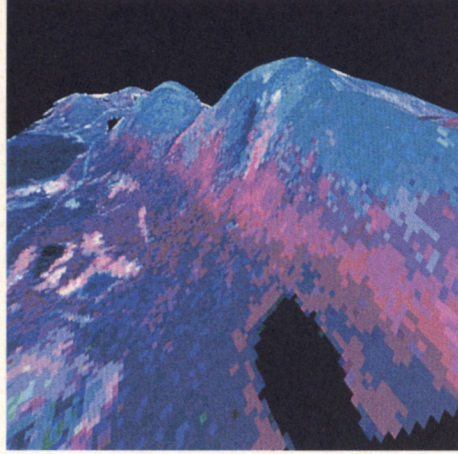


THE FINNISH FOREST RESEARCH INSTITUTE



ROVANIEMI RESEARCH STATION





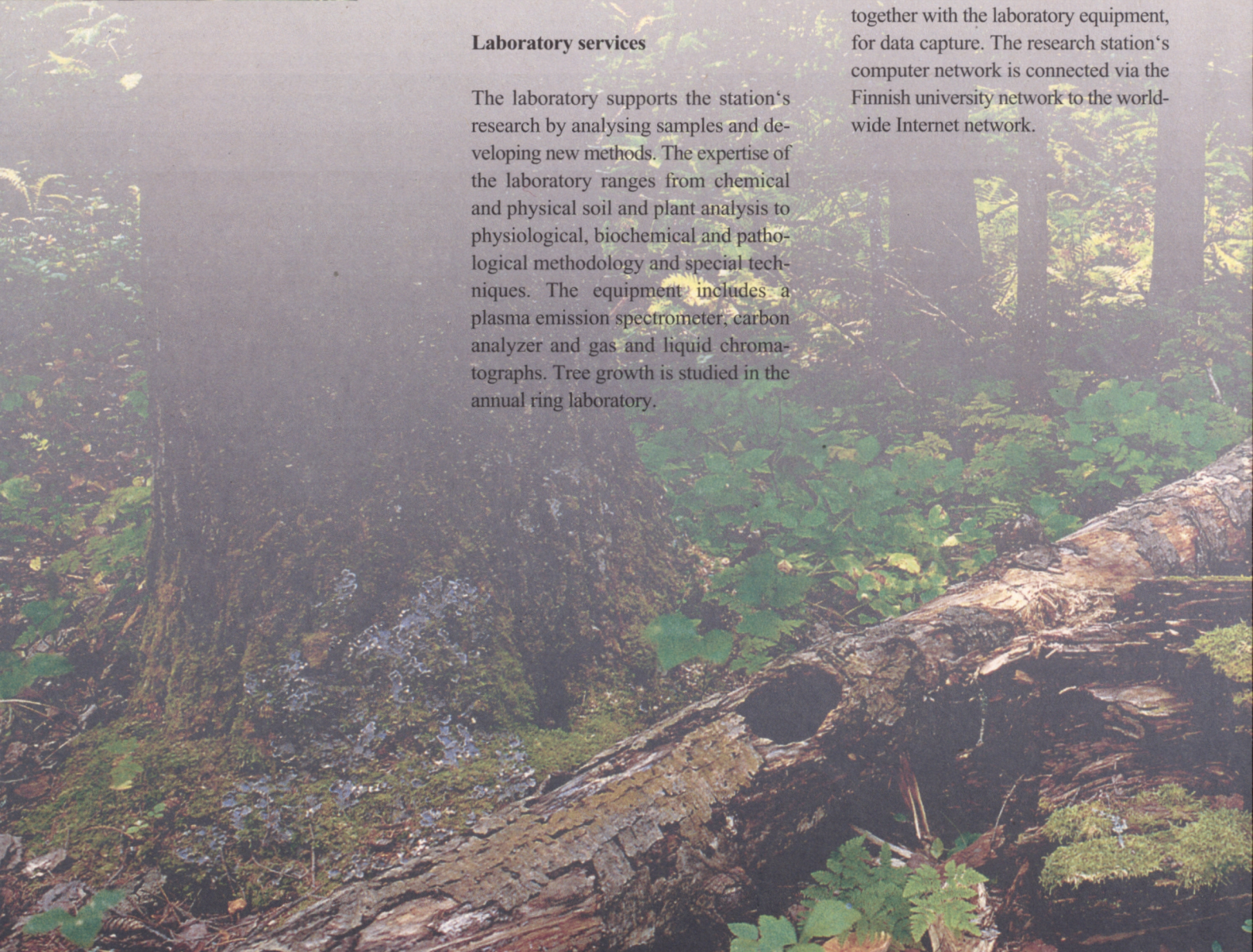
The research station was established in 1970 to solve the problems associated with the regeneration and timber production of Lapland forests. Nowadays the activities are also directed at research into the state of health of the forests and multiple forest use. The new offices and modern laboratory, completed in 1991, coupled with the station's up-to-date computer architecture and software, also provide excellent conditions for international cooperation.

