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SURVEY OF THE MYRMECOFAUNA *(FORMICIDAE, HYMENOPTERA)* OF YUGOSLAVIA

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Abstract — This paper summarizes results of myrmecofauna investigations in Yugoslavia obtained by 19 myrmecologists as well as by the authors.

Agosti and Collingwood (1987) reported 171 ant species for Yugoslavia. Their list should be enriched by 1 genus and 39 species, mentioned by other authors who worked on myrmecofauna of Yugoslavia.

The genus *Oxyopomyrmex* André 1881, and the following species: *Oxyopomyrmex* sp., *Myrmica hellenica* Forel 1913, *M. hirsuta* Elmes 1975, *Aphenogaster ionia* B. Urbani 1968, *Pheidole megacephala* (Nylander) 1849, and *Acantholepis splendens* Karawajev 1912 are new for the myrmecofauna of Yugoslavia

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INTRODUCTION

The family *Formicidae* contains about 10.000 species widespread all around the world. Ants appear as an important component practically in all terrestrial ecosystems. By their number in societies, workers are the most numerous predators among invertebrates. Ants have big biomass; therefore their role in energy turnover is important. In addition, one should bear in mind their importance in pedogenetic processes and trophic relationships, especially in semidesert and desert conditions.

Besides, if we accept the statement of Hölldobler and Wilson (1990) that ants „represent the culmination of insect evolution, in the same sense that human beings represent the summit of vertebrate evolution", it is obvious that it is important to investigate and to known myrmecofauna of particular countries and regions.

Concerning Yugoslavia, several authors reported a number of species for particular regions of Yugoslavia.

Frauenfeld (1854) was one of the first authors who gave data concerning myrmecofauna of Yugoslavia. He reported 15 species of ants from Dalmatia. Mayr (1855) gave a list of species from the Island of Lastovo, Zadar, and the Island of Hvar. Later Gasperini (1887) gave data on myrmecofauna of the middle Dalmatia. He gave a list of 17 genera and 29 species. The same author (1889) reported 2 more species. Förel (1888) and partly Katurić (1887), worked on ants of Dalmatia, as well (according to Nonveiller 1989).

Wasmann (1898) presented a list of, as he said, „real myrmecophiles and then a list of ants" sent to him by Handman from the surroundings of Travnik (Bosnia). That list consisted of 10 genera and 16 species (enclosed list of species; 28).

According to Nonveiller (1989), at the beginning of the 20th century, Galvagni (1902) reported 7 species of ants from the islands of Dalmatia. Kohl (1908) gave a list of species for the middle Dalmatia: Split (12 species), Vis (11), Mljet (8). Fahringer (1911) reported some species of Bosnia and Dalmatia.

Besides, Doflein (1920), from his two visits to Macedonia, registered 12 genera, 36 species, 11 subspecies and 12 varieties for the myrmecofauna of Macedonia (enclosed list of species; 5).

Maidl (1922) in his contribution to *Hymenoptera* of Bosnia, Herzegovina and Dalmatia, reported 16 species of ants. Also Finzi (1923) mentioned some species of ants of Dalmatia in his work. Müller (1923) reported 65 species from Dalmatia in his big work comprising 88 species in total (according to Nonveiller 1989).

Soudek (1925) gave some data on myrmecofauna of Dalmatia and presented a list of 15 species (enclosed list of species; 25). According to Nonveiller (1989), the same author described a new parasitic genus *(Myrmetaerus)* with a new species *(M. microcellatus)* and a new variety *Cardiocondyla elegans* var. *dalmatica* both found in Herceg Novi (Montenegro).

Besides, several other new species, subspecies, varieties and forms, elaborated by some of above mentioned authors have been described: *Acantholepis frauenfeldi* (Mayr) 1855, found in Senj (Dalmatia), *Acrocoelia mayri* Mayr 1855, found near Zadar, *Sysphincta mayri* Forel 1888, from Dalmatia, *Solenopsis wolfi* Emery 1915, found on the Island of Hvar, *Leptothorax pelagosanus* Müller 1923, found on the Island of Palagruža, *Crematogaster scutellaris* ssp. *schmidti* f. *atratula* Müller 1923, *C. auberti* ssp. *savinae* Müller 1923, from Herceg Novi.

