

## First records of genera *Tomoxioda* Ermisch and *Paratomoxioda* Ermisch (Coleoptera: Mordellidae) from Palaearctic region

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### Taxonomy, new combinations, keys, Coleoptera, Mordellidae, Palaearctic region

**Abstract.** New combinations *Tomoxioda truncatoptera* (Nomura, 1958) (from *Mordella*), *Paratomoxioda evanescens* (Normand, 1949) and *P. curvipalpis* (Stshegoleva-Barovskaya, 1930) (from *Mediimorda* Méquignon, 1946) are proposed. Genera *Tomoxioda* Ermisch, 1950 and *Paratomoxioda* Ermisch, 1954 are thus recorded from the Palaearctic region for the first time. Keys to Palaearctic genera related to *Tomoxia* Costa, 1854 and to the species of *Paratomoxioda* Ermisch, 1954 are provided.

### INTRODUCTION

Genera *Tomoxioda* Ermisch, 1950 and *Paratomoxioda* Ermisch, 1954, both related to *Tomoxia* Costa, 1854, have been known from the Oriental and Afrotropical regions respectively. Two Palearctic species, so far classified in the genus *Mediimorda* described by Méquignon (1946), are transferred to *Paratomoxioda* in the present paper: *Paratomoxioda curvipalpis* (Stshegoleva-Barovskaya, 1930) from Iran and Pakistan, and *Paratomoxioda evanescens* (Normand, 1949) from North Africa. Whereas the occurrence of species with Afrotropical origin and/or affinities is rather frequent in the eastern Mediterranean and Arabian peninsula, the occurrence of *P. evanescens* in North Africa is very interesting, as it represents an isolated relict of an Afrotropical faunal element. *Tomoxioda truncatoptera* (Nomura, 1958) from Japan was described as *Mordella* L. It is closely related to *T. auropubescens* Ermisch, 1950 from Sumatra. Further Oriental species, belong to this complex, which are partly undescribed and partly described by Pic as *Mordella* and not yet transferred to *Tomoxioda*. The occurrence of the genus *Tomoxioda* in Japan thus represents only a logical extension of the known range of this genus northwards.

Following acronyms are used throughout the paper to denote the depository of the examined material:

CHP collection Jan Horák, Prague;  
MHNG Musée d'Histoire naturelle, Genève, Switzerland.

### SYSTEMATICS

Three genera belonging to the informal *Tomoxia* complex of genera are known to occur in the Palaearctic region. They can be distinguished according to the following key.

- 1(2) Hind tibiae besides preapical ridge with fine dorsolateral ridge. First tarsomere of posterior tarsus without dorsolateral ridge. Eyes very finely faceted, with interfacetal setae. Palaearctic, Oriental, Nearctic and Neotropical regions ..... *Tomoxia* Costa, 1854
- 2(1) Hind tibiae and hind tarsomeres without dorsolateral ridges. There are only some modified spinulae simulating ridges.
- 3(4) Eyes finely faceted with dense interfacetal setae. Afrotropical and southern Palaearctic regions .....  
..... *Paratomoxioda* Ermisch, 1954
- 4(3) Eyes finely faceted, without interfacetal setae. Australian, Oriental and southeastern Palaearctic regions .....  
..... *Tomoxioda* Ermisch, 1950

***Paratomoxioda evanescens* (Normand, 1949) comb. n.**  
(Figs 1-9)

*Mordella (Mediimorda) evanescens* Normand, 1949: 82.

**Material examined.** Lectotype, by present designation (MHNG), ♂, Trolard-Tazo [Algeria], vii.1939, Dr. Laurent; originally labeled as „*evanescens* Norm. in lit., nov.sp.“. Paralectotype by present designation (MHNG), ♀, the same data (further syntypes not seen).

**Additional material.** Marokko mer. or. [Morocco], Aoufouss, 9.vi.1994, M. Mantič leg., 1 ♂, (CHP).

**Comments.** This very conspicuous species resembles by its colour pattern species of the genus *Mediimorda*, in which it was originally described. It differs from the latter genus in eyes with interfacetal setae, scutellum truncate at the apex, missing dorsal ridge on posterior tibiae and male genitalia, which have the shape characteristic of the genus *Mordella*. The shape of the second segment of maxillary palpus in male resembles that of the species from South Africa (see the key below). The original description by Normand (1949) is supplemented here by illustrations of habitus, maxillary palpus, antenna, genitalia etc. (Figs 1-9).

