

New *Agrilus* DAHL, 1823 species from Asia (Coleoptera: Buprestidae)

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Abstract. Eight new species of the genus *Agrilus* from Asia are described: *dilatometatibialis* sp. nov., *souliei* sp. nov., *holzschuhi* sp. nov., *chiangdaoensis* sp. nov., *wittemani* sp. nov., *shaowensis* sp. nov., *lineatomaclatus* sp. nov., *pacholatkoii* sp. nov. and *A. meliboiformis* is discussed. All species and aedeagi of known males are illustrated.

Key words. Buprestidae, *Agrilus*, new species, Asia.

In this work I give descriptions of eight new and remarkable species of the genus *Agrilus* DAHL, 1823 as a result of my study of type material in museums and private collections.

Illustrated aedeagi were cleared for twelve hours in a mixture of concentrated lactic acid and peroxide of hydrogen.

Thanks are due to Dr. M. Holecová, Dr. J. Jelínek and V. Kubáň for their critical comments.

For colour photographs I thank to my friend R. Hergovitz.

The following abbreviations are used in the text: The slash mark (/) is used to indicate data from separate labels; my notations are in parentheses [], with the abbreviation [h] = handwritten and [p] = printed, MHNP = Muséum national d'Histoire Naturelle, Paris. Type material without abbreviations means author's collection.

Agrilus dilatometatibialis sp. nov.

(fig. 1)

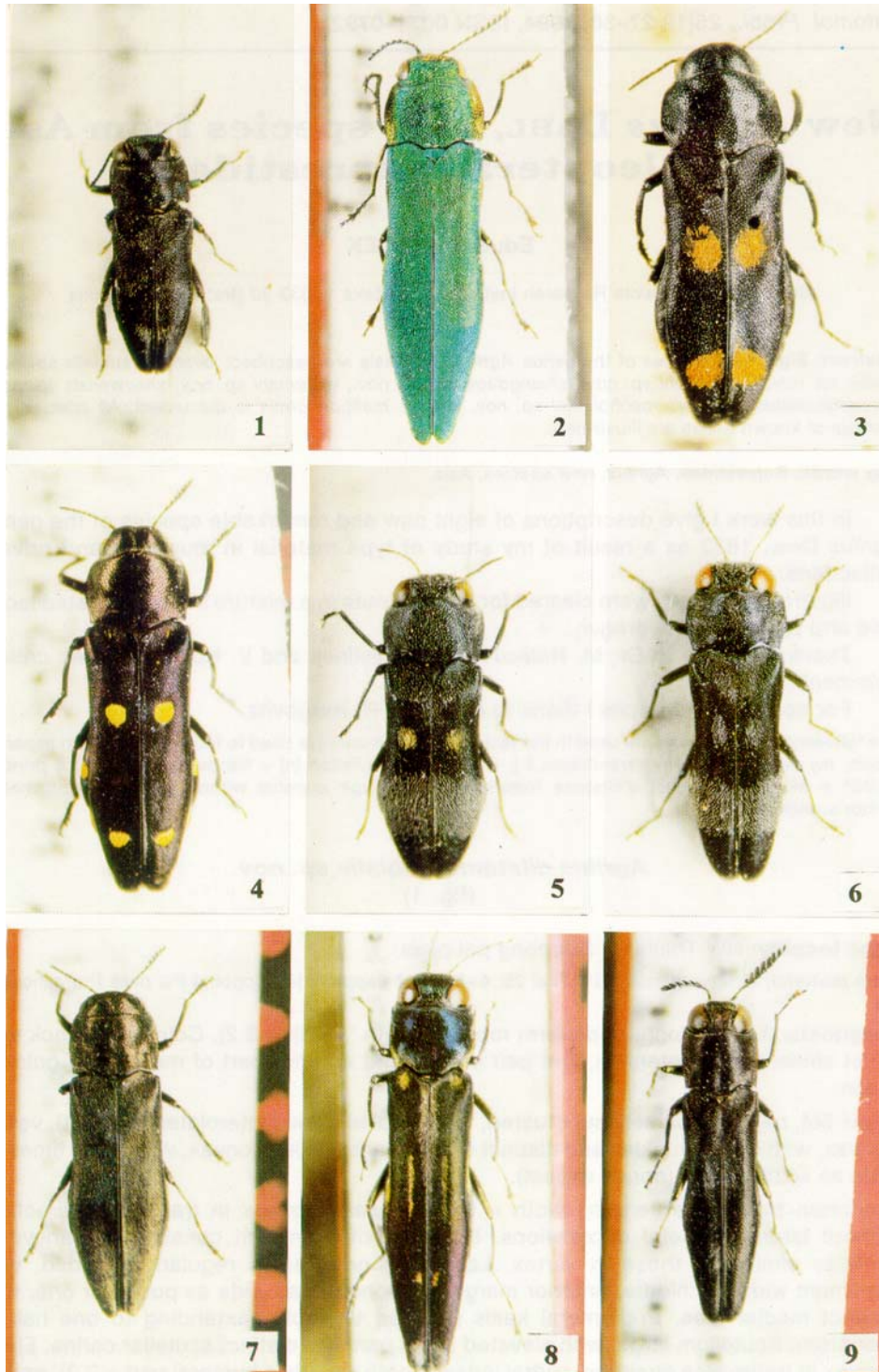
Type locality: NW Thailand, Soppong pai pass.

