

UK MOSSES SURVEY 2005: FIRST RESULTS

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It is well known that mosses efficiently capture and retain metals deposited from the atmosphere. Since 1990, a European survey of the concentration of heavy metals in mosses has been carried out every five years. The most recent European survey was conducted in 2005/2006 and involved more than 30 European countries and about 7,000 sites (see other abstracts Harmens et al.). For the first time, the majority of countries (18) also determined the nitrogen concentration in mosses to establish whether mosses can be used as biomonitors of atmospheric nitrogen deposition at a European scale. Here we report on the contribution of the UK to the European moss survey 2005/2006 and discuss preliminary results and temporal trends in the heavy metal concentration in mosses; nitrogen analyses are ongoing.

Throughout the UK the following moss species were sampled from 173 sites, located at or near to the same sampling sites as in the 2000 UK moss survey: *Pleurozium schreberi* (65 sites), *Hylocomium splendens* (50 sites), *Rhytidiadelphus squarrosus* (37 sites) and *Hypnum cupressiforme* (25 sites). An interspecies calibration exercise was conducted in the 2000 UK moss survey. The following metals were analysed at the NERC ICP-MS facility: aluminium, antimony, arsenic, cadmium, chromium, copper, lead, nickel, titanium, vanadium and zinc. Provisional data for 2005 show that the general decline in the median values of the metal concentration in mosses during the last decade of the 20th century continued in the first five years of the 21st century, although at a slower rate. Further data processing, interpretation and mapping is ongoing.

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