**Note.** The centre of speciation of *Paratomoxioda* is in South and East Africa. *P. evanescens* represents the isolated northernmost occurrence of the genus.

**Distribution.** Algeria, Morocco, Tunisia.

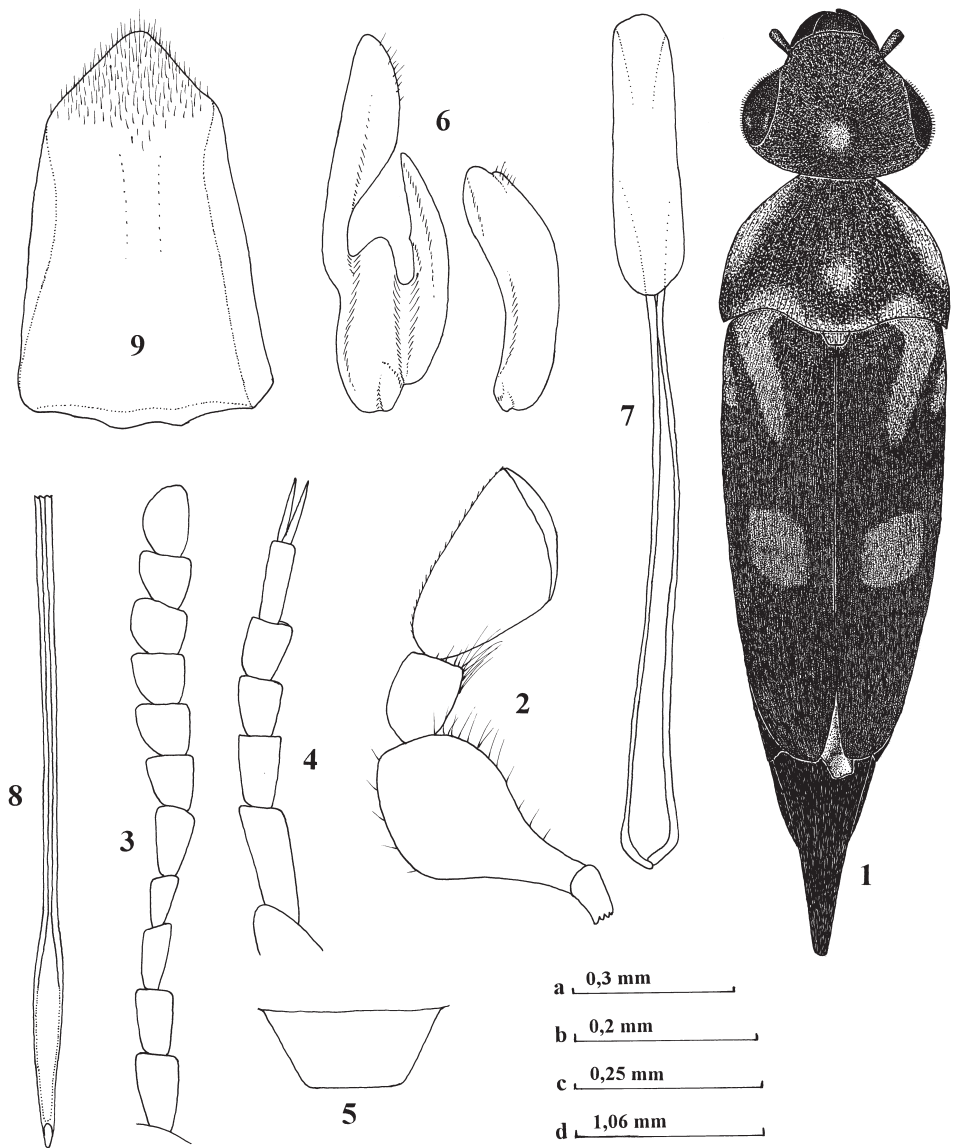
***Paratomoxioda curvipalpis* (Stshegoleva-Barovskaya, 1930) comb. n.**  
(Figs 10-12)

*Mordella curvipalpis* Stshegoleva-Barovskaya, 1930: 751.