These species, subspecies, varieties and forms are also mentioned by some other authors who worked on myrmecofauna of Yugoslavia (enclosed list of species).

Zimmermann (1934) using the material obtained by several collectors, registered 29 genera, 71 species and 18 subspecies for the south Dalmatia and Budva (enclosed list of species; 30).

Živojinović (1950) reported 10 genera, 18 species and 3 varieties for the family of ants for the forest region of Majdanpek (Serbia) (enclosed list of species; 29).

Vogrin (1955) reported data for the fauna *Hymenoptera Aculeata* of Yugoslavia, presenting 27 genera, 69 species and 6 varietas for the family *Formicidae,* mostly for Croatia and Adriatic coast, but also for 3 localities in Serbia (enclosed list of species; 27).

Gradojević (1963) in his doctoral theses, which elaborates ecological problems, reported 9 genera and 11 species for Deliblatska pešćara (Serbia) (enclosed list of species; 14).

Petrov (1986) registered 8 genera and 12 species in 3 oak-tree communities on Jastrebac Mt. (Serbia). Two of them were new for the fauna of Yugoslavia: *Myrmica sabuleti* Meinert 1861 and *Formica cunicularia* Latreille 1798. Petrov and Mesaroš (1988) reported 14 species from 9 genera for 6 open communities which belonged to the vegetation of meadows and pastures-grounds of Stara planina Mt. (Serbia). A new genus *(Sifolinia* Emery 1907) and a new species *(S. laurae* Emery 1907) have been reported in that work for the fauna of Yugoslavia. Petrov (1991) (in press) gave a preliminary summarized list of ant species known to date for Serbia, which includes 55 species. Data obtained by Živojinović (1950), Vogrin (1955), Gradojević (1963), and also by the author, included 49 more specific localities in Serbia. Species reported in the latter work by Petrov: *Aphenogaster gibbosa* (Latreille) 1798, *Lasius affinis* (Schenck) 1852, and *L. bicornis* Foerster 1850 were reported for the first time for the myrmecofauna of Serbia.

Agosti and Collinwood (1987) using their own collections, literature data and collections of some museums in Europe, presented a provisional list of the Balkan ants and reported 171 species for Yugoslavia (enclosed list of species; 1).

In this paper, the authors report 28 genera and 85 species, collected at random at 61 localities in Yugoslavia (Fig. 1). Collected materal, as a summit of investigations of myrmecofauna for the last 10 years, belongs to 4 subfamilies *(Ponerinae, Myrmicinae, Dolichoderinae, Formicinae* (enclosed list of species).

The genus *Oxyopomyrmex* André 1881 and the following species: *Oxyopomyrmex* sp., found at Dojran (Fig. 1; 30), *Myrmica hellenica* Forel 1913, found at Cernica (Fig. 1; 27), *M. hirsuta* Elmes 1975, found at Kapela (Fig. 1; 56), and Šibenik (Fig. 1; 51), *Aphenogaster ionia* B. Urbani 1968, found at Split (Fig. 1; 49), *Pheidole megacephala* (Nylander) 1849, as well as *Acantholepis splendens* Karawajev 1912, both found at Milna (Fig. 1; 48), are new for the myrmecofauna of Yugoslavia (enclosed list of species; I.P. u.d., C.A.C. u.d.).

