

# DESCRIPTION OF A NEW SPECIES OF *ANOMMATUS* FROM ROMANIA AND OF THE MALE OF *A. DUODECIMSTRIATUS* (COLEOPTERA, ANOMMATIDAE)

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A new species of *Anommatus* from Romania and the aedeagus of *A. reitteri* Ganglbauer 1899 and *A. duodecimstriatus* (Müller 1821) (a species formerly considered parthenogenetic) are described and illustrated.

## 1. INTRODUCTION

Many systematic problems of the genus *Anommatus* were solved due to Dajoz's monograph (1977). The taxonomic characters and the biometric methods used by Dajoz contributed to eliminating a great part of the confusions from the previous descriptions, wherein due to the insufficient taxonomic data, many coleopterologists included into one species (collective species) many distinct specific taxa. For instance, the astonishing variability described by previous researchers (Ganglbauer 1899, Reitter 1922) for *Anommatus duodecimstriatus* in reality hid the existence of many distinct species clustered under the same name. However, Dajoz himself wrote that "Beaucoup d'espèces étant fort rares et aucun caractère sexuel secondaire ne permettant de reconnaître les mâles (sauf chez *A. dentatus*) nous n'avons en général pas utilisé la forme de l'édéage pour la discrimination des espèces" (p. 209). On that account the systematics of Anommataidae is still difficult. Our studies on the fauna from the superficial subterranean environment (Nitzu 2000, 2001) have shown that many species are considered rare due to the inadequate methods of collecting. Using proper methods much many specimens could be available in the future for more elaborated taxonomic studies. Among the specimens collected by us using traps placed at 50 to 70 cm in depth in the Cloșani karstic area, one male of *Anommatus* belongs to a new species and other two males present all differential characters for *A. duodecimstriatus* – considered up to now as a parthenogenetic species (Dajoz, 1977).

## 2. MATERIAL AND METHODS

The material was collected using Barber traps placed at 50 to 70 cm into the calcareous subterranean superficial environment from the Cloșani karstic area (the Mehedinți Mountains, Romania). The traps were covered after placement

with the initial layer of stones and detritus following the technic described by us in a previous paper (Nitzu 2000).

Olympus CH-2 microscope provided with UDA-Olympus drawing attachment was used for the exam, drawing and biometrics of the male genitalia. Carl-Zeiss (Jena) microscope provided with reflected light installation was used to observe the cuticular microsculpture and a Nikon-102 stereo dissecting microscope was used to study the external structures of dried specimens.

I examined the genitalia in glycerine and those illustrated by line drawings were mounted in Eukit.

Additional comparative material: 8 specimens of *Anommatus reitteri* Ganglbauer 1899: 3 labelled Makkosmária 400m, leg. Adam, det. Slipinski; 5 – Herkulesfürdo (Băile Herculane), leg. Pavel, det. Kaszab and 4 specimens of *A. hungaricus* Dudich *trapezicollis* Kaszab 1947: 1 paratypus – Mariabesnyő, leg. Fodor, det. Kaszab and 3 – Békes m., leg. et det. Merkl Otto – all of them from the Hungarian Natural History Museum's collection in Budapest.

### 3. DESCRIPTION

#### *Anommatus oltenicus* n. sp.

Holotype: 1 male – Steiul Roșu, 70 cm depth in calcareous subterranean superficial environment (the karstic region Cloșani, the Mehedinți Mountains, Romania)(Coll. I.S.E.R.), 28.IV.1999, leg. Victoria Ilie.

Habitus: (Fig. 1.) Body length = 1.63 mm.

Colour: Yellowish (depigmented).

Head (Fig. 5). Punctuation of head distinct on frons and vertex; spaces between punctures without trace of microsculpture (at 200× magnification) excepting two small ventro-lateral microreticulate areolas – one on each temporal region. The fourth antennomere 1.5 times as long as the third antennal joint. The length of the antennomeres 1; 2; 3; 4 = 0.07; 0.05; 0.03; 0.02 mm.