*Mordella curvipalpis*: Horák, 1985: 22.

*Mediimorda curvipalpis*: Odnosum, 2003: 20.

**Material examined.** SE Iran, 13-47 km N Espakeh, Sands, Loc. no. 156, 11.iv.1973, Exp. Nat. Mus. Praha, 1 ♂ (CHP); SE Iran, 55-78 km NNW Tis, Pish mont. kowr river, Loc. no. 151, 8.iv.1973, Exp. Nat. Mus. Praha, 1 ♀ (CHP); S. Iran, prov. Hormozgan, Angohran SE Mináb, 24.iv.2002, P. Kabátek leg., 1 ♂ (CHP); Pakistan, W. Balochistan, Turbat, 8.-



Figs 1-9. *Paratomoxioda evanescens* (Norm.), male (Morocco): 1- habitus; 2- maxillary palpus; 3- antenna; 4- anterior tarsus; 5- scutellum; 6- paramere; 7- phallobase; 8- apex of penis; 9- 8<sup>th</sup> internal sternite. (Scale: a - 3, 7, 8, 9; b - 5; c - 2, 4, 6; d - 1).

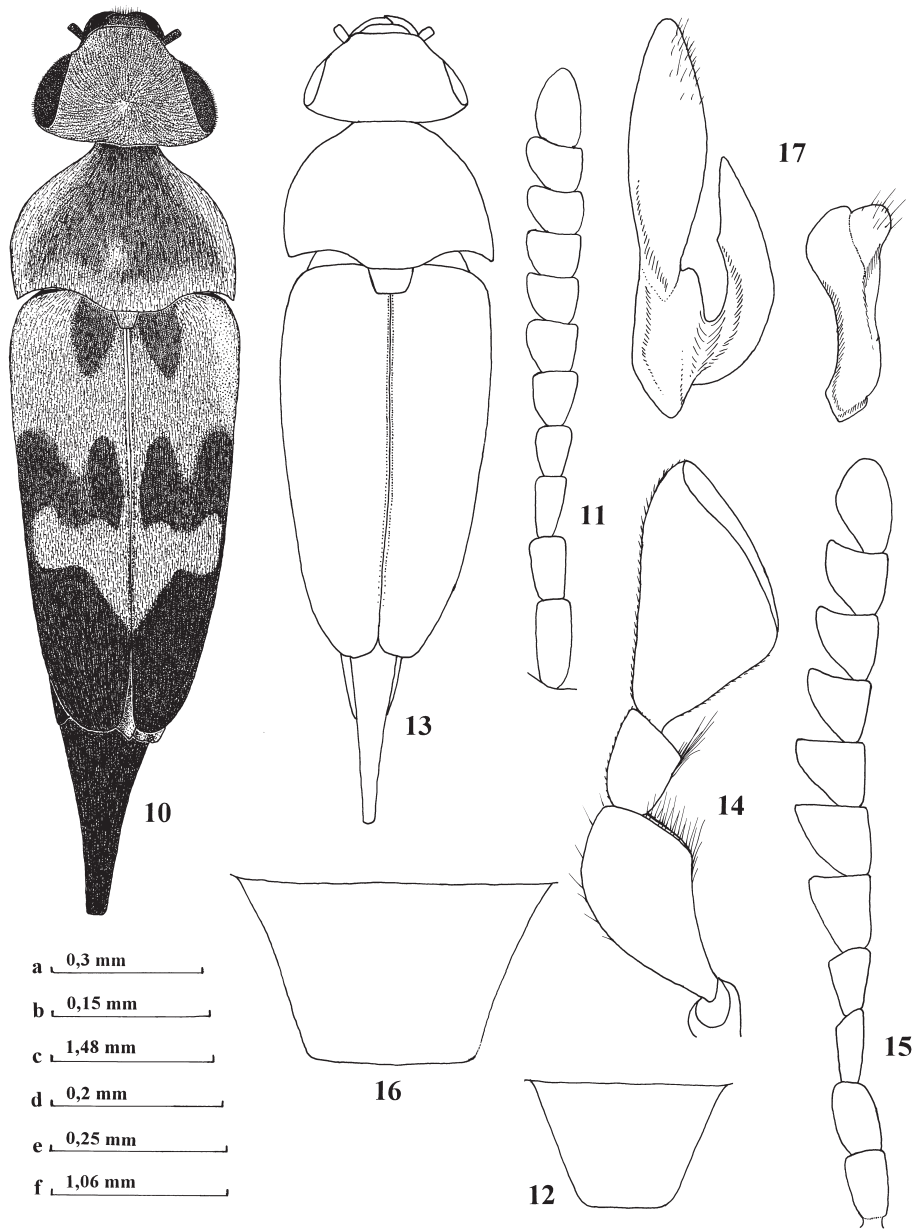
19.iv.1993, S. Bečvář leg., 1 ♂, 2 ♀♀ (CHP); Pakistan, W. Balochistan, Tump (90 km W Turbat), 13.-15.iv.1993, S. Bečvář leg., 1 ♂, 1 ♀ (CHP).