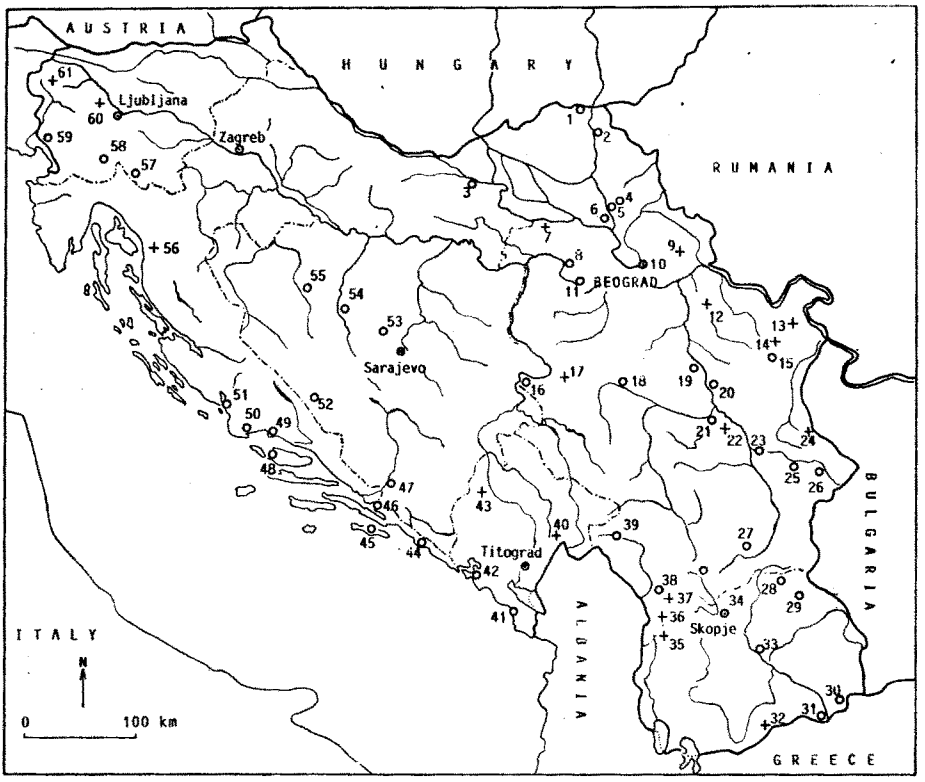

Fig. 1. List of localities: 1 — Horgoš; 2 — Novi Bečej; 3 — Osijek; 4 — Zrenjanin; 5 — Aradac; 6 — Titel; 7 — Fruška Gora; 8 — Jarak; 9 — Deliblatska peščara; 10 — Beograd; 11 — Prograr; 12 — Homoljske planine; 13 — Stol planina; 14 — Crni vrh; 15 — Bor; 16 — Višegrad; 17 — Mokra Gora; 18 — Čačak; 19 — Topola; 20 — Trmbas; 21 — Kruševac; 22 — Jastrebac; 23 — Niš; 24 — Stara planina; 25 — Bela Palanka; 26 — Pirot; 27 — Cernica; 28 — Stracin; 29 — Kratovo; 30 — Dojran; 31 — Đevđelija; 32 — Kajmakčalan; 33 — Titov Veles; 34 — Skopje; 35 — Popova Šapka; 36 — Šar planina; 37 — Brezovica; 38 — Prizren; 39 — Peć; 40 — Komovi; 41 — Ulcinj; 42 — Tivat; 43 — Durmitor; 44 — Dubrovnik; 45 — Sobra (Mljet); 46 — Neum; 47 — Gabela; 48 — Milna (Brač); 49 — Split; 50 — Trogir; 51 — Šibenik; 52 — Livno; 53 — Fojnica; 54 — Jajce; 55 — Čađavica; 56 — Velika Kapela; 57 — Ribjek; 58 — Pivka; 59 — Soča; 60 — Pokljuka; 61 — Triglav.

