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## **Three new subgenera and four new species of Indochinese *Agrilus* CURT. (Coleoptera: Buprestidae)**

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### **Introduction**

In a series of my recent publications (HOLYŃSKI 2003, 2018a,b,c,d, 2019) I have attempted to do for the Indo-Pacific *Agrilus* CURT. what ALEXEEV (АЛЕКСЕЕВ 1998) has done for Palaearctic and CURLETTI (1998) for Ethiopian representatives of the genus: to bring some clarity in its internal (subgeneric) structure; the present paper is a small step in the continuation of that task: for three out of four here described new species three new subgenera must have been proposed. At the end, an erratum to one of my previous papers on *Agrilus* CURT. is provided

### **Conventions**

Like in my other publications (unless “corrected” by editors...), I follow the very useful conventions of applying (of course, except wordly citations, where the original form must be retained) SMALL CAPS to *all* [irrespective of context and full vs. abbreviated version: inconsistent use deprives the display of any sense!] personal family- (*not* given-) names, *italicizing* species- and genus-group names (as well as citations and words in languages different from that of the main text), and writing the suprageneric taxon-names in **Bold** [the latter is not a generally accepted custom, but is often important, as some of such names (*e.g.* of the subtribes **Buprestina** LEACH, **Melobasina** BÍLÝ or **Coraebina** BED.) are (or may easily become) “homonymous” (but valid!) with generic or subgeneric ones (*Buprestina* OBB., *Melobasina* KERR., *Coraebina* KERR.)]: we must make possibly unequivocal what we have in mind, and possibly easy for the reader to “optically” spot the “wanted” name in the (especially longer) text!

**Abbreviations:**

- L = length  
W = width  
H = width of head with eyes  
V = width of vertex between eyes  
∅ = sex unknown  
BP\*\*\* = (e.g. BPfmw): specimen-identifying signature  
≈ = approximately equal

**Collection acronyms:**

- KBIN = Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels, BELGIUM  
RBH = Roman B. HOLYŃSKI, Milanówek, POLAND

**Agrilus CURT.**

***Obenbergerilus HOL.***

*Obenbergerilus HOLYŃSKI 2018d: 93-94*

**Type species:** *Agrilus irrorellus HAROLD 1869: 124*

**Remarks:** The sg. *Obenbergerilus HOL.* was described as monotypic; the material I have recently received for elaboration from KBIN contains a specimen of another representative.

***Agrilus (Obenbergerilus) kambu sp.n.***

**Material examined:**

**Holotype:** “Coll. I.R.Sc.N.B., Cambodia, Praeh Vihear Prov., BeTreed Adventures, 16-21.x.2017, 13°29'44"N 104°42'36"E, GTI Project, Leg. J.Constant & X.Vermeersch, I.G.: 33.551”  
[yellow label] [∅ (KBIN)]

**Additional material:** none

**Holotype:** Unsexed (?female), 9.0×1.8 mm. Slender, medium sized, black with three (one in perihumeral depression, one at anterior and one at posterior third) pairs of white punctiform spots of very dense pubescence on elytra, similar pair on anterior half of 2. pleurite, and broader patches of much less contrasting vestiture at sides of metasternum, metacoxae and 3. sternite; otherwise pubescence grayish, rather inconspicuous, dense, recumbent, very short on elytra, somewhat longer and more distinct on ventral side.

Epistome *ca.* as wide as long; front broadly and deeply excavated between slightly carinate oculo-frontal margins, longer than wide, with deeply S-shaped sides, narrowest somewhat above antennal grooves and from there distinctly widened upwards to upper third and roundedly narrowed to vertex; puncturation rather fine, regular, moderately dense, shallow; no discernible pubescence; V:H≈0.35. Antennae short (not reaching significantly beyond anterior pronotal margin), serrate from 4. joint.

Pronotum (L:W≈0.7) rectangular, sides somewhat obliquely truncated before base, subparallel from basal fourth to near anterior angles; base broadly truncated on median third, rather deeply subangularly sinuate on each side; anterior margin bisinuate with moderately (to the level of acute lateroapical angles) produced median lobe; basal angles bluntly right. Disk deeply and broadly depressed all-along midline; prehumeral carinulae sharp, curved, joining lateral margins at midlength, sulci on their inner side distinct; marginal and submarginal carinae confluent at base. Surface densely, rather coarsely transversely punctatostrigose. Scutellum wide (occupying almost 1/3 of elytral base), transversely carinate, nearly impunctate, mat.

