

Наиболее хорошо изучен список тундровых, лесотундровых, средне-, южно- и подтаежных экосистем, тогда как северотаежные и пустынные – требуют дополнительных исследований.

Несомненно, данный результат не итоговый, а будет корректироваться вместе с поступающими новыми данными.

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## DIVERSITY AND ECOLOGY OF APHYLLOPHOROID FUNGI IN THE ARCHIPELAGO FORESTS OF THE BALTIC SEA

The aim of this study was to find out diversity, biogeography and ecology of aphyllorphoid fungi in the insular forest habitats. The study area was located in the archipelago of the Finnish southwestern coast, in the Baltic Sea. The material was collected from 40 forested islands in the middle and outer archipelago zones. The total forest area of these islands were 1142 hectares (range 3–159 ha). The species group focus was on polypores, corticioids and hydnyaceous wood decayers with the common feature to form basidiocarps on woody substrates.

The number of surveyed substrate units was determined according to size of the island so that each island had same sampling effort. Wood pieces  $\geq 3$  cm were considered and documented. In all, 10 127 dead trunks, stumps or fallen branches were inventoried and they were divided into tree species as follows: *Pinus sylvestris* 32.3 %, *Alnus glutinosa* 26.1 %, *Betula sp.* 20.1 %, *Picea abies* 9.6 %, *Populus tremula* 5.0 % and others 7.0 %.

Altogether 339 species or taxon were identified among the 8549 species records. It is 45 % of all known species of the target groups recorded in Finland. The proportion of polypores was 98 species. The genera with the highest species richness were: *Trechispora* 19, *Phellinus* 13 and *Tomentella* 11 species. The most numerous species were (number of separate substrate unit) *Inonotus radiatus* 939, *Stereum rugosum* 466, *Trichaptum abietinum* 333, *Piloderma fallax* 329, *Piptoporus betulinus* 320, *Fomes fomentarius* 318 and *Botryobasidium subcoronatum* 281 and *Peniophorella pubera* 218. On the other hand, 231 species had less than 10 records and 82 species were found only once.

Eight new species to Finland were found in this material: *Peniophorella tsugae*, *Phlebia cremeoal-*

*utacea*, *Tomentella albomarginata*, *Tomentella cinereoumbrina*, *Tomentella fuscocinerea*, *Trechispora araneosa*, *Tubulicium vermiferum* and *Tulasnella danica*. Up to 30 species had five or less earlier records in Finland. Several new and still undescribed species of aphyllorphoid fungi were found. The number of red-listed species was 16 and the number of old-growth forest indicator species was 17.

On average 0.84 record was done per surveyed substrate unit. *Salix caprea* had the highest hosting result with 1.2 record per wood piece, and the next ones were *Alnus glutinosa* (0.96), *Betula sp.* (0.95) and *Populus tremula* (0.92). In total, 70 % of all species records were made in decay stage 1–2. These two freshest decay stages covered 85 % of all found species. Fine woody debris (diameter 10cm) hosted only 21.3 % of all records, but as much as 61.9 % of all species.

The correlations between the environmental factors and the species richness and the number of records were tested. The forest area of islands had significant relation with the species richness and the number of records. Also the dead wood diversity index had significant relation with the species richness and the number of records. Surprisingly, the volume of dead wood had only slight relation to the polypore species richness and the number of polypore records. However, the study islands' distance to mainland or the number of cut stumps had no relation to the species richness or the number of records. The study islands with herb-rich forest as dominant forest type had on average more records than the islands with other dominant forest type. When comparing the means, the number of records varied significantly with the number of forest types per island.