Forstschutz Aktuell Nr. 22 - Abstracts

Neodiprion sertifer: Pine sawfly gradation in Carinthia (Austria)

H. Krehan

Since 1995 the Fox-coloured sawfly (*Neodiprion sertifer*) has caused severe damage on 60-100 year old Scots pine in the forest districts of Klagenfurt and Völkermarkt. About 5500 ha of secondary pine stands at altitudes between 400 and 600 m have been infested (340 ha of them heavily). The same stands had already been damaged in 1961-65 by this sawfly. Different investigations concerning critical numbers of healthy cocoons and egg masses, the rate of parasitism and assessment of crown defoliation have been carried out in 1997. The numbers of healthy cocoons varied between 0 and 112 per square meter, the number of egg masses per tree between 6 and 44 after 30 minutes of searching time (4 persons).

Remarkable Occurrence of Insect Pests in Austria 1997

B. Perny

The occurance of two insect pests, *Xyleborus dispar* (Col., Scolytidae) - the broadleaved pinhole borer - and *Dasyneura abietiperda* (Dipt., Cecidomyiidae) - a spruce gall midge - in parts of Austria was worth mentioning.
X. dispar, well known in horticulture and orchards, infested young deciduous tree afforestations in Lower Austria (Waldviertel) and caused severe damage there.
D. abietiperda occurred in old spruce stands as well as in urban gardens on hetches and on individual plants in Carynthia and Lower Austria. Apart from brief information about the biology of the insects and the kind of damage, some recommendations for control are given.

Damages by woodpeckers

C. Tomiczek

Damage on European larch (*Larix decidua* Mill.) by woodpecker.In a mixed forest stand bark damage on European larch was observed in late winter. From a height of approxemately 2 m up to the crown, the outer bark was removed by woodpecker. The causes are still unclear.

Herbicides in Christmas Tree Crops

F. Gruber and J. Brandl

In recent years many Christmas tree crops - most of them planted with *Abies nordmanniana* - in Lower Austria near Maria Taferl showed strong damage caused by incorrectly applied herbicides and pesticides. Shoot and needle growth reduction, needle yellowing and browning, abnormal shoot growth and inhibition of shoot elongation are the most common symptoms. Incorrect application of herbicides can influence respiration and compounds of phyto hormones and by that way affect total photosynthesis - because of injury to mesophyll. Spraying of herbicides should be avoided in cultures of young fir seedlings.

Pine decline in the Tyrol

T. L. Cech and B. Perny

Scots pine (*Pinus sylvestris*) trees along the Upper Inn Valley, Tyrol, are presently affected by a decline, which began in 1989. As the amount of incidences increased markedly in 1996, three stands were selected for random differential diagnoses in autumn 1997. Symptoms were yellowing and losses of the greater part of the needles beginning in the lower parts of crowns. Blue staining of the sapwood of branches and stems appeared only in the last stages of decline, when nearly no foliage was left, moreoften, however, on totally defoliated trees. The most striking difference between this decline and the one currently affecting Scots pine in Lower Austria is the apparent lack of pathogenic bark insects or fungi. Data of growthring analyses of pines from the Tyrol were related to those of precipitation, but the comparison indicated more than one drought-period, which could have been responsible for this decline. Specific site conditions and site stresses as main causes as well as the role of mistletoes, scale insects and sapwood nematodes are discussed.

Decline of tree-of-heaven (Ailanthus altissima [Mill.] Swingle) in Southern Styria

T. L. Cech

Decline of tree-of-heaven is reported from Southern Styria, Austria. Both 35 year old trees and young plants are affected. Symptoms comprise dieback of branches beginning in the upper crown and bark necroses extending down the stem. Microfungi found in dead bark tissues were *Verticillium* sp., *Phomopsis ailanthi*, *Nectria coccinea*, *Fusarium* sp., *Botryosphaeria melanops*, *Cytospora* sp., *Nectria peziza* and *Giberella moricola*. *Verticillium* sp. is regarded as the main species responsible for the decline. Predisposing climatic factors are discussed, but infection from agricultural soil adjacent to the *Ailanthus* stand is considered to be the dominant factor.

Fatal spirals for protection against fraying?

T. L. Cech

Stem-wounds caused by fraying protection spirals are reported from afforestations of Swiss stone pine (*Pinus cembra* L.) in the Tyrol, Austria. The main reason were twigs growing through perforations in the spiral preventing its extension. Infections by wound parasitic fungi and insects resulted in the death of the trees.

Unnatural suberization on Norway spruce - a new prevention of the bark peeling problem?

Ch. Tomiczek

Near Villach (Carinthia, Southern-Austria) a group of Norway spruce (*Picea abies*) was detected which shows unnatural suberization of the outer bark on stem and branches. No causes of this phenomenon have been found so far.

Winkelpflanzung kontra Lochpflanzung - gibt es unterschiedliche Anwuchserfolge?

Ch. Tomiczek

The comparison of two different cultivation methods, which are both very common in Austria, gave interesting results. During the first three years two times more plants (32.1%) cultivated by angle notch planting died compared to those cultivated by pit planting (14.3%). *Armillaria* sp. was the most common reason for the dying off of young spruce.

Evolution of crown condition of oak in the recent years

G. Steyrer

The results of the 1996 Forest Damage Monitoring System in comparison to previous years show neary deteriarration of the crown condition of *Quercus* spp. Due to these results an entomological and phytopathological survey was carried out in spring and summer 1997 on plots with dominance of oak sample trees. the reasons for deteriorated crown condition vary for the different plots. Water deficiency seems to be the most important factor influencing the crown condition of oak.

Tests of bark beetle pheromones in 1997

A. Pfister

New pheromones for *Ips typographus* and *Pityogenes chalcographus* were tested and compared with pheromones available on the market. These pheromones included various test charges of "Ipsowit" and "Chalcowit" (Witasek Ltd.) and "Pheroprax" ampulla (Cyanamid Ltd.). On five trial plots, 37 Theysohn slot-traps were used. The standard-pheromones of "Ipsowit" and "Pheroprax" achieved good and equal results, no test charges achieved better results than the standard charges.

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