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THE FIRST RECORD OF THE SUBFAMILY AENICTINAE (HYMENOPTERA, FORMICIDAE) FROM IRAN

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The First Record of the Subfamily Aenictinae (Hymenoptera, Formicidae) from Iran. **Radchenko A. G., Alipanah H.** — *Aenictus dlusskyi* Arnoldi, 1968, the member of the subfamily Aenictinae, is recorded for the first time from Iran. Collected material was compared with the types of two closely related species, *A. dlusskyi* and *A. rhodiensis* Menozzi. Differences between these species are shown.

Key words: army ants, taxonomy, faunistics, *Aenictus dlusskyi*, *A. rhodiensis*, Iran, West Palaearctic Region.

Первая находка муравьев подсемейства Aenictinae (Hymenoptera, Formicidae) в Иране. **Радченко А. Г., Алипанах Х.** — *Aenictus dlusskyi* Arnoldi, 1968, представитель подсемейства Aenictinae, впервые приведен для фауны Ирана. Собранный материал сравнен с типами двух близких видов: *A. dlusskyi* и *A. rhodiensis* Menozzi. Показаны различия между этими видами.

Ключевые слова: муравьи-кочевники, таксономия, фаунистика, *Aenictus dlusskyi*, *A. rhodiensis*, Иран, Западная Палеарктика.

Introduction

The ant fauna of Iran is still very poorly known. There were only a few publications dealt with Iranian ants, on which several species were described and scarce faunistic data was provided (Forel, 1904; Emery, 1906; Crawley, 1920, 1922; Karawajew, 1924; Ardeh, 1994; Radchenko, 1994 a, b, 1995, 1996, 1997 a, b; Alipanah et al., 1995, 2000 a, b; Paknia, 2002) There were recorded only about 70 ant species for this very large, heterogenic and interesting territory, and we expect finding of at least 200–250 ant species from Iran. For the comparison, more than 70 species are known in Armenia, which territory is only about 30 000 km^2, and about 100 ant species are referred from Turkmenistan's part of the Kopet-Dagh Mountains. Hence it was not so great surprise to find in Iran *Aenictus dlusskyi* Arnoldi, 1968, a member of subfamily, which was not known in Iranian fauna.

More than 150 species and infraspecific forms of *Aenictus* are known in the World. About 100 of them were described from Asia and Australia, the others inhabit Africa. Nine species distribute in the southern part of Western Palaearctic from Morocco till Afghanistan.

Genus *Aenictus* Shuckard, 1840 belongs to the monotypic ant subfamily Aenictinae Emery. Previously, this subfamily was considered as tribe in the subfamily Dorylinae Leach, but Bolton (1990) separated Aenictinae from Dorylinae. They belong to the so-called "army ants" ("driver-ants"), which are predators, have no permanent nests and are nomadic (for details, see Wheeler, 1910; Gotwald, 1982, 1995; Hölldobler, Wilson, 1990). Reproductive queens of *Aenictus* species have extremely enlarged gaster and often even cannot move without the help of workers. Workers are small (2.5–3.5 mm), monomorphic (with one known until now exception, see Yamane, Yoshiaki, 1999), blind, yellow to brownish yellow, smooth and shiny ants with 2-segmented waist (whereas waist of queens and males is 1-segmented) and 8–10 jointed antennae. Males of *Aenictus* are very big (up to 25 mm), robust and quite often fly to the light.

Aenictus can be confused with Leptanillinae genera, but differs from the latter by the almost fused, inflexible promesonotum with vestigial to absent promesonotal suture, and queens of Leptanillinae have 2-segmented waist. *Aenictus* differs from the subfamily Pseudomyrmecinae by eyes lacking, and from Myrmici-

