Three new Omiini species from Eastern Palaearctic region, sifted by Michael Košťál (Coleoptera: Curculionidae: Entiminae: Omiini)

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Taxonomy, new species, Curculionidae, Entiminae, Omiini, *Asphalmus*, *Yunakovius*, Japan, Korea

Abstract. Three new species of Omiini, *Asphalmus kostali* sp. nov., *A. terricolus* sp. nov. and *Yunakovius koreanus* sp. nov. are described from South Korea and Japan, illustrated and compared with similar species.

INTRODUCTION

Litter-associated Entiminae from the eastern part of the Palaearctic Region are only in the beginning of our knowledge. The tribe Omiini Shuckard, 1840, as redefined by Borovec (2006), includes 21 genera and 177 species (Borovec 2013). Except an unclear genus *Teripelus* Heller, 1909 the tribe is only Palaearctic (Borovec 2006) and most genera and species (19 genera and 173 species) occur only in the western Palaearctic Region. Eastern Palaearctic Omiini were revised by Borovec (2010), and the present paper supplements this study by a description of three species newly collected in Japan and South Korea and thus increases the number of species from four to seven.

MATERIAL AND METHODS

Total length of examined specimens was measured in profile from the anterior border of the eyes to the apex of the elytra, excluding the rostrum. Ratios between width and length of rostrum, pronotum, elytra and antennal and tarsal segments correspond to maximum widths and lengths of the respective parts in dorsal view. Dissected female genitalia were embedded in Solakryl BMX (Medika, Prague); male genitalia were mounted dry. Genitalia are mounted on the same card as the respective specimen. The terminology of rostrum and genitalia follows Oberprieler et al. (2014). Exact label data of type material are cited, my comments are found in brackets.

The material is deposited in the following collections (identified by the acronyms as follows):

ECRI Enzo Colonnelli collection, Rome, Italy;
MKBC Michael Košťál collection, Brno, Czech Republic;
RBSC Roman Borovec collection, Sloupno, Czech Republic.

RESULTS

Asphalmus kostali sp. nov.

(Figs. 1-4)

Type material. Holotype (♂): 'Korea mer. [South Korea], Sobae Mts., Witae pr. Jinju, 35°09.9' N 127°49.4' E, 400 m, 16.v.2014, M. Košťál lgt.', (MKBC). Paratypes (13 ♂♂, 5 ♀♀): the same data as holotype, (12 ♂♂, 4 ♀♀ MKBC, 1 ♂, 1 ♀ RBSC).

Description. Body length (rostrum excluded): males 2.38-2.81 mm, females 2.72-3.44 mm (holotype 2.59 mm).

Body brown, elytra in some specimens dark brown, antennal clubs and tarsi slightly lighter than reminder of antennae and legs. Elytra with 1. 1-2 irregular rows of short, inconspicuous, semierect, piliform, slightly enlarged distad, yellow greyish setae, slightly shorter than diameter of one puncture in elytral striae, and with 2. 3-4 irregular rows of appressed piliform setae, faintly shorter, more slender and identically colored as semierect setae, not hidden integument. Each puncture in elytral striae with one piliform seta, shorter than setae on intervals. Pronotum and head with rostrum with the same appressed setae as elytra, on pronotum transversally directed, regularly scattered, not covered integument. Femora with appressed short piliform setae; tibiae and scapes with semiadherent short piliform setae; funicles with moderately long, semierect piliform setae; clubs with 1. short, fine appressed and 2. longer semierect piliform setae.

Rostrum (Fig. 1) short and wide, 1.32-1.40 times as wide as long and at base 1.16-1.21 times as wide as at apex. Rostrum in basal half distinctly tapered anteriad, with straight sides, in apical half with strongly rounded sides around antennal scrobes; in lateral view distinctly finely punctured. Epifrons basally distinctly tapered with concave sides, at base narrower than third width of rostrum in the same place, flat, densely punctured, elevated compared to the rostrum, separated from it by shallow, ill-defined transversal furrow. Frons large, U-shaped, angular to epifrons, shallowly depressed, finely punctured, moderately shiny. Epistome not developed. Scrobes in dorsal view fully visible, open; in lateral view very short, subtriangular; dorsal border curved, subparallel with dorsal border of rostrum, directed above eyes; ventral border very short, directed below eye; scrobes shorter than distance between scrobe and eye. Head and rostrum regularly, finely and densely punctured, punctures touching each other. Eyes small, distinctly vaulted and distinctly prominent from outline of head; in lateral view oval, narrower than scapes at apex, placed in dorsal third of head.

