

30th Result of the zoological Expedition of the National Museum in Prague to Turkey

Coleoptera — Nitidulidae

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The present paper is a review of the Nitidulidae collected by the zoological expedition of the National Museum in Prague to Turkey during May—September 1947. A report of that expedition, with short accounts of particular biotopes and localities was published by Hoberlandt and Táborský (1948).

The collected material of Nitidulidae contains 133 specimens of 20 species, collected in the main by sweeping, partly also by use of a special net attached to a car, in the following localities: Edirne, Mollafeneri, Ankara—Baraj, Moğan gölü, Pozanti, Bürücek, Gyaur dağlari, Beyşehir gölü. A further 13 specimens of 5 species were collected during travel in Yugoslavia (Irig and Mladenovac in Serbia), and Bulgaria (Svilengrad).

From the 20 species collected during the expedition to Turkey 7 species can be designated as pontomediterranean or holomediterranean species according to the definition of De Lattin (1949). They are as follow: *Cateretes dalmatinus* Strm., *Carpophilus quadrisignatus* Er., *Meligethes ater* Bris., *M. hoffmanni* Reitt., *M. nanus* Er., *M. lepidii* Mill. and *M. buduensis* Ganglb. 6 further species are recently widely distributed ones, but probably also of mediterranean origin: *Meligethes maurus* Strm., *M. obscurus* Er., *M. nigrescens* Steph., *M. planiusculus* (Heer), *M. acicularis* Bris. and *M. egenus* Er. 4 species [*Brachypterolus linariae* (Cornel.), *Meligethes aeneus* (F.), *M. coracinus* Strm. and *M. brachialis* Er.) can be characterized as an eurosiberian element. The only species, *Meligethes pectinatus* Schilsky, occurs, according to our recent knowledge, in Caucasus and Anatolia only, representing probably the caspian element sensu de Lattin (1951). One species, *Meligethes funereus*, new to science and described below, is known only from Anatolia and Italy so far, but we are unable to come to any conclusions about its distribution.

Review of material from Anatolia

CATERETINAE

Cateretes dalmatinus (Sturm, 1844)

Distribution: Asia Minor, Greece, Albania, Yugoslavia, South Italy, Sicily, Sardinia.

Material examined: Moğan gölü, 5. 7. 1947, 3 specimens.

Brachyterolus linariae (Cornelius, 1863)

Distribution: Europa, Asia Minor, Mongolia.

Material examined: Ankara-Baraj, 3.—4. 7. 1947, 1 spec. — Mogan gölü, 9. 7. 1947, 1 spec.

Discussion: This species, taken as a synonym of *B. pulicarius* (L.), was recognized as a distinct species by Hansen (1943). Its distribution is not yet known, but it conforms probably to that of *B. pulicarius* (L.). About its occurrence in Mongolia see Jelínek (1965).

MELIGETHINAE

Meligethes aeneus (Fabricius, 1775)

Distribution: North Africa, Europa, Western Asia.

Material examined: Çamlidere, Işık dağı, 23. 6. 1947, 1 spec.

Meligethes coracinus Sturm, 1845

Distribution: Europa, Asia Minor, Caucasus, Siberia.

Material examined: Mollafeneri, 21. 6. 1947, 2 spec.

Meligethes maurus Sturm, 1845

Distribution: Europa, Caucasus, Asia Minor, Kazakhstan, West Siberia, according to Horion (1960) also Central Asia.

Material examined: Moğan gölü, 8. 7. 1947, 1 spec.

Meligethes ater Brisout, 1868

Distribution: South France, Italy (Horion 1960), Yugoslavia, Albania, Asia Minor, Palestine, according to Horion (1960) also Hungary, Czechoslovakia, Caucasus and Crimea. I know no specimens of this species from Czechoslovakia.

Material examined: Ankara-Baraj, 3.—4. 7. 1947, 4 spec. — Moğan gölü, 5. 7. 1947, 2 spec. — Bürücek, Toros, 29.—31. 7. 1947, 1 spec.

