

## Sphaeropsis Blight of *Pines* in Serbia and Montenegro – Plant Hosts, Epidemiology, Importance

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**Abstract** – *Sphaeropsis sapinea* DYKO & SUTTON is a destructive conifer pathogen of worldwide distribution and importance. However, the greatest damages have been occurred on *Pinus* species. It has been researched intensively in Serbia and Montenegro during late 80-ties and late 90-ties. In this period it was recorded as one of the most important cause of dieback in Austrian and Aleppo pine plantations older than 20 years and also in urban areas.

This pathogen is widely distributed in the continental and Mediterranean parts in these countries. It is recorded on eleven *Pinus* species - *P. nigra*, *P. sylvestris*, *P. halepensis*, *P. jeffrey*, *P. peuce*, *P. pinaster*, *P. ponderosa*, *P. peuce*, *P. pinea*, *P. mugo* and *P. heldreichii* and on species of six coniferous genera - *Abies*, *Cedrus*, *Chamaecyparis*, *Cupressus*, *Juniperus* and *Thuja*.

For the first time *S. sapinea* was registered in Serbia on *Pinus nigra* in 1981 (KARADŽIĆ, 1983). On *P. heldreichii*, a Tertiary relic and a Balkan subendemic, it was first recorded on individual trees near Pećka Patrijaršija in 1993., and after that, near the Monastery Ostrog. It was the first report of *Sphaeropsis sapinea* on this plant host in Serbia and Montenegro.

*S. sapinea* can infect almost each part of host plant, causing many symptoms. However, the most common symptoms are shoot blight, characterized by stunted dead shoots and needles, bud wilt, stem cankers and branch dieback. It also causes the necroses of the seed cones and their dwarfishness. All these symptoms were observed during this research.

*S. sapinea* penetrates through buds, bark of young shoots and needles. The critical period of infection is from middle of April till the middle of May, when infections mainly occur through the bark of young shoots, which results in their dying. The very early symptoms on the young shoots were mostly observed at the first part of May. Changing of colour of infected needles can be seen at the beginning of June, while in the middle of June they become yellow-brown.

Infections through the needles occur mainly at the time of their sudden growth or during summer months. Second year seed cones are susceptible to the infection in the second decade of April. Current year seed cones can be infected as well.

Pycnidia have been observed on young shoots and needles, pollen and seed cones, buds, current year and second year cones, and in the bark of older branches on *P. nigra*. Pycnidia with mature conidia can be formed during the same year of infection. In the bark of young shoots they were identified at the end of June and on the cones at the beginning of the third decade of July.

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