

## Forstschutz Aktuell Nr. 30 - Abstracts

### Forest Health Protection 2002 in Austria

Ch. Tomiczek, T. L. Cech, H. Krehan and B. Perny

Unfavourable weather conditions during 2002 had a negative influence on the forest protection situation in Austria. The annual mean temperature was 1 ° - 1,5 ° above normal, the annual precipitation with 110-180% much too high. Between October 2002 and January 2003 wind throws and wind breaks by storms caused a loss of 5 million cubic meters of wood. Bark beetle problems are expected for 2003. Damage by *Pristiophora abietina* and *Thaumetopoea processionea* increased. For the first time this year *Hypodermella laricis*, *Melampsorium* spp. infestations were recorded.

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### Phytopathological analyses of plant samples at the Institute of Forest Protection - remarkable damaging organisms in 2002

T. L. Cech

The paper gives an overview on the results of diagnoses conducted at the Institute of Forest Protection of the BFW in 2002 within the scope of the Forest Damage Documentation and Information System. Epidemically occurring pathogens in 2002 are the *Sclerotinia*-disease (*Gremmeniella abietina*), which affected about 4000 ha stands of *Pinus sylvestris* in the Tyrol, the *Phytophthora*-disease of Alder, which was observed in numerous stands of *Alnus glutinosa* as well as *Alnus incana*, both along lowland rivers and white-water streams in the Alps, and a probably new rust species (*Melampsorium hiratsukanum*) on *Alnus incana* and *glutinosa*. *Diplodia*-blight (*Sphaeropsis sapinea*) of *Pinus nigra austriaca* in Eastern Austria. Frost damages of *Pseudotsuga menziesii* were commonly observed in Lower Austria. Furthermore, examples for pathogens with local importance are *Hypodermella* -needle cast of *Larix europaea* (*Hypodermella laricis*), *Cenangium* -blight (*Cenangium ferruginosum*) of *Pinus nigra austriaca*, Leopard moth on deciduous trees, Green cicada (*Cicadella viridis*), dieback of *Alnus viridis* in subalpine stands, and herbicide damages.

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### Crown Condition Survey 2002

F. Kristöfel

The 2002 crown condition survey showed, with respect to all investigated species, no remarkable change in defoliation in comparison with the previous year. Out of the most common coniferous species the crown condition of *Picea abies* only changed imperceptible, crown condition of *Larix decidua* and *Abies alba* slightly deteriorated. The crown condition of *Pinus sylvestris* remarkably improved, the proportion of not defoliated sample trees increased by 10.7 percent-points. The crown condition of the most common broadleaved species *Fagus sylvatica* and *Quercus* sp. shaped up in a different way. Whilst crown condition of *Fagus sylvatica* obviously improved, crown condition of *Quercus* sp. remarkably deteriorated. The proportion of not defoliated crowns of beech increased by 9.1 percent-points, the proportion of oak decreased by 20.1 percent points.

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### Monitoring the impact of air pollutions on forests with bio-indication

A. Fürst

In Austria, the impact of sulphur has been assessed since 1983 with the help of the Austrian Bioindicator Grid. The annual sampling allows a precise evaluation of the temporal and regional development of the impact of sulphur on the basis of legal standards. Despite the reduction of SO<sub>2</sub> emissions in Austria, the legal standard has still been exceeded on 5-10% of the plots in the last years. These plots are mainly located near large Austrian emitters, but also in areas affected by transboundary sulphur emissions from neighbouring countries. The present paper describes one example how the Bioindicator Grid can be applied for the control of legal requirements to enact effective clean air measures in Austria and take supportive measures that reduce the impact of sulphur from emitters in neighbouring countries.

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### Documentation of Forest Damage Factors 2002

G. Steyrer, W. Krenmayer and H. Schaffer

The Documentation of Forest Damage Factors 2002 (DWF) provides data on important forest pests, diseases, vertebrates and abiotic damages, collected through a survey on forest district basis in all private and public woodlands of Austria for the year 2002. The data ascertainment is based on the estimation of 67 damage factors. Due to structural changes in comparison with the year 2001 the number of ascertainment units has increased from 72 to 215. Additionally, the methods for gathering and processing data evolved from a spreadsheet-based application to a relational database for the reason of easy customization and flexible adaptation to changes. The results for the total federal territory are illustrated by maps of the forest districts allowing a good overview on forest health protection.

