

Three new species of the genus *Acrotona* THOMSON, 1859 from Poland (Coleoptera, Staphylinidae: Aleocharinae)

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Abstract. Three new species of the genus *Acrotona* THOMSON, 1859 from Southern Poland are described and illustrated: *Acrotona beskidica* sp.n., *A. otrytica* sp.n. and *A. forestica* sp.n. The *beskidica*-group for new species of *Acrotona* is established, the affinities with related species are discussed. Ten species are transferred from the genus *Atheta* subgenus *Mocyta* MULSANT et REY, 1873, to *Acrotona*.

Key words: Coleoptera, Staphylinidae, Aleocharinae, new species, taxonomy, Poland.

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I. INTRODUCTION

Acrotona THOMSON, 1859 is one of the largest genus of the tribe Athetini. It currently contains over 200 species distributed throughout all zoogeographical regions.

There was considerable disagreement among early authors concerning the status of *Acrotona*. THOMSON (1859) established it as a genus of the tribe Athetini, but GANGLBAUER (1895), FENYES (1920), BERNHAUER and SCHEERPELTZ (1926), CAMERON (1939) and subsequent authors regarded this taxon as a subgenus of *Atheta*. In the most recent study of *Acrotona* subgenus, BRUNDIN (1952) recorded 29 Palearctic species in 11 species groups. Later, LOHSE (1974) based primarily on the microsculpture of the tergite 8 and shape of the genitalia (especially the shape of spermatheca), transferred the *fungi*-group of *Acrotona* (*sensu* BRUNDIN) to the newly adopted subgenus *Mocyta* Muls. et REY. YOSII & SAWADA (1976) were the first to raise the subgenus *Acrotona* again to the generic rank. This concept have been accepted only by SEEVERS (1978) and MUONA (1993), the later authors still maintained the subgeneric LOHSE's treatment. However, in my opinion, subgenus *Mocyta* shares all the subgeneric characters of *Acrotona* and the characters used to distinguish these two subgenera do not justify their separation. Transverse microsculpture on tergite 8, characteristic for species of the subgenus *Mocyta*, occurs also in some species of *Acrotona*. The shape of the spermatheca, although typical, seems to be insufficient as a basis for establishing separate subgenera. In addition, the new species described herein, should be assigned to the *Mocyta* based on the most of morphological characters but they have a completely different type of spermatheca. Moreover, creating new subgenera based on superficial and subjective features results in difficulties in distinguishing numerous species and associating them with subgeneric names. Therefore, I am supporting SEEVERS' view (1978), that some subgenera should be elevated to the generic rank. Moreover, in my opinion some subgenera should be also synonymized with some other subgenera and groups of species can be introduced instead. Such classification facilitates identification on both a generic and subgeneric level.

In this paper, I consider the *Acrotone* sufficiently distinct to warrant recognition as a separate genus; synonymizing the subgenus *Mocyta* with *Acrotone* and transferring all species of *Mocyta* to that genus. Three new species from Southern Poland described herein are included to the *beskidica*-group within the genus *Acrotone*. The type material is deposited in the Institute of Systematics and Evolution of Animals PAS, Kraków, Poland.

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II. SYSTEMATICS

Changes in taxonomy proposed here are summarized as follows:

Genus *Acrotone* THOMSON, 1859

= *Atheta* (*Mocyta*) MULSANT et REY, 1873

Acrotone amblystegii (BRUNDIN, 1952) comb. nov.

Acrotone amplicollis (MULSANT et REY, 1873) comb. nov.

Acrotone clientula (ERICHSON, 1839) comb. nov.

Acrotone fungi (GRAVENHORST, 1806) comb. nov.

Acrotone fussi (BERNHAEUER, 1908) comb. nov.

Acrotone gilvicollis (SCHEERPELTZ, 1949) comb. nov.

Acrotone haematica (EPPELSHEIM, 1884) comb. nov.

Acrotone negligens (MULSANT et REY, 1873) comb. nov.

Acrotone orbata (ERICHSON, 1837) comb. nov.

Acrotone orphana (ERICHSON, 1837) comb. nov.

Acrotone beskidica sp.n.

Acrotone otrytica sp.n.

Acrotone forestica sp.n.

***Acrotone beskidica* sp.n.**

(Fig. 1)

M a t e r i a l. Holotype, ♀: Poland, Beskid Wyspowy Mts., Jastrzębik River Valley, near Młyńczyska, 10.x.1996, leaf litter and wet moss in willow-poplar burshwoods, leg. G. PAŚNIK.

D e s c r i p t i o n of female. Length 2.9 mm. Body convex, robust, fusiform; ground colour black, elytra pitchy-brown, posterior margins of abdominal tergites narrowly reddish, legs and antennae reddish-yellow, antennae infusate towards apex.

Head transverse, narrower than pronotum, distinctly, arcuately widened to base, broadest at middle of postocular region, eyes large, protruding from lateral contours of head, length of each seen from above subequal to that of postocular region; surface of head covered with fine, transverse microsculpture, punctation indistinct, very fine and moderately dense; pubescence directed anteriorly and slightly inwardly. Antennae rather slender, antennomere 3 slightly shorter than 2, antennomeres 4-5 elongate, antennomeres 6-10 quadrate.

