NATURAL ENEMIES ASSOCIATED WITH SOME AGRICULTURAL PESTS IN MONTENEGRO

Sanja RADONJIĆ[1], Snježana HRNČIĆ[2], Tanja BOHINC[3], Stanislav TRDAN[4]

[1]University of Montenegro, Biotechnical Faculty, Podgorica, Montenegro
[2]University of Ljubljanja, Biotechnical Faculty, Ljubljana, Slovenia

ABSTRACT

Biological control is a proven and an essential component of Integrated Pest Management (IPM) where pest populations are controlled by using their natural enemies. Biological control in Montenegro is regulated by the Law on Plant Health Protection, specifically in Articles 49 and 50, but its application has not been established at the level of common and organized use yet. There is only "natural" influence of already existing natural enemies on certain agricultural pests. We consider that the first step in organization and implementation of any future strategy of biological control in Montenegro is to summarize all available and so far published information regarding existing natural enemies associated with agricultural pests. We searched the literature and listed around 50 beneficial species (predators, parasitoids, entomopathogenic fungi) mainly related with citrus and olive pests that are officially recorded for the period 1961–2023. Thanks to the previous work particularly of academician Mijušković and Dr. Velimirović together with some recent data, this can be considered as the first comprehensive list of natural enemies of arthropod pests in Montenegro, as well the basis for its comparison with the EPPO Positive List of biological control agents that can be used in agricultural production to control plant pests. In this context example of Slovenia can be cited where only the native natural enemies of plant pests that are on the EPPO Positive List of biological control agents can be used in agricultural production to control plant pests. Slovenian current list includes 38 species of beneficial insects, mites and entomopathogenic nematodes.

Key words: agricultural pests, first comprehensive list, natural enemies, Montenegro

1 INTRODUCTION

Biological control is one of several strategies used to control pests to avoid economic damage on crop plants, in husbandry, or on recreation areas. It is also used against nuisance pests (Eilenberg, 2006). One of definition for biological given by Eilenberg et al. (2001) is: ''The use of living organisms to suppress the population density or

[1]prof. dr., Mihaila Lalića 15, 81000 Podgorica, e-mail: sanjar@ucg.ac.me
[2]prof. dr., ibid
[3]dr., znan. sod., Jamnikarjeva 101, SI-1000 Ljubljana
[4]prof. dr., ibid

impact of a specific pest organism, making it less abundant or less damaging than it would otherwise be''. Generally it is a method of controlling pests that relies on predation, parasitism, herbivory and other natural mechanisms and is an important component of integrated pest management (IPM) programs (Hoy, 1994., cit. Chidawanyika et al., 2012).

Although biological control is relatively well known and not recent, it is still not widespread enough as a measure in plant protection. Chemical control against pests is still more prevalent in most countries. However, increasingly strict EU regulations related to pesticides and their application, more data on environmental pollution and resistance development of some harmful organisms to chemical pesticides, reduce the offer of chemical companies and possibilities for successful and economical protection of cultivated plants. That is why, especially in recent decades and years, preference is increasingly given to the application of biological protection measures. In the European Union (EU) integrated pest management (IPM) is legally obligatory as described in the Directive 2009/128/EC Annex III (European Parliament and Council 2009) and is widely regarded as the standard broad-based approach for safeguarding crops from harmful organisms while reducing or minimizing PPP-related risks to human health and the environment (Deguine et al., 2021; Mailly et al. 2017., cit Galli et al., 2024).

Plant health protection and biological measures for plant protection in Montenegro are regulated by Law on Health Protection of Plants published in the "Official Gazette of the Montenegro", no. 28/2006 and "Official Gazette of Montenegro", no. 28/2011 and 48/2015 regulates. In Chapter VI of this Law entitled "Biological health protection of plants" biological control is regulated in Articles 49 and 50.

In Montenegro there is still no organized application of biological control measures against harmful organisms and pesticides still appeared to be the solution to most pest problems. There is only ‘’natural" influence of already existing natural enemies through its spontaneous action on certain agricultural pests. On the other hand, from a scientific point of view and recognizing the role of natural enemies, identification of natural enemies of some agricultural pests as possible tools for biological control is the field on which some researchers have been working so far.

We consider that the first step in organization and implementation of any future strategy of biological control of agricultural arthropod pests in Montenegro is to summarize all published data and the aim of this paper is to present those data in form of comprehensive list.

