Tellus (1994), 46A, 1–3
Printed in Belgium – all rights reserved

TELLUS
ISSN 0280–6495

In Memoriam

(Photo Fritz Larsson, February, 1993)

ALF NYBERG

19 June 1911–10 October 1993

The death of Alf Nyberg is a great loss to Swedish meteorology. A central personage of great character, substance and pragmatic wisdom has left us. He was a key person in international meteorology for several decades, and gave through this, prestige and visibility to Sweden and to the Swedish Meteorological and Hydrological Institute (SMHI). For his contributions, he was awarded the International Meteorological Organization (IMO) prize in 1978. He was elected honorary member of the American Meteorological Society in 1970.

Alf Nyberg's scientific contributions covered a wide range of areas and were extended over a long period of time. He realized early the enormous potentials of aerology and systematic observations of the large-scale upper air circulation and his early contributions were concerned with detailed studies and intercomparison of radiosondes. A visit to Chicago 1946–1947 brought him into contact with the leading scientists in dynamical meteorology and weather forecasting under Carl-Gustaf Rossby. Together with

Tellus A/46/1-1

his co-workers at SMHI, he published several interesting papers on energy and momentum fluxes which contributed to our present understanding of the general circulation of the atmosphere. In the 1950s, he already started undertaking what is now called cage experiments by estimating the water balance of different areas including the Baltic Sea, using a combination of aerological and hydrological observations, an issue which is today of the highest interest under the Global Energy and Water Cycle Experiment (GEWEX) program.

Nyberg had an open view on new areas of science, particularly where he could see a societal value. He took a great interest in studies and investigations of acid precipitation, where he wrote several articles and put the resources of his institute to the fore, with the objective of clarifying different aspects of long-range transport of sulfur. This contributed very much in convincing other countries outside the Nordic region to gradually reduce pollutants leading to acid rain.

Nyberg's scientific interest covered many areas of geophysics. Just two years ago, he published an interesting critical study on sea level changes in the Baltic and the North Sea which I had the great opportunity to discuss with him on several occasions. His sound, critical, common sense approach to judging data and scientific results, was as always most refreshing.

Alf Nyberg was director-general at SMHI between 1955 and 1977, a time when rapid developments took place in meteorology. New technology was introduced early on, and SMHI was one of the first meteorological services to operationally introduce numerical weather prediction and to use computers to automate data collection and data-processing. The activities in hydrology and oceanography were rapidly expanding. SMHI introduced the selling of services to clients in the governmental and private sectors and the retention of a portion of the proceeds to meet different expenditures. This had a most positive and dynamical effect on the Institute, since different actions could be taken without having to await the lengthy procedure of approval of funds by governmental authorities.

Alf Nyberg was appointed member of the World Meteorological Organization (WMO) Executive Committee in 1955 and remained a member of this committee until his retirement in 1977. From 1963 to 1971, he was also president of WMO. The period of his presidency coincided with a very dynamical time at WMO and in meteorology in general. A new advanced global system for observation, data-communication and data-processing, World Weather Watch (WWW), was introduced, making possible for the first time the prediction of the weather and the provision of weather forecasts for the whole globe. Together with the International Council of Scientific Unions (ICSU), an agreement was made to undertake a Global Atmospheric Research Programme (GARP) including the development of new types of satellites. In spite of political and economical difficulties, these two programmes were successfully introduced, creating a quantum jump in the development of our science. To support the developing countries in establishing the infrastructure for WWW, a special voluntary co-operation programme was set up. Nyberg took a particular interest in this and continued to support it in his capacity as a consultant to WMO long after his retirement.

I had the opportunity to work closely with Alf Nyberg in the preparation and setting up of the European Centre for Medium-Range Weather Forecasts (ECMWF). His sound judgement and ability to cut his way through bureaucratic jungles was useful, to say the least.

Nyberg had many interests outside meteorology. He was an active member of the Royal Swedish Academy of Sciences and the Royal Swedish Academy of Agriculture and Forestry. After his retirement, he wrote many interesting articles on several subjects including a report on the scientifically interesting and successful Swedish expedition to Spitsbergen during The First Polar Year 1882/83 (in contrast to the well-known, disastrous André expedition), on weather and rheumatic disease (together with his daughter Gudrun Nyberg), and two most readable, popular science books.

Alf Nyberg will be particularly remembered for his great contributions to Swedish meteorology. He was instrumental in establishing the prestigious Rossby award of the Swedish Geophysical Society, and indeed used his private resources to contribute to its realisation. During his time, SMHI became known as one of the most advanced and progressive meteorological services in the world. Good science and modern technology were put in the forefront with the objective of providing the best possible service and of giving sound scientific advice to society.

The following words from an interview he gave in the WMO Bulletin in 1984, given as advice to young persons taking up meteorology as a profession, are characteristic of him.

"The advice is simply to take an interest in one's work. This applies whatever the work is. Any job presents problems, problems call for solutions, finding the best solution is a challenge and a challenge is stimulating for any intelligent being. I would also urge this person to bear in mind that success can usually only be attained through hard work; therefore, study thoroughly whatever field you find yourself working in, aim at improving your knowledge your whole working life, and why not after retirement too. I can assure you that only in this way will the young person derive satisfaction from life and all it brings." He himself did follow this all through his long life!

Lennart Bengtsson