

First report of oak lace bug, *Corythucha arcuata*, in Austria

Markus Sallmannshofer, Sophie Ette, Werner Hinterstoisser, Thomas L. Cech, Gernot Hoch

The American oak lace bug *Corythucha arcuata* (Say, 1832) (Heteroptera, Tingidae) has severe impact on oak forests in parts of its invasive range in Europe. Here we report the first finding of *C. arcuata* in Austria. A screening in south-eastern Austria in September 2019 confirmed the occurrence of *C. arcuata* on 21 sites. The intensity of infestation varied considerably between 1 % and 95 % of leaves per tree and correlated with average leaf discolouration. Compared to investigations in the project REFOCuS the intensity of infestation seems to be dependent on human activities on the site. We assume that the spread of *C. arcuata* initially took place along main traffic and tourist routes. Thus, the quick spread is likely caused by passive transportation on vehicles. The first assessment gives evidence that *C. arcuata* is already widespread and established in south-eastern Styria and southern Burgenland. Massive feeding damage on oak foliage is expected in the upcoming years.

First record of the entomopathogenic fungus *Entomophaga maimaiga* in gypsy moth populations in Austria

Gernot Hoch, Daniela Pilarska, Margarita Georgieva, Georgi Georgiev, Plamen Mirchev und Christa Schafellner

The entomopathogenic fungus *Entomophaga maimaiga*, a native of East Asia, was recorded in gypsy moth (*Lymantria dispar*) populations in Austria for the first time in summer 2019. Light microscopic examination of dead *L. dispar* larvae, collected in a forest near Eggenburg (Lower Austria) that suffered complete defoliation, showed a prevalence of *E. maimaiga* of 64.8 %. Prevalence in dead larvae collected in a forest near Ebergassing (Lower Austria) was 100 %. These larvae also showed the typical macroscopic symptoms of *E. maimaiga* infections. Surveys on these two sites in 2018 did not reveal the presence of the fungus. Cool and rainy conditions in May 2019 were probably optimal for infections of gypsy moth larvae. *E. maimaiga* has been spreading quickly from the Balkan Peninsula to Central Europe since its first introduction to Bulgaria in 1999 and consecutive releases. The fungus will likely become a further effective natural enemy of *L. dispar* in the oak forests of Austria that will have marked impact on the population dynamics of this defoliator.

Effect of construction fleece, silage film and cellulose-polypropylene laminate on development and emergence of Eurasian spruce bark beetle (*Ips typographus*) from stored spruce logs

Gernot Hoch, Gottfried Steyrer, Gerlinde Weizer, Karl Schuster

The effect of three methods of covering infested spruce logs on development and dispersal of *Ips typographus* (Col., Scolytinae) was tested. Covering a pile of logs in an open area with silage film did not negatively affect development of *Ips typographus* broods. The film cover led to an increase in temperature, particularly of lower temperatures. Maximum temperatures were only slightly above the optimum for larval development. No increased mortality was noted. Due to higher humidity new broods could be established in the stored logs. The function of cellulose-polypropylene laminate and polypropylene construction fleece as mechanical barrier was tested in laboratory experiments. Of all beetles that emerged from the breeding systems, 83.4 ± 8.8 % (mean \pm SD) escaped from laminate packaging. Construction fleece was a significantly effective barrier; only 12.4 ± 9.2 % of emerged beetles escaped from the packaging. This method should be further pursued for storage of smaller amounts of infested wood.

Disease dynamics and mortality of sooty bark disease in Bavarian sycamore stands

Nicole Burgdorf, Ludwig Straßer

The sooty bark disease in combination with the dry and hot years of 2018/2019 induced severe damage to sycamore forest stands in Bavaria. In four study sites, the proportion of sycamore maples with spores of *Cryptostroma corticale* increased from 33 % in autumn 2018 to 64 % in autumn 2019. The disease dynamics was accompanied by high mortality rates: In June 2020, more than 60 % of the sycamore maples were dead in the four stands. The symptoms of sooty bark disease were primarily diagnosed in warm, dry areas of Lower Franconia in small-scale forest sites and in urban areas where climate extremes are less mitigated.