Pronotum transverse, 1.45 times as wide as long, convex, widest nearly at middle, more strongly narrowed to apex than to base; hypomeron invisible in lateral view; microsculpture similar to that on head; punctation very fine and dense; pubescence at midline directed posteriorly, at sides posterolaterally.

Elytra transverse, 1.52 times broader than their length at sides, broader than pronotum, at suture shorter than pronotum at midline (index 15:17), at sides 1.23 times as long as pronotum at midline, sides divergent posteriorly; punctation fine, dense and asperate; pubescence directed obliquely posteriorly.

Abdomen acuminate to apex, bases of tergites 3-5 each with transverse impression; microsculpture consisting of transverse weave; punctation moderately coarse and moderately dense, asperate, diminishing on tergites 7 and 8.

Spermatheca (Fig. 1) with oblong capsule directed laterally, umblicus small, duct twisted along its long axis and hooked posterior part.

Male unknown.

R e m a r k s. *Acrotona beskidica* sp.n. is very closely related to *A. fungi* (GRAVENHORST, 1806) and very similar in general appearance, but it can be distinguished from that species by its more robust body, more transverse pronotum (1.45 in *A. beskidica*, 1.33-1.35 in *A. fungi*), the less asperate punctation, the slightly shorter antennomere 3 of antenna and mostly by the shape of its spermatheca.

Acrotona otrytica sp.n.

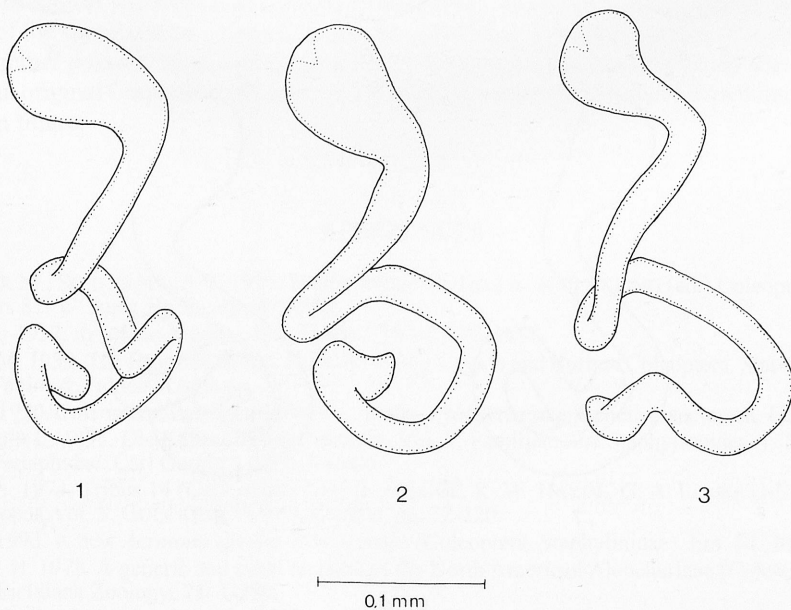
(Fig. 2)

M a t e r i a l. Holotype, ♀: Poland, Niskie Bieszczady Mts., Otryt, Hulske Mt., 820-840 m, 22.viii.1995, leaf litter in beech forest, leg. G. PAŚNIK.

D e s c r i p t i o n of female. Length 2.8 mm. Black, elytra pitchy-brown, posterior margins of abdominal tergites narrowly reddish, legs and antennae reddish-yellow.

Spermatheca (Fig. 2) with oblong capsule directed latero-posteriorly, small umblicus, duct in middle bent apically and with semicircular posterior portion.

Male unknown.



Figs 1-3. Shape of spermatheca. 1 – *Acrotona beskidica* sp.n.; 2 – *Acrotona otrytica* sp.n.; 3 – *Acrotona forestica* sp.n.

R e m a r k s. *A. otrytica* sp.n. is externally indistinguishable from *A. beskidica* sp.n., but it differs significantly from this species by the shape of its spermatheca (Fig. 2).