Type material: Holotype male: "NW Thai 25. 4.–5. 5. 92 Sappong [= Soppong] Pai pass P. Pacholatko leg."

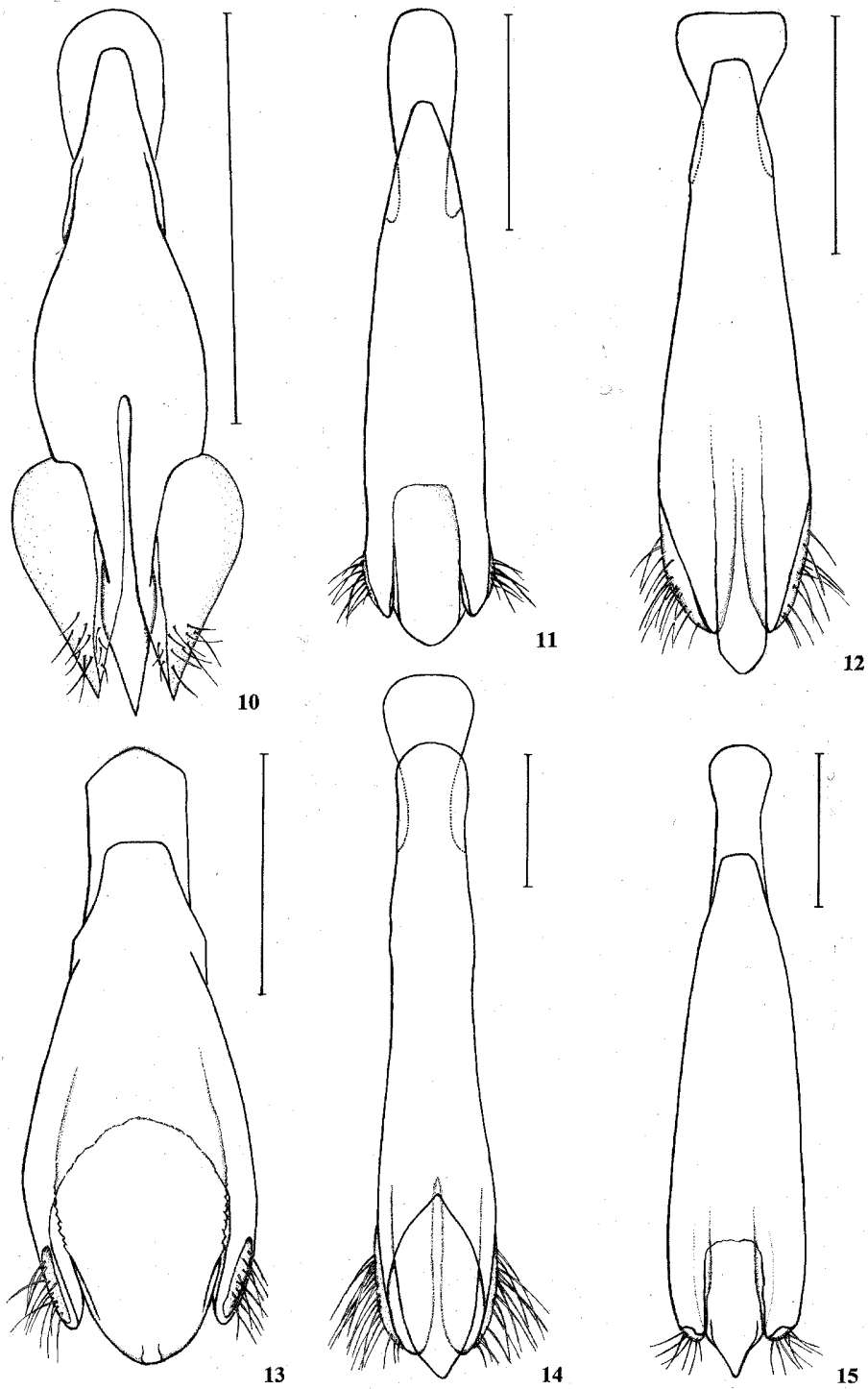
Diagnosis: 3.1 mm long, body form robust (length : width = 3.2). Coloration black with violet shine, frons, antennae, first pair of legs and anterior part of mesotibiae golden-green.

