

DIRECTION AND RATE OF SUCCESSIONAL CHANGES IN THE STRICT RESERVE OF THE BIAŁOWIEŻA NATIONAL PARK

S u m m a r y

In 1959, a phytosociological survey on a permanent study plot of the Białowieża Primeval Forest was made and then repeated in 1998. In the stand studied a reduction in spruce share in favour of the oak-hornbeam habitat type was recorded. The greatest changes in stand composition and structure were accompanied by the greatest changes in the vegetation of the forest floor. A reduction of oligotrophic and light-demanding species was recorded. At the same time, the number of species demanding more fertile habitats increased. This was expressed in the drop in the systematic value of the coniferous habitat type species and the rise in the systematic value of the oak-hornbeam habitat species. Using traditional phytosociological methods, indicator values of vascular plants and method of reciprocal averaging it was found that the greatest changes in the vegetation oc-

curred in the medium fertile fresh mixed broadleaved habitats and poor fresh coniferous habitats. Fertility of the fresh coniferous habitats was found to increase while in fresh broadleaved habitats, wet broadleaved habitats, ash-alder carr and wet mixed broadleaved habitats the changes were small. The overlapping processes of recovery of plant communities and soil eutrophisation caused mainly by air pollution and climatic changes were the major reasons of changes in the vegetation. During the past 40 years great changes in species composition of some plant communities of the natural forests of BPF were recorded. They may suggest that the concept of both potential of natural vegetation and climax, should be referred to a given time interval.