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REDNESS OF MAIZE

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Summary

A disease labelled redness has been observed for several decades on maize in Serbia, particularly in regions: Banat, Stig and Pomoravlje. Etiology of redness of maize has been variously interpreted. Some researchers interpreted data that disease of maze is caused by abiotic factors like severe drought. Yet others commected this disease to biological factors: *Fusarium* spp. were found to be present in diseased plants, thus some authors interpreted that redness of maize is caused by the mentioned fungi. Still other investigators suggested fastidious bacteria, as possible causal agent of redness. The Kochís postulates have not fulfilled yet. In this paper we have done some hypothesis about biotic nature of this disease. In any case "redness" as new infectious disease is problem in maize production must be object of further and comprehensive research.

Key words: maize, redness, couser, hybrids, fastidious bacteria

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DETECTION OF PHYTOPLASMA DISEASE ON GRAPEVINE IN SERBIA BY ELECTRON MICROSCOPY

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Summary

In the region of "Župsko vinogorje" (Serbia) the presence of pathogens of phytoplasma type were found in grapevine. Whith black and red fruited cultivars characteristic symptom was redness of leaves, while white fruited ones showed leaf yellowing and leafvine banding. In both cases the leaves of diseased vines are swallen, brittle in some extence and bent downward along the margins. The shoots of diseased vines are severely shortened, have shorter internodes, they are rubbery-like, and remain unriped. Such shoots usually froze during winter. Infected vines are dwarfed. If they set fruits the clusters are sparsed and dry-up early. Such vines are short-living.

With vines showing above mentioned symptoms the pathogens of phytoplasma type were found to be present in conductive vessells. Presence of phytoplasmas was proved by transient electron microscopy.

Key words: grapevine, phytoplasma, electron microscopy

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DIVERSITY OF THE WEEDS FLORA MIRIJEVO UNDER THE INFLUENCE OF THE GEOLOGICAL BASE

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Summary

Ecological characteristics of the weed species occurring on the two different geological locality of Mirijevo, i.e. Mirijevo stream and Orlovica hill have analyzed.

The total of 73 taxons of the vascular plants belonging to the 67 genera and 28 families were found in various types of habitats in the investigated area. On the area of Orlovica hill, there are 43 weeds species and on the area of Mirijevo stream there are 50 weeds species.

Biological spectrum of weed flora Mirijevo stream is hemicryptophytes – therophytes character (46%:40%), while biological spectrum of weed flora Orlovica hill is therophytes – hemicryptophytes character (47%:28%).

By analyzing ecological indices for five main ecological factors, it determined a domination of weeds that prefer submesophyte and subxerophyte habitats, mostly those of neutral to slightly basic reaction, with medium and high availability of minerals, predominantly semi-open to open in character, and mesothermic to thermophilic regarding temperature regime.

The phytogeographic analysis shows the dominance of the Holartic group.

Key words: Diversity, geological base, living forms, phytogeografical characteristics, weeds flora.

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APHID FLIGHT ACTIVITY (APHIDIDAE, HOMOPTERA)

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Summary

Monitoring of aphid flight activity was done by the sticky fishing line trap (Labonne et al., 1983, Labonne, 1987) during vegetation periods in 1995, 1996 and 1997, in the vicinity of Belgrade (Zemun Polje). A total of 9650 specimens was caught and 75 taxa were identified. One aphid new for the fauna of Serbia was trapped (*Aploneura lentisci* (Pass.), as well as some species which are difficult to be detected by inspecting plants (*Atheroides serrulatus* Hal., *Diuraphis noxia* (Mordv.), *Mindarus abietinus* Koch., *Smynthuroides betae* Westw. and *Thripsaphis* sp.). Heteroecious species were more numerous than monoecious, which was expected. The most abundant heteroecious species belong to genera: *Aphis, Rhopalosiphum, Brachycaudus, Capitophorus, Cavariella, Cryptomyzus* i *Macrosiphum*.

There were two annual peaks: in spring (or summer) and in autumn. The spring maximum was influenced by economicaly important species, such as: *Hyalopterus pruni* (Groff.), *Phorodon humuli* (Schr.), *Brachycaudus helichrysi* (Kalt.), *Aphis fabae* Scop., *Myzus persicae* (Sulz.), *Myzus cerasi* (Fabr.). *Rhopalosiphum padi* (L.) had the most significant autumn flight activity. Also, *R. padi* was the most aboundant species in all three years and amounted to 41.4% of all individuals caught in 1995, 27.5% in 1996 and even 63.4% in 1997.

Key words: aphid flight activity, Aphididae, Homoptera, sticky fishing line trap, fauna, *Rhopalosiphum padi*.

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MORPHOLOGY AND PATHOGENICITY OF *GLOMERELLA CINGULATA* – A MYCOPARASITE OF *POLYSTIGMA RUBRUM* SUBSP. *RUBRUM* STROMATA

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Summary

Mycoparasite *Colletotrichum gloeosporioides*, previously described as *Gloeosporium polystigmicolum* Bondar., formed *Glomerella* perfect stage in culture, rarely on overvintered parasited stromata of *P.rubrum* subsp. *rubrum*. Morphology of mycoparasiteis telemorph agreed with descriptions of *Glomerella cingulata* isolated from different hosts. Morphometric characteristics of mycoparasiteis anamorph were almost the same as those reported for *Gloeosporium polystigmicolum* and for *Colletotrichum gloeosporioides* isolated from different hosts. The isolates of mycoparasite were not pathogenic to one-year-old branches, leaves, unmature and mature fruits of plum *in-vitro* and *in-vivo*. There were some differences in fisiological activity of mycoparasite isolates according to reactions of artificially infected apple fruits cv. Golden Delicious.

Key words: Plum, red blotch, *Polystigma rubrum* subsp. *rubrum*, mycoparasite, *Gloeosporium polystigmicolum*, *Colletotrichum gloeosporioides*, *Glomerella cingulata*, morphology, pathogenicity.

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