

NEW DATA TO THE KNOWLEDGE ON THE ERIOPHYOID FAUNA (ACARI: ERIOPHYOIDEA) IN YUGOSLAVIA

R. PETANOVIĆ

Faculty of Agriculture Belgrade, P.O. Box 127, Nemanjina 6, 11081 Belgrade

Results of the last two years survey of eriophyoid mite fauna in Yugoslavia are presented in the paper. The following 10 species were new for the fauna of Yugoslavia: *Acalitus essigi* (Hassan), *Aceria balasi* (Farkas), *A. biradiatus* de Lillo & Fontana, *A. caliberberis* K., *A. tamaricis* (Trotter), *Anthocoptes depressus* FARKAS, *Epitrimerus umbonis* Boczek, *Eriophyes canestrini* (Nal.), *Shevtchenkella ligustri* (Farkas) and *Vasates sarothamni* Boczek. 37 species were for the first time found on new localities and/or new host plant species.

KEY WORDS: eriophyoids, new faunistic records, Yugoslavia

INTRODUCTION

The latest analysis of the world eriophyoid fauna (AMRINE, 1996) indicates that there are 237 valid genera (plus 29 junior synonyms) and over 3030 species. According to this author conservative assessments indicate that world eriophyoid fauna has 35 000 to 50 000 species although some estimates claim 250 000 species. Most species have been described from Europe (889) and North America (699) (AMRINE & STASNY, 1994). Annual rate at which new species have been described was 0,6 in the first decade of work in the 19. century and increased to 73,3 in the period 1990-1992.

During the past years the catalogues of world fauna (AMRINE & STASNY, 1994), China (HONG & ZHANG, 1996), USA (BAKER et al., 1996) and Yugoslavia (PETANOVIĆ & STANKOVIĆ, 1999) were prepared. Check lists of the Italian species (BERNINI et al., 1995) and similar reports in Czech Republic, Hungary and Poland have also been prepared according to VANECKOVA-SKUHRAVA, 1996, RIPKA and de LILLO, 1997, and BOCZEK, 1998, respectively.

According to PETANOVIĆ & STANKOVIĆ (1999) 269 species were determined in the Federal Republic of Yugoslavia, assigned to 34 genera at 243 localities

from a total of 256 plant species. Comparing with 243 species in Poland (BOCZEK, 1998) and 257 plus 19 in Hungary (FARKAS, 1966, RIPKA & de LILLO, 1997) it is obvious that to date number of known species is similar. Considering the great florist diversity on this territory and the fact that every plant species is the host of at least two eriophyoid species, a greater diversity of eriophyoid fauna is to be expected.

Catalogue of Eriophyoid Mites of Serbia and Montenegro has been prepared for publishing two years ago. In the mean time new data concerning eriophyoid mite fauna were cummulated, and are presented in this paper.

MATERIALS AND METHODS

Surveys of eriophyoid mite fauna were carried out during last two years. Plant samples were taken in plastic bags. The plant organs were inspected with stereoscope for presence of mites. Specimens were prepared using the usual methods for light microscopy. Eriophyoid mites were mounted in Heinz or Keifer media and identified using a phase-contrast microscope at the magnification x 1000-1250.

RESULTS

New species for Yugoslavian fauna

The eriophyoid mites reported below are new records for the Yugoslavian fauna:

FAMILY ERIOPHYIDAE SUBFAMILY ERIOPHYINAE

Acalitus essigi (Hassan)

ex *Rubus* spp. (Rosaceae), Lepenski vir, Eastern Serbia, 25.05.1997. collected by R. PETANOVIĆ, in berries and buds.

Aceria balasi Farkas

ex *Carduus acanthoides* L. (Asteraceae), Novi Bečej - Slano Kopovo, Vojvodina, 7.10.1998, Beograd, Central Serbia, 16.10.1998. collected by D. SMILJANIĆ, causing deformed and multiple capitula.

Aceria biradiatus de Lillo & Fontana

ex *Corylus avellana* L. (Corylaceae), Ručići - Gornji Milanovac, Central Serbia, June, 1996, collected by M. PEŠIĆ & S. MILENKOVIĆ, vagrant.

Aceria caliberberis K.

ex *Berberis wilsoniae* Hemsl. et Wils., *Berberis vulgaris* L. (Berberidaceae), Beograd, Central Serbia, 11.08.1998. collected by I. Božić, in buds, vagrant; *Berberis julianae* Scheid. and *B. thunbergii* DC, Vrnjačka Banja, Central Serbia, 22.10.1998. collected by R. PETANOVIĆ.

Aceria tamaricis (Trotter)

ex *Tamarix* sp. (Tamaricaceae), Vrnjačka Banja, Central Serbia, 22.10.1999. collected by R. PETANOVIĆ.