Meligethes hoffmanni Reitter, 1871

Distribution: South France, Czechoslovakia, Hungary (probably also Austria), Yugoslavia, Albania, Asia Minor.

Material examined: Beyşehir gölü, 3. 9. 1947, 9 spec.

Discussion: Contribution to the knowledge of the species has been made by Easton (1955) who also figured its genitalia. Its distribution is probably as *M. ater* Bris. Interesting is its occurrence in Sweden according to Palm (1955) and Horion (1960).

Meligethes obscurus Erichson, 1845

Distribution: South and Central Europa, Caucasus, Asia Minor.

Material examined: Moğan gölü, 9. 7. 1947, 2 spec.

Meligethes brachialis Erichson, 1845

Distribution: Europa, Caucasus, Siberia, Asia Minor.

Material examined: Ankara-Baraj, 3.—4. 7. 1947, 1 spec.

Meligethes nigrescens (Stephens, 1830)

Distribution: Canary Islands, Madeira, North Africa, Europa, Asia Minor, Palestine, Arabia, Siberia, North America.

Material examined: Mollafeneri, 21. 6. 1947, 1 spec.

Meligethes nanus Erichson, 1845

Distribution: Canary Islands, West Europa to Holland and southern England, South Europa (northwards to Czechoslovakia, Austria and Hungary), Cyprus, Asia Minor, Syria, Palestine, Caucasus. According to Palm (1955) also in Sweden.

Material examined: Edirne, 8.—13. 6. 1947, 1 spec.

Meligethes buduensis Ganglbauer, 1899

Distribution: Yugoslavia, Albania, Bulgaria, Greece, Crete, Asia Minor.

Material examined: Pozanti, Toros, 28. 7. 1947, 1 spec.

Meligethes pectinatus Schilsky, 1894

Distribution: Caucasus, Asia Minor.

Material examined: Ankara-Baraj, 3.—4. 7. 1947, 3 spec.

Discussion: This interesting species will be redescribed in the revision of the *M. tristis* species group, which is being prepared by Easton and Jelínek.

Meligethes planiusculus (Heer, 1841)

Distribution: Canary Islands, North Africa, Europa, Asia Minor.

Material examined: Ankara-Baraj, 3.—4. 7. 1947, 1 spec.

Meligethes lepidii Miller, 1852

Distribution: South and southern Central Europa, Asia Minor, Syria, Palestine, Caucasus, Afghanistan. According to Horion (1960) also in East Siberia.

Material examined: Ankara-Baraj, 3.—4. 7. 1947, 1 spec.

Meligethes acicularis Brisout, 1863

Distribution: France, Belgium, Germany, Czechoslovakia, Asia Minor.

Material examined: Ankara-Baraj, 3.—4. 7. 1947, 1 spec. — Moğan gölü, 8. 7. 1947, 1 spec.; dtto, 9. 7. 1947, 1 spec.

Discussion: The true status of this species has been recognized by Easton (1954). Its distribution is not yet completely known. Horion (1960) is certainly right, speaking about it as a thermophilous species of southern provenance, occurring in Central Europe on xerotherme localities only.

Meligethes funereus, n. sp.

Male. — Oblong oval, subparallel, moderately narrowed forwards and backwards, moderately convex.

Head triangular, flat, anterior margin of clypeus widely and shallowly emarginate. Punctures on the upper surface of head nearly equal in size to eye facets, separated by less than one diameter, spaces between them smooth and shining, with only slight traces of reticulation.

Antennae short, only slightly longer than the breadth of head between eyes. The second segment thicker than the following ones, conical, hardly 1.5 times as long as wide, the third segment 2.6 times as long as wide, equal in length to the preceding one, the fourth segment slightly longer than wide, the fifth one as long as wide, the sixth to eighth ones transverse. Club roundly oval, 1.33 times as long as wide, as long as the third to eighth segments together.