Elytral sides narrowly rounded at humeri, very shallowly sinuate to midlength, and sinuately tapering to apices; apex of each elytron bidentate: short but sharply acute sutural spine deeply arcuately separated from three times longer sublateral (the latter externally demarcated with minute right-angled denticle, the distalmost element of very fine serrulation occupying short apical portion of lateroapical elytral margins). Perihumeral (basal)

depressions deep, not quite confluent with shallower but also very distinct, almost entire (somewhat interrupted before posterior pubescent spot, narrower and deeper behind) perisutural. Surface very finely and densely imbricate, almost mat.

Anterior margin of gular lobe almost straightly truncate; prosternal process subparallelsided, almost flat, apical denticle very long, surface very densely punctured; abdomen regularly convex, finely and rather densely punctulate. Metatarsus short, barely longer than half of tibia, basal joint subequal to following three.

**Variability:** Only holotype known.

**Geographical distribution:** Known only from the type locality in northern Cambodia.

**Remarks:** Differs from *A. (O.) irrorellus* HAR. in having additional elytral pubescent speckle in basal (perihumeral) depression, narrower epistome, and especially in bispinose elytral apices. The name refers to Maharaja Kambu, the legendary founder of the ancient Khmer empire.



**Fig. 1**

*A. (O.) kambu* sp.n.



**Fig. 2**

*A. (A.) sukhothai* sp.n.



**Fig. 3**

*A. (O.) akiyamai* sp.n.



**Fig. 4**

*A. (H.) artagnan* sp.n.

### *Akiyamailus* sg.n.

**Type species:** *Agrilus sukhothai* sp.n.

**General characteristics:** Monotypic (as currently known) subgenus, thus subgeneric characters are those of the only included medium-sized, greenish-bronzed type-species characterized by uniform dense golden dorsal and sparser white ventral (partly condensed as not contrasting spots) pubescence, convex front, non-protruding eyes, moderately wide vertex, almost regularly convex pronotum with strongly curved prehumeral carinulae in basal half, subacutely acuminate elytral apices, lack of sexual markers on 1. abdominal segment, regularly arcuate apex of anal sternite, &c.

**Included species:** *A. sukhothai* sp.n.

**Geographical distribution:** Known only from NE-Siam: Nan area.

**Remarks:** Superficially most similar to Palearctic *Xeragrilus* ALEX., from which, however, clearly differs in regularly convex front, simple longitudinally strigose sculpture of vertex, median sulcus of pronotum reduced to prebasal fovea, lateral depressions practically absent, submarginal carinula fused basally with marginal, elytral apices subacuminate, &c.; *Bilyilus* HOL. and *Degeerilus* HOL. show, among other differences, elytra with spots of denser pubescence. Resemblance to the new subgenus show also some (e.g. *A. yunnanicola* OBB., *A.*

*striatocollis* KERR., *A. fulvovittatus* FISH., *A. terrereginae* BLB., *A. babaulti* THY., *A. vittatus* DEYR.) members of the (here conceived and delimited not exactly as in JENDEK & NAKLÁDAL 2019) *A. vittatus* DEYR.-group, but pubescent vittae on elytra and lack of prehumeral carinulae immediately exclude them from *Akiyamailus* *sg.n.* Dedicated to the memory of our late Friend and Colleague, connoisseur of East Asian **Buprestidae**, Kôyô AKIYAMA.

*Agrius (Akiyamailus) sukhothai* *sp.n.*

**Material examined:**

**Holotype:** "THAILAND, Nan area June 1952" [♂ (RBH: BPlre)]

**Paratype:** "THAILAND, Nan area June 1952" [1 ♂ (RBH: BPlrf)]

**Additional material:** none

**Holotype:** Male, 7.0×1.5 mm. Slender, with greenish-bronzed dorsal and aeneous-black ventral side (femora and tibiae green); front and elytra covered with rather dense, short, recumbent, uniform golden pubescence, that of ventral side white, rather sparse and inconspicuous on middle parts of abdomen but much denser and partly (in form of not contrasting but distinct spots) pulverulent on sternum and abdominal sides.

