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SHORT COMMUNICATION

SORICULOPUS NEPALENSIS g.n., sp.n. (ACARI, GLYCYPHAGIDAE) AN ENDOFOLLICULAR HYPOPUS FROM NEPALESE SHREWS (SORICULUS SPP)

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Abstract. A new genus and species of mite, *Soriculopus nepalensis* (Glycyphagidae, Metalabidophorinae) only represented by endofollicular hypopi (heteromorphic deutonymphs) is described from two shrews (*Soriculus caudatus* and *S. nigrescens*) from Nepal.

The subfamily Metalabidophorinae Fain, 1967 (Acari, Glycyphagidae) has been created for a group of pilicolous or endofollicular hypopi (heteromorphic deutonymphs) with modified or displaced genital suckers. During this last decade a lot of new genera and species have been described in this group from various mammals, mainly rodents (Fain 1969, Fain and Lukoschus 1978, Lukoschus et al. 1977).

The new species described here represents a new genus with several unusual characters, e.g. great inflation of the body, anterior migration of the dorsal setae and presence of big spines on tarsus IV. All our specimens were found embedded in the hair follicles of the tail in two species of Nepalese shrews. The measurements are in μm.

Soriculopus g.n.

Definition: Body only slightly inflated in young hypopi; in the older ones the body is strongly inflated dorsally covering nearly entirely the legs.

Venter: Epimerae I fused in Y; epimerae II free; epimerae III—IV fused. Coxal fields III—IV completely closed and small. Genital suckers normal in shape but displaced laterally and close to coxae IV. Clasping organ ventral, strongly reduced; clasping folds and ridged claspers very small. Behind the clasping organ is a sclerotized plate with lateral triangular prolongations. This plate remains in contact with the clasping organ even in strongly engorged hypopi. Legs I—III with a well-formed almost sessile claw, leg IV without a claw. Femora I—II with two pointed ventral or ventrolateral processes (attaching organs).

Idiosomal chaetotaxy: All the dorsal setae are situated on two poorly sclerotized plates situated in the anterior half of dorsum (in not inflated and in inflated hypopi). The anterior plate bears the *sc i* and *sc e* setae. The posterior plate bears the *d 1*, *d 2*, *d 3*, *l 1*, *l 2*, *l 3* and *h*. Ventrally are present the *v i*, *v e*, *sh*, *g a*, *d 4*, *d 5*, *l 4* and *l 5*. The coxals *g m* and *g p* are lacking. Palposoma represented only by 2 short solenidia (alpha).

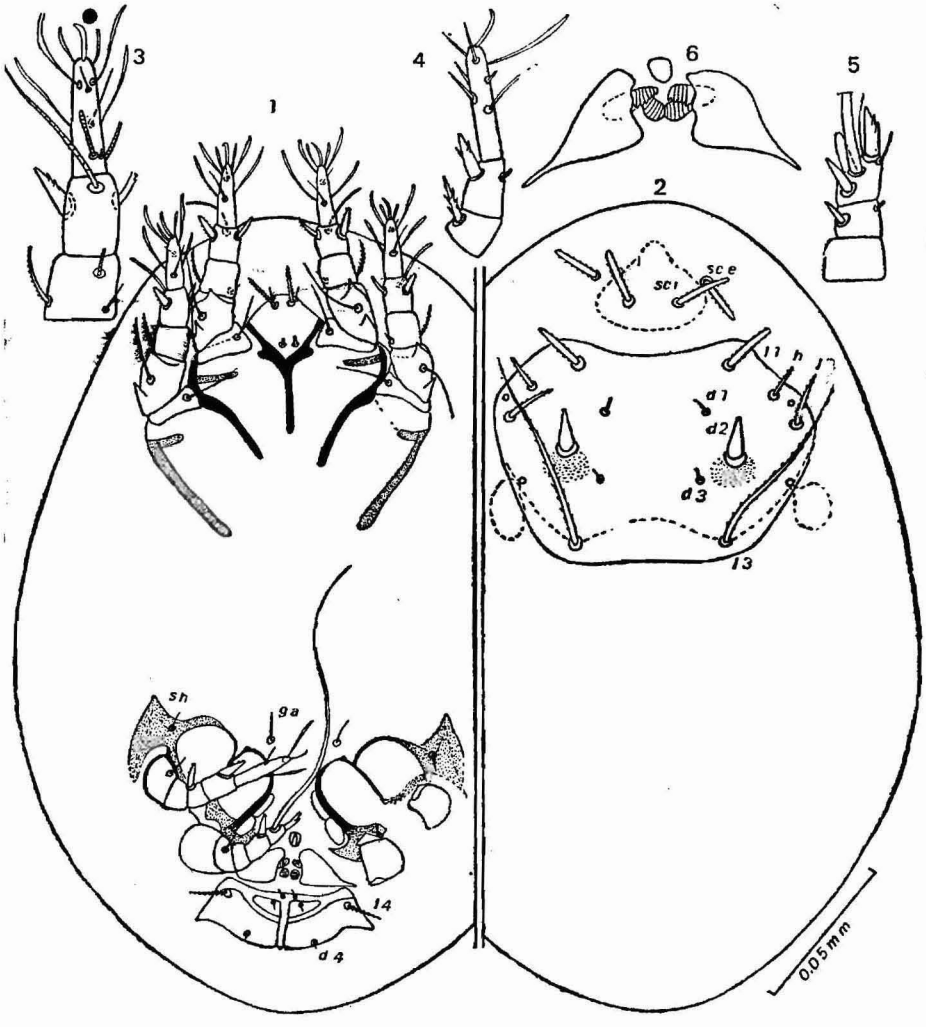
Leg chaetotaxy: Tarsi 8-8-7-6. Tibiae 2-2-1-1. Genua 2-2-1-0. Femora 1-1-0-1. Trochanters 1-1-1-0. Tibial setae I—III are strong barbed spines.