Frons flat, roughly sparsely punctuated, with parallel sides (anterolateral aspect), vertex convex, with spiral wrinkles and distinct medial carina. Eyes convex, vertex 2.9 times as wide as width of eye (dorsal aspect).

Pronotum transverse (length : width = 0.6), regularly convex in transverse direction, without lateral pronotal depressions. Structure of pronotum consists of transverse wrinkles similar to those in vertex. Lateral pronotal sides regularly rounded, with maximum width in middle. Anterior margin of pronotum as wide as posterior one, with distinct medial lobe. Prehumeral keels reduced to knolls, extending to one half of pronotum. Scutellum large, with elevated basal part and distinct scutellar carina. Elytra convex in transverse direction, elytral index (length : width in humeral part = 2.2), apices slightly separately rounded. Each elytron with two stripes of white short hairs as follows:



Figs 1–9. 1) *Agrilus dilatometatibialis* sp. nov. (holotype), 2) *A. souliei* sp. nov. (paratype), 3) *A. meliboeiformis* (lectotype), 4) *A. holzschuhi* sp. nov. (holotype), 5) *A. chiangdaoensis* sp. nov. (holotype), 6) *A. wittermani* sp. nov. (paratype), 7) *A. shaowensis* sp. nov. (paratype), 8) *A. lineatopunctatus* sp. nov. (holotype), 9) *A. pacholatkoi* sp. nov. (holotype).



Figs 10–15. Aedeagus (dorsal aspect) of 10) *Agrilus dilatometatibialis* sp. nov. (holotype), 11) *A. souliei* sp. nov. (paratype), 12) *A. wittemani* sp. nov. (paratype), 13) *A. shaowensis* sp. nov. (holotype), 14) *A. lineatamaculatus* sp. nov. (holotype), 15) *A. pacholatkoii* sp. nov. (holotype). The scale next to the figures represents 0.5 mm.

first diagonal in basal two thirds, rather poorly visible anteriorly, second transverse spot-like in apical fourth, near sutural margin.

Mentonniere slightly incurved medially, prosternal process wide, parallel between coxae, depressed centrally, with smooth and shiny lateral sides. Basal abdominal sternite in male with deep medial longitudinal impression, surrounded with rim of long, white, erect hairs. Last abdominal sternite in male deeply notched apically. Tarsi shorter than tibiae, apex of each tibia armed with sharp conspicuous spine. Metatibiae strongly dilated, distinctly broader than metafemora, with apical part projecting to strong spine. Aedeagus see fig. 10.