Eriophyes canestrini (Nal.)

ex *Buxus sempervirens* L. (Buxaceae), Aranđelovac, Central Serbia, 11.07.1998., collected by D. SMILJANIĆ, hairy bud deformation.

SUBFAMILY PHYLLOCOPTINAE

Anthocoptes depressus Farkas

ex *Doricnium germanicum* (Greml.) Rouy. (Fabaceae), Mt. Rudnik, Central Serbia, 11.07.1998. collected by D. SMILJANIĆ, vagrant.

Epitrimerus umbonis Boczek

ex *Galium rubioides* L. (Rubiaceae), Belgrade, Central Serbia, 25.09.1997. collected by D. SMILJANIĆ, vagrant, leaf and shoot rust.

Shevtchenkella ligustri (Farkas)

ex *Ligustrum ovalifolium* Haask. (Oleaceae), Beograd, Central Serbia, 1.09.1998., collected by I. BOŽIĆ, vagrant.

Vasates sarothonni Boczek

ex *Chamaecytisus austriacus* (L.) Link. (Fabaceae), Mt. Goč, Central Serbia, 24.09.1998., collected by D. SMILJANIĆ, vagrant.

Eriophyoid mites found at new localities and /or new host plants

FAMILY PHYTOPTIDAE
SUBFAMILY PHYTOPTINAE

Phytoptus avellanae Nal.

ex *Corylus colurna* L. (Corylaceae), Mt. Kozjak, c. 1100 m, South Serbia, 5.06.1997., collected by R. PETANOVIĆ.

Phytoptus tetratrichus (Nal.)

ex *Tilia* sp. (Tiliaceae), Mt. Kozjak, c. 1100 m, South Serbia, 5.06.1997., collected by R. PETANOVIĆ

FAMILY ERIOPHYIDAE
SUBFAMILY CECIDOPHYINAE

Cecidophyes galii (Karp.)

ex *Galium kitabelianum* Roem et Schult (Rubiaceae), Mt. Bukulja, Central Serbia, 11.07.1998., collected by D. SMILJANIĆ, new host plant record.

Coptophylla gymnaspis (Nal.)

ex *Acer pseudoplatanus* L. (Aceraceae), Vrnjačka Banja, Central Serbia, 21.10.1998., collected by R. PETANOVIĆ.

Colomerus vitis (Pgst.)

ex *Vitis vinifera* L. (Vitaceae), Herceg Novi, Mediteranean Montenegro, 21.06.1997., collected by J. ŠUTAKOVIĆ.

SUBFAMILY ERIOPHYINAE

Acalitus stenaspis (Nal.)

ex *Fagus moesiaca* (K. Maly) Czecz. (Fagaceae), Mt Kozjak, c. 1.100 m, South Serbia, 5.06.1997, collected by R. PETANOVIĆ

Aceria anthocoptes (Nal.)

ex *Cirsium arvense* (L.) Scop. (Asteraceae), Novi Bečeј, Slano Kopovo, Vojvodina, 7.10.1998., collected by D. SMILJANIĆ.

Aceria drabae (Nal.)

ex *Alyssum tortuosum* W. et K. (Brassicaceae), Devojački bunar, Vojvodina, 31.01.1998. collected by D. SMILJANIĆ, new host plant record.

Aceria ligustri K.

ex *Ligustrum ovalifolium* Haask. (Oleaceae) Vrnjačka Banja, Central Serbia, 21.10.1998., collected by R. PETANOVIĆ.

Aceria massalongoi (Can.)

ex *Vitex agnus-castus* (L.) (Verbenaceae), Ostros, Skadarsko jezero; Nišice, Bar, Mediteranean Montenegro, 6.08.1997. collected by N. MIHAJLOVIĆ.

Aceria medicaginis (K.)

ex *Galega officinalis* L. (Fabaceae), Surčin, Vojvodina, 19.06.1998. collected by D. SMILJANIĆ, new host plant record.

Aceria mentharia (Can.)

ex *Mentha aquatica* L. (Lamiaceae), Banatska Palanka, Vojvodina, 13.10.1997., collected by D. LAKUŠIĆ, new host plant record.

Aceria peucedani (Can.)

ex *Pastinaca sativa* L. (Apiaceae), Beograd, Central Serbia, 27.08.1998., collected by D. SMILJANIĆ, new host plant record.

Aceria salviae (Nal.)

ex *Salvia pratensis* L. (Lamiaceae), Mt. Rajac, Central Serbia, 1.06.1998., collected by D. SMILJANIĆ.

Aceria sanguisorbae (Can.)

ex *Sanguisorba minor* Scop. (Rosaceae), Mt. Rudnik, Central Serbia, 4.06.1998. collected by D. SMILJANIĆ.