2 MATERIAL AND METHODS

In order to create the first comprehensive list, systematic review of all available published data related to existing natural enemies of agricultural arthropod pests (insects, mites) that have been identified in agro ecosystems and on spontaneous flora in Montenegro was done. The information were obtained through detailed search of scientific and professional publications that are published in period from 1961 to 2023. This search included also results of some national projects that are realized in Montenegro which are related with this topic.

3 RESULTS AND DISCUSSION

On the basis of published data it can be seen that academician Milorad Mijušković and Dr. Velizar Velimirović were the pioneers in the field of biological control and made the biggest contribution in work with natural enemies of some harmful insects and mites so far, especially in citrus and olives grooves. Overall existing data include contribution of some other researchers also.
Data regarding natural enemies whose presence was confirmed in Montenegro during in period from 1961 to 2023 are presented in Table.

Table 1. Order, family, species, host and literature source of natural enemies of arthropod pest in Montenegro (1961-2023).

Class	Ordo	Family	Species	Host	Literature source
INSECTA	Neuro-ptera	Conioptery-gidae	***Conwentzia* sp.**	***Panonychus citri*** McGregor Acari: Tetranychidae	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Neuro-ptera	Chrysopidae	***Chrysopa carnea* Steph.**	***Panonychus citri*** McGregor Acari: Tetranychidae ***Aphis spiraecola*** Patch (Hemiptera, Sternorrhyn-cha, Aphididae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1. . Radonjić, S. (2014): Štetočine iz reda Hemiptera

INSECTA					(Aphididae, Aleyrodidae i Psyillidae) na citrusima i njihovi prirodni neprijatelji u Crnoj Gori i NR Kini. Završni izvještaj o radu na projektu bilateralne saradnje Crne Gore i NR Kine.
	Neuro-ptera	Chrysopidae	***Chrysopa* sp.**	***Saissetia oleae*** Oliv. (Hemiptera: Sternorrhyncha Coccidae)	Velimirović, V. (1992): Važnije štetočine maslina na crnogorskom primorju. Poljoprivreda i šumarstvo, XXXVIII, 1-2, 77-82.
	Hemi-ptera: Hetero-ptera	Miridae	***Campylo-neura virgula* Herrich-Schaeffer**	***Coccus pseudoma-gnoliarum*** Kuwana (Hemiptera: Sternorrhyn-cha: Coccidae)	Velimirović, V. (1994): Natural enemies *Coccus pseudomagnoliarum* Kuwana in costal part of Montenegro. Zaštita bilja. Plant protection. 45, 2, 139-150.
INSECTA	Coleo-ptera	Coccinelli-dae	***Stethorus gilvifrons* Mulsan**	***Panonychus citri*** McGregor Acari: Tetranychidae	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Coleo-ptera	Coccinelli-dae	***Exochomus quadripustul atus* L.**	***Saissetia oleae*** Oliv.	Velimirović, V. (1992): Važnije štetočine maslina na

INSECTA				(Hemiptera: Sternorrhyncha: Coccidae)	crnogorskom primorju. Poljoprivreda i šumarstvo, XXXVIII, 1-2, 77-82.
	Coleoptera	Coccinellidae	***Chilocorus bipustulatus* L.**	***Saissetia oleae*** Oliv. (Hemiptera: Sternorrhyncha: Coccidae) ***Coccus pseudomagnoliarum*** Kuwana (Hemiptera: Sternorrhyncha: Coccidae)	Velimirović, V. (1992): Važnije štetočine maslina na crnogorskom primorju. Poljoprivreda i šumarstvo, XXXVIII, 1-2, 77-82. Velimirović, V. (1994): Natural enemies *Coccus pseudomagnoliarum* Kuwana in costal part of Montenegro. Zaštita bilja. Plant protection. 45, 2, 139-150.
	Coleoptera	Coccinellidae	***Exochomus quadripustulatus* L.**	***Coccus pseudomagnoliarum*** Kuwana (Hemiptera: Sternorrhyncha: Coccidae)	Velimirović, V. (1994): Natural enemies *Coccus pseudomagnoliarum* Kuwana in costal part of Montenegro. Zaštita bilja. Plant protection. 45, 2, 139-150.
	Coleoptera	Coccinellidae	***Adalia decempunctata* L.**	***Aphis spiraecola*** Patch. (Hemiptera, Sternorrhyncha, Aphididae)	Radonjić, S. (2014): Štetočine iz reda Hemiptera (Aphididae, Aleyrodidae i Psyillidae) na citrusima i njihovi prirodni neprijatelji u Crnoj Gori i NR Kini. Završni izvještaj o radu na projektu