Female unknown.

This species is closely related to *A. tantillus* KERREMANS, 1896 and *A. pilosotibialis* DESCARPENTRIES, 1958 from which it can be distinguished mainly by the strongly dilated metatibiae.

Distribution: Thailand.

Etymology: Dilato (Latin) – to dilate, metatibia (Latin) – shin of the third pair of the legs; refers to the dilated metatibiae.

***Agrilus souliei* sp. nov.**
(fig. 2)

I found in the MHNP, in the collection of A. Théry, 2 specimens of this species labelled as types. I failed to find original description of this species so that I consider it to be unpublished.

Type locality: China, Sichuan, Tagu.

Type material: Holotype male: "China, Szechuan [= Sichuan] 20. VII. 1992 130 km SW of Kangding, Tagu, R. Sauer leg.". Paratypes: 1 ex female labelled as holotype; 3 exs: "China Thibet Yaregong 1900"; 2 exs: "China pr. Yunnan b. occ. Dequen 3900 m 7. VI. 1993 R. Červenka lgt."; 1 ex: "China – Yunnan 25. VII. 93 Chang Shan Mt. 3000 m 20 km N of Dali"; 2 exs (MHNP): "Muséum Paris Yun-Nan: Tsekou [= cca 30 km S of Dequen] et Se. Tchouen Principaute de Batang Vargong J. A. Soulie 1907".

Diagnosis: 7–9.4 mm long, subparallel, flattened, upper surface hairless, shiny golden-green, sometimes frons apically, pronotum and elytra laterally golden-orange. Head, pronotum and elytra with the same, specific, roughly grained structure.

Frons and vertex flat, with fine medial carina, frons with distinct elevation anteriorly. Vertex broad, 3 – 4 times as wide as width of eye (dorsal aspect), with indication of spiral structure. Eyes small, convex, slightly overreach outline of head. Lower part of eyes extends to antennal fovea (dorsal aspect).

Pronotum transverse, flattened, with rounded lateral sides and maximum width at midlength. Anterior pronotal margin equal to or narrower than posterior. Medial lobe of anterior pronotal margin distinct. Pronotal disc slightly elevated in middle, with indication of medial longitudinal carina. Prehumeral keels indistinct, obtused in pronotal structure, knoll-like, extending maximally to basal third of pronotum. Marginal and submarginal pronotal carinae subparallel apically, behind half continuously approached and joined in basal part. Scutellum strongly reduced, small and depressed in central part, without transverse carina. Elytra rather prolonged, elytral index (length : width in humeral part = 2.8–3.3), subparallel. Elytral apices rounded separately, with fine serration.

Mentonniere broad, with deep medial notch, prosternal process between coxae subparallel, covered with erect whitish pubescence. Abdomen behind metacoxae with shallow impression (male), last abdominal sternite regularly rounded apically (both sexes). Legs long, meso- and metatarsi as long as metatibiae. Aedeagus see fig. 11.

This remarkable species is distinguished from all known species by the specific grained structure of dorsal side, by reduced scutellum without transverse carina, and by coloration.

Distribution: China (Tibet, Yunnan, Sichuan). Mountainous species living up 2000 m.

Etymology: Dedicated to J. A. Soulie, who first collected this species.

***Agrilus meliboeiformis* DESCARPENTRIES et VILLIERS, 1967**
(fig. 3)

Meliboeus quadriguttatus BOURGOIN, 1924: Bull. Soc. Entomol. France: 179.

Agrilus meliboeiformis DESCARPENTRIES et VILLIERS, 1967: Bull. Mus. Natn. Hist. Nat.: 146.

This species was originally described by Bourgoin in the genus *Meliboeus* as *M. quadriguttatus*. Descarpentries & Villiers transferred it correctly to *Agrilus* and simultaneously established new name *A. meliboeiformis* because of existing senior secondary homonym *Agrilus quadriguttatus* GORY, 1841.

