

XI International Colloquium on Soil Zoology

Jyväskylä, Finland, 10-14 August 1992

Program and Abstracts

SOIL FAUNA OF ARTHROPODS ON HUMAN DISTURBED TERRITORY
OF BIRCH STAND IN JAMAL FOREST TUNDRA. Bogacheva I.A.,
Institute of Plant & Animal Ecology, 8 March Str., 202,
Ekaterinburg, 620219, USSR.

Insects (without Apterygota), spiders and millipeds were studied in a birch stand near Labytnangi (66°40'N, 66°15'E) disturbed by recreation. Its territory was mapped in 1985 and in 1991; the changes in plant communities were described. Samples for arthropods were taken in 1985, 1986 and 1991, three times each growing season. Bare patches of naturally eroded soils (5% of the total area of the sampling plot) appeared to be inhabited by wasps and ants. Patches of burned and trampled vegetation (human disturbance) occupied 25% of the total area by 1985 and 42% by 1991; they are deprived of permanent arthropod population. Three types of vegetation were separated by us; the first one dominated by *Betula pubescens* ssp. *tortuosa*, and the second one dominated by *Betula nana* have similar arthropod communities. Carabids, spiders, millipeds and tipulid larvae prevail in them. The total biomass was equal approximately to 1-2 g/m², with significant decrease in the middle of the growing season. The third type of vegetation dominated by *Arctous*, *Arctostaphylos*, *Vaccinium* spp. contained poorer (100-1500 mg/m²) but very peculiar arthropod community. The dry and hot period of 1987-1990 was favourable to Hemiptera and Microlepidoptera and adverse to Elateridae, Byrrhidae and Tipulidae; so litter forms of phytophages are believed to depend mainly on summer temperature but the real soil inhabitants - on soil moisture. Populations of many active predators were rather stable. Only staphylinids and ants have suffered really from human disturbance; the destruction of moss cushions might be the preultimate reason of their decline.