

**THREE NEW SPECIES OF ERIOPHYOID MITES  
(ACARI: ERIOPHYOIDEA) FROM SERBIA WITH THE  
NOTES ON NEW TAXA FOR THE FAUNA OF YUGOSLAVIA**

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Three new species *Phyllocoptes pteridii* n. sp., *Epitrimerus serbicus* n. sp. and *Platyphytoptus taxodii* n. sp. are described from Serbia. Five species i.e. *Tegoprionus dentatus* (Nal.), *Tegonotus carinatus* Nal., *Shevtchenkella brevisetosus* (Hodgkiss), *Aceria ambrosiae* Wilson and *Epitrimerus knautiae* Liro. are new for the fauna of Yugoslavia. At the same time, no species of the genus *Tegoprionus* was registered before in this country.

KEY WORDS: eriophyoids, new species, Serbia, new faunistic records, Yugoslavia

Three new species of eriophyoid mites from Serbia are described and illustrated. *Phyllocoptes pteridii* n. sp. was found as vagrant on leaves of fern *Pteridium aquilinum* (L.) Kuhn, *Epitrimerus serbicus* n. sp. was found as vagrant on under surface of leaves of fern *Driopteris filix-mas* (L.) Schott. and *Platyphytoptus taxodii* n. sp. was found as vagrant on *Taxodium distichum* Rich. Five species of eriophyoids are for the first time registered in Yugoslavia: *Tegoprionus dentatus* (Nal.), vagrant on *Galium verum* L., *Tegonotus carinatus* Nal., rust mite on *Aesculus hippocastanum* L., *Shevtchenkella brevisetosus* (Hodgkiss), vagrant on *Acer negundo* L., *Aceria ambrosiae* Wilson, causing stunting of *Ambrosia artemisifolia* L. and *Epitrimerus knautiae* Liro, vagrant on *Dipsacus laciniatus* L.

All measurements are expressed in micrometers. Type material has been deposited at the Department of Entomology, Faculty of Agriculture,

University of Belgrade.

The following abbreviations are used to denote the various parts in the figures: AD, antero-dorsal mite, AL, antero-lateral mite, CG, coxal-genital region, em, empodium, GF, genital region, female, GM, genital region, male, IG, internal genitalia, female, LO, lateral opisthosoma, PM, postero-ventral mite, w, solenidion.

*Phyllocoptes pteridii* n. sp. ( Fig. 1)

**Female:** 155 (150-175) long, 60 wide, 70 thick, yellowish in colour. Gnathosoma 27 long, dorsal pedipalpal genual seta 6 long, chelicerae 18 long, almost straight. Prodorsal shield 40 long, 54 wide, with a lobe over gnathosoma 5 long, with one median, one admedian, and two submedian lines on each side; lines granulated. Dorsal tubercles situated ahead of a shield margin, 20 apart, with scapular setae 10 long ahead, converging.

Foreleg 35 long, tibia 8 long with paraxial tibial seta 4 long, tarsus 6 long, tarsal solenidion 7 long, knobbed, tarsal empodium 6 long, 4-rayed. Hindleg 33 long, tibia 8 long, tarsus 6 long, tarsal solenidion 6 long, knobbed, tarsal empodium 5 long.

Coxae with granular ornamentation; anterolateral tubercles on I coxisternum 8 apart, setae 5 long; proximal tubercles on I coxisternum 11 apart, setae 20 long; proximal tubercles on II coxisternum 20 apart, setae 45 long.

Opisthosoma with 52 (50-54) microtuberculate tergites and about 66 microtuberculate sternites. Microtubercles smaller and denser, ventrally. Setae **c2** 12 long, on ventral annulus 11; **d** setae 80 long, on ventral annulus 23; **e** setae 60 long on annulus 40; **f** setae 20 long on 5 before anal lobes. **h2** setae 40 long, **h1** setae minute.