Antennae moderately robust. Scapes robust, 1.2 times as long as funicles, distinctly curved at midlength, gradually enlarged apicad, at apex about as wide as protibiae at midlength but narrower than clubs. Funicles segment 1 robust, slightly shorter but distinctly wider than segment 2, 1.5-1.6 times as long as wide; segment 2 1.8 times as long as wide; segments 3-5 1.2-1.3 times as wide as long; segments 6 and 7 1.5-1.6 times as wide as long; clubs 1.8 times as long as wide.

Pronotum (Fig. 2) 1.14-1.20 times as wide as long, regularly vaulted, widest at midlength, with distinctly rounded sides, anteriad more tapered than posteriad. Dorsal surface irregularly, densely punctured, punctures small, touching each other, boundaries creating very narrow keels. Pronotum in lateral view moderately vaulted.

Scutellum very small, almost invisible.

Elytra (Fig. 2) long-oval, 1.28-1.33 times as long as wide, widest at midlength. Striae very wide, in dorsal surface equally wide as intervals, distinctly densely punctate, entire striae depressed. All intervals flat, moderately shiny.

All femora edentate. Tibiae long and slender, straight laterally, weakly enlarged mesally, mucronate; apex of protibiae rounded with a fringe of very short and fine yellowish setae. Onychium in all tarsi in females longer and more slender than in males, in both sexes longer in meso- and metatarsi than in protarsi. Tarsal segment 2 1.4 times as wide as long; segment 3 1.5-1.6 times as wide as long and 1.5-1.6 times as wide as segment 2; onychium in males in protarsi 1.1 times as long as segment 3, in meso- and metatarsi 1.2-1.3 times as long as segment 3; onychium in females in protarsi 1.4 times as long as segment 3, in meso- and metatarsi 1.5 times as long as segment 3.

Abdominal ventrites 1.06-1.24 times as long as wide, shiny, convex, finely regularly punctate, punctures small, distance between two punctures larger than diameter of one puncture. Ventrites with sparse, short, semiadherent, fine, piliform setae.

Male genitalia. Penis (Fig. 3) weakly varying in shape, in ventral view widest at base, almost evenly tapered apicad with slightly convex or concave sides, apical part regularly pointed, tip shortly rounded; in lateral view weakly irregularly curved or almost straight, apex more or less lengthened. Temones weakly longer than body of penis. Tegmen with very slender, incomplete ring, without parameres, with manubrium about third as long as temones.

Female genitalia. Spermatheca (Fig. 4) with moderately short, curved cornu and ramus longer and wider than nodulus. Sternite VIII with umbrella-shaped plate and long slender apodeme, apically terminated inside of plate. Gonocoxites slender and long, evenly tapered apicad, with very short, hardly visible, laterally orientated stylus with long apical setae.

Differential diagnosis. *A. kostali* sp. nov. is, together with the below described *A. terricolus* sp. nov., easily distinguishable from the other three known *Asphalmus* species by femora of all legs edentate. Distinguishing of both newly described species is detailed in a short key, as follows:

1. Elytra with 1-2 irregular rows of short, semierect setae, visible mainly in lateral view. Rostrum 1.32-1.40 times as wide as long, at base 1.16-1.21 times as wide as at apex (Fig. 1). Rostrum in lateral view punctured. Pronotum 1.14-1.20 times as wide as long (Fig. 2). Abdominal ventrites distinctly punctured..... *A. kostali* sp. nov.
- Elytra without semierect setae. Rostrum 1.27 times as wide as long, at base 1.08 times as wide as at apex (Fig. 6). Rostrum in lateral view with microsculpture. Pronotum 1.07 times as wide as long (Fig. 7). Abdominal ventrites without punctures..... *A. terricolus* sp. nov.