					bilateralne saradnje Crne Gore i NR Kine.
	Coleo-ptera	Coccinelli-dae	***Harmonia axyridis* Pallas**	***Aphis spiraecola*** Patch. (Hemiptera, Sternorrhyn-cha, Aphididae)	Radonjić, S. (2014): Štetočine iz reda Hemiptera (Aphididae, Aleyrodidae i Psyillidae) na citrusima i njihovi prirodni neprijatelji u Crnoj Gori i NR Kini. Završni izvještaj o radu na projektu bilateralne saradnje Crne Gore i NR Kine.
	Coleo-ptera	Coccinelli-dae	***Coccinella septempun-ctata* L.**	***Aphis spiraecola*** Patch (Hemiptera, Sternorrhyn-cha, Aphididae)	Radonjić, S. (2014): Štetočine iz reda Hemiptera (Aphididae, Aleyrodidae i Psyillidae) na citrusima i njihovi prirodni neprijatelji u Crnoj Gori i NR Kini. Završni izvještaj o radu na projektu bilateralne saradnje Crne Gore i NR Kine.
	Hyme-noptera	Encyrtidae	***Ooencyrtus pityocampae* Mercet**	***Thaumato-poea pityocampa*** Denis & Schiffermüller (Lepidoptera: Thaumatopo-eidae)	Mijušković, M. (1961): Neki momenti iz biologije borovog četnika, s posebnim osvrtom na značaj jajnog parazita *Ooencyrtus pityocampae* Mercet. Naša poljoprivreda i

					šumarstvo, 4, 31-40.
	Hyme-noptera	Aphelinidae	***Coccophagus lycimnia* Walker.**	***Coccus pseudoma-gnoliarum*** Kuwana (Hemiptera: Sternorrhyn-cha: Coccidae	Velimirović, V. (1994): Natural enemies *Coccus pseudomagnoli arum* Kuwana in costal part of Montenegro. Zaštita bilja. Plant protection. 45, 2, 139-150.
	Hyme-noptera	Encyrtidae	***Metaphycus flavus* Howard.**	***Coccus pseudoma-gnoliarum*** Kuwana (Hemiptera: Sternorrhyn-cha: Coccidae	Velimirović, V. (1994): Natural enemies *Coccus pseudomagnoli arum* Kuwana in costal part of Montenegro. Zaštita bilja. Plant protection. 45, 2, 139-150.
	Hyme-noptera	Encyrtidae	***Microterys flavus* Howard**	***Coccus pseudoma-gnoliarum*** Kuwana (Hemiptera: Sternorrhyn-cha: Coccidae)	Velimirović, V. (1994): Natural enemies *Coccus pseudoma-gnoliarum* Kuwana in costal part of Montenegro. Zaštita bilja. Plant protection. 45, 2, 139-150.
	Hyme-noptera	Aphelinidae	***Coccophagus* spp.**	***Coccus pseudoma-gnoliarum*** Kuwana (Hemiptera: Sternorrhyn-cha: Coccidae)	Velimirović, V. (1994): Natural enemies *Coccus pseudomagnoli arum* Kuwana in costal part of Montenegro. Zaštita bilja. Plant protection. 45, 2, 139-150.
	Hyme-noptera	Eurytomidae	***Eurytoma martelli* Dom.**	***Bactrocera oleae*** (Rossi)	Velimirović, V. (1992): Važnije štetočine

				(Diptera: Tephritidae)	maslina na crnogorskom primorju. Poljoprivreda i šumarstvo, XXXVIII, 1-2, 77-82.
	Hyme-noptera	Eupelmidae	***Eupelmus urozonus* Dalm.**	***Bactrocera oleae*** (Rossi) (Diptera: Tephritidae)	Velimirović, V. (1992): Važnije štetočine maslina na crnogorskom primorju. Poljoprivreda i šumarstvo, XXXVIII, 1-2, 77-82. Hrnčić, S. (2012): Nove metode praćenja i modeli prognoze voćnih muva (*Bactrocera oleae* Gmel. i *Ceratitis capitata* Wied.) i mogućnosti njihovog suzbijanja biotehničkim i biološkim mjerama. Završni izvještaj.
	Hyme-noptera	Eulophidae	***Pnigalio mediterra-neus* Ferr. and Del.**	***Bactrocera oleae*** (Rossi) (Diptera: Tephritidae)	Velimirović, V. (1992): Važnije štetočine maslina na crnogorskom primorju. Poljoprivreda i šumarstvo, XXXVIII, 1-2, 77-82. Hrnčić, S. (2012): Nove metode praćenja i modeli prognoze voćnih muva

