

# ON CORNICULI, RUTELLA AND PSEUDORUTELLA – SOME ULTRASTRUCTURAL DETAILS OF KEY-CHARACTERS IN ACARI (ARACHNIDA)

GERD ALBERTI

*Zoologisches Institut und Museum, Ernst-Moritz-Arndt-Universität Greifswald,  
Johann-Sebastian-Bach-Str. 11/12, 17489 Greifswald, Germany;  
e-mail: alberti@uni-greifswald.de*

**Abstract.**— The gnathosoma is considered by most authors as the main constitutive character of a monophylum Acari. However, this has been questioned due to fundamental differences regarding its morphology in Anaetinostrichida (=Parasitiformes s.l.) and Actinostrichida (=Acariformes). A key character which might indicate homology is represented by stout cuticular structures called corniculi, rutella, and/or pseudorutella present in most of the main groups of mites. However, the homology of these structures has also been doubted. In the present paper a first comparative ultrastructural study on these elements is presented taking representatives of all main groups of Acari in consideration (except of ticks lacking these structures). It was shown that the structures under concern are quite different even in closely related taxa. Hence the question on homology could not be solved definitely. Evidently more studies are needed to elucidate this problem.



**Key words.**— Gnathosoma, fine structure, innervation, receptor cell processes, sensory elements.

***BLASZAKIELLA AMERICANA* GEN. ET SP. NOV.  
A NEW ZERCONID MITE (ACARI: ZERCONIDAE)  
FROM NORTH AMERICA**

BOŻENA SIKORA and MACIEJ SKORACKI

*Department of Animal Morphology, Faculty of Biology, Adam Mickiewicz  
University, Umultowska 89, 61-614 Poznań, Poland; e-mail: boszka@amu.edu.pl*

**Abstract.**— *Blaszakiella americana* gen. et sp. nov., a new genus and species of zerconid mite (Acari: Mesostigmata: Zerconidae) is described and figured. This new genus differs from the closely related *Microzercon* Blaszak, 1976 by the presence both of small adgenital shields with openings of adgenital glands *gv*<sub>2</sub>. A key for females of Zerconidae genera in the Nearctic Region is provided.



**Key words.**— Acari, Mesostigmata, Zerconidae, *Blaszakiella*, soil fauna, taxonomy.

# *ZERCON ANATOLICUS*, A NEW SPECIES OF ZERCONID MITES (ACARI: MESOSTIGMATA: ZERCONIDAE) FROM TURKEY

RAŞIT URHAN

*Department of Biology, Faculty of Arts & Sciences, Pamukkale University,  
P.O.286 K1n1kl1, Denizli, Turkey; e-mail: rurhan@pau.edu.tr*

**Abstract.**— In this study, a new species of zirconid mites, *Zercon anatolicus*, is described and illustrated on the basis of material collected from Turkey. Diagnostic characters of *Zercon anatolicus*: Anterior margin of ventro-anal shield with two pairs of setae. Dorsal cavities of general size and appearance, star-like with undulated and weakly sclerotised on their anterior margin. Pores Po<sub>3</sub> situated between setal rows J and Z, on the line connecting setae Z<sub>4</sub>-J<sub>5</sub> located closer to the setae Z<sub>4</sub>. Pores Po<sub>4</sub> lie on the line connecting the base of setae S<sub>4</sub>-Z<sub>5</sub>. Setae J<sub>1</sub>-J<sub>5</sub>, Z<sub>1</sub>, Z<sub>2</sub>, Z<sub>5</sub>, S<sub>1</sub>-S<sub>3</sub> and R<sub>1</sub>-R<sub>7</sub> short and smooth. Setae J<sub>6</sub>, Z<sub>3</sub>-Z<sub>4</sub> and S<sub>4</sub> long and barbed with hyaline ending. Setae J<sub>6</sub> the longest opisthonotal setae (63–76 µm). Opisthonotal shield with distinct reticulate pattern in the anterior region and punctuate pattern in the posterior region. A key to the adults of *Zercon* species known from Turkey is also given.



**Key words.**— Acari, Zerconidae, Zercon, taxonomy, Turkey.

***EPICROSEJUS BLASZAKI* SP. NOV. (ACARI:  
MESOSTIGMATA: SEJIDAE). A NEW MITE SPECIES  
FROM KOREAN PENINSULA**

SŁAWOMIR KACZMAREK

*Kazimierz Wielki University in Bydgoszcz, Institute of Environmental Biology,  
Department of Zoology, Al. Ossolińskich 12, 85-093 Bydgoszcz, Poland;  
e-mail: slawkacz@ukw.edu.pl*

**Abstract.**— A new mite species of the genus *Epicrosejus* has been described and illustrated based on 4 females collected from decaying material from the inside of an oak hollow (*Quercus acutissima* Carruth) in South Korea. Key to identify adult forms of the species listed in the genus *Epicrosejus* included.