Aceria schmardae (Nal.)

ex *Campanula trachelium* L. (Campanulaceae), Mt. Bukulja, Central Serbia, 11.07.1998. collected by D. SMILJANIĆ, reka Duboka, Mt. Kopaonik, South-western Serbia, 20.08.1998. collected by O. Petrović.

Aceria solida (Nal.)

ex *Stachys officinalis* (L.) Trev. (Lamiaceae), Mt. Rudnik, Central Serbia, 19.06.1998. collected by D. SMILJANIĆ, new host plant record.

Aceria vitalbae (Can.)

ex *Clematis vitalba* (Can.) (Ranunculaceae), Vrnjačka Banja, Central Serbia, 19.09.1998. collected by D. SMILJANIĆ.

Paraphytoptus chrysanthemi (K.)

ex *Dendranthema* sp. (Asteraceae), Monastery Žiča, Central Serbia, 12.09.1998., collected by D. SMILJANIĆ.

SUBFAMILY PHYLLOCOPTINAE

Anthocoptes rubi Domes

ex *Rubus* sp. (Rosaceae), Lepenski vir, Eastern Serbia, 27.05.1997., collected by R. PETANOVIĆ.

Epitrimerus chamaeneri Liro

ex *Epilobium* sp. (Onagraceae), Novi Bečeј, Slano Kopovo, Vojvodina, 7.10.1998., collected by D. SMILJANIĆ.

Epitrimerus inulae Farkas

ex *Inula britanica* L. (Asteraceae), Krnule, Vladimirci, Western Serbia, 20.08.1998. Vrnjačka Banja, Central Serbia, 19.09.1998., collected by D. SMILJANIĆ.

Epitrimerus taraxaci Liro

ex *Taraxacum officinale* Weber (Asteraceae), Monastery Žiča, Central Serbia, 22.09.1998., collected by D. SMILJANIĆ.

Epitrimerus urbanus Liro

ex *Geum urbanum* L. (Rosaceae), Mt. Kozjak, c. 1100 m, Southern Serbia, 5.06.1997., collected by R. PETANOVIĆ.

Phyllocoptes balasi Farkas

ex *Sanguisorba minor* Scop. (Rosaceae), Mt. Rudnik, Central Serbia, 4.06.1997., collected by D. SMILJANIĆ.

Phyllocoptes gracilis (Nal.)

ex *Rubus idaeus* L. (Rosaceae), Čačak, Central Serbia, 28.08.1997., collected by R. PETANOVIĆ.

Tegonotus depressus (Nal.)

ex *Carpinus betulus* L. (Corylaceae), Mt. Kozjak, c. 1100 m, Southern Serbia, 5.06.1997., collected by R. PETANOVIĆ.

Tegonotus pseudoobtusus Pet.

ex *Acer intermedium* Panč. (Aceraceae), Mt. Kozjak, c. 1100 m, Southern Serbia, 5.06.1997., collected by R. PETANOVIĆ.

Tetra eurynotus (Nal.)

ex *Daucus carota* L. (Apiaceae), Novi Bečeј, Slano Kopovo, Vojvodina, 7.10.1998., collected by D. SMILJANIĆ.

Vasates acraspis (Nal.)

ex *Genista sagittalis* L. (Fabaceae), Mt. Rudnik, Central Serbia, 1.06.1998., collected by D. SMILJANIĆ, new host plant record.

Vasates anthobius (Nal.)

ex *Galium vernum* Scop. (Rubiaceae), Mt. Rajac, Central Serbia, 4.06.1998., *G. rubioides* L. (Rubiaceae), Beograd, Central Serbia, 25.09.1997., collected by D. SMILJANIĆ, new host plant records.

Vasates ballei (Nal.)

ex *Tilia platyphyllos* Scop., *T. cordata* Mill. (Tiliaceae), Vrnjačka Banja, Central Serbia, 21.10.1998., collected by R. PETANOVIĆ.

Vasates clinopodii (Liro)

ex *Lycopus europeus* L. (Lamiaceae), Vrnjačka Banja, Central Serbia, 25.09.1998., collected by D. SMILJANIĆ, new host plant record.

Vasates massalongoi (Nal.)

ex *Syringa vulgaris* L. (Oleaceae), Vrnjačka Banja, Central Serbia, 22.10.1998., collected by R. PETANOVIĆ.

Vasates scutellariae (Can. & Mass.)

ex *Scutellaria hastifolia* L. (Lamiaceae), Ropočeve, Sopot, Central Serbia, 9.05.1998., collected by D. SMILJANIĆ.

Vasates teucrii (Nal.)

ex *Teucrium chamaedrys* L. (Lamiaceae), reka Duboka, Mt. Kopaonik, South-western Serbia, 20.08.1998., collected by O. Petrović.