Althoug numerous authors (19) worked on myrmecofauna of Yugoslavia, it is still insufficiently investigated. Namely, the list of 171 species given by Agosti and Collingwood (1987) should be enriched by 1 new genus and 39 species which are not in their list, but are mentioned by other authors. It gives the total of 210 species for Yugoslavia. But in the same list there are 47 species registered in other Balkan countries (Albania, Bulgaria, Greece, European part of

Turkey), which have not been found in Yugoslavia yet. In addition the same authors mentioned 29 species of ants which could be expected in myrmecofauna of the Balkan.

But we should bear in mind too that B a r o n i-U r b a n i (1971) reported 223 species for the myrmecofauna of Italy including Sicily.

Considering everything mentioned above it is obvious that the myrmecofauna of Yugoslavia is richer than observed up till now and deserves further investigations.

LIST OF ANT SPECIES *(FORMICIDAE)* REGISTERED TO DATE IN YUGOSLAVIA

It was impossible to check the species of former authors in making this list. Therefore, disregarding the taxonomy at the intraspecific level between species, subspecies, varietas and forms, the names are presented as the mentioned authors termed them.

A number in brackets following the name of species indicates the disposition of the author in references who mentioned certain species. The letters „I.P." and „C.A.C." mean the names of the authors (Ivan Petrov, Cedric A. Collingwood), and letters „u.d." mean unpublished data by now; „ssp." and „var." behind the number mean that mentioned author gave that species as subspecies or variety.

Subfam.: *DORYLINAE*

Dorylus fulvus (WESTWOOD) 1840 (1)

Subfam.: *PONERIAAE*

Ponera coarctata (LATREILLE) 1802 (1; 22; 24; 27; 28)

P.ochreacea (MAYR) 1855 (1; 27)

Hypoponera eduardi (FOREL) 1894 (1; 30)

H. punctatissima (ROGER) 1859 (1; 24; 27)

Cryptopone ochreaceum (MAYR) 1855 (1)

Amblypone (= *Stigmatomma*) *denticulatum* (ROGER) 1859 (1; 30)

Proceratium algiricum FOREL 1899 (1; I.P. u.d.)

P. (= *Sysphincta*) *europea* FOREL 1884 (30)

P. (= *Sysphincta*) *mayri* FOREL 1888 (30)

Subfam.: *MYRMICINAE*

Smithistruma baudueri (EMERY) 1875 (1)

Epitritus argiolus EMERY 1869 (1)

Manica rubida (LATREILLE) 1892 (1; 24; 27)

Myrmica gallinei BONDROIT 1919 (1)

M. hellenica FOREL 1913 (C.A.C. u.d.)

M. hirsuta ELMES 1975 (C.A.C. u.d.)

M. lobicornis NYLANDER 1846 (1; 23; 24; 27)

M. ravasinii FINZI 1923 (1)

M. rubra (L.) 1758 (1; 28; 29)
(= *M. leavinodis* (NYLANDER) 1846 (14; 23; 27; 28; 29,ssp.)

M. ruginodis NYLANDER 1846 (1; 5-ssp.; 24; 27)

M. rugulosa NYLANDER 1849 (1; 27)

M. sabuleti MEINERT 1861 (1; 22; 24; 30-ssp.)

M. scabrinodis NYLANDER 1846 (1; 24; 27; 28; 29)

M. schencki EMERY 1859 (1; I.P. u.d.)

M. specioides BONDROIT 1918 (1)
(= *M. rugulosoides* striata FINZI (30)

M. sulcinoidis NYLANDER 1846 (1; 24)

M. vandeli BONDROIT 1919 (1)

Sifolinia laurae EMERY 1907 (23)

Stenamma striatulum EMERY 1895 (1; 24)

St. westwoodi WESTWOOD 1840 (1; 27)

Aphenogaster finzii MUELLER 1913 (24; 30-ssp.)

