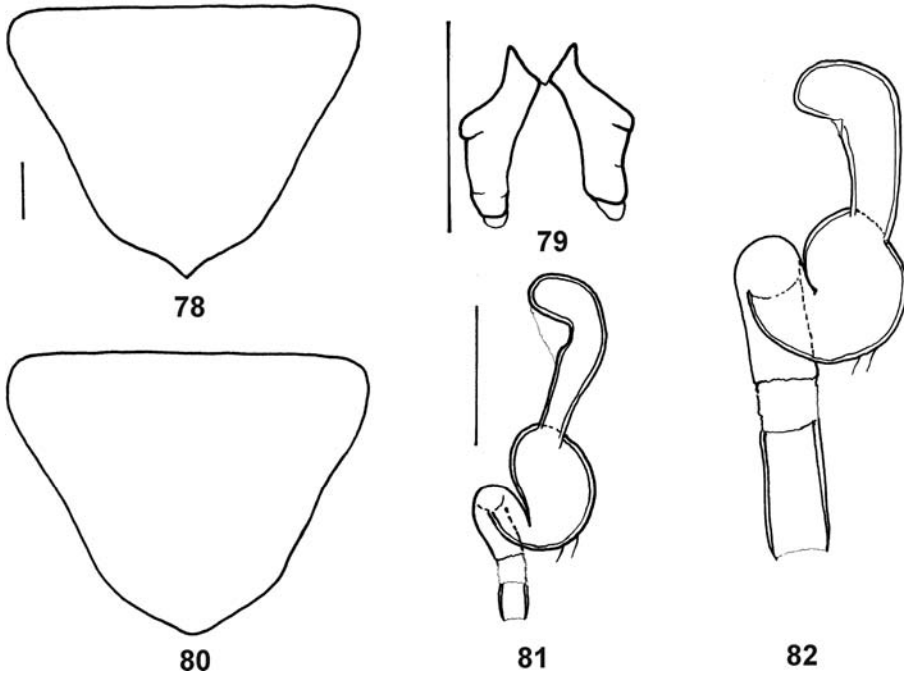
Figs 42-54: Ventral aspect of aedeagus (42-45), paraglossa (46, 47), metasternum (48), spermatheca (49-54) of *Stenus perpunctus* nov.sp. (42, T 69, PT), *S. perscitus* nov.sp. (43, T28, PT), *S. pertricosus* nov.sp. (44, T 61, PT), *S. perfectus* nov.sp. (45, T 119, PT), *S. perpauperculus* nov.sp. (46, 52, PTT), *S. pilicornis* FAUVEL (47, 48), *S. mysterialis* PUTHZ (49), *S. perpusillus* nov.sp. (50), *S. perpropinquus* nov.sp. (51, T 52, PT), *S. perpauper* nov.sp. (53, T 60, PT), *S. perpastus* (54, T 91, PT). – Scale bar = 0.1mm (42=43-45).



Figs 55-69: Spermathecae of PTT of *Stenus pervenustus* nov.sp. (55, T 138), *S. persculptus* nov.sp. (56, T 107), *S. persculpturatus* nov.sp. (57, T 88), *S. pervilis* nov.sp. (58, T 120), *S. sugayai* nov.sp. (59, Anmashan), *S. persubtilis* nov.sp. (60, T 199), *S. perplicatus* nov.sp. (61, Meifeng), *S. perturbator* nov.sp. (62, T 187), *S. persimplex* nov.sp. (63, T 177), *S. perrarus* nov.sp. (64, Fushan), *S. perspicabilis* nov.sp. (65, T 144), *S. perpinguis* nov.sp. (66, T 29), *S. perodiosus* nov.sp. (67, T 84), *S. perpunctus* nov.sp. (68, T 72), *S. perversor* nov.sp. (69, T 59).



Figs 70-77: Spermathecae of PTT (70-75), elytra (76), semilateral aspect of abdominal segments 4-7 (77) of *Sienus permolestus* nov.sp. (70, T 116), *S. pertricosus* nov.sp. (71, T 61), *S. permodestus* nov.sp. (72, T 64), *S. perscitus* nov.sp. (73, T 28), *S. perfectus* nov.sp. (74, T 19), *S. pertenuis* nov.sp. (75, T 161), *S. nefas* PUTHZ (76, 77, HT).



Figs 78-82: Sternite 8 of females (**78, 80**), expulsion hooks of median lobe (**79**) and spermatheca (**81, 82**) of *Stenus kuanmontis* nov.sp. (**78, 81**, HT), *S. houhanmontis* nov.sp. (**79**, HT) and *S. hseuhmontis* nov.sp. (**80, 82**, HT).- Scale = 0.1mm (78=79; 81=82).

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