

Diversity of Auchenorrhyncha species and potential *Bois noir* vectors in Serbian vineyards

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INTRODUCTION:

Bois noir (BN) represents an important grapevine disease caused by stolbur phytoplasma belonging to 16SrXII-A phylogenetic group (Lee et al., 1998). It has a wide distribution in all European countries where grapevine is growing.

MATERIALS AND METHODS:

Diversity of Auchenorrhyncha species was studied in three vineyards, in Central, North and East Serbia, with high percent of BN infected plants. Hemipteran vectors were collected using sweep nets and mouth-aspirators from grapevine and weeds present in vineyard inter-rows and borders.

DNA was isolated from individual insects and amplified using a modification of the stolbur phytoplasma-specific nested PCR protocol (Clair et al., 2003).

RESULTS:

A total number of collected specimens was 4971, belonging to 8 families and 49 species. The most numerous was family Cicadellidae with 30 species, followed by family Cixiidae 7 species, Delphacidae 4 species, Aphrophoridae 3 species, and Dictyopharidae, Issidae, Cercopidae and Membracidae with only one species recorded. Most abundant species on all inspected sites were *Psammotettix alienus* (29,4%), *Dictyophara europaea* (10%), *Hyalesthes obsoletus* (9,2%), *Euscelis incisus* (6,4%) and *Reptalus quinquecostatus* (5,8%). Among the species which were present in less than 5%, two were more abundant *Neoliturus fenestratus* and *Errastunus ocellaris* (about 4,2%), while presence of *Philaenus spumarius*, *Laodelphax striatella*, *Doratura impudica* and *Zyginidia pullula* was between 2,5 and 3,3%.

DISCUSSION AND CONCLUSIONS:

PCR analyses for stolbur phytoplasma presence indicated that 4 out of 49 collected species harbored the phytoplasma: 38% of *H. obsoletus* (91/240), 15% of *R. quinquecostatus* (44/289), 8% of *R. panzeri* (4/49) and 12% of *D. europaea* (41/341) specimens. This is the first record of stolbur phytoplasma presence in *D. europaea* and preliminary study suggests of its vector role in *Bois noir* spreading.

REFERENCES:

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