By wide rostrum, 1.3-1.4 times as wide as long, *A. kostali* sp. nov. is similar to *A. japonicus* Sharp, 1896, but it is clearly distinguishable from it by rostrum distinctly tapered anteriad, at base 1.2 times as wide as at apex (Fig. 1), while *A. japonicus* has rostrum at base equally wide as at apex (Fig. 5) and by semierect piliform elytral setae, while *A. japonicus* has elytra only with appressed setae. By semierect elytral setae, *A. kostali* sp. nov. is similar only to *A. sharpi* Borovec, 2010, which has elytra with one row of semiappressed piliform setae, but *A. sharpi* has elytral intervals also with dense, appressed, tear-drop shaped scales, while *A. kostali* sp. nov. has elytra with appressed piliform setae. Moreover, from all three *Asphalmus* species with known males, *A. kostali* sp. nov. is different by its punctate abdominal ventrites and sharply pointed penis (Fig. 3).

Etymology. The species is dedicated to its collector, my long-time friend Michael Košťál (Brno, Czech Republic), excellent weevil specialist and occasional sifter.

Biology. The type specimen was sifted from litter of primeval deciduous subtropical forest with dominant *Quercus*, *Castanea* and *Acer* (M. Košťál, pers. comm.).

Distribution. South Korea. Kojima & Morimoto (2004), subsequently Borovec (2010, 2013) and Han et al. (2014) stated *A. japonicus* from Korea. In the later, *A. japonicus* is figured and according to figures, it is a species having femora armed with teeth. Thus, there are two species of *Asphalmus* in Korea.

Asphalmus terricolus sp. nov.

(Figs. 6-8)

Type material. Holotype (♀): 'Japonia mer. [South Japan], Shikoku [island], Tokushima, Koyadaira env., Tsurugisan Mts., 33°55.0'N 134°17.1'E, 1000 m, 23.v.2014, M. Košťál lgt.', (MKBC).

Description. Body length (rostrum excluded): 3.06 mm.

Body brown, head with rostrum and pronotum dark brown. Elytra with 2-3 irregular rows of very fine, short, piliform, yellowish appressed setae, length of one seta shorter than diameter of one puncture in elytral stria. Each elytral puncture with one seta, identical to setae on intervals, only slightly shorter. Pronotum and head with rostrum with the same appressed setae as elytra, regularly scattered, inconspicuous, on pronotum transversally directed to midline. Femora and tibiae with appressed short piliform setae; scapes with semiadherent short piliform setae; funicles with moderately long, semierect piliform setae; clubs with 1. short, fine appressed and 2. longer semierect piliform setae.

Rostrum (Fig. 6) 1.27 times as wide as long and at base 1.08 times as wide as long at apex. Rostrum in basal half tapered anteriad with slightly concave sides, in apical half with strongly rounded sides around antennal scrobes; in lateral view matt, with distinct microsculpture. Epifrons distinctly basally tapered with concave sides, at base slightly narrower than a quarter width of rostrum at the same place, flat, sparsely punctured, moderately shiny, elevated compared to rostrum, separated from it by wide, shallow, ill-defined transversal furrow. Frons large, U-shaped, angular to epifrons, shallowly depressed, with only several fine punctures along basal border, shiny, shallowly depressed. Epistome not developed. Scrobes in dorsal view fully visible, open; in lateral view short, subtriangular; dorsal border curved, subparallel with dorsal border of rostrum, directed above eyes; ventral border directed below eyes; scrobes separated from eye by space equal to its length. Head and rostrum indistinctly punctured, matt, with microsculpture. Eyes small, vaulted, moderately prominent from outline of head; in lateral view oval, as high as width of apex of scapes, placed in dorsal third of head.