**Comments.** Based on the truncate apex of scutellum, eyes with interfacetal setae, missing dorsal ridge on posterior tibiae, shape of the second segment of male maxillary palpus, etc. this species belongs to the genus *Paratomoxioda*. Its size and the pattern of coloured setae as well as other traits suggest its close relationship to *P. bioculata* Franciscolo, 1965 from South Africa. Maxillary palpus and genitalia were figured by Horák (1985: Figs 72-75), habitus, scutellum and antenna are figured in the present paper (Figs 10-12). *P. curvipalpis* is the only known species of the genus occurring outside Africa.

**Distribution.** Iran, Pakistan.

Both Palaearctic species of *Paratomoxioda* can be incorporated into the key of the genus by Franciscolo (1965) as follows (modified):

- 6(5) The third antennomere as long as, or very slightly shorter than the second. The last tarsomere of the anterior tarsi is only twice as long as the third, sometimes only 1 and  $1^{1/3}$  times as long as the latter. The penultimate article is about as long as the 3<sup>rd</sup> one. Body length usually above 5 mm.
- 7(8) Pronotum and head densely and uniformly covered with heavy golden whitish pubescence, without any dark markings or spots.
- A(B) Antennomeres 2, 3 and 4 all of the same length, 4 distinctly longer than 5. White-silvery pubescence occupying nearly one fourth of the length of elytra at their base, encloses a large, round black spot. The spot is interconnected at apical side with a median black stripe. Further broad white-silvery bar is situated between the midlength and apical third of elytra and interrupted at suture. Length 6.4 mm. - South-West Africa, Namibia ..... 3. *bioculata* Franciscolo, 1965
- B(A) Antennomere 4 as long as 5 and more or less distinctly shorter than 3. Entire basal third of elytra covered with white-silvery pubescence, except for an oblong-ovate black spot near scutellum, which is completely isolated. Broad transverse whitish-silvery bar behind the midlength of elytra with posterior triangular projection is not interrupted at suture. Length 5.6 - 7 mm. - Iran, Pakistan .....  
..... *curvipalpis* (Stshegoleva-Barovskaya, 1930)
- 8(7) Head and pronotum covered with dark pubescence. The head has only an aureole of paler hairs and the pronotum bears a pattern of silvery or golden pubescence along the base, with some protruding sinuities at sides and near the basal lobe. Smaller species.
- 9(12) The second article of the male maxillary palpus is elongate, subclavate, without any dilatation at middle, much longer than broad (usually about 5 to 7 times as long as broad at middle).
- 10(11) Right parameron with a normally developed, sclerotized dorsal branch, without any hook-shaped protuberance at its inner side. The last article of the maxillary palpi is elongately securiform, its inner angle is obtuse, the outer one is smoothed at vertex. Elytral pubescent design consisting of four pre-basal small spots, a narrow basal, marginal, a postscutellar spot common to both elytra, and two postmedian subrectangular spots. Length 5.8-6 mm. - South-West Africa: Otjikondo, Zimbabwe .... 4. *novemguttata* Franciscolo, 1965
- 11(10) Right parameron with an extremely long, slender, very feebly sclerotized dorsal branch; its inner margin (at about one fourth from apex) with a very long, hook-shaped protuberance. The last article of maxillary palps is triangularly securiform, its inner angle is perfectly square, the outer one is very acute and not smoothed at vertex. Elytral pubescent pattern consists of a complete basal band which leaves acircular black spot on each side of scutellum, and of a reduced post-median spot. Length 5.2 mm. -South West Africa: Okahandja .....  
..... 5. *uncinata* Franciscolo, 1965
- 12(9) The second article of the male maxillary palpi is strongly dilated, sometimes as long as broad or about twice



