Search for possible vectors of “bois noir” in Austrian vineyards

M. Riedle-Bauer and A. Sára
Lehr und Forschungszentrum für Wein- und Obstbau Klosterneuburg, Wienerstraße 74, A-3400 Klosterneuburg, Austria; Monika.Riedle-Bauer@hblawo.bmlfuw.gv.at

During the past years, inspections revealed a significant increase of “bois noir” (BN) disease in Austrian vineyards. Known natural BN vectors belong to the Cixiidae family (Hemiptera, Auchenorrhyncha). In some parts of Austria, however, Cixiidae species have not or are rarely found. The aim of our work was to study other Auchenorrhyncha species for their ability to transmit stolbur phytoplasma.

The Auchenorrhyncha fauna was analyzed in two severely infected vineyards in Lower Austria between 2006 and 2009. Surveys were carried out by yellow sticky traps and by vacuum sampling. Yellow sticky traps were mounted at three different levels (10-20 cm above herb layer, 120-150 cm above ground level in the canopy and 320-400 cm above ground level).

Transmission trials with several Auchenorrhyncha species (field trapped and laboratory reared insects) were carried out. *Vicia faba*, *Convolvulus arvensis* and *Vitis vinifera* were selected as host plants. Infected *C. arvensis* plants were used as phytoplasma source.

Altogether 155 Auchenorrhyncha species were recorded. Among them were 20 Fulgoromorpha from the families Cixiidae (5 species), Delphacidae (11 species), Dictyopharidae (1 species), Issidae (1 species) and Tettigometridae (2 species) and 136 Cicadomorpha from the families Aphrophoridae (4 species), Cercopidae (1 species), Membracidae (2 species) and Cicadellidae (subfamily Agallinae 4 species, Aphrodinae 2 species, Cicadellinae 3 species, Dorycephalinae 1 species, Iassinae 1 species, Idiocerinae 4 species, Macropsinae 3 species, Megophthalminae 1 species, Penthimiinae 1 species, Ulopinae 1 species, Typhlocybinae 51 species, Deltocephalinae 54 species).

We observed a transmission of stolbur phytoplasma to *Vicia faba* by *Anacertagallia ribauti*, but up to now we have not succeeded to find a species transmitting BN of grapevine.