

## Influence of soil formation on spreading process of *Abies mariesii* : Case study in the Hachimantai area

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Coniferous forest composed of *Abies mariesii* and *Abies veitchii* commonly covers subalpine zone of Tohoku and Japanese Alps, although its extent and maturity vary even in adjacent areas corresponding to some local factors such as landform and snow cover. In case of Hachimantai, *Abies mariesii* forest is well distributed in its northern part in contrast with the southern part where the coniferous forest is scanty. This study investigate the spreading processes of *Abies mariesii* forest in Hachimantai in terms of soil formation.

The results suggest that the matured *Abies* forest widely covers the areas in which black soils are well developed. The *Abies* forest on places where black soils are less developed is scattered or immatured. The past palynological studies also support this correspondence. It is estimated that spreading processes of *Abies* forest is closely related to soil development.

Keywords: *Abies mariesii*, Soil formation, Pseudo-Alpine Zone, Vegetation changes