Type locality: Tonkin: "Hoa-Binh" [BOURGOIN, 1924].

Type material: HOLOTYPE (by monotypy) female, preserved in MHNP: "Hoo-Binh Tonkin [p] \ Meliboeus quadriguttatus Bourgoin Type [h] \ HOLOTYPE (by monotypy) [p] MELIBOEUS quadriguttatus Bourgoin 1924 [h] Ed. Jendek design. 1994 [p] [red label]".

Distribution: Vietnam (Tonkin). So far known only from type locality.

***Agrilus holzschuhi* sp. nov.**
(fig. 4)

Type locality: China, W Yunnan – Yunlong.

Type material: Holotype female: "China 30. VI. 1993 W Yunnan – Yunlong".

Diagnosis: 7.4 mm long, robust and convex, body violet-black, lustrous. Centre of each elytron near basal third and apical fourth with bright yellow, rounded spot consisting of dense adpressed hairs. Diameter of each spot one third width of each elytron. Another three spots located ventrally: largest one on posterolateral part of metasternum and lateral part of metacoxal plates, smallest on pleural part of first visible abdominal sternite, on lateral part of second visible abdominal sternite and partially in pleural part.

Frons flat, with small shallow rounded depression between eyes, vertex strongly convex, with deep medial carina, covered with blackish semierect pubescence. Eyes small, width of vertex 6 times width of eye (dorsal aspect).

Shape of pronotum similar to those of *Nalanda* THÉRY, 1904 (*Coraebini*), transverse (length : width = 0.7), with lateral sides regularly rounded and maximum width in middle, clearly incurved before basal angles. Medial lobe of the anterior pronotal margin prominent, projecting distinctly more forwards than anterior pronotal angles. Pronotal disc regularly vaulted, without medial depressions, slightly depressed anterolaterally. Prehumeral keels absent. Structure of pronotum consists of fine superficial reticulation similar to that at vertex. Marginal and submarginal pronotal carinae subparallel, not connected posteriorly. Scutellum transverse, 1.8 times as wide as long, without scutellar carina. Elytra subparallel, behind apical fourth only slightly narrowed to apex, without distinct pubescence, elytral index (length : width in humeral part = 2.5), elytral apices broadly separately rounded, with extremely fine apical serration. Basal elytral depression deep. Tarsi short, metatibiae about twice as long as metatarsi. Basal metatarsal segment short, but as long as following two together.

Mentonniere medially with two sharp spines, prosternal process robust and convex, subparallel between coxae. Last abdominal sternite rounded apically, without notch or incision.

Male unknown.

This species is closely similar to *A. meliboeiformis*, from which can be distinguished by following characters: body black-violet, vertex more convex and divided by deep medial carina into two elevated knoll-like parts, medial lobe of anterior pronotal margin obviously projecting anteriorly, yellow spots on elytra distinctly smaller.

Distribution: So far known only from South China (Yunnan).

Etymology: Dedicated to my dear colleague Carolus Holzschuh from Vienna.

***Agrilus chiangdaoensis* sp. nov.**

(fig. 5)

Type locality: Thailand, Chiang Dao.

Type material: Holotype female: "Thai, 17.-24. V. 1991 Chiang Dao 1000 m 19° 25' N 98° 52' E Vit Kubáň leg."

Diagnosis: 4.6 mm long, black with slightly bluish tinge, body convex. Head and pronotum with white short semierect pubescence, elytra with one transverse stripe of white pubescence in basal part and second broader in apical third. Each elytron with central yellowish spot composed of dense short hairs before midlength. Underside with white sparse pubescence, proepisterna and lateral part of metasterna and metacoxal plates with yellowish spots of dense hairs.

Frons and vertex flat, with medial carina only feebly indicated. Frons between eyes narrowed anteriorly. Eyes medium-sized, convex, width of vertex 1.6 times width of eye (dorsal aspect).