Genitalia 14 long, 21 wide; female genital coverflap with about 8-12 striae; proximal setae on III coxisternum 18 apart, 15 long; genitalia between 4 and 10 ventral annuli.

**Male:** 130 long, prodorsal shield 40 long, **sc** setae 8 long. Opisthosoma with 39 dorsal and about 63 ventral annuli.

**Type locality:** Mt. Goč, Central Serbia, collected on September 24, 1998, by D. Smiljanić. Also found at the same mountain 20.07.1999 and 23.10.1999. Collected by M. Glavendekić and D. Smiljanić, respectively.

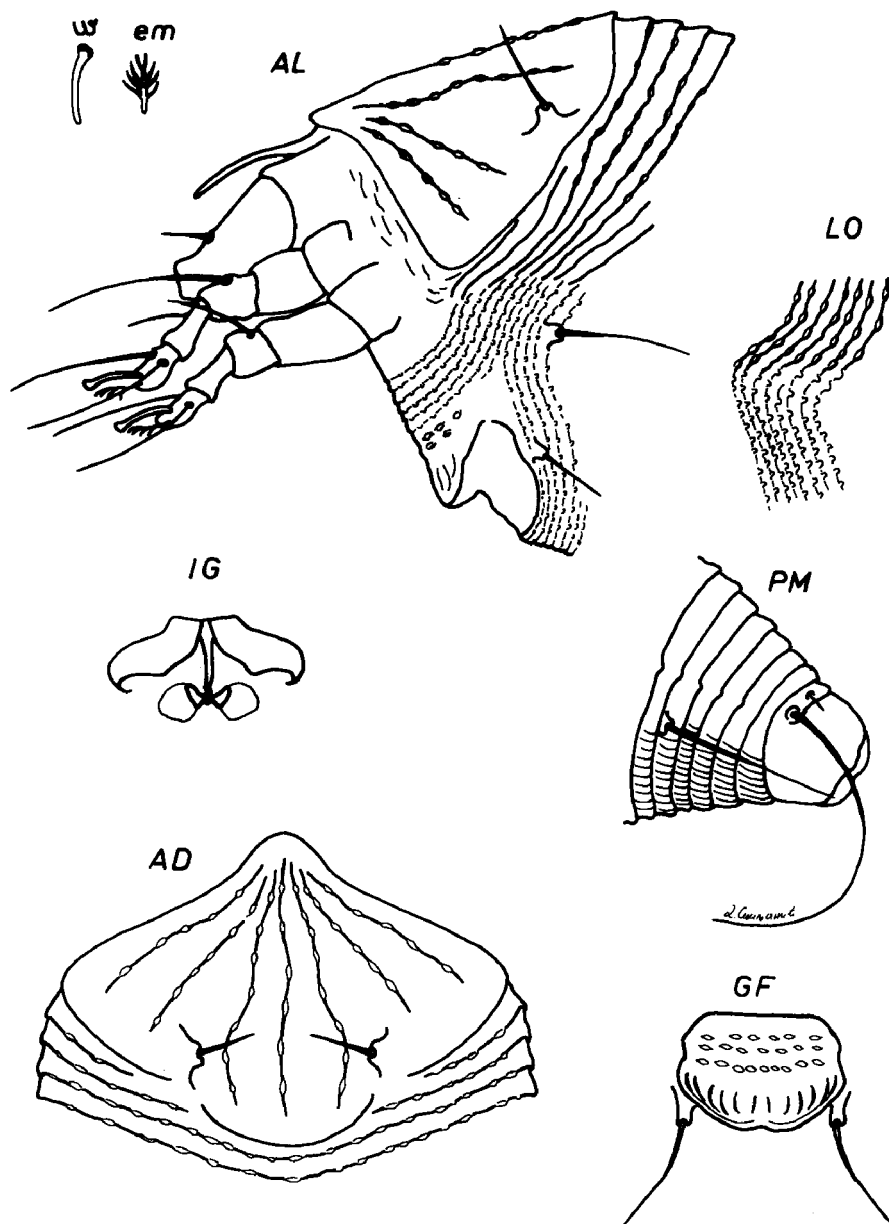


Fig. 1. *Phyllocoptes pteridii* n. sp.

