

# The Forest Protection Situation in Austria 2006/2007

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## Abstract

Despite a cooler, wetter summer than in recent years, many insect species continued their gradation. The damage by spruce bark beetles reached a historical high with more than 2.5 million m<sup>3</sup> of timber affected. Other Scolytidae, Buprestidae and Cerambycidae species registered also an increase. Damage by defoliators increased in 2005 and keeps gradually decreasing since 2006. Due to the moister conditions, regionally known diseases such as leaf and needle fungi in particular, were observed more often. Heavy snowfall during winter 2005/2006 led to outraging snow breakage on conifers of all age classes. In addition, severe frost damage on conifers could be observed. Locally damage by woodpecker occurred. Still unclear is the phenomenon of long stem cracks and bark damage on maple, which are not due to frost.

**Keywords:** Insect gradation, spruce bark beetle, defoliators, snow breakage, frost

## Kurzfassung

### Die Forstschuttsituation 2006 und 2007 in Österreich

Trotz eher kühler Witterung und überdurchschnittlicher Niederschläge konnte ein neuer Negativrekord durch Buchdrucker (*Ips typographus*) mit mehr als 2,5 Millionen m<sup>3</sup> Schadholz verzeichnet werden. Ebenso kam es zu einer Zunahme bei weiteren Schadinsekten wie Scolytidae, Buprestidae und Cerambycidae. Seit 2006 nimmt die Bedeutung von fressenden Schmetterlingsraupen wieder ab. Die feuchtkühle Witterung hat auch zu einem Anstieg der Pilzkrankheiten geführt. Im Winter 2005/2006 wurden Schneebruchschäden in Nadelholzbeständen aller Altersklassen registriert. Zum Winterausgang wurden Winterfrost- und Frosttrocknissschäden an Douglasie und Lärche beobachtet. Zusätzlich ist es zu Spechtschäden sowie zu einem bisher ungeklärten Schadbild an Ahorn gekommen.

**Schlüsselworte:** Insektengradation, Fichtenborkenkäfer, Raupenfraß, Schneebruch, Frost

## Spruce bark beetles

In 2005, a total of 2.56 million m<sup>3</sup> of timber was cut due to bark beetle infestation. This is once again the highest amount of bark beetle damaged wood ever registered in Austria. Major damages were reported from Salzburg and Styria because of the consequences of the storm event in November 2002. The population of *Ips typogra-*

*phus* keeps increasing whereas other important bark beetle species such as *Pityogenes chalcographus* or *Ips cembrae* have decreased in comparison to 2004. For *Ips typographus* two generations were observed at lower altitudes, only one in higher regions.

Other Scolytidae, Buprestidae and Cerambycidae species showed also an increase especially in beech and oak.

## Diseases

Dieback of young *Fraxinus excelsior* probably as a consequence of spring frost in 2005 is reported from Lower Austria, Upper Austria and Salzburg. Scleroderris-disease (*Gremmeniella abietina*) and Diplodia-dieback (*Sphaeropsis sapinea*), both related to hail wounds could be observed in the most western parts of Austria.

In Christmas tree plantations *Kabatina abietis* has become an increasing problem on some sites in eastern Austria. *Thysanophora penicillioides*, first detected as a needle cast fungus of Nordmanns fir in Austria in 2004, is probably widespread. Nevertheless, rarely changes from saprophytic to parasitic occurrence.

## Defoliators

Leopard Moth (*Zeuzera pyrina*) mostly occurred on ash, maple and lime trees. Like every year in some parts of Austria moths of the genus *Yponomeuta* could be found in masses predominantly on *Prunus padus*, which often lead to defoliation and total wrapping of trees with web. The moth *Gelechia turpella* was observed in Vienna on an old poplar wrapping the stem completely. In 2005 winter moth (*Operophtera brumata*) and Gypsy moth (*Lymantria dispar*) increased their range. They have become less important since 2006. The same applies to oak processionary moth (*Thaumetopoea processionea*).

## Snow breakage

Heavy snowfall during winter 2005/2006 led to severe snow breakage in many parts of Austria. Altogether, more than 2.2 million m<sup>3</sup> of round wood had to be cut. It is expected, that this will further contribute to bark beetle damage during the next two years.

## Frost

Damage by winter frost and frost drought was observed in young stands of Douglas fir and European larch in



Figure 1: Woodpecker damage on maple  
Abbildung 1: Spechtschäden an Bergahorn



Figure 2: Bark damage of unknown cause on maple  
Abbildung 2: Rindenschaden unbekannter Ursache an Bergahorn

the eastern, warmer parts of Austria. The weakened or dying parts of Douglas fir were often infested by secondary factors like small bark beetles (*Pityophthorus pityographus*) and Phomopsis bark disease (*Phomopsis pseudotsugae*).

### Phenomenon on maple

A seldom phenomenon was observed in young maple stands. Trees were hit by woodpeckers, which seem to suck the maple sap (Figure 1). A completely different problem is bark damage (Figure 2) and long cracks (Figure 3) along the stem of younger maple. It seems that first the cracks occur and then the affected tree tries to close the wound. In some cases *Verticillium sp.* could be isolated out of the discoloured stem material, but not in all cases. Frost or too fast tree growth are definitely not the causal agents.



Figure 3: Stem crack and discolouration of unknown cause on maple  
Abbildung 3: Stammriss und Holzverfärbung unbekannter Ursache an Bergahorn

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