

## **Vegetation and soils of northern Alaska - a geographical analysis along a latitudinal transect from Prudhoe Bay to Fairbanks**

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Seven monitoring plots ([AK01]-[AK07]) were established along the Dalton Highway, Alaska, from Prudhoe Bay to Fairbanks to analyze and describe the current status of vegetation and soils and to provide base-line information for monitoring and detecting future change of the ecosystems. Their exact geographical positions were recorded in terms of latitude, longitude and elevation. At each plot site, vegetation was described and one soil pit was dug to observe profile structure and to collect soil samples representing different horizons. The samples were analyzed for physical and chemical properties.

It became apparent that there was a considerable difference in vegetation and soil characteristics between the north and south of the Brooks Range in such a manner that in the north vegetation was represented by extensive tundra while in the south principally by boreal forest. Soil horizons were poorly developed in the north of the Range whereas they were reasonably well developed in the south. Permafrost was encountered in most soils. Soils were generally acidic except for those of [AK01] where all samples showed an alkaline reaction as pH was more than 7.4 and base saturation was extremely high.

Such information would serve as bench mark data to monitor and detect future change of ecosystems along with environmental change in northern Alaska.