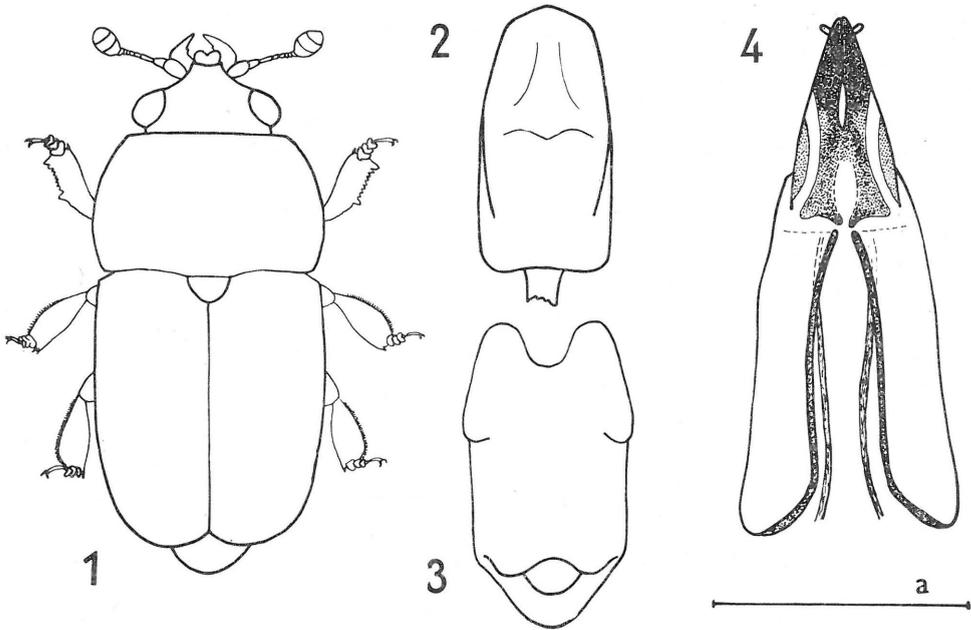
Pronotum transverse, 1.65 times as wide as long, widest at the basal third, moderately narrowed forwards, slightly but distinctly narrowed backwards (distance between anterior angles 0.7 mm, that between posterior angles 1 mm), convex. Sides moderately rounded, very narrowly bordered. Anterior margin almost straight, anterior angles obtuse, rounded. Basal margin arcuate before scutellum, feebly sinuate besides scutellum. Posterior angles obtuse. Punctures of the upper surface nearly equal in size and density to those of head, spaces between them smooth and shining, basal margin with feeble traces of reticulation. Scutellum triangular with broadly rounded apex, reticulate.

Elytra as wide as pronotum, 1.2 times as long as their combined width, subparallel, at two thirds of their length moderately narrowed towards the apex, apex of each elytron widely and flatly separately rounded. Sides very narrowly bordered. Upper surface not strongly convex, so that the side borders of both elytra viewed from directly above are simultaneously visible in their entirety. Shoulders feebly prominent. Punctures of the upper surface in the basal half somewhat larger than those of pronotum, separated usually by less than one diameter, becoming gradually finer and sparser towards the apex. Spaces between punctures smooth and shining, in the apical part finely reticulate. Slight transverse rugosity is developed at sides of elytra. Pygidium with rounded apex and with granular and reticulate surface.

Ventral surface moderately convex. Lateral parts of prosternum smooth, the middle of prosternum and prosternal process coarsely punctate, prosternal process gradually broadened towards the narrower and somewhat prominent rounded apex. Punctures larger than the eye facets, spaces between them smooth on the process and reticulate on the prosternum. Metasternum with fine punctures nearly equal in size to eye facets, separated by one, or less than one, diameter; spaces between them smooth and shining, with traces of reticulation in lateral parts. Caudal marginal lines of mesocoxae moderately arched, reaching sides of metasternum in the last quarter of their length. Axillary space reticulate. Metasternum feebly longitudinally impressed in the posterior half. Abdominal sternites with fine punctures, smooth and shining between them in the middle and reticulate in lateral parts. Caudal marginal lines of metacoxae

follow closely the hind edge of coxal cavities. Last sternite coarser punctate, less shining, with strongly raised transverse ridge, concave posteriorly.