					(*Bactrocera oleae* Gmel. i *Ceratitis capitata* Wied.) i mogućnosti njihovog suzbijanja biotehničkim i biološkim mjerama.
	Hyme-noptera	Pteromalidae	***Cyrtoptyx dacicida* Masi**	***Bactrocera oleae*** (Rossi) (Diptera: Tephritidae)	Hrnčić, S. (2012): Nove metode praćenja i modeli prognoze voćnih muva (*Bactrocera oleae* Gmel. i *Ceratitis capitata* Wied.) i mogućnosti njihovog suzbijanja biotehničkim i biološkim mjerama.
	Hyme-noptera	Pteromalidae	***Scutellista cyanea* Motschulsky**	***Saissetia oleae*** Oliv. (Hemiptera: Sternorrhyn-cha: Coccidae)	Velimirović, V. (1992): Važnije štetočine maslina na crnogorskom primorju. Poljoprivreda i šumarstvo, XXXVIII, 1-2, 77-82.
	Hyme-noptera	Encyrtidae	***Metaphycus* sp. How.**	***Saissetia oleae*** Oliv. (Hemiptera: Sternorrhyn-cha: Coccidae)	Velimirović, V. (1992): Važnije štetočine maslina na crnogorskom primorju. Poljoprivreda i šumarstvo, XXXVIII, 1-2, 77-82.
	Hyme-noptera	Braconidae	***Lysiphlebus testaceipes* (Cresson)**	***Toxoptera aurantii*** (B.d. F.) (Hemiptera, Sternorrhyn-cha, Aphididae)	Tomanović, Ž., Radonjić, S. (2001): Appearance of introduced parasitic wasp *Lysiphlebus*

				Aphis citricola (v.d.G)= ***Aphis spiraecola*** Patch (Hemiptera, Sternorrhyncha, Aphididae)	*testaceipes* (Cresson) (Aphidiinae, Braconidae, Hymenoptera) on the Adriatic Coast. Naučni skup, Prirodni potencijali kopna, kontinentalnih voda i mora Crne Gore i njihova zaštita. Žabljak, Zbornik rezimea: 96. Radonjić, S. (2014): Štetočine iz reda Hemiptera (Aphididae, Aleyrodidae i Psyillidae) na citrusima i njihovi prirodni neprijatelji u Crnoj Gori i NR Kini. Završni izvještaj o radu na projektu bilateralne saradnje Crne Gore i NR Kine.
	Hyme-noptera	Eulophidae	***Aprostocetus* sp. *(=Tetrastichus)***	***Ceratitis capitata*** Wiedem. (Diptera, Tephritidae) - larvae	Radonjić, S. (2008): Mediteranska voćna muva *Ceratitis capitata* Wiedem. (Diptera, Tephritidae) na području crnogorskog primorja i njen uticaj na biljnu proizvodnju. Doktorska disertacija. Univerzitet u Beogradu.

					Poljoprivredni fakultet Zemun.
	Hyme-noptera	Braconidae	***Aphidius colemani* Viereck**	***Myzus persicae*** Sulz. (Hemiptera, Sternorrhyn-cha, Aphididae)	Hrnčić, S. (2008): Izvještaj o radu na programu „Invazivne vrsta insekata u plastenicima“, Ministarstvo poljoprivrede, šumarstva i vodoprivrede.
	Hyme-noptera	Dryinidae	***Neodryinus typhlocybae* Ashmead**	***Metcalfa pruinosa*** Say (Hemiptera: Flatidae)	Glavednekić, M., Ćirković-Ognjanović, M. i Mirić, M. (2010): Beneficial insects in integrated pest management on public green“. Proceedings of 57. Deutsche Pflanzenschutzt agung: 365-366.
	Diptera	Cecido-myiidae	***Prolasioptera berlesiana* Paoli**	***Bactrocera oleae*** (Rossi) (Diptera: Tephritidae)	Velimirović, V. (1992): Važnije štetočine maslina na crnogorskom primorju. Poljoprivreda i šumarstvo, XXXVIII, 1-2, 77-82. Hrnčić, S. (2012): Nove metode praćenja i modeli prognoze voćnih muva (*Bactrocera oleae* Gmel. i *Ceratitis capitata* Wied.) i mogućnosti njihovog suzbijanja biotehničkim i biološkim