Pronotum convex and transverse (length : width = 0.6), with maximum width before anterior angles. Medial lobe of anterior pronotal margin conspicuous, strongly projecting anteriorly. Pronotal disc convex, without lateral depressions, with feeble indicated basal medial depression. Prehumeral keels curved laterally, extended to basal third of pronotum, smooth and shiny, feebly elevated. Structure of pronotum regularly grained. Marginal and submarginal carinae subparallel, behind distal half continuously approached and joined proximally. Scutellum large (length : width = 0.75), with transverse carina. Elytra rather short and vaulted in transverse direction, subparallel to three fourth of length, then apically narrowed. Elytral apices with fine serration, broadly separately rounded. Elytral index (length : width in humeral part = 2.4). Tarsi short, metatibiae about twice as long as metatarsi.

Mentonniere wide, subparallel, prosternal process continuously tapering apically, metasternum deeply depressed between mesocoxae, last abdominal sternite with deep apical notch.

Male unknown.

This species is closely similar to *A. amorphus* KERREMANS, 1900, but differs from it mainly by having flat frons, maximum width of pronotum before anterior angles, wider vertex, not strongly elevated prehumeral keels and by having broader yellowish spots on elytra.

Distribution: So far known only from Thailand (Chiang Dao).

Etymology: Named in reference to the type locality.

***Agrilus wittemani* sp. nov.**

(fig. 6)

Type locality: NW Thailand, Soppong Pai pass.

Type material: Holotype male: "NW Thai, 25. 4.–5. 5. 92 SAPPONG [= Soppong] PAI pass p. Pacholatko leg.". Paratypes 5 exs labelled as holotype; 3 exs: "C-Nepal, Janakpur, 1987 Tamba-Koshi-Khola SE Charikot, 900–1200 m leg. C. Holzschuh 5.–10. VI."; 1 ex: "NW Thai 8.–18. V. 1992 Mae Hong Son Ban Huai Po J. Horak leg."; 1 ex: "NW Thailand 1.–6. 5. 1991 Soppong-Pai 1800m Leg. Pacholátko".

Diagnosis: 5.1–6.1 mm long, oblong, vaulted. Completely black, sometimes with feeble bluish tinge. Head and pronotum with white sparse semierect hairs. Elytra with poorly visible transverse stripe in basal part and two prolonged spots behind basal third, composed of white sparse hairs. Apical third of elytra with further large transverse, stripe of dense white hairs. Ventral side with sparse whitish hairs, lateral parts of metasternum, metacoxal plates and pleural parts of basal abdominal sternite with spots of dense pubescence.

Frons flat, impressed between eyes and clearly tapering anteriorly, vertex impressed, frons and vertex with medial carina. Eyes convex but not overreach outline of head, vertex 1.5–1.8 times as wide as width of eye (dorsal aspect).

Pronotum transverse, pronotal index (length : width = 0.6–0.65), with lateral sides regularly rounded and maximum width in middle. Medial lobe of anterior pronotal margin conspicuous, not projecting more anteriorly than anterior pronotal angles. Pronotal disc convex, with medial rounded depression near basal margin and sometimes with small and feeble one in apical half. Prehumeral keels slightly elevated, extending to basal half of pronotum, sometimes indistinctly prolonged to anterior pronotal angles, behind half strongly curved to pronotal margin. Structure of pronotum densely rugoso-punctate. Marginal and submarginal carinae subparallel, behind distal half continuously approached, submarginal carina on proximal apex obliterated or missing. Scutellum large, with distinct transverse carina. Elytral index (length : width in humeral part = 2.6–2.7), elytral apices separately rounded, with fine serration. Tarsi short, metatibiae about twice as long as metatarsi.

Mentonniere wide, subparallel as those of *A. chiangdaoensis* sp. nov., or anterior margin feebly incurved medially. Prosternal process subparallel between coxae. Metasternum depressed between mesoxocae, last abdominal sternite with conspicuous apical notch. Aedeagus see fig. 12.

Closely similar to *A. amorphus* and *A. chiangdaoensis* sp. nov., differs from them mainly by not having yellowish prominent spot of dense hairs on each elytron.