#### Laboratory services

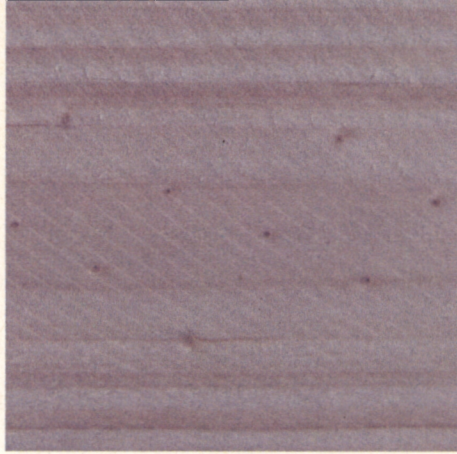
The laboratory supports the station's research by analysing samples and developing new methods. The expertise of the laboratory ranges from chemical and physical soil and plant analysis to physiological, biochemical and pathological methodology and special techniques. The equipment includes a plasma emission spectrometer, carbon analyzer and gas and liquid chromatographs. Tree growth is studied in the annual ring laboratory.

#### Information systems services

The station's information systems services (ISS) maintain and develop the computing resources needed in research and administration. The computing capacity consists of efficient, Unix-based workstations and PC's. The workstations are used for statistical analysis, data base management and geographic information systems and satellite imagery analysis. The PC's are mainly used for text processing, graphics and, together with the laboratory equipment, for data capture. The research station's computer network is connected via the Finnish university network to the worldwide Internet network.







### **Forest health and vitality**

The forests in the far north are subjected to continuous natural selection. The harsh, extreme climate, combined with pathogen and pest attacks and air pollutants, weaken forest health and vitality. Research into the occurrence, characteristics and significance of the damaging agents provides information about the causal relations of forest damage and the potential threat to forest ecosystems.