Designations on figures: AD - antero-dorsal mite; AL - antero-lateral mite; GF - genital region, female; IG - internal genitalia, female; LO - lateral opisthosoma; PM - postero-lateral mite; w - solenidion; em - tarsal empodium

**Host plant:** *Pteridium aquilinum* (L.) Kuhn (Pteridophyta: Hypolepidaceae)

**Relation to the host plant:** vagrant on the under surface of leaves.

**Type material:** holotype female on slide 792/5; 19 paratype females, 2 males.

The species is close to *Phyllocoptes dimorphus* K. and can be distinguished by the appearance of prodorsal shield, number of opisthosomal annuli, the length of opisthosomal setae **d**, **e** and **f**, and the appearance of female genital coverflap.

In *P. dimorphus* K. (Keifer, 1940) prodorsal shield pattern netlike. Number of dorsal and ventral opisthosomal annuli 38 and about 60, respectively; opisthosomal setae **d**, 22 long, opisthosomal setae **e** 12,5 long and opisthosomal setae **f** 31 long; female genital coverflap with double longitudinal scoring.

In the new species prodorsal shield with one median, 1 admedian and 2 submedian granulated lines on each side; number of dorsal and ventral opisthosomal annuli 50 and about 70, respectively. Opisthosomal setae **d** 80 long, opisthosomal setae **e** 60 long, opisthosomal setae **f** 20 long; female genital coverflap with single longitudinal scoring.

Only 23 species of eriophyoid mites have been described until now from ferns in the world, mostly from Far East, New Zealand and Southern Africa (GERSON, 1996). Description of a new species is the third in Europe from ferns, and the second description of species within the genus *Phyllocoptes* from *Pteridium aquilinum* (L.) Kuhn.

### *Epitrimerus serbicus* n. sp. ( Fig.2)

**Female:** 167 long, 65 wide, 63 thick, spindleform, yellowish in colour. Gnathosoma 19 long, dorsal pedipalpal genual seta 15 long; chelicerae 18 long, almost straight. Prodorsal shield 44 long, 60 wide, with a lobe over gnathosoma 13 long, with netlike ornamentation. Dorsal tubercles situated ahead of a shield margin, 19 apart with scapular setae 5 long, directed forwards and converging.

Foreleg 33 long, tibia 9 long, with paraxial tibial seta 4 long, tarsus 5 long, tarsal solenidion 5 long, knobbed, tarsal empodium 5 long, 4-rayed. Hindleg 29 long, tibia 7 long, tarsus 6 long, tarsal solenidion 5 long, knobbed, tarsal empodium 5 long.

