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ACINETA PERSIENSIS SP. N. (CILIOPHORA, SUCTOREA) — A NEW FRESHWATER SUCTORIAN SPECIES FROM THE WATER MITES OF THE GENUS *PROTZIA* (ACARI, HYDRACHNIDIA)

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***Acineta persiensis* sp. n. (Ciliophora, Suctorea) — a New Freshwater Suctorian Species from the Water Mites of the Genus *Protzia* (Acari, Hydrachnidia). Dovgal I. V., Pesic V.** — *Acineta persiensis* Dovgal et Pesic, sp. n. — a new suctorian ciliate species, was described from specimens collected in Guik stream, Khorrasan Province, Iran and in Stream Bistrica near village Crkvine, Montenegro. The suctorian was found colonizing the legs of the hydrachnid mites *Protzia sepasgosariani* and *P. invalvaris*. A new species differs from other species of the genus *Acineta* in the lorica structure, stalk morphology, the ability to hyperphoretic pseudocolonies formation and geographical distribution.

Key words: ciliates, suctorians, *Acineta*, water mites, Iran, Montenegro.

***Acineta persiensis* sp. n. (Ciliophora, Suctorea) — новый вид пресноводных сукторий с водных клещей рода *Protzia* (Acari, Hydrachnidia). Довгаль И. В., Пешич В.** — Описан новый вид сукторий, *Acineta persiensis* Dovgal et Pesic, sp. n., по материалам из потока Джук, провинция Хорасан, Иран и потока Быстрица у деревни Црквин, Черногория. Инфузория была обнаружена на ногах клещей-гидрахнид *Protzia sepasgosariani* и *P. invalvaris*. От других видов рода *Acineta* новый вид отличается строением раковины и стебелька, способностью формировать гиперфоретические псевдоколонии, а также географическим распространением.

Ключевые слова: инфузории, суктории, *Acineta*, водные клещи, Иран, Черногория.

Introduction

Suctorian ciliates are largely sessile forms. The majority of suctorians are commensals of various water invertebrates including both marine and freshwater mites (Dovgal, 2002).

The representatives of several groups of water mites were indicated as suctorian hosts (Precht, 1935; Matthes, 1956; Matthes et al., 1988; Bartsch, 1998; Dovgal, 1996; Gelmboldt, Dovgal, 2005). The majority of such finds were at the marine halacarid mites.

Hence the *Acineta sulcata* Dons, 1928 was found on halacarides mainly although was reported also at the seed shrimps (Kahl, 1934). It should be pointed out that the same species was found in 2005 (Dovgal, unpublished data) at the unidentified freshwater oribatid mite from river Unava (Fastov region, Ukraine). The species *Limnoricus ceter* Jankowski, 1981 was described from marine isopods and halacarid mites (Jankowski, 1981). However only on halacarid mites were found the *Praethecacineta halacari* (Schulz, 1933) and *Thecacineta allgeni* (Jankowski, 1981). Seemingly the two latter species are specific to the marine mites.

Only one suctorian species, *Tokophrya wenzeli* Matthes et Stiebler, 1970 was previously renowned from freshwater hydrachnid mites. Except Germany where the species was described (Matthes, Stiebler, 1970) it was found also in Ukrainian water bodies (Dovgal, 1987).

This paper describes a new species of *Acineta* Ehrenberg, 1834, *A. persiensis*, from the legs of hydrachnid mite *Protzia sepasgosariani* Pesic et Saboori, 2006 collected in Guik stream, Khorrasan Province, Iran and *P. invalvaris* Piersig, 1898, collected in Stream Bistrica near village Crkvine, Montenegro.

Material and methods

Collection of the water mites was provided by Dr. Vladimir Pesic. The mites were collected 08.06.05 in Khorrasan Province (Iran), Guik stream before Guik dam near Birjand city, 59°10'E 32°50'N, ca. 2500 m asl, and 30.09.06 in Stream Bistrica near village Crkvine (Kolasin town, Montenegro). The hydrachnid mite, which was found then was described as a new species, *Protzia sepasgosariani* Pesic et Saboori, 2006 (Pesic et al., 2006). The mite from Montenegro was identified as *Protzia invalvaris* Piersig, 1898.

