



Palsa monitoring in Dovrefjell, Southern Norway

Michaela Ferbar and Leif Sørbel

University of Oslo, Department of Geosciences, Oslo, Norway (michaf@student.geo.uio.no)

Palsas are permanently frozen peat hummocks. As palsas occur in the discontinuous and sporadic permafrost zone, they are sensitive markers of permafrost change. In Dovrefjell, southern Norway, the Haukskardmyrin palsa mire is located at 1040 m a.s.l. Using a variety of methods, we have conducted detailed investigations of the palsa mire, aiming towards improved knowledge of palsa development and what is controlling palsa growth and disintegration. We have monitored the Haukskardmyrin palsa area since June 2006, measuring the surface evolution and compared arial photographs from 1963, 1979, 1992, 2002 and 2009. We have also measured the temperature of the palsa for a depth profile with temperature loggers at the surface, 10 cm depth, 30 cm depth and 70 cm depth as well as air temperature since September 2006. Combining the palsa temperature data with recorded temperature from a nearby weather station we intend to relate the palsa temperature to air temperature and evaluate the impact of temperature variations for palsa development.