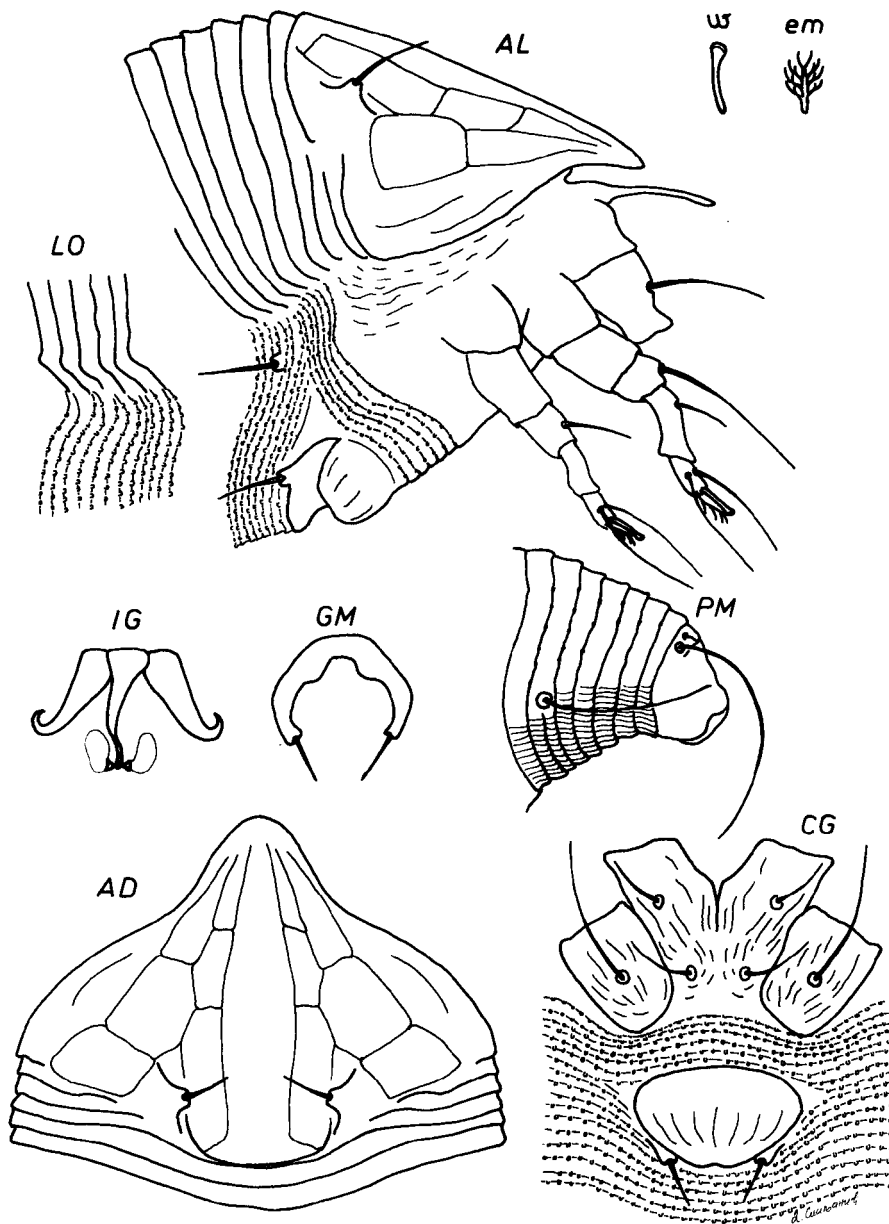


Fig 2. *Eptirmerus serbicus* n. sp.

Designations on figures: AD - antero-dorsal mite; AL - antero-lateral mite; CG - coxal-genital region; GM - genital region, male; IG - internal genitalia, female; LO - lateral opisthosoma; PM - postero-lateral mite; w - solenidion; em - tarsal empodium

Coxae with ornamentation of longitudinal lines; anterrolateral tubercles on I coxisternum 14 apart, setae 8 long; proximal tubercles on I coxisternum 6 apart, setae 10 long; proximal tubercles on II coxisternum 24 apart, setae 19 long; sternum 5 long.

Opisthosoma with about 50 smooth dorsal annuli and about 76 microtuberculate ventral annuli; microtubercles, minute. Setae **c2** 9 long, on ventral annulus 13; **d** setae 18 long, on ventral annulus 27; **e** setae 5 long, on ventral annulus 50; **f** setae 23 long, on ventral annulus 71; last 8 annuli with elongated tubercles; **f** setae on annulus 6 before the anal lobes; **h2** setae 62 long, **h1** setae 2 long.

Genitalia 13 long, 22 wide; genital coverflap with about 6-7 striae; proximal setae on III coxisternum 11 apart, 6 long; genitalia between 6 and 13 ventral annuli.