Thorax. Pronotum (Figs. 1, 5) 0.48 mm long, 0.49 mm wide, nearly square-shaped (pronotal length/width = 0.98), moderately densely punctate. Punctures oval, each point including two small tubercles and 1 small seta (300× in reflected light microscopy) (Fig. 5A). A deeply impressed transversal furrow (a distinctly sulcate prebasal line) exists before the posterior margin. The pronotal surface is entirely smooth, without trace of microreticulation.

Protibia – Fig. 2. Femora normal, without denticles.

Elytron (Fig. 1) with six rows of punctures. Elytral base slightly crenulate; humeral angle slightly protruded. Elytral length = 0.89 mm, elytral width = 0.26 mm (ratio L/w = 3.42); ratio elytral length/pronotal length = 1.85.

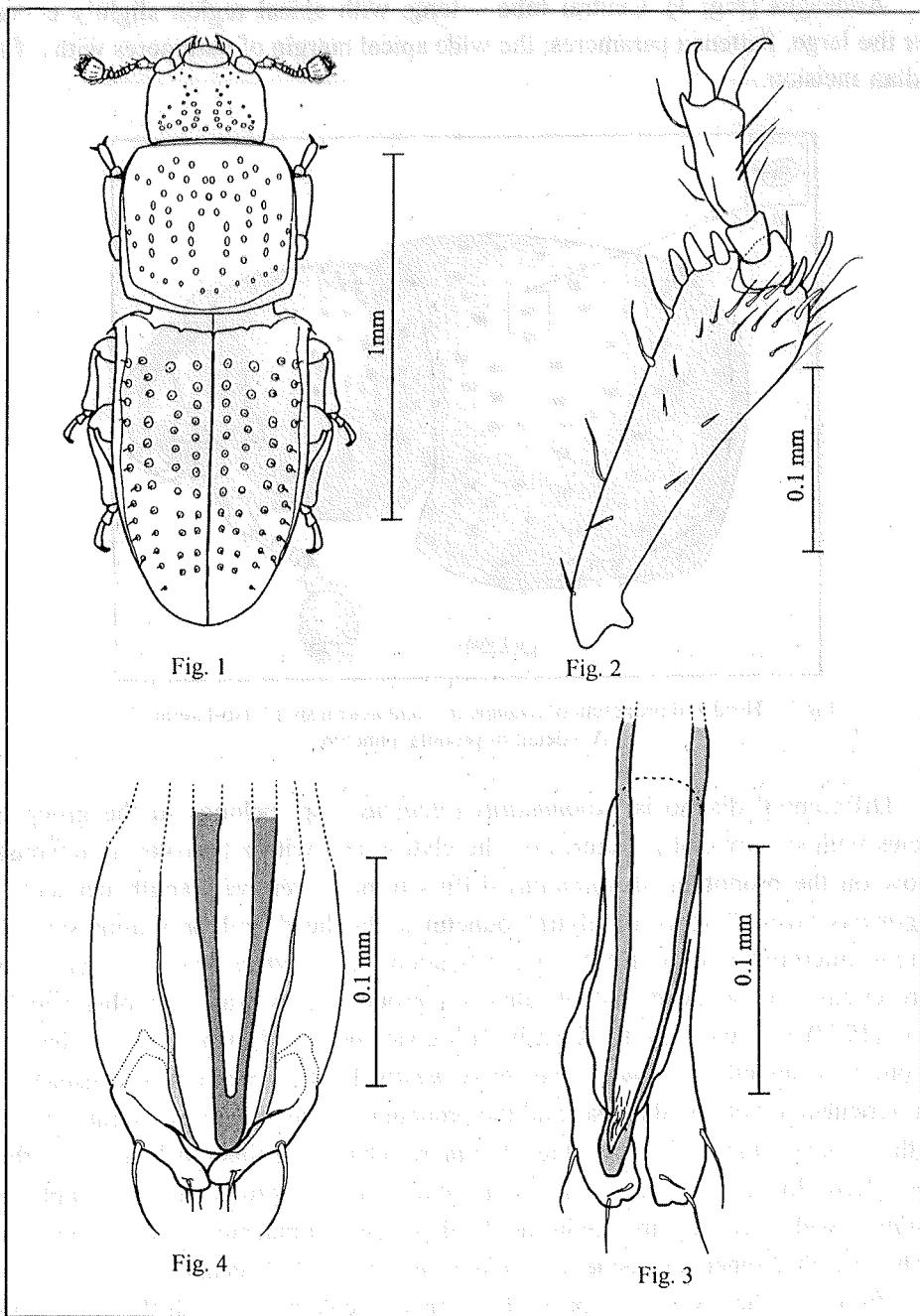


Fig. 1 – Habitus of *Anommatus oltenicus* n. sp.; Fig. 2 – Protibia of *Anommatus oltenicus* n. sp.; Fig. 3 – Aedeagus of *Anommatus oltenicus* n. sp. (apical half of the central lobe and tegmen with parameres); Fig. 4 – Aedeagus of *Anommatus reitteri* (apical part of the central lobe and parameres).

Aedeagus (Fig. 3). Central lobe – long, with apical region slightly curved over the large, flattened parameres; the wide apical margin of parameres with a fine median incision.

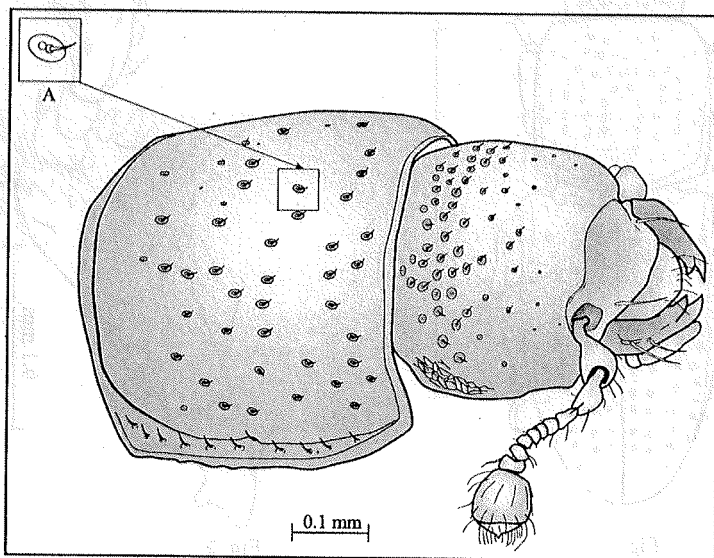


Fig 5 – Head and pronotum of *Anommatus oltenicus* n.sp. (dorso-lateral view); A – detail of pronotal puncture.

