Professor Hilary Helen BIRKS

Written and read by Professor Des Thompson FRSE on 14th May 2018

Professor Hilary Birks is internationally acclaimed for her work in environmental science, palaeoecology and plant-macrofossil analysis (embracing studies of plant remains such as seeds, fruits and leaves). Her landmark contributions have enriched our understanding of how nature has varied and responded to past climates and other environmental impacts, such as pollution.

As Hilary wrote in a forthcoming book chapter, *'palaeoecology is the study of past ecological events and processes … We cannot see the past directly, so must reconstruct it from evidence stored in sedimentary and archaeological archives, rather like a cold-case detective investigation. The Holocene sediment is organic brown mud… students get excited when they see fresh-looking pine needles and birch leaves sticking out of it, and are astonished when they are told that these are about 5,000 years old - as old as the pyramids.'*

Hilary's specialist subject is unravelling the history of the Northern Hemisphere 's vegetation and landscapes. Her Cambridge PhD involved studying the early history of Abernethy Forest in the northern Cairngorms. From here she has gone on to advance our understanding of the vegetation history of Scotland, particularly our native Scots pine , and vegetation and climate changes in what is called the Late-glacial period. Not satisfied with working on land, Hilary has reconstructed the aquatic and terrestrial ecosystems of lakes - lochs to you and me in Scotland - and their responses to climate changes and human related drivers of agriculture, forestry and industrialisation. The reach of her work has involved peering into the soils and lake sediments of Britain and Ireland, Norway, Svalbard, Greenland, Finland, Spain, Romania, North America, Tibet, and three north African countries.

In the UK, Hilary analysed massive datasets on upland vegetation for our National Vegetation Classification, giving us key insights on some of our most internationally important plant groups – the mosses and ferns - in western Britain and Ireland. All of this has contributed to our wider understanding of the flora of alpine areas across the world. Significantly, this also helped in devising the network of protected areas for nature we have today. In this, Hilary worked closely with one of the pioneers of nature conservation in post-War Britain – Derek Ratcliffe – on whom she co-edited a substantial book entitled *'Nature's Conscience'*.

A world-leading scientist, Hilary is based in the University of Bergen where she was elected a Foreign Member of the Norwegian Academy of Science and Letters. Also elected a Fellow of the American Association for the Advancement of Science - there are only three such Fellows in Norway - Hilary was recently awarded the Lifetime Achievement Award by the International Paleolimnological Association. On retirement in 2014 she was honoured by her international colleagues with a Special Issue (Festschrift) of *Vegetation History and Archaeobotany*. Entitled 'It's all in the detail: a tribute to Hilary Birks and her contributions to palaeoecology', her remarkable career is attested in 12 papers by 54 authors from 14 countries.
An inspirational mentor of emerging environmentalists and ecologists, Hilary is one of the most modest and unassuming environmental stars we are likely to encounter!

President, two years ago we welcomed Professor John Birks, Hilary's husband, as a Bergen-based Corresponding Fellow of the Society. The Vikings may not be coming back to Scotland, but the Birks are here from Norway! Today, we complete the double act, and are delighted to admit Professor Hilary Birks as a Corresponding Fellow of the Society.