Epistome somewhat wider than long, apex shallowly arcuately emarginated, clypeofrontal carinula distinct. Front slightly regularly convex, somewhat wider than long, widest at upper third; sides markedly sinuately convergent downwards and slightly roundedly so upwards; oculo frontal margins neither furrowed nor carinate; frontal surface densely regularly punctulate. V:H≈0.6; vertex longitudinally strigose, broadly but shallowly depressed at middle. Antennae slender, moderately long (reaching slightly beyond middle of pronotal margin), serrate from 4. joint, antennomeres 5.-10 sharply triangular.

Pronotum distinctly transverse (L:W≈0.7), widest at anterior third, sides definitely arcuate, very shortly subsinuate just before base; basal angles right; basal margin rather deeply angularly sinuate to both sides of broadly subtruncated prescutellar lobe; apical margin bisinuate with acute angles and regularly rounded median lobe. Disk almost regularly convex with only broad and long (extending to pronotal midlength) but not deep prescutellar depression; prehumeral carinulae sharp, curved, approaching lateral margins at midlength and vanishing before; sulci on their inner side barely discernible; marginal and submarginal carinae confluent at base. Surface very densely transversely strigose. Scutellum moderately wide (occupying *ca.* 1/5 of elytral base), transversely carinate.

Elytral sides obliquely, somewhat roundedly truncated at humeri, very shallowly sinuate to midlength, and cuneately tapering to subacuminate apices. Perihumeral (basal) depressions deep and broad, shallowly sulciform perisutural only in apical half distinct. Surface very finely and densely imbricate, mat.

Anterior margin of gular lobe almost straightly truncate; prosternal process subparallelsided, almost flat, apically subtruncated; surface densely uniformly punctulate; abdomen regularly convex, punctulation fine and rather dense, sides of each sternite with not contrasting depressed, very finely and densely punctulate spots covered with chalky puerulence; smaller but more sharply defined speckles seen also on basal halves of pleurites; lateroapical groove of anal sternite regularly arcuate. Metatarsus subequal in length to tibia, basal joint to sum of following four.

**Variability:** Paratype (?female?) almost identical to holotype, only with front looking somewhat more convex, coarser punctulate, and with traces of median, subcarinate along midline, sulcus; also sides of pronotum a little more rounded.

**Geographical distribution:** Hitherto nown only from the type locality in northeastern Siam.

**Remarks:** For specific characters see **Remarks** on the subgenus above. The specific name refers to the Kingdom of Sukhothai, mediaeval predecessor of the Kingdom of Siam.

***Ohmomoilus* sg.n.**

**Type species:** *Agrilus akiyamai* sp.n.

**General characteristics:** Subgeneric characters are those of the only included moderately large, bluish-black, rather inconspicuously pubescent species with flat front, narrow vertex, entire prehumeral carinulae, inwards truncated elytral apices, not emarginated gular lobe, laterally shallowly furrowed prosternal process, bituberculate 1. and regularly arcuate lateroapical groove of anal sternite, &c.

**Included species:** *A. akiyamai* sp.n.

**Geographical distribution:** Known only from NE-Laos: Samneua.

**Remarks:** Resembles large representatives of the *Angustulus*-circle of Palaearctic sg. *Quercagrillus* ALEX., but long prehumeral carinulae, unusual (obliquely inwards truncated) elytral apices, not incised apical margin of anal sternite, mucronate pygidium &c., convincingly disprove their identity. Dedicated to the eminent student of SE-Asian **Buprestidae**, Sadahiro OHMOMO.

***Agrilus (Ohmomoilus) akiyamai* sp.n.**

**Material examined:**

**Holotype:** "Laos, Samneua, 25. V. 2002" [♂ (RBH: BPlrg)]

**Additional material:** none

**Holotype:** Male, 8.7×1.8 mm. Front dark blue; dorsal side, sternum and abdomen bluish-black. Whitish-gray pubescence recumbent, short on upper part of front, gradually strongly condensed towards epistome, rather sparse and inconspicuous on elytra, practically absent on pronotum and medial parts of abdomen, denser on sides of ventral surface and especially on prosternum.

Epistome *ca.* as long as wide between antennal grooves, apex very shallowly arcuately emarginated, no clypeofrontal carinula. Front flat, longer than wide, sides strongly sinuately convergent from upper third downwards and roundedly so upwards; oculo-frontal margins finely furrowed; eyes not protruding; frontal surface very densely regularly punctulate. V:H≈0.45; vertex longitudinally punctatostrigose, finely inconspicuously furrowed along middle. Antennae slender, moderately long (reaching slightly beyond middle of pronotal margin), serrate from 4. joint.