**Key words.**— Mites, Sejidae, *Epicrosejus*, new species, Korean Peninsula.

# SUCCESSIONAL CHANGES AND DIVERSITY OF MESOSTIGMATID MITE COMMUNITIES (ACARI: MESOSTIGMATA) ON RECLAIMED POWER PLANT WASTE DUMPS

GRAŻYNA MADEJ\* and ALEKSANDER STODÓŁKA

*Department of Ecology, University of Silesia, Bankowa 9, 40-007 Katowice, Poland*

*\*Corresponding author: e-mail: grazyna.madej@us.edu.pl*

**Abstract.**— Secondary succession of mesostigmatid soil mites was studied in two types of reclaimed electric power plant waste dumps in Łaziska Górne (Upper Silesia, Poland) in 1997–1998. The dumps on which the studies were carried out differed in their construction and structure. We sampled 6 sites from 2 localities (Sites I–III and IV–VI), representing 3 stages of ecological succession. The sites differed floristically and in substrate physiochemistry i.e. organic carbon content ( $C_{org}$ ) and total nitrogen ( $N_t$ ). Site I representing pioneer stage was characterized by a poorly developed herb layer, a lack of trees and shrubs, and low  $C_{org}$ ,  $N_t$  and humus content. Sites III, V and VI represented a pre-forest stage and were characterized by a larger number of plant species, higher percent cover of trees and shrubs, and high  $C_{org}$ ,  $N_t$  and humus content. Sites II and IV represented an intermediate stages of succession. In 18 months, we took 540 samples of soil and litter, and we collected 4811 mites, assigned to 86 species of mesostigmatid mites. The mite communities differed between successional stages, mostly with respect to the relative dominance among species. At the pioneer stage of succession, the mite community was characterized by a “degraded” model of species abundance distribution, with a high dominance of *Asca bicornis*. At more advanced ecological stages (Sites III, V and VI), mite communities had similarities with communities of forest. Some of the most abundant species in Sites III, V and VI were typical forest inhabitants. Sites I–III represent a real succession of plant communities, soil development and mite communities, showing an increase in species richness of mites, diversity indices and of the number of dominant species (creative type of succession). The succession within Sites IV–VI reveals a different course (rise-and-fall).



**Key words.**— Acari, Mesostigmata, succession, species diversity, soil mites, community structure.

# TAXONOMIC RANKING OF MAJOR TROMBICULID SUBTAXA WITH REMARKS ON THE EVOLUTION OF HOST-PARASITE RELATIONSHIPS (ACARIFORMES: PARASITENGONA: TROMBICULIDAE)

ANDREY B. SHATROV<sup>1</sup> and NAINA I. KUDRYASHOVA<sup>2</sup>

<sup>1</sup>199034, Zoological Institute of the Russian Academy of Science, Universitetskaya  
nab., 1, St Petersburg, Russia;, e-mail: chigger@mail.ru

<sup>2</sup>Zoological Museum of the Moscow State University, Moscow, Russia

**Abstract.**— The modern classification of trombiculid mites from the family Trombiculidae (Acariformes: Parasitengona) is briefly reviewed on the subfamily and tribe level based on the larval characters. Some taxonomical and evolutionary aspects are briefly discussed. The family Trombiculidae is divided into four subfamilies: Leeuwenhoekinae – Apoloniinae – Trombiculinae – Gahrlepiinae, from which Leeuwenhoekinae should be placed at the base and Gahrlepiinae at the top of phylogenetic tree. Host-parasite relationships of trombiculid larvae are examined from the point of view that host-parasite specificity is low in trombiculids. Some physiological questions with respect to the realization of the life strategy of trombiculids are considered.



**Key words.**— Trombiculid mites, classification, host-parasite relationships, phylogeny.

**A REDESCRIPTION OF *ECHINOTHROMBIUM SPINOSUM*  
(CANESTRINI, 1885) (ACARI: ACTINOTRICHIDA:  
PROSTIGMATA: MICROTROMBIDIIDAE) WITH NOTES  
ON BIOLOGY AND LIFE CYCLE**

JOANNA MAKOL<sup>1,\*</sup>, ANDREAS WOHLTMANN<sup>2</sup>  
and GRZEGORZ GABRYŚ<sup>3</sup>

<sup>1</sup>*Department of Zoology and Ecology, Wrocław University of Environmental and  
Life Sciences, Koźuchowska 5B, 51-631 Wrocław, Poland*

