The vegetation of the Canadian Prairie Provinces
IV. The woody vegetation, Part 4
Coniferous forests

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with 6 photos and 5 tables

Abstract. The coniferous forests occupy the Boreal forest zone of the Prairie Provinces and much of the submontane-subalpine zone of the eastern slope of the Rocky Mountains in Alberta, covering a total area of approximately 1 200 000 km$^2$. These forests are of considerable economic importance, and produce large amounts of lumber and pulpwood. Because of the large number of lakes suited for recreational purposes, communities in the Boreal forest zone derive much of their income through tourism, especially hunting and fishing. The forests also are the habitat of a large but diminishing number of fur bearing animals, and are of considerable economic importance to fur trappers.

The coniferous forests of Canada have several species, varieties, or vicariants of species in common with their Eurasian counterparts, and can be placed in the existing class Vaccinio-Piceetea, order Pino-Piceetalia. Based on analyses of 882 relevés, and for some areas the study of existing literature, three new alliances, with 8 associations and 27 subassociations are described, and several variants are mentioned.

Further research is needed, and will probably show the existence of several other forest communities, or lead to the elevation of most of the subassociations to the status of associations. The ecology and the significance as biocoenose of the forests, as well as their economic importance, are discussed.

Introduction

The coniferous forests of the Prairie Provinces are the largest single vegetation type, occupying approximately 1 200 000 km$^2$. Most of this forest is in the Boreal forest zone, and continues north into the North West Territories. The submontane-subalpine coniferous forests of the Rocky Mountains in Alberta, however, are also of considerable extent, with an area of more than 100 000 km$^2$, or almost 10% of the total area.

Three basic types of coniferous forest can be distinguished, each characterized by one or more tree species, and often also several species of shrubs and herbs, as well as bryoids. These three vegetation types also occupy different habitat types.

The most common type of coniferous forest, occupying about 45% of the total area, is that dominated by, or with a significant cover of, the white spruce,