

BARK BEETLES AND OPHIOSTOMATOID FUNGI IN JAPAN

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Many Ophiostomatoid fungi had been reported from Japan, the first of which date back to 1917. However, consistent with the confused taxonomy of this group, their identities have been uncertain. Recent advances in taxonomy of Ophiostomatoid fungi have enabled a reappraisal and survey of these fungi in Japan. These surveys have revealed many undescribed species and species for which the taxonomy requires revision. Here we review the current knowledge of the Ophiostomatoid fungi and their bark beetle associations in Japan. The common species known from this country are *Ophiostoma piceae*, *O. querci*, *O. minus*, *O. ips*, *O. piliferum* and *L. koreanum*. *Ophiostoma piceae* was the only species known in the *O. piceae* complex, but now several species in this group are recognized. Some other Ophiostomatoid fungi also encompass species complexes and these require study. Various studies have been conducted on the Ophiostomatoid fungi from bark beetles in Japan and in particular, those associated with *Ips typographus* and *Ips cembrae*. Here the fungal associates are similar to those found elsewhere in the world, but new species have also been found. An example here is *Ceratocystis fujiensis*, which was segregated from *C. laricicola*. Likewise, *Leptographium koreanum*, and *L. yunnanense*, first reported from Korea and China respectively, have recently been found in Japan. Both appear to be specifically Asian species. Ophiostomatoid fungi from Asia have not been extensively surveyed and collaborations among Asian researchers that have been established are likely to result in the discovery of many new species. In particular, the area has many bark beetles not previously considered for these fungi and surveys, for example on hosts such as *Abies* species are likely to yield new taxa.