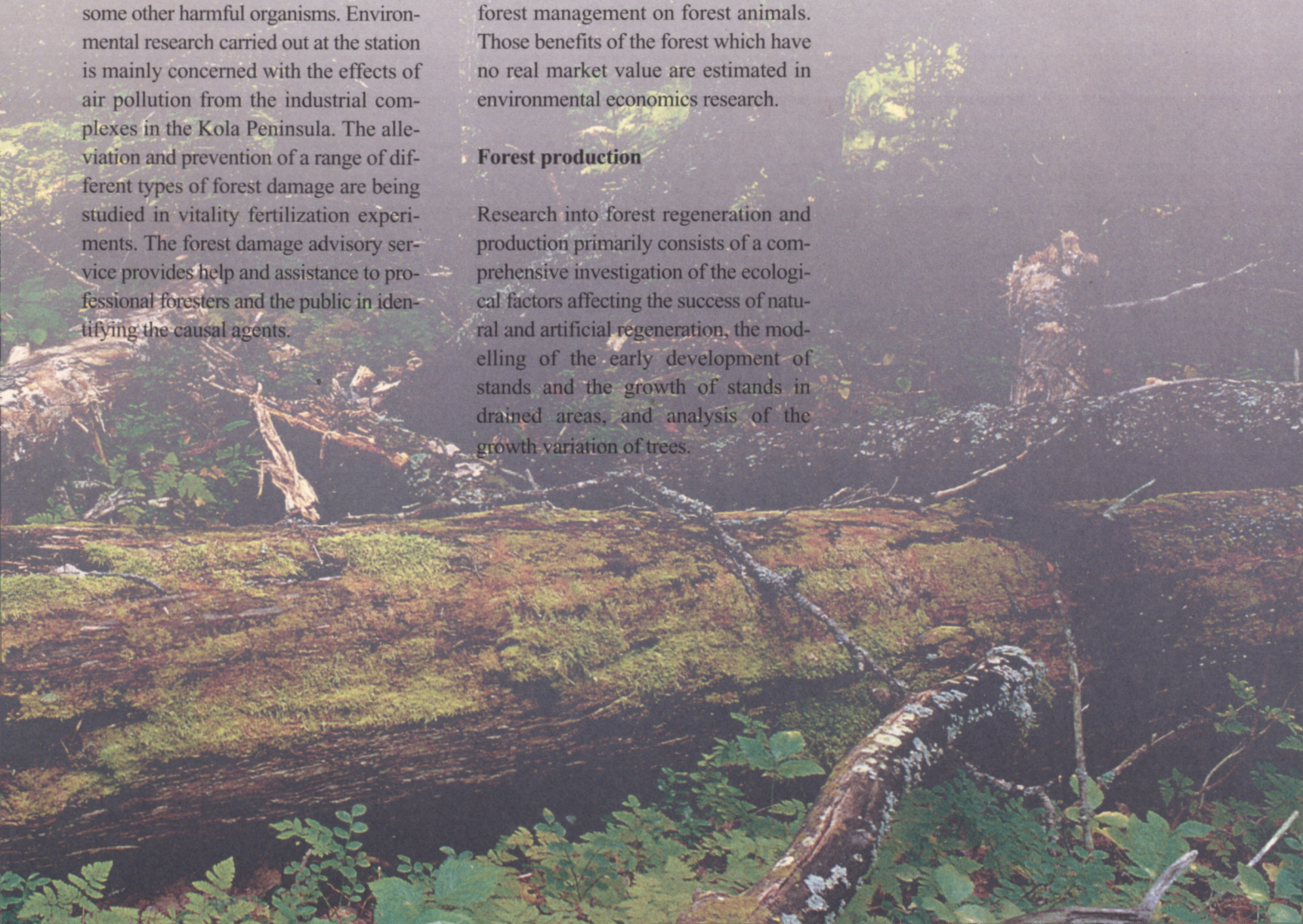
The station's forest health research is primarily directed at forest defoliation, frost injury and frost hardiness, Scleroderris canker, moose damage and some other harmful organisms. Environmental research carried out at the station is mainly concerned with the effects of air pollution from the industrial complexes in the Kola Peninsula. The alleviation and prevention of a range of different types of forest damage are being studied in vitality fertilization experiments. The forest damage advisory service provides help and assistance to professional foresters and the public in identifying the causal agents.