Distributions: Thailand, Nepal.

Etymology: Dedicated to my dear friend Mark Witteman.

***Agrilus shaowensis* sp. nov.**

(fig. 7)

Type locality: China, prov. Fujian, Shaowu env.

Type material: Holotype male: "China Fujian prov. Shaowu env. 11.–13. 6. 1991". Paratypes 2 exs female labelled as holotype.

Diagnosis: 6.3–8.1 mm long, body robust and convex, bronze, elytra with greenish tinge. Frons, pronotum and ventral side with sparse white pubescence, elytra with white dense semierect hairs and with two hairless spots of variable size near to sutural margin as follows, first smaller one in basal third, second larger one in apical third.

Frons slightly convex, without medial carina, narrowed posteriorly between eyes, vertex vaulted, with short medial carina (posterodorsal aspect). Structure of vertex consists of obvious characteristic spiral grooves (anterodorsal aspect). Eyes small, slightly convex, vertex 5–6 times as wide as width of eye (dorsal aspect).

Pronotum transverse, pronotal index (length : width = 0.6–0.7), strongly convex, lateral sides rounded, with maximum width in basal part, medial lobe of anterior pronotal margin present, pronotal disc with medial longitudinal depression deep and large in basal half, apically becoming shallower and narrower or missing. Lateral pronotal depressions narrow. Prehumeral keels clearly elevated but not sharp, projecting behind basal third of pronotum, slightly curved laterally. Marginal and submarginal carinae joined posteriorly, submarginal carina on posterior apex sometimes reduced and indistinct. Scutellum with transverse carina. Elytral index (length : width in humeral part = 2.7–2.8). Elytral apices separately rounded, with very fine serration.

Mentonniere wide, with anterior margin slightly incurved medially. Prosternal process subparallel between coxae. Last abdominal sternite feebly incurved apically. Aedeagus see fig. 13.

Has some similarity to *A. pekinensis* OBENBERGER, 1924 but differs from it by coloration, shape of pubescence, by more vaulted pronotum, with maximum width in basal part, by reduced prehumeral keels, indistinct pronotal medial longitudinal carina in apical half etc.

Distribution: So far known only from type locality.

Etymology: Named in reference to the type locality.

***Agrilus lineatomaculatus* sp. nov.**

(fig. 8)

Type locality: Thailand, Soppong Pai 1800 m.

Type material: Holotype male: "Thailand 1.–8. V. 1993 Soppong Pai 1800 m". Paratypes 1 ex female: "NW Thailand 9.–16. 5. 1991 Mae Hong Son, Ban Huai Po 1600 m leg. Pacholátko"; 1 ex female: "Doi Sang, Chiang Mai, Thailand 4. V. 1990 K. Kume"; 3 exs, two females, one male (MHNP): "Bhutan Padong [= West Bengal] 1913"; 1 ex male (MHNP): "Bhutan [= West Bengal] Maria Basti".

Diagnosis: 8.2–10.5 mm long, body form slender and distinctly prolonged. Head and thorax bluish-black to black, elytra black with green or blue tinge, elytral apex with distinct metallic violet-blue reflection (posterodorsal aspect). Frons anteriorly with dense white and golden semierect pubescence, pronotal disc with sparse black hairs, becoming whitish near basal angles. Each elytron with yellow spots of short, dense pubescence as follows: first rounded in humeral part, second longitudinal, line-like in the middle and third rounded in apical fourth. Basal elytral half near sutural margin and elytral apex with areas of white hairs. Ventral side in lateral parts with areas of dense white and gold pubescence.

Frons rather flat, between eyes feebly narrowed anteriorly (anterodorsal aspect), densely rugoso-punctate, vertex moderately convex, narrow, about as wide as width of eye (dorsal aspect), longitudinally punctuated, with distinct medial longitudinal carina. Eyes large, convex, slightly overreaching outline of head. Antennae slender, antennal segments from fourth to eleventh longer than wide.