<sup>2</sup>*Findorffstr. 11, D-27721 Ritterhude, Germany; e-mail: wohlتمان@uni-bremen.de*

<sup>3</sup>*Department of Biology, University of Zielona Góra, Szafrana 1,  
65-516 Zielona Góra, Poland; e-mail: g.gabrys@wnb.uz.zgora.pl*

*\* Corresponding author: e-mail: joanna.makol@up.wroc.pl*

**Abstract.**— *Echinothrombium spinosum* (Canestrini, 1885) is redescribed based on female. Characteristics of larvae, described for the first time, deutonymphs and adults as well as data on biology are provided. Data on habitat specificity and phenology of the species as well as on developmental times of larvae are given. A female of *E. spinosum*, from which larvae were obtained by experimental rearing, has been designated as neotype. Key characters that allow to differentiate *E. spinosum* from *E. rhodinum* (C. L. Koch, 1837) pertain mainly to postlarval forms.



**Key words.**— Acarology, Parasitengona, taxonomy, biology, life cycle, *Echinothrombium spinosum*, neotype.

# SPECIES DIVERSITY OF PARASITENGONA TERRESTRIA (ACARI: ACTINOTRICHIDA: PROSTIGMATA) IN A HABITAT INFLUENCED BY ANTHROPOPRESSURE

JOANNA ŁAYDANOWICZ and JOANNA MAKOL<sup>1</sup>

*Department of Zoology and Ecology, Wrocław University of Environmental  
and Life Sciences, Koźuchowska 5b, 51-631 Wrocław, Poland;*

*e-mail: joanna.makol@up.wroc.pl*

<sup>1</sup>*to whom all correspondence should be sent*

**Abstract.**— The fauna of terrestrial Parasitengona was studied in a human-transformed habitat, located on the Odra River shore in Wrocław agglomeration, and compared with that observed in natural habitats. The anthropogenic influence did not markedly affect the species diversity due to the presence of microhabitats which created favourable conditions for the mites. Altogether 13 species, representing four families and constituting almost nine percent of the Polish fauna of Parasitengona terrestria, were found within the studied area of ca. 200 m<sup>2</sup>. Species composition, compared with that observed in undisturbed habitat, differed with respect to nine taxa. Data on biology and ecology of the examined taxa are provided. The results of laboratory experiments allow for synonymization of *Hauptmannia brevicollis* Oudemans, 1910 with *Abrolophus norvegicus* (Thor, 1900) and *Hauptmannia pseudolongicollis* Haitlinger, 1987 with *Abrolophus quisquiliarus* (Hermann, 1804).



**Key words.**— Parasitengona, microhabitats, anthropopressure, biology, ecology, *Abrolophus*, *Hauptmannia*, new synonyms.



# A REVIEW OF THE MITE FAMILY STIGMOCHEYLIDAE BERLESE (ACARI: PROSTIGMATA)

ANDRE V. BOCHKOV

*Zoological Institute, Russian Academy of Sciences, Universitetskaya emb. 1, 199034  
St. Petersburg, RUSSIA, e-mail: prostigmata@zin.ru (address for correspondence)  
Museum of Zoology, University of Michigan, 1109 Geddes Ave., Ann Arbor,  
Michigan 48109, USA*

**Abstract.**— The external morphology of rare soil inhabiting mites belonging to the monobasic family Stigmocheylidae (Acari: Prostigmata) is examined, based on the material from North America. Homologies of all studied morphological structures with those of other prostigmatic mites are established. An expanded taxonomic diagnosis of the family is provided for the first time. Two new species from North America are described, *Stigmocheylus americanus* **sp. nov.** and *S. oberon* **sp. nov.** These species differ from *S. brevisetus* Berlese, 1910, the type species of the genus, by the longer body 510 and 630  $\mu\text{m}$ , respectively (vs. 380 in *S. brevisetus*) and by the absence of setae *c3*. *Stigmocheylus oberon* sp. nov. differs from *S. americanus* sp. nov. by the absence of *g2* (vs. its presence in *S. americanus*), and by leg setation: setae *ve'* and *ve''* on tarsi II–III; *v'* on tibia IV, *l1*, *l''1*, *v'1* on genu I, *l''* on telofemur III, *l'* on telofemur IV, *l''* on basifemur I, *d* on basifemur II, and *4c* on coxa IV are present (vs. absence of these setae in *S. americanus* sp. nov.). All three species differ from *S. pilosus* (Soliman et Zaher, 1975), the second formerly known species of this family, by having the non segmented peritremes.



**Key words.**— Mites, systematics, external morphology, Stigmocheylidae, *Stigmocheylus*, *S. oberon*, *S. americanus*, new species.