Differential diagnosis: *Anommatus oltenicus* n.sp. belongs to the group of species with six rows of punctures on the elytron and with a transversal antebasal furrow on the pronotum. *A. oltenicus* differs from *A. reitteri* Ganglbauer and *A. hungaricus* (with 7 rows of elytral punctures) by head and pronotum smooth, without microreticulation (300× magnification). *A. reitteri* has a conspicuous microreticulation on head and obsolete on pronotum, as was also observed by Dajoz (1977) and contrary to Kaszab's observations (1947) who noticed that the pronotum is smooth. *A. hungaricus trapezicollis* Kaszab presents a conspicuous microreticulation both on the head and the pronotum. *A. oltenicus* has the ratio elytral length/ pronotal length = 1.85 (1.80 for *A. reitteri*); elytra 1.71 times as long as together wide (1.70 for *A. reitteri*). The punctuation of the pronotum is simple at *A. reitteri* (with only one tubercle inside the depression of puncture) and composed of punctures with 2 tubercles inside at *A. oltenicus* (Fig. 5A). Aedeagus of *A. oltenicus* differs from the other examined species by parameres enlarged towards the apical third and with a small median excavation on the apical margin (Fig. 3–Fig. 4).

Deviatio nominis: From Oltenia – one of the historic provinces of Romania.