Figs 10-17. *Paratomoxioda curvipalpis* (Stsheg.-Bar.), male (Pakistan): 10- habitus; 11- antenna; 12- scutellum. *Tomoxioda truncatoptera* (Nomura), male (Japan): 13- habitus; 14- maxillary palpus; 15- antenna; 16- scutellum; 17- paramere. (Scale: a - 11, 15, 17; b - 16; c - 13; d - 12; e - 14; f - 10).

- as long as broad.
- 13(14) Antennomere 5 to 10 slightly broader than long, 5<sup>th</sup> article is conical and distinctly longer than 6<sup>th</sup>. Right parameron is normally narrow, ventral branch 1/2 to 2/3 as long as the dorsal branch.
- A(B) Second segment of maxillary palps in male almost as long as broad, flat, almost subcircular. Silvery pattern at the base of elytra narrow, embracing a large black spot, which remains not enclosed posteriorly. Right parameron very slender, about twice as long as broad at its base; without at its inner margin which is regularly convex and without chaetae. The inner edge of the ventral branch of the parameron forms a small protuberance which is not hook-shaped. Length 5.7 mm. - South West Africa: Okahandja .....  
 .....6. *grandipalpis* Franciscolo, 1965
- B(A) Second article of maxillary palps male about twice as long as broad. Silvery pattern at the base of elytra consists merely of an oblong and oblique stripe running from humerus to one third of the elytral length. The inner edge of the ventral branch of the right parameron very indistinct, without hook-shaped protuberance. Length 5.8 mm. - Tunisia, Algeria, Morocco .....  
 .....*evanescens* (Normand, 1949)
- 14(13) Antennomere 5 to 10 equilateral, 5<sup>th</sup> article is dentate and as long as 6<sup>th</sup>. Second article of maxillary palps male strongly dilated, about twice as long as broad. The dorsal branch of the right parameron is short, with a very narrow base, then abruptly dilated, about as long as its base; its inner margin is sinuate; at its inner edge the ventral branch is provided with a strong, hook-shaped protuberance. The elytral pubescent design is very reduced and consists of golden hairs. Length 4 mm. - South West Africa: Okahandja. ....  
 .....7. *brevis* Franciscolo, 1965

***Tomoxioda truncatoptera* (Nomura, 1958) comb. n.**

(Figs 13-17)

*Mordella truncatoptera* Nomura, 1958: 21.

**Material examined.** Japan, Shiga-ken, Mikunidakeyama, 700m. E slope, 35°20'40"N 135°41'10"E, 12.vii.2002, Bolm leg., 1 ♂ (CHP); Fukushima Pref., Akane Rindo, 17.vi.1979, 1 ♀ (CHP); Japan, Mt. Fuji, 9.-10.vi.1976, Krecbach, 1 ♀ (CHP).

**Comments.** Comparatively large and robust species (Fig. 13). Truncate scutellum (Fig. 16), eyes without interfacetal setae, missing dorsal ridge on hind tibiae and other traits classify it as a member of the genus *Tomoxioda*. It differs from the Australian species of the genus by a distinctly larger and more convex body. It seems to be closely related to *T. auropubescens* from Sumatra, which has a striking pattern of golden hairs on dorsum and is distinctly more slender (female). Original description is supplemented here by illustrations of antenna (Fig. 15) and parameres (Fig. 17).

**Note.** It is by now the only species of *Tomoxioda* occurring beyond the limits of the Oriental and Australian regions.

**Distribution.** Japan.

**ACKNOWLEDGEMENTS.** It is my pleasant duty to express my thanks to C. Besuchet and I. Löbl (MHNG) for the loan of type material in their charge. I thank to J. Jelínek (NMP) for the translation of the manuscript.

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