Legs. Anterior tibiae strongly widened in the basal third, then parallel. Outer edge of them extremely feebly crenulate in the basal part, in the two apical thirds with about eight sharp teeth, the first and the last of them are wider, stronger and more prominent. Two teeth neighbouring with the large



Meligethes funereus, sp. n.: 1 — form of body, 2 — median lobe of aedeagus, 3 — tegmen, 4 — ovipositor. Scale a = 0.33 mm (for figs. 2–4).

apical tooth are somewhat larger than the preceding ones, but not reaching size of both the outside prominent ones. Intermediate tibiae not very broad, broadest in the middle, with outer edge moderately rounded and furnished with strong, short and close spines. Posterior tibiae nearly as wide as the preceding ones, widest in the apical half, with outer edge rounded and furnished with spines finer and longer than those of intermediate tibiae.

Upper surface deeply black, shining. Antennae black, the second segment yellowish brown, third to sixth segments blackish brown. Intermediate and posterior tibiae dark blackish brown, anterior tibiae lighter, pitchy brown. Upper surface with fine and comparatively long dark pubescence. Eyes dark pigmented.

Genitalia as figured. Tegmen in the apical half feebly narrowed towards the apex, lateral lobes simply rounded, apical excision U shaped with divergent sides. Lateral lobes moderately longitudinally bowed. Median lobe parallel in

the basal half, narrowed towards the apex in the apical half, apex widely obtusely angulate. Dorsal surface of the median lobe flat, only in the apical part with lateral impressions along the feebly raised middle part.

Female. — In general appearance similar to male, metasternum extremely feebly impressed posteriorly, the last abdominal sternite without elevated transverse ridge. Ovipositor long and narrow, coxites distinctly shorter than valvifers, suture between coxites and valvifers straight.

Variability. — Length of body varies from 2.1 to 2.4 mm in males, 1.9 to 2.3 mm in females. Traces of reticulation at the basal margin of pronotum more or less distinct, often completely reduced. Elytra 1.09—1.16 times as long as combined width. Colour of anterior tibiae varies somewhat from clear yellowish brown to pitchy brown.

Comparative notes. — Combining emarginate anterior margin of clypeus, characteristic form of anterior tibiae, transverse rugosity of elytra and secondary sexual characters of male, this species resembles the members of the *Meligethes lugubris* species group. Some characters, such as the subparallel form of body with the more transverse pronotum distinctly narrowed posteriorly, moderately convex elytra with lateral borders completely visible from above, feebly developed transverse rugosity of elytra and lack of raised longitudinal ridges on the dorsum of median lobe of aedeagus prove its close relation to *Meligethes acicularis* Bris. and distinguish both the mentioned species from all other species of the *M. lugubris* complex yet known.

Similarity of *M. acicularis* and *M. funereus* is very conspicuous. The new species differs from the former mainly by having reticulation of pronotum strongly reduced, body slightly longer and male secondary sexual character of hypopygium in the shape of distinct transverse ridge (and not simple tubercle, as it is the case in *M. acicularis* Bris.) Because in some examined specimens of *M. acicularis* Bris. from Anatolia the reticulation of pronotum is not so distinctly developed being more or less reduced at the anterior margin, the form of genitalia remains the most important character to distinguish these species.

The characteristic shape of tegmen, with simply rounded lateral lobes without lateral angulations, as well as the secondary sexual characters of male resemble conspicuously those of *Meligethes exilis* Strm., so that *M. funereus* constitutes a link between *M. acicularis* Bris. and *M. exilis* Strm. Easton, who studied paratype of *M. funereus* supposes, that these three species constitute distinct species group. This opinion seems me to be correct.