FAMILY DIPTILOMIOPIDAE
SUBFAMILY DIPTILOMIOPINAE*Diptacus gigantorrhynchus* (Nal.)

ex *Physocarpus opulifolia* (L.) Maxim. (Rosaceae), Beograd, Central Serbia, 30.08.1998., *Cornus sanguinea* L. (Cornaceae), Beograd, Central Serbia, 30.09.1998., collected by I. BOŽIĆ, new host plant records.

ACKNOWLEDGEMENTS

I wish to thank my colleagues and associates: D. SMILJANIĆ, O. Petrović, N. MIHAJLOVIĆ, D. LAKUŠIĆ and the student I. BOŽIĆ who collected part of the samples.

REFERENCES

- AMRINE, J. W. Jr., 1996. *Keys to the World Genera of the Eriophyoidea (Acari: Prostigmata)*. Indira Publ. House. West Bloomfield, Michigan, USA, 187 pp.
- AMRINE, J. W. Jr., T. A. STASNY, 1994. *Catalog of the Eriophyoidea (Acarina: Prostigmata) of the World*. Indira Publ. House, West Bloomfield, Michigan, USA, 798 pp.
- BAKER, E. W. , T. KONO, J.W. AMRINE, Jr., M. DELFINADO-BAKER, T. STASNY. 1996. *Eriophyoid Mites of the United States*. Indira Publishing House. West Bloomfield, Michigan, USA.
- BERNINI, F., M. CASTAGNOLI, R. NANELLI 1995. Arachnida .Acarí. In: Minelli, A., Ruffo, S., La Posta, S. (eds.). Checklist delle specie della fauna Italiana, 24. Calderini. Bologna, 131 pp.
- BOCZEK, J. 1998. Relationships of Eriophoid Mites (Eriophyoidea) to their Host Plants. Zesz. Nauk. Nr 214. Ochrona srodowiska 2. XXV Krajowe Sympozjum Akarologiczne "Akarologia w sluzbie czeloweka", 25-27.09.1997. Bydgoszcz, 1998., pp 13-16.
- FARKAS, H., 1966. Gubaczatakak - Eriophyidae. In: Magyarorszag Allatvilaga (Fauna Hungarica), 18, 15. Akademia Kiado , Budapest, 164 pp.
- HONG, X., Z-Q , ZHANG, 1996. The Eriophyoid Mites of China: An Illustrated Catalog and Identification Keys (Acari: Prostigmata: Eriophyoidea). Memoirs on Entomology, International Associated Publishers. Goinesville. Florida, USA, pp. 318.

- PETANOVIĆ, R., S. STANKOVIĆ (1999): Catalog of the Eriophyoidea (Acari: Prostigmata) of Serbia and Montenegro. *Acta Ent. Serb.* Special Issue, 1-143.
- RIPKA, G., E. de LILLO. 1997. New data to the knowledge on the eriophyoid fauna in Hungary (Acari: Eriophyoidea). *Folia Ent. Hung.* LVIII, 147-157.
- VANECKOVA-SKUHRAVA, I. 1996. Eriophyoid mites (Acari: Eriophyoidea) on trees and shrubs in Czech Republic. *Acta Soc. Zool. Bohem.*, 60: 223-246.

НОВИ ПРИЛОЗИ ПОЗНАВАЊУ ФАУНЕ ЕРИОФИДА (ACARI: ERIOPHYOIDEA) ЈУГОСЛАВИЈЕ

Р. ПЕТАНОВИЋ

И з в о д

Последњих деценија у свету се веома интензивно проучава фауна Eriophyoidea. Као један од резултата систематизације података публикован је последњих неколико година каталог светске фауне Eriophyoidea као и каталоги Eriophyoidea Кине и САД, чек листа ериофида Италије, прилози који се односе на фауну ериофида дрвећа и жбуња Чешке и Мађарске, итд. Каталог ериофида Србије и Црне Горе (ПЕТАНОВИЋ & СТАНКОВИЋ, 1999) обухвата 269 врста ериофида у оквиру 34 рода, са 243 локалитета и са укупно 256 биљних врста. У међувремену су акумулирани подаци који чине ово кратко саопштење.

У раду се наводи 10 нових врста за фауну Југославије: *Acalitus essigi* (Hassan), *Aceria balasi* (Farkas), *A. biradiatus* de Lillo & Fontana, *A. caliberberis* (K.), *A. tamaricis* (Trotter), *Anthocoptes depressus* Farkas, *Epitrimerus umbonis* Boczek, *Eriophyes canestrini* (Nal.), *Shevchenkella ligustri* Farkas и *Vasates sarothamni* Boczek. Поред тога 37 врста ериофида нађено је на новим локалитетима и/или новим врстама биљака домаћина.

Received February 3, 1999

Accepted March 10, 1999