In the laboratory mite legs were examined using a dissecting microscope for the presence of epibionts. In order to produce permanent preparations, the legs with attached suctorians were placed in a concentrated Bouin's fixative, then were stained with Boehmer's haematoxylin and, finally, were mounted in Canada balsam. The type material *Acineta persiensis*, hapantotype no. 294, is deposited at the Department of Fauna and Systematics of Invertebrates, Schmalhausen Institute of Zoology, National Academy of Sciences, Kyiv, Ukraine.

Acineta persiensis Dovgal et Pesic, **sp. n.**

Etymology. The specific name is of Latin derivation and reflects the geographical distribution of the species in Iran.

Hosts. Adult hydrachnid mites *Protzia sepasgosariani* (type host) and *Protzia invalvaris*. Localization: leg surface.

Localities. Guik stream, Khorrasan Province, Iran (type locality); sampled during summer 2005 and in Stream Bistrica near village Crkvine; sampled during autumn 2006.

Hapantotype N 294. The preparation of sessile forms mounted in Canada balsam and deposited in the Schmalhausen Institute of Zoology.

Diagnosis. Cell body pear-shaped, laterally flattened, 34–58 mkm long and 34–41 mkm wide (fig. 1). Two fascicles of clavate tentacles are located at the apical cell body surface. Actinophores are not developed. Macronucleus in the form of irregular ellipse, relatively large (9 x 20 mkm) and located about in center of the cell body. Lorica covers all cell body, commonly coated with a detritus. The very thick walls of lorica (up to 5 mkm) is characteristic to species. The stalk very short (5–7 mkm), compact (2–3 mkm in diameter), slightly flexed and composed of adhesive disc. One further peculiarity of the species is the ability to forming of the hyperphoretic pseudocolonies, in the case that the swarmer of the species to walk all over the trophont (commonly the maternal individual) and undergone the metamorphosis (fig. 1, *3*). The similar pseudocolonies forming the suctorian ciliate *Periacineta gyrini* Dovgal, 1993 inha-bits in the mouth cavity of whirligig beetles (Dovgal, 1993).

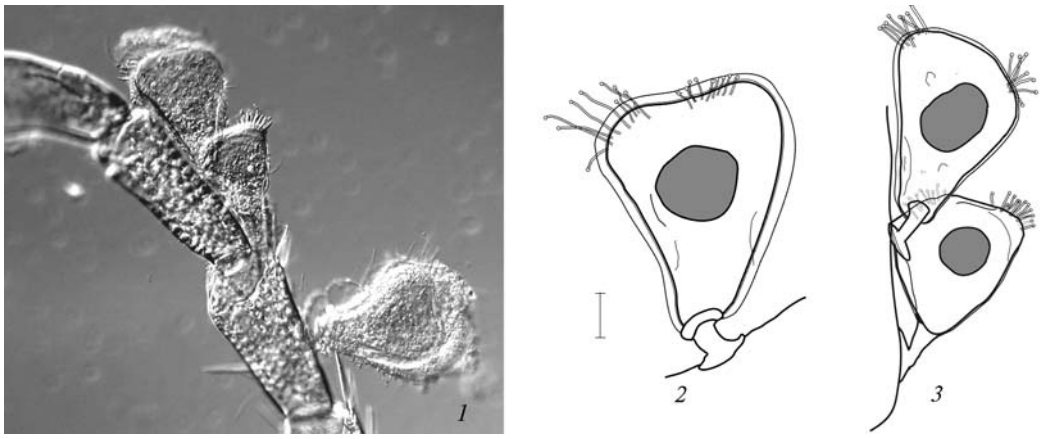

Fig. 1. Trophonts of *Acineta persiensis*: *1* — photomicrograph of three individuals on the leg of *Protzia sepasgosariani* (x 200); *2* — solitary trophont; *3* — hyperphoretic pseudocolony. Scale bar 2 mkm.

Рис. 1. Трофонты *Acineta persiensis*: *1* — микрофотография трех особей на ноге *Protzia sepasgosariani* (x 200); *2* — единичный трофонт; 3 — гиперфоретическая псевдоколония. Масштабная линейка 2 мкм.

Differential diagnosis. The new suctorian species is probably close related to *A. foetida* Maupas, 1881 as it also possesses short compact stalk, well-developed lorica and ellipsoidal macronucleus. However in *A. persiensis* lorica absent the transversal wrinkles that characteristic for *A. foetida* (Dovgal, 1996). In contrast to type species of the genus, *A. tuberosa* Ehrenberg, 1834 the *A. persiensis* has short flexed stalk, lorica with rarely thick walls and pear-shape body outlines.

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