Pronotum slightly transverse (L:W≈0.8), sides distinctly divergent from base to midlength, then subparallel to apical angles; basal angles sharp but obtuse; basal margin distinctly trisinate; apical margin bisinate with acute angles and regularly rounded median lobe. Median sulcus reduced to broad and deep rectangular fovea on basal third; anterior part of disk crossed by shallow transverse sulciform depression; lateral (inside of prehumeral carinulae) depressions deep and broad, extending to apical fifth; prehumeral carinulae sharp, slightly curved, joining lateral margins at midlength; marginal and submarginal carinae confluent at base. Surface transversely punctatostrigose. Scutellum moderately wide (occupying *ca.* 1/5 of elytral base), transversely carinulate.

Elytral sides indistinctly truncated at humeri, then shortly subparallel, shallowly sinuate to somewhat behind midlength, and cuneately tapering to obliquely inwards truncated apices; lateral margins almost smooth (only just before apices with few very fine denticles), apical truncation of each elytron with four definitely coarser ones. Perihumeral (basal) depressions deep and broad, shallow perisutural marked only between basal and apical fourth. Surface very finely and densely imbricate, mat.

Anterior margin of gular lobe very slightly emarginated; prosternal process subparallelsided, sulcated along lateral margins, convex along middle, apex acutely triangular, surface densely uniformly punctulate; border between 1. and 2. sternite marked at middle with pair of distinct tubercles, abdominal punctulation fine but rather dense, sides of each sternite

with somewhat not contrasting depressed, very finely and densely punctulate spots covered with more conspicuous pubescence; lateroapical groove of anal sternite regularly arcuate; pygidium mucronate. Metatarsi missing; basal mesotarsomere subequal in length to following three.

**Variability:** Only holotype known.

**Geographical distribution:** Unique specimen collected in NE-Laos: Samneua.

**Remarks:** Superficially similar to Palaearctic *A. (Quercagrilus) sulcicollis* LAC., but long prehumeral carinula, not incised lateroapical groove of anal sternite, or mucronate pygidium immediately suffice to prove taxonomic distinctness at not only specific level. The species name, like that of the previous subgenus, given in honour of Kôyô AKIYAMA.

***Hattorilus* sg.n.**

**Type species:** *Agrilus artagnan* sp.n.

**General characteristics:** Small (3.5-6 mm.), stout, black or dark-bronzed beetles contrastingly patterned with white elytral pubescence on otherwise almost glabrous body. Vertex wide (V:H>0.5). Pronotum transversely tetragonal; sides almost straight, subparallel to distinctly divergent; prehumeral carinula entire, confluent apically with lateral margin; submarginal and marginal carinae closely approached but not joined in basal half. Elytral apices narrowly separately rounded; lateroposterior margins without distinct denticulation; pubescent pattern consists of two parts separated by broad transverse denudate area extending from slightly behind midlength to apical fourth. Gular lobe shallowly emarginated; prosternal process rather wide, sides divergent, apex tridentate; 1. abdominal segment regularly convex; apex of anal sternite narrowly emarginated at middle; pygidium not mucronate; basal metatarsomere subequal in length to three following together.

**Included species:** JENDEK & GREBENNIKOV (2018) described three species as *A. athos* J.G., *A. porthos* J.G., and *A. aramis* J.G.; I am hereby supplementing the company with the fourth musketeer: *A. artagnan* sp.n.

**Geographical distribution:** N-Indochina: northern parts of Siam, Laos and Tonkin

**Remarks:** General outlook, elytral pattern, apical emargination of anal sternite and some other details may suggest affinity to Palaearctic *Quercagrilus* ALEX., but stout proportions, long prehumeral carinula, submarginal carina not joining marginal near base, &c. point clearly to their distinctness. Name given in honour of another renowned Japanese buprestidologist, Takaharu HATTORI.