Antennae moderately robust. Scapes robust, 1.3 times as long as funicles, regularly curved along the whole length, gradually enlarged apicad, at apex about as wide as protibiae at midlength and 0.8 times as wide as clubs. Funicle segment 1 and 2 conical, equally long; segment 1 1.4 times as long as wide, 1.3 times as wide as segment 2; segment 2 1.9 times as long as wide; segment 3 isodiametric; segments 4 and 5 1.2 times as wide as long; segment 6 1.4 times as wide as long; segment 7 1.5 times as wide as long; club 1.7 times as long as wide.

Pronotum (Fig. 7) narrow, 1.07 times as wide as long, regularly vaulted, widest at midlength, with distinctly rounded sides, anteriad more tapered than posteriad. Dorsal surface regularly, densely punctured, punctures small, well isolated, distance between two punctures shorter than diameter of one puncture. Pronotum in lateral view moderately vaulted.

Scutellum very small, almost invisible.

Elytra (Fig. 7) long-oval, 1.40 times as long as wide, widest at midlength. Striae very wide, in dorsal surface as wide as intervals, distinctly densely punctate, entire striae depressed. All intervals equally faintly vaulted, moderately shiny.

All femora edentate. Tibiae long and slender, straight laterally, weakly enlarged mesally, mucronate; apex of protibiae obliquelly subtruncate with a fringe of very short and fine yellowish setae. Protarsi more robust than meso- and metatarsi. In protarsi segment 2 1.7 times as wide as long; segment 3 1.4 times as wide as long and 1.4 times as wide as segment 2; onychium 1.3 times as long as segment 3; in metatarsi segment 2 1.5 times as wide as long; segment 3 1.2 times

as wide as long and 1.4 times as wide as segment 2; onychium 1.3 times as long as segment 3.

Abdominal ventrites long and slender, 1.26 times as long as wide, shiny, convex, without any puncture; with very sparse, very short, inconspicuous, appressed, fine, piliform setae.

Male genitalia unknown.

Female genitalia. Spermatheca (Fig. 8) with slender regularly curved cornu, large corpus and ramus distinctly longer and wider than nodulus. Sternite VIII with moderately small umbrella-shaped plate and long slender apodeme, apically terminated inside of plate. Gonocoxites very slender and long, evenly tapered apicad, with very short, hardly visible, laterally orientated stylus with long apical setae.

Differential diagnosis. *A. terricolus* sp. nov. constitutes the third known Japanese *Asphalmus* species. It is possible to separate it from both known species, *A. japonicus* and *A. ovatus* (Sharp, 1896), mainly by all femora edentate (*A. japonicus* and *A. ovatus* have all femora in both sexes clearly dentate). Moreover, *A. terricolus* sp. nov. is distinguishable from *A. japonicus* by its more slender rostrum, 1.27 times as wide as long, at base 1.08 times as wide as at apex (Fig. 6), while *A. japonicus* has the rostrum 1.37-1.40 times as wide as long, at base as wide as at apex (Fig. 5) and by inconspicuous elytral vestiture, while *A. japonicus* has elytral vestiture well visible, creating longitudinal stripes on intervals. *A. terricolus* sp. nov. is distinguishable from *A. ovatus* also by matt head and rostrum with microsculpture, while *A. ovatus* has the head and rostrum shiny, punctate and by shorter antennae with funicle segment 1 1.4 times as long as wide and segments 4-6 wider than long, while *A. ovatus* has segment 1 twice as long as wide and segments 4-6 longer than wide or isodiametric. By all femora edentate *A. terricolus* sp. nov. is similar only to *A. kostali* sp. nov., described above from Korea. From this species it can be distinguished by the key presented in the description of this species.

Etymology. The name refers to a hidden way of life in the forest litter.

Biology. The type specimen was sifted in top part of mountain with deciduous forest with *Carpinus*, *Acer*, *Quercus*, *Alnus* and *Castanea* (M. Košťál, pers. comm.).

Distribution. Japan, island Shikoku.