					mjerama. Završni izvještaj.
ACARI	Meso-stigmata	Phytoseiidae	***Amblyseius aberrans* Oud. (=*Kampimodromus aberrans* (Oudemans)**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Amblyseius finlandicus* Oud. *(=Euseius finlandicus* (Oudemans)**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Amblyseius concordis* Chant (=*Euseius concordis* (Chant)**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
ACARI	Meso-stigmata	Phytoseiidae	***Amblyseius vivax* Chant and Baker (=*Euseius vivax* Chant & Baker**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju.

					Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Amblyseius umbraticus* Chant (=*Neoseiulus umbraticus* Chant)**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Amblyseius zwölferi* Dosse (=*Neoseiulus zwoelferi* Dosse)**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Amblyseius* sp. (probab. *stipulatus*)**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.

	Meso-stigmata	Phytoseiidae	***Typhlodro-mus pyri* Scheuten**	*Panonychus citri* McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Typhlodro-mus tiliarum* Oud. *(=Neoseiu-lella tiliarum* (Oud.)**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Typhlodro-mus rhenanus (*Oud.)**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Typhlodro-mus bakeri* (Garman)**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne

					Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Phytoseius horridus* Ribaga**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Phytoseius finitimus* Ribaga**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Phytoseius macropilis* Banks**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Meso-stigmata	Phytoseiidae	***Neoseiulus yugoslavicus sp. N.***	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na

			(*Seiulus yugoslavi-cus)*		jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Prostig-mata	Stigmaeidae	***Zetzellia mali* Ewing**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Prostig-mata	Stigmaeidae	***Zetzellia* sp. *(similar with Z. languida)***	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Prostig-mata	Tydeidae	***Tydeus californicus* Banks**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.

	Astig-mata	Winterschmi dtiidae	***Czenspinskia* sp.**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	Mijušković, M., Tomašević B. (1975): Pregljevi na agrumima na jugoslovensko m primorju. Društvo za nauku i umjetnost Crne Gore. Odjeljenje prirodnih nauka. Knjiga 1.
	Prostig-mata	Tarsonemi-dae	***Tarsonemus* sp.**	***Panonychus citri*** McGregor (Acari: Tetranychidae)	
	Meso-stigmata	Phytoseiidae	***Phytoseiulus persimilis* Evans**	***Tetranychus urticae*** Koch. (Acari: Tetranychidae)	Radonjić, S., Hrnčić, S. (2023): Mites of major importance on vegetables in greenhouses in southern part of Montenegro. IOBC/WPRS Bulletin, Vol. 167, 146-153.
ENTOMOPATH OGENIC FUNGUS	Hypocre ales	Cordycipita-ceae	***Verticillium lecanii* Zimm.**	***Saissetia oleae*** Oliv. (Hemiptera: Sternorrhyn-cha: Coccidae)	Velimirović, V. (1992): Važnije štetočine maslina na crnogorskom primorju. Poljoprivreda i šumarstvo, XXXVIII, 1-2, 77-82.

As result of this search we listed 48 beneficial species (predators, parasitoids and entomopathogenic fungi) mainly related with citrus and olive pests. Among predatory insects the most common is Coleoptera (Coccinellidae) followed by Neuroptera (Chrysopidae), Hemiptera (Heteroptera: Miridae) and Diptera (Cecidomyiidae). Parasitoid wasps (Hymenoptera) are presented mostly with family Encyrtidae, followed by Aphelinidae, Braconidae, Eulophidae, Pteromalidae. The most abundant group of the predatory mites is family Phytoseiidae. Entomopathogenic fungus are presented with one species *Verticillium lecanii* Zimm.

4 CONCLUSIONS

All findings presented in this paper as the first comprehensive list of indigenous or ubiquitous natural enemies of certain pests that are registered in Montenegro so far, should be the basis for further studies regarding inventorying of beneficial species and first steps in application of biological control. This list can also serve as the basis for comparison with the EPPO Positive List of biological control agents that can be used in agricultural production to control plant pests.

5 ACKNOWLEDGMENTS

This paper presents results of the project of the bilateral scientific and technological cooperation between Montenegro and Slovenia for 2023-2024 (``State and perspectives of biological protection in Montenegro and Slovenia").

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