Solenidiotaxy: Tarsi 2-1-0-0. Tibiae 1-1-1-1. Genua 1-1-0-0.

Type species: *Soriculopus nepalensis* sp. n.

Soriculopus nepalensis sp.n.

Hypopus (Figs. 1—6): Holotype (slightly inflated) 260 long and 210 wide. In 4 paratypes these measurements are 280 × 210; 440 × 250; 550 × 360 and 595 × 420. The last hypopus is the largest of our series. Cuticle poorly sclerotized in the smaller hypopi. A distinct sclerotization is present in the larger hypopi. Dorsal plates poorly sclerotized bearing setae as mentioned above. Posterior (hysteronotal) plate, in addition, bearing a pair of gland openings and a pair of pores. Tarsi I to IV 19, 18, 21, 8 long. Claws I—III about 8 long. Posterior legs small. Tarsus IV bearing a long seta (150) and 3 strong spines. All setae of tibiae are conical spines, those of tarsi I—III are barbed. Tibial solenidia (I—IV) 32, 26, 2, 2 long.



Figs. 1.—6. *Soriculopus nepalensis* g. n., sp. n. Hypopus: 1 — ventral view, 2 — dorsal view, 3 — leg I, 4 — leg III, 5 — leg IV, 6 — clasping organ.

Host and locality: All the hypopi were embedded in the hair follicles of the tail of 2 species of *Soriculus*: 1. *S. caudatus*, Lunsum, Village Dhar Khola off Mayandgi Khola, Dadar Dhuri Mt., 2700 m., West Nepal, 1. XII. 1975 (holotype and 62 paratypes); Kyangjin Gompa, 3800 m., Langtang Valley, Central Nepal, 8 and 12. XI. 1975 (25 paratypes); 2. *S. nigrescens*, Lunsum, 30. XI. 1975 (1 paratype). All these hosts were collected by Weisser.

Holotype in the collection of U.S. National Museum of Natural History (Smithsonian Institution), Washington, D.C. Paratypes in Zoologisches Institut der Universität Heidelberg; Institute of Parasitology, Czechoslovak Academy of Sciences, Prague; Zoologisches Museum, Hamburg; Institute of Acarology, Columbus, Ohio; Field Museum of Natural History, Chicago; Rijksmuseum van Natuurlijke Historie, Leiden; Museum d'Histoire Naturelle, Paris; British Museum (Natural History), London; Institut royal des Sciences naturelles de Belgique and in collections of authors.