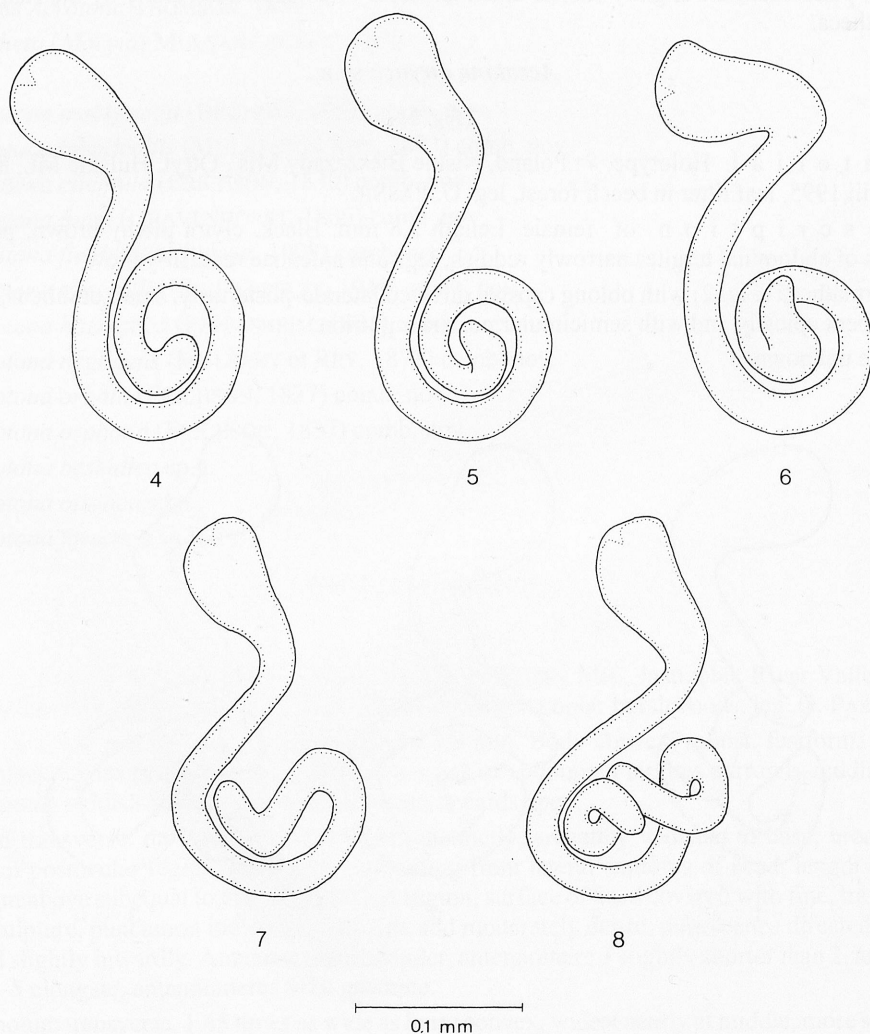
Acrotona forestica sp.n.

(Fig. 3)

M a t e r i a l. Holotype, ♀: Poland, Pogórze Cieszyńskie, Tuł Mts., 9.v.1996, leaf litter in beech forest, leg. G. PAŚNIK.

D e s c r i p t i o n of female. Length 2.5 mm. Body convex, robust, fusiform; ground colour black, pronotum and elytra paler, deep brownish-red, legs and antennae reddish-yellow.

Spermatheca (Fig. 3) with small capsule, duct twisted along its long axis and with semioval posterior portion.



Figs 4-8. *Acrotona fungi* (GRAV.) – variability of spermatheca.

Male unknown.

R e m a r k s. Externally, *Acrotona forestica* sp.n. is very similar to *A. beskidica* sp.n. and *A. otrytica* sp.n. but differs slightly from both species by slightly smaller size, slightly paler pronotum and elytra and mostly by the shape of its spermatheca.

E t y m o l o g y. The name *forestica* refers to the habitat where the new species was found.

C o m m e n t s. Three new species, *Acrotona beskidica*, *A. otrytica* and *A. forestica* form a group of closely related and very similar species. They are not distinguishable or difficult to distinguish externally but differ in their genital features. Based on the shape of the spermatheca as well as external characters, the three species dealt with in this paper are assigned to the new species-group characterized by the following combination of character states:

The *beskidica*-group

D i a g n o s i s. Body medium-sized; pubescence on head directed straight anteriorly and slightly inwards; antennae slender, antennomere 3 slightly shorter than 2, antennomeres 6-10 quadrate; pubescence of pronotum at midline directed posteriorly, at sides posterolaterally; sensory setae on tibiae very short; punctuation on abdomen diminishing on tergites 7 and 8; microsculpture on tergite 7 transversely weaved; female tergite 8 with 4 + 4 setae; metatarsomere 1 shorter than 2; spermatheca twisted or bent at middle of duct.

This new species-group is closely related to the *fungi*-group (see BRUNDIN 1952), but based on the interspecific overlap of external characters (size, colour, punctuation) it is difficult to draw a definite line of distinction between them; however they are characterized reliably by the shape of the spermatheca. Members of the *fungi*-group have S-shaped spermatheca with a spiral posterior portion of the duct. In *A. fungi* – the most closely related to all new species – the spermatheca is very variable (Figs 4-8) but its general appearance is identical and only the shape of the posterior part of the duct vary considerably within the species. In *beskidica*-group the spermatheca is more or less twisted in the middle along its long axis or bent apically, with a semioval or semicircular posterior portion. This type of spermatheca is unique in this group. Based only on the general similarities of the shape of the spermatheca, *A. otrytica* may be considered as a sister species of *A. forestica*, and the two together possibly form a sister group of *A. beskidica*. It seems very likely that this species represent an original Carpathian element, and it is quite probable that further Carpathian species will be found in future.

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