# ***BLASZAKIA*, A NEW GENUS OF QUILL MITES (ACARI: SYRINGOPHILIDAE) PARASITIZING TURACOS (AVES: MUSOPHAGIFORMES)**

MACIEJ SKORACKI and BOŻENA SIKORA

*Department of Animal Morphology, Faculty of Biology, Adam Mickiewicz University,  
Umultowska 89, 61-614 Poznań, Poland; e-mail: skoracki@amu.edu.pl*

**Abstract.**— A new genus and two new species of quill mites (Acari: Syringophilidae) are described and figured from birds of the order Musophagiformes. *Blaszakia* **gen. nov.** differs from the closely related *Charadriphilus* Bochkov et Chistyakov, 2001 by the rounded posterior margin of the stylophore and small number of chambers in the peritremal branches. The first new species – *B. tauracos* **sp. nov.** was recorded from *Tauraco livingstoni* (Gray) from Tanzania and from *T. schalowi* (Reichenov) (Musophagidae) from Guinea, the second – *B. rossae* **sp. nov.** was recorded from *Musophaga rossae* Gould (Musophagidae) from the Democratic Rep. of Congo. Syringophilid mites are recorded from birds of this order for the first time.



**Key words.**— Syringophilidae, quill mites, ectoparasites, Musophagiformes, taxonomy, new taxa.

FIRST RECORD OF THE GENUS *THAUMATOPELVIS*  
MAHUNKA (ACARI: HETEROSTIGMATA:  
SCUTACARIDAE) FROM EUROPE

ERNST EBERMANN

*Karl-Franzens-University, Institute of Zoology, A-8010 Graz, Universitätsplatz 2,  
Austria; e-mail: ernst.ebermann@uni-graz.at*

**Abstract.**— The first European record of the scutacarid genus *Thaumatopelvis* Mahunka, 1973 is presented. The mites were extracted from decayed pine litter collected from the Island of Elba (Italy). The finding represents a new species that is described in this paper as *Thaumatopelvis blaszaki* **sp. nov.**



**Key words.**— Acari, Scutacaridae, *Thaumatopelvis*, new species, Elba.

**REDESCRIPTION OF *HAWAIIEUPODES TERMOPHILUS*  
STRANDTMANN ET GOFF, 1978 (ACARI: PROSTIGMATA:  
EUPODOIDEA: PENTHALODIDAE) FROM HAWAII,  
WITH A DISCUSSION OF THE SYSTEMATIC STATUS  
OF THE TAXON**

KATARZYNA JESIONOWSKA

*Department of Invertebrate Zoology and Limnology, University of Szczecin, Wąska 13,  
71-415 Szczecin, Poland; e-mail: Katarzyna.Jesionowska@univ.szczecin.pl*

**Abstract.**— *Hawaii eupodes termophilus* from the superfamily Eupodoidea is redescribed from the Hawaiian holotype and paratypes housed in the Bishop Museum, Honolulu, Hawaii. This is the first redescription since *H. termophilus* was originally described. Details of body morphology, i.e. idiosoma, gnathosoma, legs with setae, and solenidia are described and a morphological comparison with the genus *Penthalodes* of the family Penthalodidae is presented as a basis for the discussion of the systematic status of the mite *Hawaii eupodes termophilus*.



**Key words.**— Acari, Prostigmata, Eupodoidea, Penthalodidae, *Hawaii eupodes termophilus*, *Hawaii eupodes*, morphology, redescription, Hawaii.

**THREE NEW TYDEIN SPECIES OF THE GENUS  
*BRACHYTYDEUS* THOR, 1931 SENSU ANDRÉ 2005  
(ACARI: ACTINEDIDA: TYDEIDAE) FROM SIBERIA**

ANDRZEJ KAŻMIERSKI

*Department of Animal Morphology, Institute of Environmental Biology,  
Faculty of Biology, Adam Mickiewicz University, Umultowska 89; 61-614 Poznań,  
Poland; e-mail: amirski@amu.edu.pl*

**Abstract.**— Three new species of mites of the subfamily Tydeinae: *Brachytydeus stebayevi*, *Brachytydeus comaliatus* and *Brachytydeus karoli* from Siberia are described.



**Key words.**— Acari, Tydeidae, Tydeinae, morphology, new species, Siberia.

# DESCRIPTION OF TWO NEW SPECIES OF TYDEINAE (ACARI: ACTINEDIDA: TYDEIDAE) FROM SPAIN WITH THE REMARKS ABOUT THE IBERIAN SPECIES OF SUBFAMILY

ANDRZEJ KAŻMIERSKI

*Department of Animal Morphology, Faculty of Biology, Adam Mickiewicz  
University, Umultowska 89; 61-614 Poznań, Poland;  
e-mail: amirski@amu.edu.pl*

**Abstract.**— Two new species of the subfamily Tydeinae: *Brachytydeus fernando* and *Brachytydeus matador* from Spain are described and figured, as well as some comments are added. Eleven species are cited in text as a new combinations.