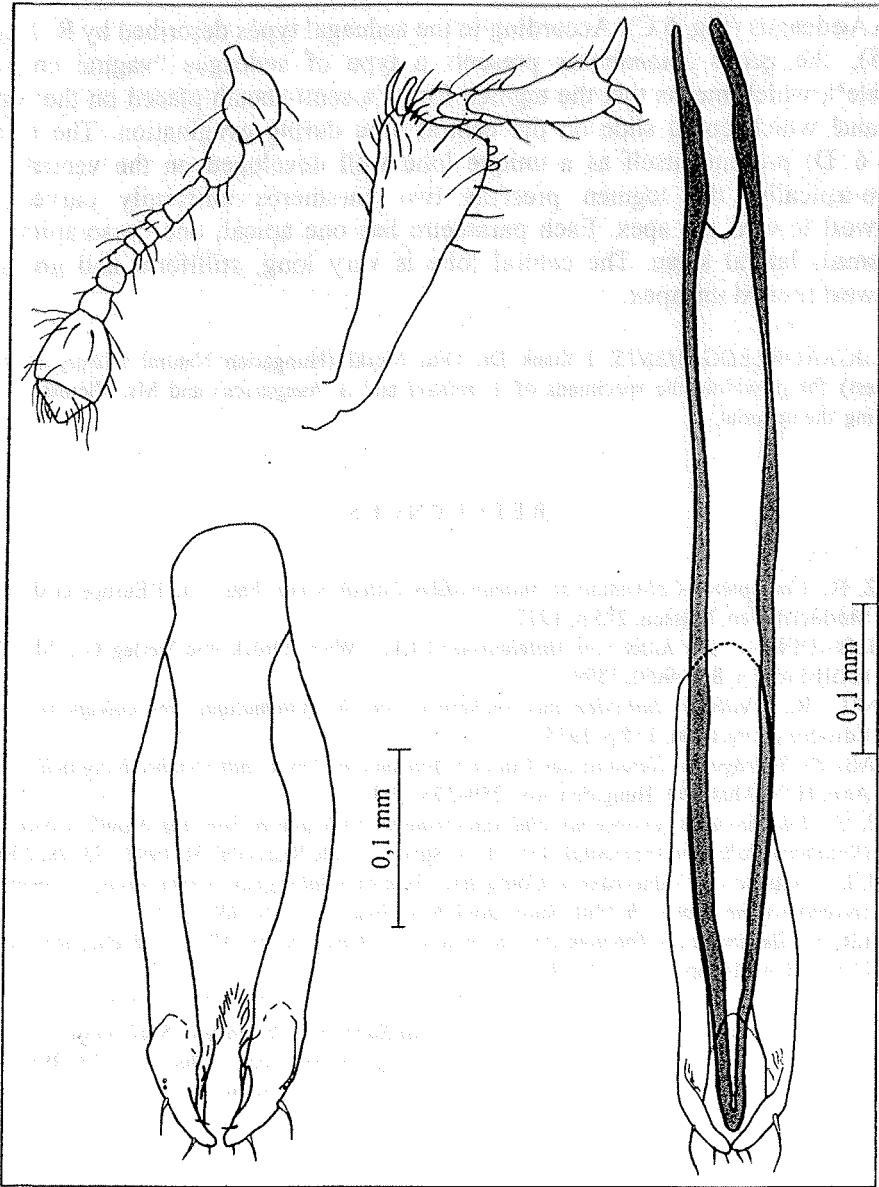


Fig. 6 – *Anommatus duodecimstriatus* (male from Cloșani region): A – antenna; B – protibia; C – aedeagus; D – detail of the tegmen with parameres.

### Description of male of *Anommatus duodecimstriatus* (Müller 1821)

No sexual dimorphism was observed at *A. duodecimstriatus*. Protibia and antenna as in Fig. 6 A, B.

Aedeagus (Fig. 6 C). According to the aedeagal types described by R. Jeannel (1955), the genus *Anommatus* presents a type of aedeagus "vaginé en gaine sternale", which means that the tegmen forms a semi-sheath placed on the ventral side and which could slide on the central lobe during evagination. The tegmen (Fig. 6 D) presents itself as a unique lobe well developed on the ventral side. Latero-apically, the tegmen presents two parameres uniformly curved and narrowed toward the apex. Each paramere has one apical, one dorso-apical and two small lateral setae. The central lobe is very long, stilliform and gradually narrowed toward the apex.

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