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Methodology of forest insect and disease survey in central Europe "Fluctuation of Insects and Diseases"

WORKING PARTY MEETING

S. Michele all'Adige, Italy

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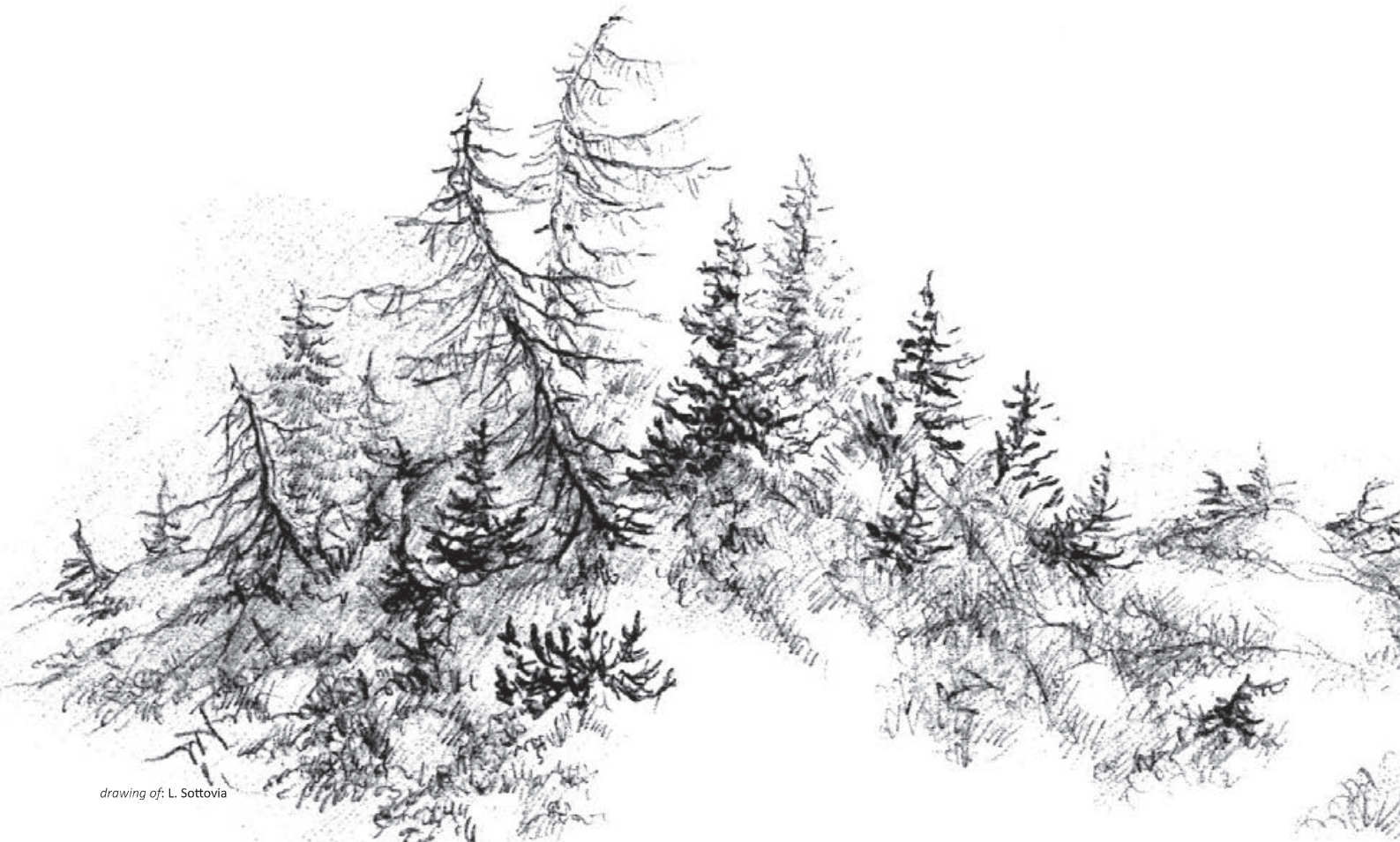
Programme

Book of Abstracts



drawing of: L. Sottovia

12. A case of pine dieback due to *Bursaphelenchus mucronatus* in Trentino

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The accidental introduction of *Bursaphelenchus xylophilus*, a pine wood nematode native to North America, to Portugal and its subsequent report in Spain represent a great danger for pine stands across Europe. Therefore, also the potential risk areas of Trentino are subjected to a continuous monitoring activity.
In November 2013, as severe and anomalous wilt symptoms were observed in a pine (*Pinus sylvestris* and *P. nigra*) stand of Non Valley suffering for previous drought periods, surveys were carried out to assess the presence of this invasive nematode. The trees, which were completely desiccated, showed the typical symptoms associated with nematode attacks, such as lack of oleoresin flow from wounds and blue-stain fungal growths in the wood. Therefore, they were cut and removed from the area and some samples were collected in order to extract nematodes and isolate fungi. The nematodes and the fungal mycelia were then identified by the microscope observation of morphological characters and molecular analyses.
The taxonomic identification of the nematode species confirmed the presence of the European type of *B. mucronatus*. This species, which is widely distributed in Europe and Siberia, is morphologically close to *B. xylophilus*, but has a very low virulence in comparison to it. It can be associated with dead trees as fungal feeding species and has a weak pathogenicity. Regarding fungi, the blue-stain growths resulted due to *Diplodia sapinea*, an endophytic fungus which had never been described in association with these nematodes before.
The evolution of the symptomatology was surveyed in summer 2014 by visual inspections in the same area and attractive traps were exposed to monitor the presence of long-horn beetles of the genus *Monochamus*, the natural vectors of pine wood nematodes. So far, no new symptoms of decline have been observed and no individuals of *Monochamus* spp. have been collected.