

BOOK REVIEW

SKUHRAVÝ V.: THE NEEDLE-SHORTENING GALL MIDGE *THECODIPLOSI* *BRACHYNTERA* (SCHWÄGR.) ON THE GENUS *PINUS*. Rozpravy ČSAV 10, Ser. Mathematics and Natural Science, Academia, Praha, 1991, 104 pp., 32 Figs. ISBN 80-200-0426-2. Price CZK 37.

This study is related to the author's monographs on insect pests in agriculture and forestry. The most extensive studies are those concerning *Leptinotarsa decemlineata* (Coleoptera) and *Zeiraphera diniana* (Lepidoptera). However, his area of specialization is the Cecidomyiidae (Diptera). From among this family he has studied *Haplodiplosis marginata*, an important pest of wheat and barley; *H. equestris*, a pest of cereals; and *Pasioptera arundinis*, *Giraudiella inclusa*, *Lasioptera hungarica* and *Microlasioptera flexuosa*, pests of *Phragmites communis*. He has also devoted a long-term study to the cecidomyiid *Thecodiplosis brachyntera*. A summary of his previously published results is given in this monograph.

The author started his study of this pest in the dwarf pine zone of the Krkonoše Mts. During the 25 years of his study, he found this species in 1,100 localities, between 100–1,700 m a.s.l. Today, possibly as a result of air pollution, the ecological situation has changed and *T. brachyntera* has become a pest on *Pinus sylvestris*, *P. mugo* subsp. *mughus*, *P. mugo* subsp. *uncinata* and on *P. nigra*.

Skuhravý's monograph comments in a thorough and comprehensive manner upon all available data in the literature. The description of the morphology of immature stages is supported by excellent scanning electron micrographs. Subsequent sections cover the influence of humidity on pupation and

emergence, mortality during development, the description of galls, damage caused to needles by larvae, and the influence of experimental manipulations on the gall shape. The species' distribution in Europe and the former Czechoslovakia is presented. The study discusses outbreaks of the species in several localities in Czechoslovakia and known outbreaks in Europe since 1833. The study also describes population dynamics and its long-term variations, genus *Pinus* as a host of *T. brachyntera*, the biochemistry of needles, damage to dwarf pines, the effect of air pollution, the economic importance of *T. brachyntera*, and possibilities for pest control.

However, the value of the numerous data is sometimes diminished by low print quality and by editorial work, which is beyond the author's influence. My comments now are thus aimed at the editorial work of Rozpravy. For example, the excellent scanning electron micrographs (which I had the opportunity to see several times) deserve chalk paper, so that the fantastic ultrastructure can be shown in the best possible manner. Also, some of the pictures are too small to show the needed detail. Furthermore, the study seems incompact, since each of the 27 chapters begins on a new page. There are thus many blank spaces at the ends of chapters, amounting to more than 10 unprinted pages, which could have been either saved or used to present larger photographs.

However, the entire study brings together much of the author's knowledge and data, and so is a very useful handbook, presenting a full account of the phenomenon of needle-shortening in the genus *Pinus*.

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