**Male:** 120 long; prodorsal shield 36 long, **sc** tubercles 14 apart, setae 4 long. Opisthosoma with 44 dorsal annuli and about 60 ventral annuli; genitalia 10 wide.

**Nymph:** 126 long; prodorsal shield 36 long; **sc** tubercles 14 apart, setae 5 long. Opisthosoma with about 60 annuli, genital setae 6 apart, 2 long, on ventral annulus 15.

**Type locality:** Mt. Goč, Central Serbia, collected on October, 23, 1999. by the author.

**Host plant:** *Driopteris filix-mas* (L.) Schott. (Pteridophyta: Aspidiaceae)

**Relation to the host plant:** vagrant on the undersurface of leaves.

**Type material:** holotype female on slide 838/7 and 23 paratype females, 2 males, 1 nymph.

This species is close to *Epitrimerus alinae* Liro and can be distinguished by ornamentation of prodorsal shield and the host plant.

In *Epitrimerus alinae* Liro (LIRO, 1941, BOCZEK, 1964) prodorsal shield with three longitudinal lines and four side lines and the mite is vagrant on the under surface of leaves of *Chrysanthemum leucanthemum* L. (Asteraceae).

In the new species prodorsal shield design, net like and the mite is vagrant on the undersurface of leaves of *Driopterix filix-mas* (L.) Schott. (Pteridophyta: Aspidiaceae). This is the first *Epitrimerus* species described until now on ferns.

*Platyphytoptus taxodii* n. sp. ( Fig.3)

**Female:** 150 (150-171) long, 86 (86-92) wide, 85 thick. Colour red-brown; body in dorsal view heavy spindle-form, widest across rear of shield, dorsoventrally flattened, a little curved. Gnathosoma 37 long, dorsal pedipalpal genual seta 15 long, chelicerae 25 long, almost straight. Prodorsal shield 53 long, 66 (63-73) wide, with a lobe over gnathosoma 13 long; the shield without markings except rather sparse microgranulations. Dorsal tubercles large, situated ahead of the rear shield margin, 26 apart, with scapular setae 14 long, directed forwards and converging.

Foreleg 50 long, tibia 10 long with paraxial tibial seta 10 long, tarsus 7 long, tarsal solenidion 13 long unknobbed, tarsal empodium 12 long, 6-rayed. Hindleg 39 long, tibia 9 long, tarsus 7 long, tarsal solenidion 12 long, unknobbed, tarsal empodium 11 long.

Coxae without ornamentation; anterolateral tubercles on I coxisternum 15 apart, setae 10 long; proximal tubercles on I coxisternum 12 apart, setae 20 long, proximal tubercles on II coxisternum 30 apart, setae 40 long.

Opisthosoma with about 71 (60-96) annuli, superficially divided into a dorsal and ventral annuli by a sublateral groove on each side. Ventral annuli microtuberculate. Setae **c2** 45 long, on ventral annulus 11, **d** setae 60 long, on ventral annulus 28, **e** setae 30 long, on ventral annulus 44; **f** setae 30 long, on ventral annulus 65; **f** setae on ventral annulus 7 before anal lobes; opisthosomal setiferous tubercles large, 4 long; **h2** setae 100 long, **h1** setae 6 long.

Genitalia 22 long, 32 wide; female genital coverflap with about 10 striae; proximal setae on III coxisternum 20 apart, 40-50 long, genitalia between 13 and 19 ventral annuli.

**Male:** not found.

**Nymph:** 145 long; prodorsal shield 40 long, **sc** setae 22 apart, 8 long. Opisthosoma with about 77 annuli, genital setae 8 apart, 9 long, on ventral annulus 18.

**Type locality:** Central Park in Vrnjačka Banja, Central Serbia, collected on October, 22, 1998 by the author and August, 2, 1999 by M. Glavendekić.