Discussion. This new genus is distinguished from all the other genera in the Metalabidophorinae by the following characters: 1. Anterior migration of a part of hysteronotal setae (*d 1 — d 3, l 1 — l 3*), the posterior half of the dorsum being devoid of setae; 2. ventral situation of the postanal shield; 3. great inflation of the body in the old hypopi; 4. fusion of epimerae and epimerites III—IV forming closed coxal fields III—IV; 5. presence of apical directed processes on femora I—II; 6. great reduction of tarsus IV and presence on it of 3 large spines.

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SORICULOPUS NEPALENSIS G.N., SP. N. (ACARI, GLYCYPHAGIDAE) — ЭНДОФОЛЛИКУЛЯРНЫЙ ГИПОПУС ОТ ЗЕМЛЕРОЕК (*SORICULUS* SPP.) НЕПАЛА

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Резюме. Дано описание нового рода и вида клеща *Soriculopus nepalensis* (Glycyphagidae, Metalabidophoridae), представленного только в виде эндофолликулярных гипопусов (гетероморфных дейтонимф) от двух землероек (*Soriculus caudatus* и *S. nigrescens*), из Непала.

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I. N. Voinov: Virusologicheskiye aspekty meditsinskoy ornitologii. (Virological aspects of medical ornithology.) *Publ. House Vysheyshaya shkola, Minsk 1979, 128 pp., 13. Figs, 7 Tables. Price 1 R.*

The fact that birds may be associated with some human diseases, has been known since the end of the last century. However, the studies on their role in the maintenance and dissemination of arboviroses began to develop intensively as late as the last decades. This publication sums up the most important results achieved in this field and presents a series of very concrete data obtained by the author in his laboratory. The first chapter, entitled "Birds as reservoirs of arboviruses in natural foci", contains data on the participation of birds in the circulation of various arboviruses in nature with special regard to the conditions in the USSR, where the following agents, ecologically connected with birds, were isolated so far: virus of tick-borne encephalitis, Omsk hemorrhagic fever, Powassan, Japanese encephalitis, West Nile, Tyuleniy, Okhotskiy, Baku, Zaliv Terpeniya, Sakhalin, Kaspiy, Paramushir, Uukuniemi, Kemerovo, Sindbis, Gheta, Astra, Sokuluk and Tamdy. The chapter is supplemented with a survey of known bird arboviruses and their geographic distribution. The second chapter covers the transmission of arboviruses by birds. The transmission is possible by two routes: either by viroforous ticks or in the organism of the infected bird, primarily in latent form of infection. Of great importance here is periodic viremia. The author admits that latent infection is likely to be the main form of existence of arboviruses associated with birds and gives a number of examples which beyond any doubt confirm the arbovirus transmission during the migration period. On the other hand, the tick-transmission over great distances is less probable, but may be taken into account when the birds are tick-infested during migration. The third chapter is entitled "Possibilities in the formation of new natural foci of diseases due to the transportation of arboviruses by migratory birds". The chapter reviews the opinions of both the advocates and adversaries of these possibilities. The author himself is of the opinion that during the evolution of landscape — either due to the influence of natural factors or under the impact of man's activities — the formation of new natural foci of diseases transmitted by birds is possible and supports his opinion by various examples. Important is the fact that bird arboviruses are far more frequently polyvectorial and polyhostal, so that under certain circumstances at least a temporary virus circulation may take place outside the range of the usual vector. Temperature, absence of suitable vectors and susceptible vertebrates and possibly competition of different pathogenic agents in the vector's organism are mentioned as factors limiting a regular formation of new natural foci due to arbovirus importation by birds. It is momentous that regular arbovirus importations by birds into local biocenoses result in the mixture of genetic material of different populations of an arbovirus and thus prevent the geographic divergence within its extensive range. The fourth chapter deals with the epidemiologic and epizootologic importance of arboviruses ecologically associated with birds. It appears that about 20% agents of this group may cause diseases in man or domestic animals. They are zoonoses with transmissive, peroral, cutaneous or aerogenous route of infection. Epidemiologically most dangerous are synanthropic species. Birds are also important in natural foci of diseases as selectors of virulent strains of arboviruses, because at high temperatures of their body the avirulent strains quickly succumb. The final supplement of the volume contains methodical directives for the organization of virological research of birds. The publication is well written and profusely documented with examples elucidating the discussed material. It will be of interest to parasitologists, virologists and ornithologists as well.

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