**Key words.**— Acari, Tydeidae, Tydeinae, morphology, new species, Spain, Iberian Region.

# NEW SPECIES AND NEW RECORDS OF ERIOPHYOID MITES (ACARI: PROSTIGMATA: ERIOPHYIDAE) FROM GRASSES

ANNA SKORACKA<sup>1</sup>, MARIUSZ LEWANDOWSKI<sup>2</sup>  
and JAN BOCZEK<sup>2</sup>

<sup>1</sup>*Department of Animal Taxonomy and Ecology, Institute of Environmental  
Biology, Faculty of Biology, Adam Mickiewicz University, ul. Umultowska 89,  
61-614 Poznań, Poland; e-mail: skoracka@amu.edu.pl*

<sup>2</sup>*Department of Applied Entomology, Faculty of Horticulture and Landscape  
Architecture, Warsaw University of Life Sciences - SGGW, Nowoursynowska 159,  
02-776 Warsaw, Poland; e-mail: mariusz\_lewandowski@sggw.pl;  
jan\_boczek@sggw.pl*

**Abstract.**— Two new species of grass-feeding eriophyid mites collected in northern Europe are described. *Aceria arenariae* **sp. nov.**, inhabiting European beachgrass, *Ammophila arenaria* (L.) Link. was found in Denmark. *Aculochetus blaszaki* **sp. nov.** inhabiting purple moorgrass, *Molinia coerulea* (L.) Moench was found in Finland. New locality and host records for *Abacarus hystrix* (Nalepa, 1896) and *Aculodes mckenziei* (Keifer, 1944) are also given.



**Key words.**— *Aceria arenariae*, *Aculochetus blaszaki*, Denmark, Eriophyoidea, Finland, Poaceae, taxonomy

**ERIOPHYOID MITES: *ACERIA ABSINTHII* (LIRO, 1943)  
AND *PARAPHYTOPTUS PARADOXUS* NALEPA, 1896  
(ACARI: ERIOPHYOIDEA) ON WORMWOOD,  
*ARTEMISIA ABSINTHIUM* L. IN SERBIA – SUPPLEMENT  
TO THE DESCRIPTIONS**

BILJANA VIDOVIĆ, BOJAN STOJNIĆ and RADMILA PETANOVIĆ\*

*Department of Entomology and Agricultural Zoology, Faculty of Agriculture,  
University of Belgrade, Nemanjina 6, 11080 Belgrade- Zemun, Serbia*

*\*Corresponding author: e-mail: rpetanov@agrifaculty.bg.ac.yu*

**Abstract.**— *Aceria absinthii* (Liro, 1943) and *Paraphytoptus paradoxus* Nalepa, 1896, are new species for the fauna of Serbia. The descriptions of both species are supplemented, with males described for the first time. *A. absinthii* causes galls on the lower surface of leaves, whereas *P. paradoxus* is vagrant on leaves of wormwood.



**Key words.**— Eriophyoidea, *Aceria absinthii*, *Paraphytoptus paradoxus*, *Artemisia absinthium*, morphology, Serbia.



# A NEW ERIOPHYOID MITE (ACARI: ERIOPHYIDAE) FROM *RHODODENDRON OVATUM* (ERICACEAE) IN CHINA

GUO-QUAN WANG<sup>1</sup>, SUI-GAI WEI<sup>2</sup> and DING YANG<sup>1\*</sup>

<sup>1</sup>*Department of Entomology, China Agricultural University, Beijing 100094, China;  
e-mail: wgq1230@yahoo.com.cn*

<sup>2</sup>*College of Agriculture, Guangxi University, Nanning, Guangxi, 530005, China  
\*To whom correspondence should be addressed. E-mail: dyangcau@yahoo.com.cn*

**Abstract.**— A new phytophagous mite species belonging to the genus *Disella* Newkirk et Keifer (Eriophyidae: Nothopodinae: Nothopodini), namely *D. ovatum* **sp. nov.**, infesting *Rhododendron ovatum* (Lindl.) Planch. et Maxim. (Ericaceae), is described and illustrated.



