development of weapons for the Armed Services is carried out at the Canadian Armament Research and Development Establishment at Valcartier, Que. This is the largest research establishment operated by the Board and has facilities for the study of all phases of armament development. The Board operates two laboratories whose prime interest is in the field of electronics. The Radio Physics Laboratory at Shirley's Bay, Ont., is interested mainly in fundamental research associated with radio communications, particularly in northern latitudes. The Electronics Laboratory, situated within the grounds of the National Research Council's Montreal Road Laboratories, is concerned primarily with the development of electronic devices as aids to navigation. The centre for research into arctic and sub-arctic conditions is the Defence Research Northern Laboratory at Fort Churchill, Man., which is mainly occupied with the application of the results of fundamental research into the effects of cold weather on men and materials.

Medical research is conducted in Canadian universities and medical schools, as practicable, and at the Defence Research Medical Laboratories at Downsview, Ont. (near Toronto). The major emphasis is in the field of aviation medicine, but investigations include such problems as blood substitutes, infection and immunity, burns and wounds, nutrition and other factors likely to hinder a military man's ability to perform his duties effectively. Operational research, which may be defined as the application of techniques of scientific research to problems which arise in the Armed Services in the execution of their operational roles, is conducted by the Operational Research Group consisting of a headquarters section and three research sections; in addition there are three operational research organizations in the Armed Forces, staffed largely by personnel from the Defence Scientific Service. The Board continued to support active programs of research into methods of estimating, recovering and fabricating such useful metals as titanium, etc. The titanium program is a series of integrated research projects conducted by the Mines Branch of the Department of Mines and Technical Surveys and the Universities of Toronto, Laval and Montreal, in co-operation with various industrial firms with long experience in this field. In addition to aeronautical research conducted by the National Aeronautical Establishment, the Defence Research Board supports an extensive program on aeronautical and gas dynamics problems at various Canadian universities. Special weapons research is conducted in the atomic, biological and chemical fields at the Defence Research Chemical Laboratories, Shirley's Bay, Ont., the Suffield Experimental Station, Ralston, Alta., the Defence Research Kingston Laboratories at Barriefield, Ont., and at a Department of Agriculture Isolation Station located on Grosse Ile near Quebec City.

Pursuing its established policy, the Defence Scientific Service continues to make available to the scientific community at large all results of its work other than those of purely military importance.

Close liaison is maintained between the Defence Research Board and the Department of Defence Production to ensure that research and development activities are closely integrated with production.

Section 2.—Services Colleges and Staff Training Colleges

Canadian Services Colleges.—The three Canadian Services Colleges are the Royal Military College of Canada founded at Kingston, Ont., in 1876, Royal Roads which was established in 1941 near Victoria, B.C., as a school for naval officers and Collège Militaire Royal de Saint-Jean established at St. Johns, Que., primarily to meet the needs of French-speaking cadets. The Royal Military College and Royal Roads were constituted as the Canadian Services Colleges in 1948, and Collège Militaire Royal de Saint-Jean was opened in 1952.

The purpose of the instruction and training at the Services Colleges is to impart the knowledge, to teach the skills and to develop the qualities of character and leadership essential to officers of all three Armed Services. The courses of instruction provide a sound and balanced liberal, scientific and military education; the organization and training give cadets the opportunity to command and to exercise judgment.