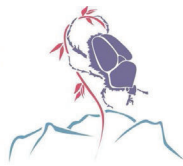


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SESSION VI

INSECTS AND MICROORGANISMS

Scotch broom's psyllid fauna and '*Ca. Liberibacter europaeus*' infection in northwestern Italy

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The Scotch broom *Cytisus scoparius* (L.) Link is a deciduous leguminous shrub belonging to the Fabaceae family. It is native to western and central Europe, it typically colonises heaths and mountain grasslands. It has been widely commercialized as an ornamental plant in temperate and subtropical regions of the world but has also become an invasive species and a serious weed in several temperate areas. The bacterium '*Candidatus Liberibacter europaeus*' (CLEu) was firstly described in Italy in 2011 from pear trees, where it seemed to behave as an endophyte, and pear psyllids. Subsequently, CLEu was recorded in New Zealand in symptomatic Scotch brooms (stunting of shoots, shortened internodes, leaf dwarfing and leaf tip chlorosis) and in the psyllid *Arytainilla spartiophila* (Förster) that was introduced as a biocontrol agent in the early 1990s in order to slow down the uncontrolled spread of the plant. More recently, CLEu was reported in Scotch broom and broom psyllids in the UK. The similarity of UK and New Zealand sequences fits with a scenario where CLEu arrived accidentally in New Zealand following the introduction of *A. spartiophila* from the UK. Consequently, a need for investigating the CLEu infection status of Scotch broom plants and its associated psyllids have raised in Italy. In particular, a wide screening was done in different ecological niches in the Piedmont region (North-western Italy), focusing on significant *C. scoparius* stands. Insects were sampled by means of the beat-tray method and subjected to DNA extraction. Molecular analyses were performed by PCR with specific primers for CLEu. *Arytainilla spartiophila* and *Arytaina genistae* (Latreille) were the most abundant psyllid species and both resulted positive to CLEu. This is the first report of CLEu in *A. spartiophila* in Italy and of *A. genistae* as host of the bacterium. Further analyses on the presence and incidence of symptoms in plants are currently underway. In addition, more in-depth investigations are in progress in order to assess the population dynamics of *A. spartiophila* and *A. genistae*, their competence in transmitting the bacterium as well as CLEu epidemiology.

KEY WORDS: *Arytainilla spartiophila*, *Arytaina genistae*, *Cytisus scoparius*, epidemiology.

POSTER