***Yunakovius koreanus* sp. nov.**

(Figs. 9-13)

Type material. Holotype (♂): 'Korea mer. occ. [Southwestern Korea], Puyŏ env., 36°16.6' N, 126°50.1' E, 50 m, 18.v.2014, M. Košťál lgt.', (MKBC). Paratypes (2 ♂♂, 2 ♀♀): the same data as holotype, (2 ♂♂, 1 ♀ MKBC, 1 ♀ RBSC).

Description. Body length (rostrum excluded): males 2.81-3.09 mm, females 3.13-3.31 mm (holotype 2.94 mm).

Body brown to dark brown, elytra paler or darker than pronotum and head with rostrum, in one specimen elytra with paler sutural interval; antennae and legs unicolored, antennae brownish, legs paler, rusty reddish brown. Elytra on each interval with 1. one irregular row of dense, semierect, yellowish brown piliform setae, at posterior declivity longer than on the disc, in males shorter, in females about as long as the interval width, and 2. 2-3 irregular rows of semiappressed, yellowish brown fine piliform setae, shorter than half the width of the interval. Each puncture of elytral striae with one short seta inside. Pronotum and head with rostrum with

only appressed setae, moderately dense, fine, short and piliform, shorter than elytral semiappressed ones, directed on pronotum transversally and on rostrum longitudinally. Scapes and legs with appressed short piliform setae; funicles with sparse, semierect, short piliform setae; clubs with 1. fine and short appressed piliform setae and 2. sparse, somewhat longer, piliform, semierect setae.

Rostrum (Fig. 9) short and wide, 1.40-1.54 times as wide as long, at basal half evenly tapered anteriad with straight sides, at apical half rounded around antennal scrobes, at base 1.07-1.14 times as wide as at apex. Rostrum in lateral view flat, in the same level as head, frons angularly declined anteriad, slightly vaulted. Epifrons very narrow, with concave sides, at midlength wider than third of rostral width in the same place, weakly enlarged posteriad and distinctly enlarged anteriad, at interocular space distinctly narrower than distance between eyes at their anterior border. Epifrons finely, densely, regularly punctured, moderately shiny, with median longitudinal, ill-defined, narrow furrow. Frons moderately large, posteriad not carinate but declined from epifrons, regularly shallowly depressed, sparsely irregularly punctured, matt. Epistome not developed. Scrobes dorsally open, reniform; in lateral view short and wide, subtriangular, with dorsal border copying dorsal border of rostrum and ventral border directed to ventral border of eye, as long as distance from eyes. Eyes small but strongly vaulted, distinctly prominent from outline of head; in lateral view placed about in middle of head, their diameter equal to width of scapes at apex. Interocular space with distinct fovea, head regularly vaulted, densely and regularly punctate, moderately shiny distance between punctures shorter than their diameter.

Antennal scapes robust (Fig. 10), distinctly curved at midlength, at basal half moderately wide, at apical half evenly enlarged apicad, at apex as wide as clubs. Funicle segments 1 and 2 conical, 3-7 transverse. Segment 1 robust, 1.4 times as long as wide and 1.1 times as long as conical segment 2, which is 1.8-1.9 time as long as wide; segments 3-5 1.4 times as wide as long; segments 6 and 7 1.5 times as wide as long; clubs 1.7-1.8 times as long as wide.

Pronotum (Fig. 11) 1.06-1.13 times as wide as long, widest behind midlength, anteriad only more tapered than posteriad. Dorsal surface regularly densely punctate, distance between two punctures distinctly shorter than their diameter, without small punctures, moderately shiny. Pronotum in lateral view weakly regularly vaulted.

Scutellum small, triangular, hardly visible.

Elytra (Fig. 12) 1.36-1.43 times as long as wide, long-oval, widest at midlength, with distinctly rounded sides, shiny; base weakly arched. Striae distinctly punctured, at the same level as elytra, in males punctures deeper, almost as wide as half interstria width, in females punctures shallower, about as wide as a third width of one interval. Punctures in both sexes distinctly larger than pronotal ones. Elytra in lateral view regularly vaulted.