### **Multiple forest use**

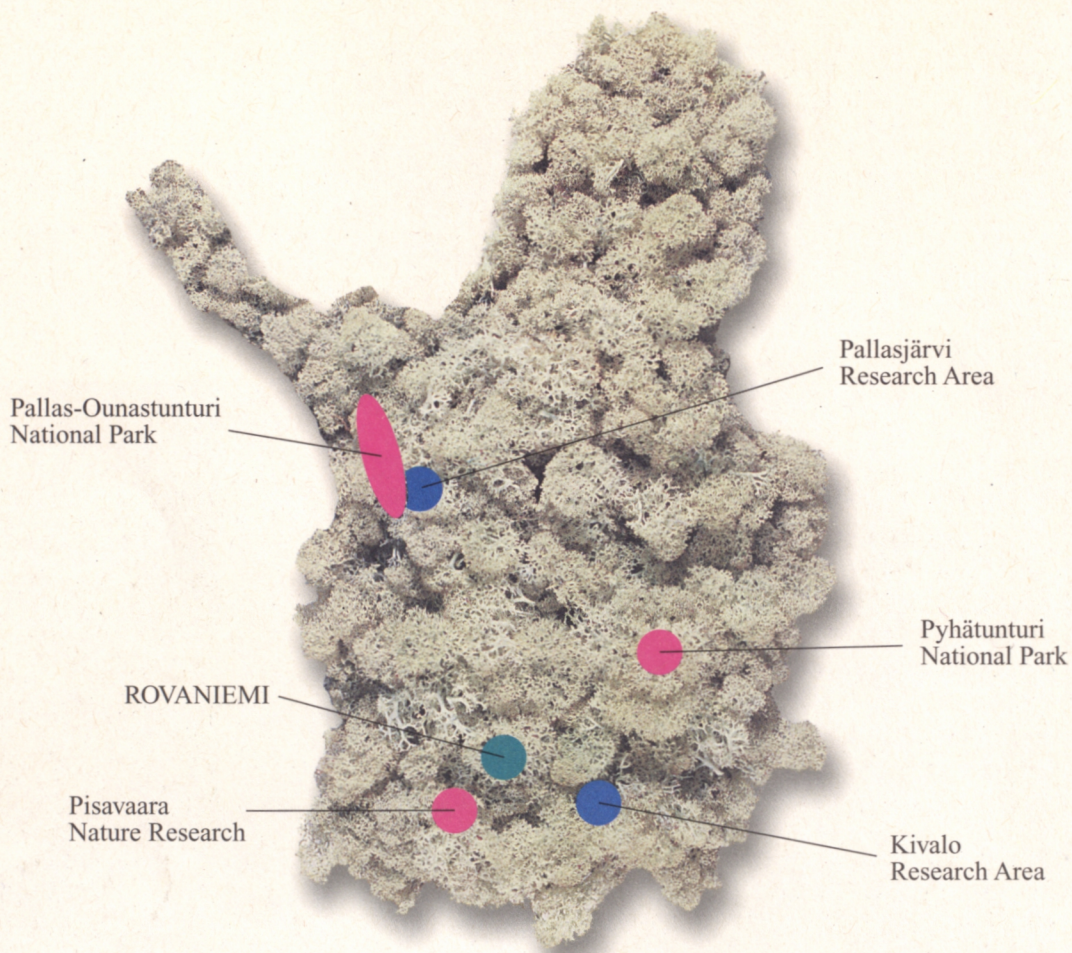
In addition to timber production, the forests in Lapland also play an important role in reindeer husbandry, hunting, berry-picking and tourism. The main multiple-use research topics are the management and utilization of wilderness and nature conservation areas, reindeer husbandry, wildlife habitats and environmental economics. The research carried out in wilderness and nature conservation areas is centred on their tourist and recreational use. Reindeer and wildlife research is concerned with the effects of the forest environment and forest management on forest animals. Those benefits of the forest which have no real market value are estimated in environmental economics research.

### **Forest production**

Research into forest regeneration and production primarily consists of a comprehensive investigation of the ecological factors affecting the success of natural and artificial regeneration, the modelling of the early development of stands and the growth of stands in drained areas, and analysis of the growth variation of trees.







The Rovaniemi Research Station is also responsible for managing the research and nature conservation areas essential for long-term forestry and environmental research.



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