**Host plant:** *Taxodium distichum* Rich. (Taxodiaceae).

**Relation to the host plant:** vagrant on and between the needles.

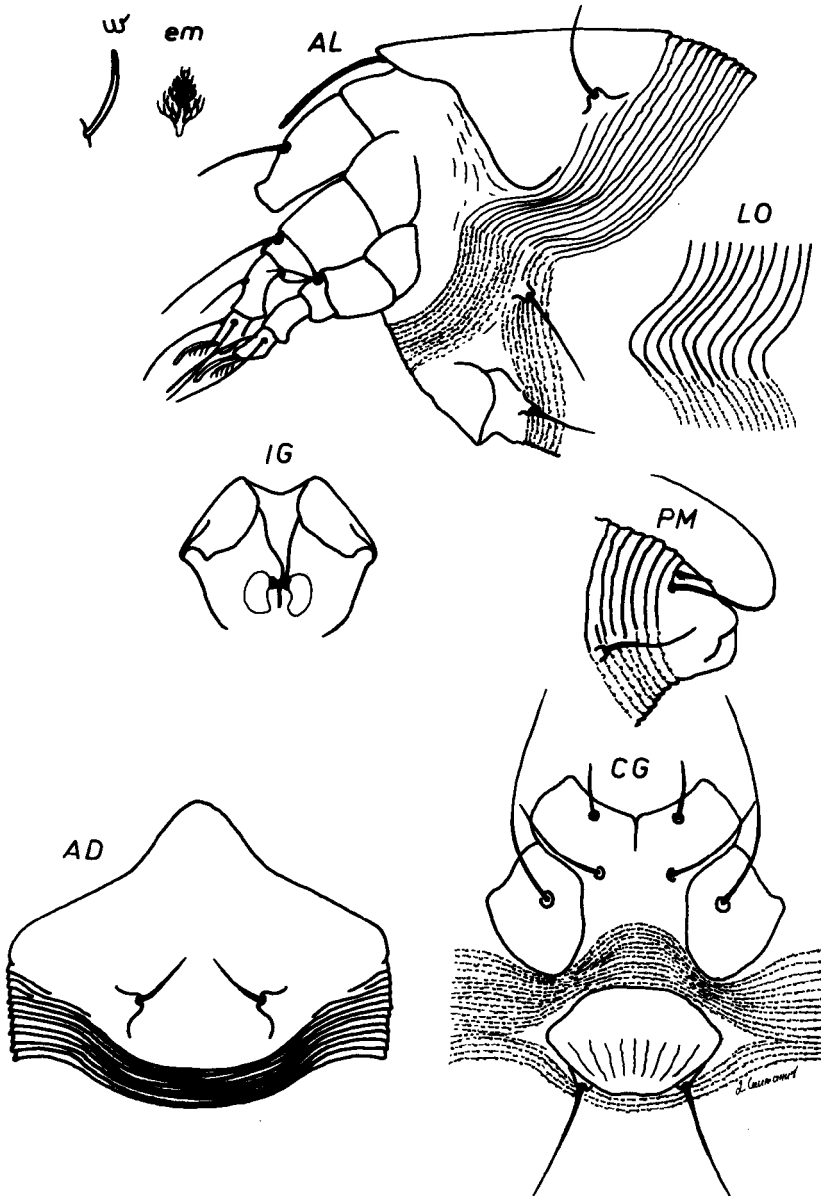


Fig 3. *Platyphytoptus taxodii* n. sp.

Designations on figures: AD - antero-dorsal mite; AL - antero-lateral mite; CG - coxal-genital region; IG - internal genitalia, female; LO - lateral opisthosoma; PM - postero-lateral mite; w - solenidion; em - tarsal empodium



**Type material:** Holotype female on slide VB30/3, paratype females 9 and 1 nymph.

This species is close to *Platyphytoptus sabinianae* K. and can be distinguished by the number of rays of tarsal empodium, coxae ornamentation, the length of opisthosomal setae, the appearance of female genital coverflap and the host plant.