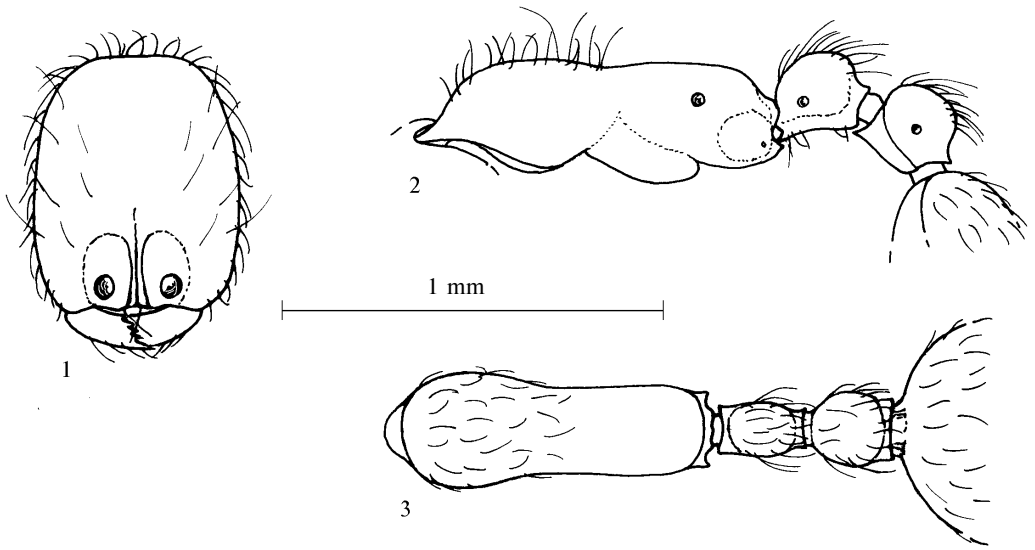

Fig. 1–3. Details of structure of *A. dlusskyi*, paratype worker: 1 — head, dorsal view; 2 — alitrunk and waist in profile; 3 — alitrunk and waist, dorsal view.

Рис. 1–3. Детали строения *A. dlusskyi*, паратип, рабочий: 1 — голова спереди; 2 — грудь и стебелек в профиль; 3 — грудь и стебелек сверху.

nae — by reduced and vertical frontal lobes, so that antennal sockets are completely exposed (see also Bolton, 1994; Aktaç, Radchenko, 2002).

Workers of *Aenictus* have predominantly terrestrial habit, but foraging in a soil, leaf litter or on the ground surface, hunting mainly on other ants or termites.

Results

Workers of *A. dlusskyi* (fig. 1–3) were found in the Tehran University court under the pine tree log on 21 May 1993 by one of the co-authors of this paper (HA).

For the reason that taxonomic revision of the African and West Palaearctic *Aenictus* was never made and there is no key for determination of species, we compared collected material with the type specimens of the species, described from adjacent regions:

A. dlusskyi Arnoldi, 1968, paratypes, 6 workers, "Armenia, Dzhrvezh near Yerevan, 3. vi. 1960, No. 1040, G. Dlussky" (Zoological Museum of the Moscow State University, Moscow, Russia);

A. rhodiensis Menozzi, 1936, syntypes, 3 workers, "Cottavia, Rhodi, 1. iv. 1924, C. Menozzi" (Istituto di Entomologia, University di Bologna, Italy).

A. dlusskyi was know previously only from the type locality in Armenia and our referring is the second for this species; *A. rhodiensis*, except of type locality on Rhodes Island, was also found in Israel and more recently — in Turkey (Kugler, 1988; Aktaç et al., 2004.)

For comparison of the species we used several morphometrics (were measured with accurate 0.01 mm) and indices, were calculated from these. The following abbreviations are used:

PPL — maximum length of postpetiole from above; PPW — maximum width of postpetiole from above; PPH — maximum height of postpetiole in profile; indices: Postpetiole$_1$ (PPI$_1$) = PPL/PPH; Postpetiole$_2$ (PPI$_2$) = PPL/PPW.

Generally, *A. dlusskyi* and *A. rhodiensis* are very similar, and their distinguishing is quite difficult. Furthermore, their males and queens are unknown and definitive opinion about relation or even possible synonymy of these species needs additional material and investigations.

We found only a few more or less distinct differences between these species: *A. dlusskyi* has higher and wider postpetiole than *A. rhodiensis* (PPI_1 0.81–0.94, mean = 0.88 versus 0.95–1.06, mean = 0.99; PPI_2 1.12–1.22, mean = 1.18 versus 1.24–1.36, mean = 1.31), and the species differ in the shape of ventral petiolar processes. This process is somewhat less developed and forming sharp teeth anteriorly in *A. dlusskyi*, whereas in *A. rhodiensis* it is somewhat wider and blunt anteriorly. Both species also slightly differ by extent of density and length of body hairs, shape of head and alitrunk, colour, etc., but these features are quite variable and impossible to say if it is intra-, or interspecific variation without study of additional material.

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