**Key words.**— *Disella*, Eriophyoidea, Nothopodinae, Nothopodini, new species, ornamental plant, herbal medicine.

# TWO NEW SPECIES OF MITES (ACARI: MYOBIIDAE AND MYOCOPTIDAE) FROM SKIN AND FUR OF SMALL MAMMALS IN POLAND

ANNA LABRZYCKA<sup>1,\*</sup> and JACEK DABERT<sup>2</sup>

<sup>1</sup>*Molecular Biology Techniques Laboratory, Adam Mickiewicz University,  
Faculty of Biology, Umultowska 89, 61-614 Poznań, Poland;  
e-mail: anna.labrzycka@amu.edu.pl; \*Corresponding author*

<sup>2</sup>*Department of Animal Morphology, Adam Mickiewicz University,  
Faculty of Biology; Umultowska 89, 61-614 Poznań, Poland;  
e-mail: jacek.dabert@amu.edu.pl*

**Abstract.**— Two new ectoparasitic mite species of the families Myobiidae (Prostigmata) and Myocoptidae (Astigmata) are described from Poland: *Acanthophthirius (Acanthophthirius) longisetosus* **sp. nov.** from *Vespertilio murinus* Linnaeus, 1758 (Chiroptera: Vespertilionidae) and *Trichoecius blaszaki* **sp. nov.** from *Apodemus flavicollis* (Melechior, 1834) (Rodentia: Muridae).



**Key words.**— Acari, Myobiidae, Myocoptidae, *Acanthophthirius*, *Trichoecius*, ectoparasites, mammals.

***XOLOPTES BLASZAKI* SP. NOV. (PTEROLICHOIDEA:  
PTEROLICHIDAE) – A NEW SPECIES OF FEATHER MITE  
FROM *ALECTORIS RUF*A (GALLIFORMES: PHASIANIDAE)  
FROM EUROPE WITH DNA BARCODE DATA**

JACEK DABERT<sup>1\*</sup>, BARRY NATRESS<sup>2</sup> and MIROSLAWA DABERT<sup>3</sup>

<sup>1</sup>*Department of Animal Morphology, Faculty of Biology, Adam Mickiewicz  
University, Umultowska 89, 61-614 Poznań, Poland;*

*e-mail: Jacek.Dabert@amu.edu.pl; \*Corresponding author*

<sup>2</sup>*25 West Lea Drive, West Ardsley, Wakefield WF3 1DH, UK;*

*e-mail: barrynattress@googlemail.com*

<sup>3</sup>*Molecular Biology Techniques Laboratory, Faculty of Biology,*

*Adam Mickiewicz University, Umultowska 89, 61-614 Poznań, Poland;*

*e-mail: Mirosława.Dabert@amu.edu.pl*

**Abstract.**— *Xoloptes blaszaki*, a new species of the feather mite family Pterolichidae (Pterolichoidea), is described from wing feathers of the Red-legged Partridge *Alectoris rufa* (L., 1758) (Phasianidae). Fusion of epimerites I and presence of a retrograde ventro-basal apophysis on tibia II in males of the new species differentiate it from the only other described species of *Xoloptes* (*X. claudicans* (Robin, 1877)), in which males have free epimerites I and thickened apico-ventral parts of tibiae II. The standard morphological description is supplemented by cytochrome oxidase I sequence data (DNA barcode).



**Key words.**— Feather mites, Astigmata, Pterolichidae, *Alectoris rufa*, new species, DNA-barcode, COI.

A NEW SPECIES OF THE GENUS *PROCTOPHYLLODES*  
(ANALGOIDEA: PROCTOPHYLLODIDAE) FROM CETTI'S  
WARBLER *CETTLA CETTI* (PASSERIFORMES:  
SYLVIIDAE) WITH DNA BARCODE DATA

AGNIESZKA BADEK<sup>1\*</sup>, MIROSLAWA DABERT<sup>2</sup>, SERGE V. MIRONOV<sup>3</sup>  
and JACEK DABERT<sup>4</sup>

<sup>1</sup>*Department of Animal Morphology, Faculty of Biology, Adam Mickiewicz  
University, Umultowska 89, 61-614 Poznan, Poland;  
e-mail: abadek@amu.edu.pl*

*\*Corresponding author*

<sup>2</sup>*Molecular Biology Techniques Laboratory, Faculty of Biology, Adam Mickiewicz  
University, Umultowska 89, 61-614 Poznań, Poland;  
e-mail: Mirosława.Dabert@amu.edu.pl*

<sup>3</sup>*Zoological Institute, Russian Academy of Sciences, Universitetskaya quay 1,  
199034, Saint Petersburg, Russia; e-mail: astigmata@zin.ru*

<sup>4</sup>*Department of Animal Morphology, Faculty of Biology,  
Adam Mickiewicz University, Umultowska 89, 61-614 Poznan, Poland;  
e-mail: dabert@amu.edu.pl*

**Abstract.**— A new feather mites species, *Proctophyllodes cetti* sp. nov., is described from Cetti's warbler, *Cettia cetti* (Temminck, 1820) (Sylviidae) from Kazakhstan. The standard morphological description is supplemented by cytochrome subunit oxidase I sequence data (DNA barcode).