***Agrilus (Hattorilus) artagnan* sp.n.**

**Material examined:**

**Holotype:** "Viet nam, Tam Dao, June 1996" [?♀ (RBH: BPlri)]

**Paratype:** "VIETNAM, Tam Dao, 1996 June" [1 ?♀ (RBH: BPlrh)]

**Additional material:** none

**Holotype:** ?Female, 4.4×1.1 mm. Black, front and elytra with distinct bronzed shine. Pubescence grayish, very short, recumbent, indistinct except for anterior half and (less conspicuously) apical fifth of elytra covered with white setulae to form contrasting pattern.

Epistome *ca.* as long as wide between antennal grooves, apically rather deeply arcuately emarginated, separated from front only by shallow transverse depression. Front *ca.* as long as wide; with not very deep but broad longitudinal depression crossed by similar arcuate transverse one; sides straight, slightly converging; oculo-frontal margins finely furrowed; surface finely and densely regularly punctulate. V:H≈0.55. Antennae slender, moderately long (reaching slightly beyond middle of pronotal margin), serrate from 4. joint.

Pronotum definitely transverse (L:W≈0.6); sides distinctly, almost straightly divergent from base to apical fourth, then strongly rounded; basal angles right; basal margin deeply

subangularly sinuate to both sides of straightly truncated prescutellar lobe; median lobe of apical margin strongly arcuately protruding. Deep, basally wide lateral (along prehumeral carinulae) sulci markedly narrowed anterad; median sulcus reduced to barely discernible shallow prescutellar fovea; prehumeral carinulae sharp, slightly curved, joining lateral margins at anterior third; marginal and submarginal carinae approached but not joined before base. Surface transversely punctatostrigose. Scutellum moderately wide (occupying *ca.* 1/4 of elytral base), transversely carinulate.

Elytra subparallelsided in basal sixth, then sides distinctly sinuate to behind midlength and somewhat cuneately tapering to rather broadly rounded apices; lateroapical margins armoured with few very fine denticles. Perihumeral (basal) depressions deep and broad, perisutural wide but very shallow. Surface very finely and densely imbricate, mat.

Anterior margin of gular lobe distinctly sinuate; prosternal process wide, sides distinctly divergent, surface depressed apically; 1. sternite regularly convex; abdominal punctulation very fine and sparse at middle, not much coarser and denser on sides; lateroapical groove of anal sternite narrowly sinuate at middle; pygidium broadly rounded apically, not mucronate. Basal metatarsomere subequal in length to following three.

**Variability:** Paratype somewhat larger (4.7×1.2 mm.), bronzed hue on its elytra somewhat stronger, median lobe of anterior pronotal margin less prominent – otherwise practically identical to the holotype.

**Geographical distribution:** Both specimens collected in Tam Dao in northern Tonkin.

**Remarks:** Judging from JENDEK & GREBENNIKOV's (2018) pictures, deceptively similar to *A. aramis* J.G., *A. athos* J.G. and especially *A. porthos* J.G.; their extremely formalized, schematic and often totally uninformative [*e.g.* “Color (dorsally): unicolored”] descriptions do not allow precise comparison, but anyway all of them have been characterized as having “Impressions: [on pronotum] medial and lateral; Medial impression: anteromedial and posteromedial”, while in *A. artagnan* sp.n. pronotal disk is anteriorly devoid of any trace of impressions and posteriorly only hardly discernible suggestion of prescutellar fovea can be seen. Moreover, at least *A. porthos* J.G. [no information for the other two] is described as having no medial impression of front, and in *A. athos* J.G. anterior area of contrasting pubescence is restricted to “transverse strip” at midlength. The specific name given after cavalier D'ARTAGNAN, the main character in A. DUMAS' novel “*The three musketeers*”.

## Literature

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Erratum to:

**HOLYŃSKI R.B. 2018. Preliminaries of the classification of *Agrilus* CURT. (Col.: Buprestidae): some Indo-Pacific subgenera with modified elytral apices. *Procrustomachia* **3, 6: 71-123****

The signatures of paratypes of *Agrilus* (*Deyrollilus*) *jendeki* sp.n. (p. 86) have been erroneously given as BPkxi, kxj instead of correct BPkyi, kyj.

The signature of the holotype of *Agrilus* (*Linneilus*) *fariniplagis* sp.n. (p. 107) has been erroneously given as BPjkn instead of correct BPjku.

The signature of the holotype of *Agrilus* (*Descarpentrilus*) *erythrosticktus robustior* ssp.n. (p. 112) has been erroneously given as BPhtr instead of correct BPktr.

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