A. gibbosa (LATREILLE) 1798 (24)

A. ionia B. URBANI 1968 (C.A.C. u.d.)

A. lesbica FOREL 1913 (1; I.P. u.d.)

A. muelleriana WOLF 1914 (24; 30-ssp.)

A. obsidiana (MAYR) 1861 (1; 30)

A. o. epirotes EMERY (30)

A. ovaticeps EMERY 1898 (30)

A. pallida (NYLANDER) 1894 (30)

A. simonellii (EMERY) 1894 (1)

A. splendida (ROGER) 1859 (1; 30; I.P. u.d.)

A. subterranea (LATREILLE) 1798 (1; 24; 27; 30)

A. subterraneoides (EMERY) 1881 (1; 24; 30)

Messor barbarus (L.) 1767 (5; 27)

M. capitatus (LATREILLE) 1798 (1; 30-ssp.; I.P. u.d.)

M. b. niger ANDRÉ (25)

M. denticulatus K. UGAMSKI 1927 (I.P. u.d.)

M. muticus NYLANDER 1849 (1; 5-var.)

M. oertzeni FOREL 1910 (5-ssp.)

M. oe. var. *amphigea* FOREL (5)

M. structor (LATREILLE) 1798 (1; 5; 27; 30; I.P. u.d.)

M. s. orientalis EMERY (30)

M. wasmanni KRAUSE 1909
(= *M. concolor* THOMÉ 1981 (1; I.P. u.d.)
(= *M. meridionalis* (ANDRÉ) 1982 partim (1; 5-ssp.; 27)
(= *M. semirufus wasmanni* (KRAUSE) (30)

Pheidole megacephala (NYLANDER) 1849 (I.P. u.d.)
Ph. pallidula (NYLANDER) 1849 (1; 5; 27; 30)
Ph. orientalis EMERY (30)
Oxyopomyrmex sp. (I.P. u.d.)
Myrmecina graminicola (LATREILLE) 1802 (1; 24; 30)
M. g. grouvellei BONDROIT (30)
M. latreillei Curt. (27)
Crematogaster auberti savinae MUELLER 1923 (30)
C. ionia EMERY 1870 (1; 30-ssp.)
C. lorteti FOREL 1910 (1)
C. schmidti (MAYR) 1852 (1; 5-ssp.; 30-ssp)
C. scutellaris (OLIVIER) 1791 (1; 5; 27; 30; I.P. u.d.)
C. s. sch. atratula MUELLER 1923 (30)
C. sordidula (NYLANDER) 1849 (1; 5; 27; 30)
C. s. var. *flachi* FOREL (5)
Monomorium monomorium BOLTON 1987 (1)
(= *M. minutum* MAYR (30)
M. pharaonis (L.) 1758 (1; 24; 27; 30)
M. subopacum (SMITH) 1858 (1)
Solenopsis wolfi EMERY 1915 (1; 30-ssp.)
S. (= *Diplorhoptrum*) *fugax* (LATR.) 1798 (1; 5; 14; 24; 27; 28; 29; 30)
S. latro FOREL 1894 (1)
Formicoxenus nitidulus (FABRICIUS) 1793 (1; 27)
Harpagoxenus sublaevis (NYLANDER) 1849 (1)
Leptothorax acervorum (NYLANDER) 1846 (1; 27)
L. affinis MAYR 1855 (1; I.P. u.d.)
L. angustulus (NYLANDER) 1856 (30)
L. bulgaricus FOREL 1892 (1; 30)
L. carinthiacus BERNARD 1957 (1; I.P. u.d.)
L. clypeatus (MAYR) 1853 (27)
L. exilis EMERY 1869 (28; 30; C.A.C. u.d.)
L. flavicornis EMERY 1870 (1; 30)
L. graecus FOREL 1911 (1; 30-ssp.)
L. gredleri MAYR 1855 (1)
L. interruptus (SCHENCK) 1852 (1; 24; 30)
L. lichtensteini BONDROIT 1918 (1; 30-ssp.)
L. muscorum (NYLANDER) 1846 (1; 27)
L. nigriceps MAYR 1855 (1; 30)
L. nylanderi (FORESTER) 1850 (1; 24; 27; 30)
L. parvulus (SCHENCK) 1852 (1; 27-var.; 30-ssp.)
L. pelagonicus MUELLER 1923 (1)
L. pelagosanus MUELLER 1923 (30)
L. recedens (NYLANDER) 1856 (1; 30)
L. rogeri EMERY 1869 (1)
L. rottenbergi (EMERY) 1870 (1; 30)
L. semiruber ANDRÉ 1881 (1)
L. sordidulus MUELLER 1923 (1; 30)
L. tuberum (FABRICIUS) 1775 (1; 27; 28; 29; 30)
L. t. nitidiceps FOREL (30)
L. unifasciatus (LATREILLE) 1798 (1; 27-var.; 28; 30)
L. unifasciato-interruptus (LATREILLE) 1978 (30)