All femora edentate. Tibiae long and slender, straight laterally, enlarged mesally, mucronate, apex of protibiae subtruncate, fringed with very short and fine, yellowish setae. Apical surface of meso- and metatibiae oval, glabrous, shiny, with one curved spine, laterally fringed by short setae. Tarsi slender, protarsi slightly wider than meso- and metatarsi. Protarsi with segment 2 1.4-1.5 times as wide as long; segment 3 1.4 times as wide as long and 1.4-1.5 times as wide as segment 2; onychium 1.3-1.4 times as long as segment 3; metatarsi with segment 2 1.2-1.3 times as wide as long; segment 3 1.3-1.4 times as wide as long and 1.4-1.5 times as wide as segment 2; onychium 1.4-1.5 times as long as segment 3.

Abdominal ventrites long and slender, 1.12-1.18 times as long as wide, shiny, vaulted, without any puncture; with sparse and short, inconspicuous, semiappressed, fine, piliform setae.

Sexual dimorphism. Males have shorter semierect elytral setae and wider and deeper punctures in elytral striae than females.

Male genitalia. Penis (Fig. 12) in ventral view widest at base, distinctly concave at midlength, apex very slender and lengthened, tip with weakly concave sides; in lateral view slender, weakly irregularly curved, apex very slender and lengthened. Temones about as long as body of penis. Tegmen with very slender incomplete ring, without parameres, with manubrium about half as long as temones.

Female genitalia. Spermatheca (Fig. 13) with slightly curved, moderately wide cornu; corpus slender; ramus and nodulus about equally sized and shaped, slightly longer than wide, perpendicular one to another. Sternite VIII with moderately small, umbrella-shaped plate with basal margin ill-defined and apical margin armed with short setae; apodeme curved and long, about 4-5 times as long as plate, terminating just inside of plate and tapered distad. Gonocoxites weakly sclerotised, very slender and long, evenly tapered apicad, with laterally prominent, very short, hardly visible styli with tuft of fine setae.

Differential diagnosis. The newly described species is very similar to the only known *Yunakovius* species, *Y. orientalis* Borovec, 2010, known from China (Shanxi, Hebei), Russian Far East and Mongolia, from which only females are known. *Y. koreanus* sp. nov. can be distinguished from the only known species of the genus, *Y. orientalis* Borovec, 2010, by the following combination of characters:

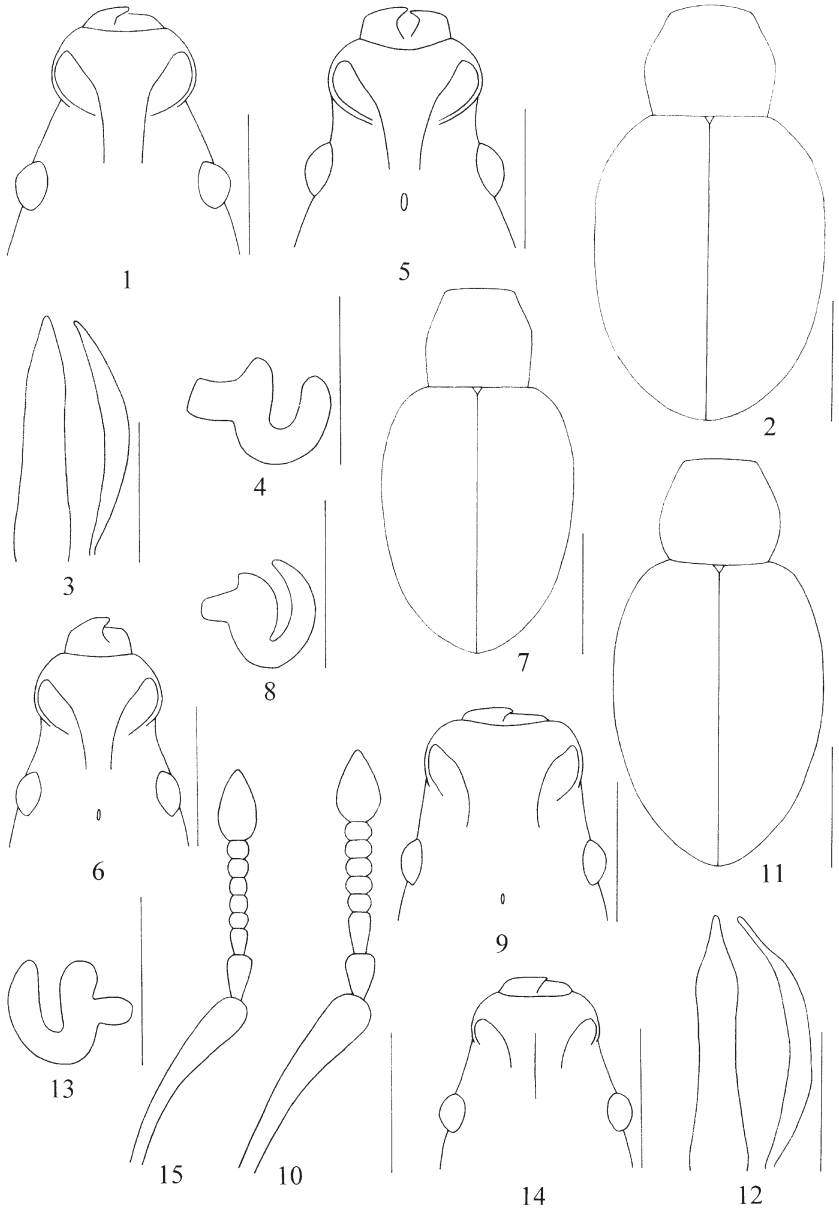
1. Rostrum wider, 1.61-1.80 times as wide as long, at base 1.13-1.17 times as wide as at apex (Fig. 14). Apical enlarged, rounded part of rostrum occupies the apical third of rostrum (Fig. 14). Antennal scapes slender, at apex weakly slenderer than clubs (Fig. 15). Funicle segment 1 twice as long as wide, 1.3-1.4 times as long as segment 2, which is 1.5-1.6 times as long as wide (Fig. 15). Pronotum with very small sparse punctures between punctures. Spermatheca with slender cornu and ramus longer than nodulus. Parthenogenetic species..... *Y. orientalis Borovec, 2010*

- Rostrum slenderer, 1.40-1.54 times as wide as long, at base 1.07-1.14 times as wide as at apex (Fig. 9). Apical enlarged, rounded part of rostrum occupies the apical half of rostrum (Fig. 9). Antennal scapes more robust, at apex as wide as clubs (Fig. 10). Funicle segment 1 1.4 times as long as wide, 1.1 times as long as segment 2, which is 1.8-1.9 times as long as wide (Fig. 10). Pronotum without very small punctures between punctures. Spermatheca with wide cornu and equally long ramus and nodulus (Fig. 13). Amphigonic species. ..... *Y. koreanus sp. nov.*

Etymology. Patronymic.

Biology. The type material was sifted from the forest litter in hilly terrain with *Castanea crenata* (M. Košťál, pers. comm.).

Distribution. South Korea.



Figs. 1-15. *Asphalmus kostali* sp. nov.: 1- head with rostrum in dorsal view. Scale = 0.50 mm; 2- pronotum and elytra in dorsal view. Scale = 1.00 mm; 3- penis in ventral and lateral view. Scale = 0.50 mm; 4- spermatheca. Scale = 0.25 mm. *Asphalmus japonicus* Sharp: 5- head with rostrum in dorsal view. Scale = 0.50 mm. *Asphalmus terricolus* sp. nov.: 6- head with rostrum in dorsal view. Scale = 0.50 mm; 7- pronotum and elytra in dorsal view. Scale = 1.00 mm; 8- spermatheca. Scale = 0.25 mm. *Yunakovius koreanus* sp. nov.: 9- head with rostrum in dorsal view. Scale = 0.50 mm; 10- antenna. Scale = 0.50 mm; 11- pronotum and elytra in dorsal view. Scale = 1.00 mm; 12- penis in ventral and lateral view. Scale = 0.50 mm; 13- spermatheca. Scale = 0.25 mm. *Y. orientalis* Borovec: 14- head with rostrum in dorsal view. Scale = 0.50 mm; 15- antenna. Scale = 0.50 mm.

