

Dutch Elm Disease in the Czech Republic

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Abstract – The first occurrence of Dutch elm disease in the Czech Republic caused by later described *Ophiostoma ulmi* (Buism.) Nannf. was noted by professor Peklo who found infected trees in elm alleys in Prague and Poděbrady in 1932. Subsequently the disease was spread to the rest of Czechoslovakia. New wave of wilting occurred at the beginning of 1960's. Probably it was caused by the new species *Ophiostoma novo-ulmi* Bras. mentioned in all countries around. To this time was not explained the identity of the right causative agent of this new wave of DED in the Czech Republic. Our study revealed some new facts about DED in the Czech Republic. *Ophiostoma novo-ulmi* was for the first time recorded on the area of the Czech Republic, so as its both subspecies ssp. *novoulmi* originated in the area of Ukraine and Moldavia and ssp. *americana* originated in North America. Remarkable is the number of hybrids of these subspecies, but non-hybrids ssp. *novo-ulmi* occurs at most. On the other hand *Ophiostoma ulmi* was not identified in any analyzed sample of elm twig. These taxonomic analyses were provided by methods of molecular biology - PCR and RFLP of CU and COL1 gene region. During cultivation of elm samples an endophytic fungus *Phomopsis oblonga* was isolated in a few cases. Elm bark invaded by this fungus is less attractive as a breeding site for the DED vectors - Elm bark beetles (*Scolytus* spp).

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