Myrmoxenus gordiagni RUZSKY 1902 (15)

Cardiocondyla elegans EMERY 1869 (1; 30; I.P. u.d.)

C. e. dalmatica SOUDEK 1925 (25-var.; 30-ssp.)

Myrmetaerus microcellatus SOUDEK 1925 (30)

Chalepoxenus muellerianus FINZI 1921 (1)

Epimyrma corsica (EMERY) 1895 (1)

E. kraussei EMERY 1915 (1)

Tetramorium caespitum (L.) 1758 (1; 5; 14; 24; 27; 28; 29; 30)

T. c. debile EMERY (30)

T. c. var. *fortis* FOREL (5)

T. c. var. *schmidti* FOREL (5)

T. ferox RUZSKY 1903 (1; 30)

T. f. diomedaeum EMERY 1908 (30)

T, forte FOREL 1904 (1; 5-var.; 30-ssp.)

T. impurum FOERSTER 1850 (1)

T. lucidulum EMERY 1909 (1)

T. moravicum KRATOCHVIL 1944 (1; I.P. u.d.)

T. semilaeve ANDRÉ 1883 (1; 5-ssp.; 27-var.; 30; I.P. u.d.)

T. s. biskrense FOREL 1904 (30)

T. s. splendens RUZSKY (30)

Strumigenys baudueri (EMERY) 1875 (27; 30)

Strongylognathus dalmaticus B. URBANI 1969 (C.A.C. u.d.)

S. testaceus (SCHENCK) 1852 (1; 27)

Subfam.: *DOLICHODERINAE*

Dolichoderus quadripunctatus (L.) 1771 (1; 27; 29; 30; I.P. u.d.)

Liometopum microcephalum (PANZER) 1798 (1; 5; 27; 30; I.P. u.d.)

Bothriomyrmex adriacus SANTSCHI 1922 (1; 30)

B. gibbus SOUDEK 1924 (1)

B. meridionalis (ROGER) 1863 (1; 29)

Tapinoma ambiguum EMERY 1925 (1)

T. erraticum (LATREILLE) 1798 (1; 5; 14; 24; 27; 29; 30)

T. nigerrimum NYLANDER 1886 (23; 24; 30)

Subfam.: *FORMICINAE*

Plagiolepis pygmea (LATREILLE) 1798 (1; 5; 14; 24; 27; 29; 30)

P. vindobonensis LOMNICKI 1925 (1)

P, xene STAERCKE 1936 (1)

Acantholepis frauenfeldi (MAYR) 1855 (1; 27; 30; I.P. u.d.)

A. melas EMERY 1915 (1; I.P. u.d.)

A. nigra EMERY 1893 (1; 30)

A. splendens KARAWAJEV 1912 (I.P. u.d.)

Prenolepis nitens (MAYR) 1852 (1; 22; 24; 27; 30)

P. vividula (NYLANDER) (27)

Lasius affinis (SCHENCK) 1852 (24)