**Key words.**— Feather mites, Astigmata, COL.

# THREE NEW SPECIES OF THE FEATHER MITE SUBFAMILY PTERODECTINAE (ACARI: ASTIGMATA: PROCTOPHYLLODIDAE) FROM PASSERINES (AVES: PASSERIFORMES) IN CENTRAL AFRICA

SERGEY V. MIRONOV

*Zoological Institute, Russian Academy of Sciences, Universitetskaya quay 1,  
199034, Saint Petersburg, Russia; e-mail: astigmata@zin.ru*

**Abstract.**— Three new species of the feather mite (Analgoidea: Proctophyllodidae: subfamily Pterodectinae) are described from passerines from Central Africa: *Montesauria faini* **sp. nov.** from the African Golden-breasted Bunting, *Emberiza flaviventris* Stephens, 1815 (Emberizidae), *M. pallida* **sp. nov.** from the Red-headed Weaver, *Anaplectes rubriceps* (Sundevall, 1850) (Ploceidae), and *Pedanodectes blaszaki* **sp. nov.** from the Copper Sunbird, *Cinnyris cupreus* (Shaw, 1812), (Nectariniidae).



**Key words.**— Feather mites, Analgoidea, Proctophyllodidae, parasite, Passeriformes, Africa.

# *FORTUYNIA ATLANTICA* SP. NOV., A THALASSOBIONTIC ORIBATID MITE FROM THE ROCKY COAST OF THE BERMUDA ISLANDS (ACARI: ORIBATIDA: FORTUYNIIDAE)

GÜNTHER KRISPER and REINHART SCHUSTER

*Institute of Zoology, Karl-Franzens-University, Graz Universitaetsplatz 2,  
A-8010 Graz, Austria; e-mail: guenther.krisper@uni-graz.at*

**Abstract.**— The adults of *Fortuynia atlantica* sp. nov. are described in detail, including intraspecific variation of several morphological characters. Sensillus short, smooth, clavate; one pair of lamellar furrows; 14 pairs of notogastral setae + vestigial  $c_3$ ; five pairs of genital setae, variations 6+5, 5+6, 5+4, 4+5; two pairs of anal setae, variations 3+2, 2+3. Leg setation (chaetome, solenidia): Leg I 1-4-2-3-18, 1-2-2; leg II 1-4-2-3-15, 1-1-1; leg III 2-3-1-3-15, 1-1-0; leg IV 1-2-2-3-13, 0-1-0. The new species shows a remarkable secondary sexual dimorphism; males are characterized by a pair of rounded lateral notogastral protuberances, four large porose areas on notogaster, and very long, distally lanceolate notogastral setae *la* and *lm*, as well as by a less broad genital opening. The species colonizes the intertidal zone of rocky shores of the Bermuda Islands, where it lives mainly in crevices but also under covering mats of algae; it is absent from sandy beaches and mangrove trees. The species is well adapted to overflow with sea water. Feeding biology and other details in behaviour are discussed. It is the first described member of the family Fortuyniidae known from the Atlantic Ocean. This paper is listed as “Contribution #146, Bermuda Biodiversity Project, Bermuda Aquarium Museum & Zoo”.



**Key words.**— Oribatida, taxonomy, marine littoral, sexual dimorphism, Atlantic Ocean, zoogeography.

# THE CULTIVATION AND MORPHOLOGY OF JUVENILE STAGES OF TWO SPECIES FROM GENUS *SCUTOVERTEX* (ACARI: ORIBATIDA: SCUTOVERTICIDAE)

SERGEY G. ERMILOV<sup>1</sup>, MAŁGORZATA ŁOCHYŃSKA<sup>2</sup>  
and ZIEMOWIT OLSZANOWSKI<sup>3</sup>

<sup>1</sup>*Nizhniy Novgorod State Medical Academy, Department of Biology Rodionov 190 a, Nizhniy Novgorod 603126, Russia; e-mail: ErmilovAcari@yandex.ru*

<sup>2,3</sup>*Department of Animal Taxonomy and Ecology, Faculty of Biology Adam Mickiewicz University, Umultowska 89, 61-614 Poznań, Poland; e-mail: cardamina@interia.pl, Ziemowit.Olszanowski@amu.edu.pl*

**Abstract.**— The morphology of juvenile and adult stages of two oribatid mites, *Scutovertex rugosus* Mihelčič, 1957 and *S. perforatus* Sitnikova, 1975 (Oribatida: Scutoverticidae) is described and illustrated. The comparative analysis of morphological features during ontogeny is presented. Moreover, the development duration in various laboratory conditions was studied. The development of *S. rugosus* lasted from 72 to 135 days, that of *S. perforatus* from 66 to 85 days.