In *P. sabinianae* K. (KEIFER, 1938), empodium 5-rayed, coxae irrorated with granules; opisthosomal setae **c2** 14 long, **d** 19 long, **e** 20 long, **f** 19 long, **h2** 75 long, **h1** 4,5 long; **3a** 11 long, female genital coverflap short, appressed, granular; the mites are vagrants between the needles of *Pinus sabiniana* Dougl. (Pinaceae).

In the new species empodium 6-rayed, coxae smooth; opisthosomal setiferous tubercles large with setae long, relatively thick in first 1/3, and extremely thin to the end; setae **c2** 45 long, **d** 60 long, **e** 30 long, **f** 30 long, **h2**, 100 long, **h1** 6 long, **3a** 50 long; female genital coverflap with about 10 striae; the mites are vagrants on and between needles of *Taxodium distichum* Rich. (Taxodiaceae).

This is the first *Platyphytoptus* eriophyoid mite described on Taxodiaceae plants. KEIFER (1939) described "*Platyophytoptus*" *taxodii* (K.), close to the new species in almost all characters except the number of empodial rays. This species has been transferred later to the genus *Epitrimerus*, and the present status is in the genus *Epitrimerus* (AMRINE & STASNY, 1994).

### New reports

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

#### Family Eriophyidae

##### *Aceria ambrosiae* Wilson

ex *Ambrosia artemisifolia* L. (Asteraceae), Belgrade, Central Serbia, 2.09.1999., collected by T. Simić, first record in Europe.

##### *Epitrimerus knautiae* Liro

ex *Dipsacus laciniatus* L. (Dipsacaceae), Kupinovo, Vojvodina, 11.09.1999., collected by D. Smiljanić, new host plant record.

***Shevtchenkella brevisetosus* (Hodgkiss)**

ex *Acer negundo* L. (Aceraceae), Belgrade, Straževica, Central Serbia, 21.07.1999. collected by B. Stevanović, first record in Europe.

***Tegonotus carinatus* Nal.**

ex *Aesculus hippocastanum* L. (Hippocastanaceae), Belgrade, Central Serbia, 15.07.1999., collected by R. Petanović.

***Tegoprionus dentatus* (Nal.)**

ex *Galium verum* L. (Rubiaceae), Mt. Kosmaj, Central Serbia, 23.07.1998., collected by D. Smiljanić, known only from Austria and Finland.

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ТРИ НОВЕ ВРСТЕ ЕРИОФИДА (ACARI: ERIOPHYOIDEA)  
ИЗ СРБИЈЕ И ПРИЛОЗИ О НОВИМ ТАКСОНИМА  
У ФАУНИ ЈУГОСЛАВИЈЕ

Р. ПЕТАНОВИЋ

**И з в о д**

У раду су описане три нове врсте ериофида (Acari: Eriophyoidea): *Phyllocoptes pteridii* n. sp. са *Pteridium aquilinum* (L.) Kuhn., *Epitrimerus serbicus* n. sp. са *Driopteris filix-mas* (L.) Schott. и *Platyphytoptus taxodii* n.sp. са *Taxodium distichum* Rich. Нове врсте су описане и нацртане, а приложена је и диференцијална дијагноза у односу на *Phyllocoptes dimorphus* K., *Epitrimerus alinae* Liro, односно *Platyphytoptus sabiniana*e K.

У раду се наводе релевантни подаци о 5 нових врста ериофида у фауни СР Југославије: *Aceria ambrosiae* Wilson, *Epitrimerus knautiae* Liro, *Shevtchenkella brevisetosus* (Hodgkiss), *Tegonotus carinatus* Nal. и *Tegoprionus dentatus* (Nal.). Припадници рода *Tegoprionus* нису до сада били забележени на овим просторима, две врсте су први пут регистроване у Европи, једна је до сада била регистрована само у Аустрији и Финској, а за једну врсту ериофиде је забележена нова биљка домаћин.

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