L. alienus (FOERSTER) 1850 (1; 22; 24; 27; 28; 29; 30)

L. a. alieno-niger FOREL (30)

L. a. lasioides EMERY (30)

L. a. illyricus ZIMMERMANN 1934 (30)

L. bicornis (FOERSTER) 1850 (24; 27)

L. brunneus (LATREILLE) 1798 (1; 23; 27; 29)

L. carniolicus MAYR 1861 (1; 30)

L. disiguendus (EMERY) 1916 (1;30; I.P. u.d.)

L. emarginatus (OLIVIER) 1791 (1; 24; 27; 29; 30)

L. flavus (FABRICIUS) 1781 (1; 5; 22; 27; 28; 29; 30)

L. flavo-myops FOREL (30)

L. fuliginosus (LATREILLE) 1798 (1; 5; 24; 27)

L. myops (FOREL) 1894 (1; 30-ssp.)

L. jensi SEIFERT 1982 (1)

L .meridionalis (BONDROIT) 1919 (1)

L. mixtus (NYLANDER) 1846 (1; 5; 27)

L. m. var. *mixto-umbrata* FOREL (5)

L. niger (L.) (1; 5; 24; 27; 28; 29; 30)

L. rabaudi (BONDROIT) 1917 (1)

L. reginae FABER 1967 (1)

L. umbratus (NYLANDER) 1846 (1; 24; 27; 30)

Camponotus aethiops LATREILLE 1798 (1; 5-ssp.; 24; 27; 30)

C. ae. marginatus LATREILLE (30)

C. ae. concavus FOREL (30)

C. ae. silvaticoides FOREL (30)

C. fallax (NYLANDER) 1856 (1; 29; 30-var.)

C. dalmaticus (NYLENDER) 1849 (1; 27-var.; 30)

C. gestroi EMERY 1878 (1)

C. herculeanus (L.) (1; 5; 14; 27; 29; 30)

C. lateralis (OLIVIER) 1791 (1; 5; 24; 27; 30)

C. ligniperda (LATREILLE) 1802 (1; 5-ssp.; 24; 27; 30-ssp.)

C. maculatus aethiops LATREILLE (5)

C. m. pilicornis ROGER (5)

C. oertzeni FOREL 1888 (1)

C. piceus (LEACH) 1825 (1; 24; 27-var.; 30)
(= *C. merula* LOSANA (5-ssp.; 30)

C. tergestinus MUELER 1921 (1; I.P. u.d.)

C. truncatus (SPINOLA) 1808 (1; 27; 30)

C. vagus (SCOPOLI) 1763 (1; 5; 24; 27; 30)

Cataglyphis cursor aenescens (NYLANDER) 1849 (1; 5; 14; 24; 30)

C. bicolor nodus (BRULLE) 1832 (1; 24; 30)

C. b. n. var. *orientalis* FOREL (5)

C. viaticus (FABRICIUS) 1787 (24; 27)

C. hellenicus FOREL 1886 (1; I.P. u.d.)

Formica aquilonia YAROW 1955 (1)
F. bruni KUTTER 1966 (1)
F. cinerea MAYR 1853 (1; 24; 27; 28; 29)
F. cunicularia LATREILLE 1798 (1; 22; 24)
(= *F. glebaria* NYLANDER 1846 (29-var.; 30-ssp.)
F. execta NYLANDER 1846 (1; 5; 29; I.P. u.d.)
F. foreli BONDROIT 1918 (1)
F. fusca L. 1758 (1; 5; 24; 27; 29; 30)
F. gagates LATREILLE 1798 (1; 22; 23; 24; 27; 29; 30)
F. imitans RUZSKY 1902 (1)
F. lemani BONDROIT 1917 (1; 30-ssp.; I.P. u.d.)
F. lugubris ZETTERSTEDT 1840 (1)
F. nigricans EMERY 1909 (1; 27-var.; 29-var.)
F. polyctena FOERSTER 1850 (1; 24)
F. pratensis RETZIUS 1783 (1; 14; 27; 29-ssp.; 30-ssp.)
F. pressilabris NYLANDER 1846 (1; 27; I.P. u.d.)
F. rufa L. 1758 (1; 24; 27; 29; 30)
F. r. var. *rufo-pratensis* FOREL (5)
F. r. var. *piniphila* SCHENCK (29)
F. rufibarbis FABRICIUS 1793 (1; 23; 24; 27; 28; 29)
F. sanguinea LATREILLE 1798 (1; 5; 14; 24; 27)
F. selysi BONDROIT 1918 (1)
F. transcaucasica NASONOW 1889 (1)
F. truncorum FABRICIUS 1804 (1)
F. trunicola NYLANDER (27)
Polyergus rufescens (LATREILLE) 1798 (1; 24; 27; 28)
Proformica striaticeps FOREL 1911 (1)