**Key words.**— *Scutovertex*, juvenile stages, development, morphology, Acari, Oribatida.

# DISTINCTIVE CUTICULAR HYDROCARBON PROFILES IN ORIBATID MITES (ACARI: ORIBATIDA)

GÜNTHER RASPOINIG<sup>1, 2, \*</sup>, GÜNTHER KRISPER<sup>1</sup>,  
GÜNTER FAULER<sup>2</sup> and HANS-JÖRG LEIS<sup>2</sup>

<sup>1</sup>*Institute of Zoology, Karl-Franzens-University, Universitätsplatz 2,  
A-8010 Graz, Austria*

<sup>2</sup>*Department of Biochemical Analysis & Mass Spectrometry, University Childrens  
Hospital, Auenbruggerplatz 30, A-8036 Graz, Austria.*

*\*Corresponding author, e-mail: guenther.raspotnig@uni-graz.at*

**Abstract.**— Cuticular hydrocarbon profiles of representatives of different groups of oribatid mites (Mixonomata: *Steganacarus carinatus*, *Collohmanna gigantea*; Desmonomata: *Hermannia gibba*; Brachypylida: *Zetorchestes falzonii*) were investigated by gas chromatography – mass spectrometry. In general, cuticular extracts showed a series of straight chain alkanes being arranged in two (or three, respectively) distinctly different patterns: **1)** a pattern with a gaussian quantitative distribution of alkanes from C<sub>23</sub> to C<sub>36</sub> was noticed in extracts of *C. gigantea* and *H. gibba*, with C<sub>29</sub> – C<sub>32</sub> being most abundant. **2)** A pattern exhibiting a saw-tooth-like quantitative distribution of alkanes – with only odd-numbered alkanes being abundant – appeared to be characteristic for *S. carinatus*. **3)** Extracts of *Z. falzonii* showed no hydrocarbons. The hydrocarbons are considered to originate in a lipid layer which is covering the cuticle: this layer is regarded to represent the inner – and in some cases the only – layer of the oribatid cerotegument. The differences in cuticular hydrocarbon profiles among oribatid species may represent a promising point of attachment for further chemosystematic studies.



**Key words.**— Cerotegument, *Collohmanna*, *Hermannia*, hydrocarbons, lipid layer, Oribatida, *Steganacarus*, *Zetorchestes*.



# DO DECAYING LOGS REPRESENT HABITAT ISLANDS? ORIBATID MITE COMMUNITIES IN DEAD WOOD

PIOTR SKUBAŁA and MARTA DURAS

*University of Silesia, Department of Ecology, 40-007 Katowice, Bankowa 9, Poland;  
e-mail: piotr.skubala@us.edu.pl*

**Abstract.**— Oribatid mites are a characteristic element of soil fauna, but they are also found in decomposing wood. However, they are often absent from publications dealing with dead wood. A core question of our study was how much the mite fauna differs between dead wood and the forest floor and at different locations on dead wood. Three dead, fallen beech logs (in the third stage of decay) in the “Góra Chełm” Reserve (Jura Krakowsko-Częstochowska, Silesian province, south Poland) were examined for log-inhabiting species of mites. Samples were collected at seven microhabitats from the logs and the ground surface adjacent to each log was also sampled. Forty-nine oribatid species (44%) were obligate members of the intra-log community. Our study revealed strong differentiation between oribatid fauna in different microhabitats of decaying logs. No statistically significant differences in oribatid communities in beech logs of the same stage of decay were observed. It may be concluded that oribatid mites are using logs as a separate habitat rather than as an extension of the forest floor.



**Key words.**— Oribatid mites, dead wood, logs, beech.

***DIAEA KANGAROOBLASZAKI* SP. NOV. FROM KANGAROO  
ISLAND, SOUTH AUSTRALIA (ARANEAE: THOMISIDAE)**

PAWEŁ SZYMKOWIAK

*Department of Animal Taxonomy and Ecology, Institute of Environmental Biology,  
Faculty of Biology, A. Mickiewicz University, Poznań, Poland;  
e-mail: pawel.szymkowiak@amu.edu.pl*

**Abstract.**— A new species of the crab spider, *Diaea kangarooblaszaki* **sp. nov.** is described and figured from Kangaroo Island located south of the southern coast of South Australia. The species is endemic and commonly occurring within the Island.



**Key words.**— New species, crab spider, Kangaroo Island.