Pronotum transverse, pronotal index (length : width = 0.74–0.76), with lateral sides subparallel in apical two third, then strongly narrowed to the base. Medial lobe of anterior margin broadly produced, but not extending beyond outline of anterior angles. Pronotal disc transversely convex, with dense but fine transverse wrinkles, medial part with two separate depressions basally and apically, anterolateral pronotal sides with

narrow depressions. Prehumeral keels only slightly indicated in form of shiny lines, closely bordering marginal carinae and extending from basal to anterior angles. Marginal and submarginal carinae subparallel in apical half, then continuously approached, but not connected before basal angles. Scutellum transversely carinate with sharp scutellar projection. Elytral index (length : width in humeral part = 3.5–3.7), elytral apices with obvious, sharp spine and lateral serration. Pygidium with strongly projected medioapical spine. Metatarsi about as long as metatibie, first metatarsal segment distinctly longer than following segments together.

Mentonniere robust, with anterior margin slightly incurved medially. Prosternal process subparallel between coxae, with elevated medial longitudinal carina in male. Last abdominal sternite truncated apically. Aedeagus see fig. 14.

This species is similar to *A. bifoveolatus* KERREMANS, 1895, but differs from it mainly by narrow vertex, larger eyes, different elytral picture and spinated elytral apex.

Distribution: So far known only from Thailand and West Bengal.

Etymology: Linea (Latin) – line, maculatus (Latin) – spotted. Refers to line-like spots on both elytra.

***Agrilus pacholatko* sp. nov.**

(fig. 9)

Type locality: NW Thailand, Soppong Pai pass.

Type material: Holotype male: "NW Thai 25. 4.–5. 92 Sappong [=Soppong] Pai pass P. Pacholatko leg."

Diagnosis: 7 mm long, body slender and subcylindrical, dorsal side shiny black, head and pronotum with carmine tinge, ventral side bronze-black with silky lustre. Frons moderately convex, densely rugoso-punctate, narrow, anteriorly with white semierect hairs. Vertex narrow, about as wide as width of eye (dorsal aspect), convex and divided by short longitudinal carina, structure of vertex similar to that in frons but with trend to spiral structure. Eyes large, convex, slightly overreach outline of head. Antennae in male from fourth segment strongly dilated transversely, with maximum from five to eight segment.

Pronotum transverse, pronotal index (length : width = 0.77), moderately convex, with almost lineal lateral sides and maximum width at anterior margin. Anterior medial lobe of the pronotum prominent, projecting beyond outline of anterior pronotal angles. Pronotal disc transversely rugose, with conspicuous medial longitudinal carina, extending from base to apex, deeper and wider in basal part. Prehumeral keels extending to pronotal half, slightly elevated and sharp in basal part, apically obtused and curved to pronotal margin. Marginal and submarginal carinae joined in basal sixth. Scutellum transverse, scutellar carina present. Elytra transversely convex, elytral index (length : width in humeral part = 3.3), elytra near sutural margin with two areas of white semierect hairs, first before middle, second in apical fourth, elytral apices separately broadly rounded, with fine serration.

Ventral side with white sparse pubescence, mentonniere robust and clearly incurved medially, prosternal process wide and enlarged between coxae, impressed in middle, with smooth and shiny lateral sides, without long erect pubescence.

Male: First abdominal sternite at distal margin with prominent medial knoll, second sternite with small, third one with large medial area of erect, yellowish and dense pubescence, last sternite slightly but distinctly incurved apically, with shallow medioapical triangular depression, bordered with rim of yellowish erect hairs. Inner

margin of femora with rim of long hairs, inner margin of metatibiae and upper side of metatarsi with rim of long whitish hairs. Metatarsi distinctly shorter than metatibiae, first metatarsal segment about as long as following three together. Aedeagus see fig. 15.

Female unknown.

This species is by body shape and by dilated antennal segments in male very similar to *A. laticornis* (ILLIGER, 1803), but differs from it mainly by different structure of abdominal sternites in male.

Distribution: So far known only from type locality.

Etymology: Named for my friend Petr Pacholátko the collector of this species.

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