CONCLUSION

Myrmecofauna of Yugoslavia is still insufficiently invesigated.

According to Agosti and Collingwood (1987), 171 species are known for Yugoslavia so far.

This list should be enriched by 1 genus and 39 species, which are not in their list but are mentioned by other authors, making total of 210 species for Yugoslavia.

Genus *Oxyopomyrmex* André 1881 and the following species: *Oxyopomyrmex sp.*, *Myrmica hellenica* Forel 1913, *M. hirsuta* Elmes 1975, *Aphenogaster ionia* B. Urbani 1968, *Pheidole megacephala* (Nylander) 1849 and *Acantholepsis splendens* Karawajev 1912 are new for the myrmecofauna of Yugoslavia.

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ИСТРАЖЕНОСТ ФАУНЕ МРАВА *(FORMICIDAE, HYMENOPTERA)* ЈУГОСЛАВИЈЕ

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Прве податке о мирмекофауни Југославије налазимо код неких аутора у XIX веку: Frauenfeld (1854), Mayr (1355), Gasperini (1887, 1889), Forel (1888), Katurić (1837, 1892) (према Nonveiller 1989), и Wasmann (1398).

У XX веку на мирмекофауни појединих региона Југославије радили су: Galvagni (1902), Kohl (1908), Fahringer (1911) (према Nonveiller 1989) и Doflein (1920). Даље, мирмекофауном Југославије бавили су се и Müller (1923), Soudek (1925, 1925a), Cori и Finzi (1931) (према Nonveiller 1989), као и Zimmermann (1934), Živojinović (1950), Gradojević (1963), Petrov (1986, 1991), Agosti и Collingwood (1987) и Petrov и Mesaroš (1988).

Аутори у овом раду наводе 28 родова и 85 врста сакупљених на 61 локалитету у Југославији, по принципу случајности. Сакупљени материјал спада у 4 потфамилије *(Ponerinae, Myrmicinae, Dolichoderinae, Formicinae).*

Род *Oxyopomyrmex* André 1831 и врсте: *Oxyopomyrmex* sp., *Myrmica hellenica* Forel 1913, *M. hirsuta* Elmes 1975, *Aphenogaster ionia* B. Urbani 1968, *Pheidole megacephala* (Nylander) 1849 и *Acantholepis splendens* Karawajev 1912 су нове за мирмекофауну Југославије.

И поред релативно великог броја аутора (19) који су саопштили податке о мирмекофауни Југославије, она је још увек недовољно истражена. Наиме, додају ли се списку од 171. врсте, које у списку мрава Балкана за Југославију дају Agosti и Collingwood (1987), још 39 врста којих нема на тој листи, а које наводе други аутори, број врста мрава познатих до данас у мирмекофауни Југославије износи 210. Али у истом списку, наведено је и 47 врста које су констатоване у осталим балканским земљама (Албанија, Бугарска, Грчка, европски део Турске) а које нису констатоване у Југославији. Такође исти аутори наводе још 29 врста које се могу очекивати у фауни мрава Балкана.

Треба имати на уму, такође, да Barogn-Urbani (1971) наводи 223 врсте за мирмекофауну Италије, укључујући Сицилију.

На основу свега горе реченог, очигледно је да је мирмекофауна Југославије знатно богатија и да јој треба посветити пажњу и даља истраживања.