Fig. 16. South Korea, Sobae Mts., Witae, deciduous subtropical forest, locality of *Asphalmus kostali* sp. nov.
Photo by Michael Košťál.
Fig. 17. South Japan, Shikoku island, Tsurugisan Mts., Koyadaira env., locality of *Asphalmus terricolus* sp. nov.
Photo by Michael Košťál.
Fig. 18. South Japan, Shikoku island, Tsurugisan Mts., Koyadaira env., locality of *Asphalmus terricolus* sp. nov.
Photo by Michael Košťál.
Fig. 19. Southwestern Korea, Puyŏ env., *Castanea* forest, locality of *Yunakovius koreanus* sp. nov.
Photo by Michael Košťál.

ADDITIONAL MATERIAL EXAMINED

Asphalmus japonicus Sharp, 1896

Material examined: 3 ♂♂ 2 ♀♀, Japan mer., Honshu island, Tottori, Kurayoshi env., 35°25.6' N 133°51.7' E, 60 m, 22.v.2014, M. Košťál lgt., (MKBC); 1 ♂ 2 ♀♀, Japan mer., Shikoku island, Tokushima, Ishii env., 34°00.2' N 134°25.1' E, 150 m, 23.v.2014, M. Košťál lgt., (MKBC).

Asphalmus sharpi Borovec, 2010

Material examined: 1 spec., China, East Fujian, Shiniushan, 25°38 N 118°30 E, 1 350 m, 1.-2.v.2008, J. Turna lgt., E. Colonnelli det., (ECRI).

Species known only from holotype from China, Jiangxi; first finding since the time of its description.

ACKNOWLEDGEMENTS. I am most grateful to M. Košťál (Brno, Czech Republic) who willingly lent me his material for the study and also to E. Colonnelli (Rome, Italy) for information about material deposited in his collection. Special thanks are extended to J. Skuhrovec (Crop Research Institute, Praha, Czech Republic) for his critical comments and to M. Rakovič (Dobřichovice, Czech Republic) for his linguistic help.

REFERENCES

BOROVEC R. 2006: Taxonomic notes on the tribe Omiini, with description of one new genus and species, and with revision of genera Anemophilus and Euplatinus (Coleoptera: Curculionidae: Entiminae). *Klapalekiana* 42: 1-44.

BOROVEC R. 2010: A taxonomic study of eastern Palaearctic Omiini (Coleoptera: Curculionidae: Entiminae). *Acta Entomologica Musei Nationalis Pragae* 50 (2): 577-594.

BOROVEC R. 2013: Omiini, p. 296-301. In: LÖBL I. & SMETANA A. (eds.): *Catalogue of Palaearctic Coleoptera*, Vol. 8., Leiden, Brill, 700 pp.

HAN K., JONG K. J., PARS S. & YUNAKOV N. 2014: *Insect fauna of Korea, Weevils III, Arthropoda: Insecta: Coleoptera: Curculionidae: Entiminae*. National Institute of Biological Resources, Seo-gu Incheon, 105 pp.

KOJIMA H. & MORIMOT K. 2004: An Online Checklist and Database of the Japanese Weevils (Insecta: Coleoptera: Curculionidae) (excepting Scolytidae and Platypodidae). *Bulletin Kyushu University Museum* 2: 33-147.

OBERPRIELER R. G., ANDERSON R. S. & MARVALDI A. E. 2014: 3. Curculionoidea Latreille, 1802: Introduction, Phylogeny. Pp. 285-300. In: LESCHEN R. A. B. & BEUTEL R. G. (eds.): *Handbook of Zoology, Arthropoda: Insecta; Coleoptera, Beetles, Volume 3: Morphology and systematics (Phytophaga)*. Walter de Gruyter, Berlin/Boston, 675 pp.