

Geological research is important because the Canadian Shield is one of the most intricate and richest rock formations on earth. The geological sciences have a long tradition in Canada and include not only mineral exploration but the dating of rocks by radioactive methods, etc. The origin of a number of very ancient so-called craters in Northern Canada is the subject of much study and debate.

There are also research programmes in meteorology, which involve the use of radar to study storm conditions and the use of rockets to forecast weather.

Aviation research to aid in opening up the North plays a leading role in developing aircraft with short take-off and landing characteristics. The Canadian-designed *Otter*, *Beaver* and *Caribou* aircraft are internationally known as being particularly well-suited to wilderness flying. Research engineers are now working on designing a reliable and economical vertical take-off and landing aircraft, thus foreshadowing the possibility of doing away with runways completely.

In addition to their participation in the above-mentioned research projects, the beneficial results of which are shared by many other countries, Canada's scientists play an important part in international research projects.

Canadian scientists took a significant part in the International Geophysical Year (IGY) and are also playing a similar role in the programme of the International Year of the Quiet Sun (IQSY), particularly in cosmic-ray studies in the World Magnetic Survey.

Canada collaborates very closely in atomic research with the United States, Britain and other countries. Canada and the U.S. also exchange technical data freely.

Most medical research is done by universities and affiliated hospitals and institutions. Outstanding contributions have been made to neuro-chemistry and bio-chemistry by the Montreal Neurological Institute at McGill University and by the Banting and Best Depart-

ment of Research at the University of Toronto, both of which have international reputations. The Connaught Medical Laboratories in Toronto and the Institute of Micro-biology in Montreal are well known for their studies of viruses. The Allan Memorial Institute in Montreal has established itself as a leader in research on mental illness.