Holotypus: Male, Anatolia, Moğan gölü, 8. 7. 1947, Expedition of the National Museum Prague. Deposited in the Department of Entomology, National Museum, Prague.

Allotypus: Female, Anatolia, Ankara-Baraj, 3.—4. 7. 1947. Deposited in the Department of Entomology, National Museum, Prague.

Paratypes: 3 males, Moğan gölü, Anatolia, 8. 7. 1947. — 5 females, Anatolia, Ankara-Baraj, 3.—4. 7. 1947. Paratypes deposited in the Department of Entomology, National Museum Prague, one male in the collection of A. M. Easton, Great Bookham, England.

After manuscript had been finished, I received 83 specimens of the new species from Mr. K. Spornraft, Wolfratshausen, which I designated as Paratypes. They originate from Italy, Rioveggio, 19. 4. 1965, lgt. Spornraft. Those Paratypes are deposited in collections of Mr. Spornraft, Wolfratshausen, Mr. A. M. Easton, Great Bookham and Department of Entomology, National Museum, Praha.

Meligethes egenus Erichson, 1845

Distribution: South and Central Europa, Asia Minor, Caucasus, according to Horion (1960) also Siberia.

Material examined: Moğan gölü, 5. 7. 1947, 1 spec. — Bürücek, Toros, 29.—31.7. 1947, 50 spec. — Gyaur dağ, 17. 8. 1947, 24 spec. — Beyşehir gölü, 3. 9. 1947, 6 spec.

CARPOPHILINAE

Carpophilus quadrisignatus Erichson, 1843

Distribution: Italy, Greece, Asia Minor.

Material examined: Moğan gölü, 5. 7. 1947, 1 spec.

Discussion: Hisamatsu (1963) has proved that the former species *Carpophilus hemipterus* (L.) represents a complex of several sibling-species and stated *C. quadrisignatus* Er. to be a distinct species, occurring in eastern Mediterranean.

Carpophilus mutilatus Erichson, 1843

Distribution: Cosmopolitan.

Material examined: Karataş, 2.—5. 8. 1947, 4 spec.

Species collected by the expedition in Yugoslavia and Bulgaria

Meligethes brunnicornis Sturm, 1845

Distribution: Europa, Caucasus, according to Horion (1960) also East Siberia.

Material examined: Yugoslavia, Fruška gora, Irig, 1. 6. 1947, 1 spec.

Meligethes maurus Sturm, 1845

Distribution: Europa, Caucasus, Asia Minor, Cyprus, Kazakhstan, West Siberia; according to Horion (1960) also Central Asia.

Material examined: Yugoslavia, Mladenovac, 3. 6. 1947, 4 spec.

Meligethes erythropus (Marsham, 1802)

Distribution: North Africa, Europa, Caucasus.

Material examined: Yugoslavia, Mladenovac, 3. 6. 1947, 3 spec.

Meligethes submetallicus Deville, 1908

Distribution: According to Easton (1954) Corsica, South France and Hungary. According to Rebmann (1943) North Africa (questionable according to Easton 1956), Portugal, Spain, Italy, Yugoslavia, Albania, Corfu.

Material examined: Yugoslavia, Mladenovac, 3., 6. 1947, 4 spec.

Discussion: The problem of nomenclature of this species has been explained by Easton (1954). According to his conclusions, the data of Rebmann (1943) about *M. acicularis* might in fact concern *M. submetallicus* Deville. They are accepted for the later species by Horion (1960).

Epuraea florea Erichson, 1845

Distribution: North Africa, Europa, Siberia, Mongolia, Afghanistan.

Material examined: Bulgaria, Svilengrad, 14.—18. 6. 1947, 1 spec.

Summary

Review of the 20 species of Nitidulidae, collected by the Zoological Expedition of the National Museum in Prague in Turkey in 1947 is given as well as a review of further 5 species collected by the expedition in Yugoslavia and Bulgaria. One of the species mentioned is new to science and is described here. Genitalia of this species, *Meligethes funereus*, are figured.

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