and *Monezia expansa*, the sheep tapeworm. In the next major work in this field, Bouvier, Burgisser and Schneider (1952) described the parasites of red deer and other wild ruminants from Switzerland. In 1931 the Imperial Bureau of Agricultural Parasitology published a comprehensive and informative work on deer parasites which included host-parasite, parasite-host lists for all species of deer, and an extensive bibliography on this subject. The most recent work on red deer parasites was a thesis written at the University of Utrecht, Holland, by Jansen (1958). Jansen's work concentrated on the trichostrongylids of red deer.

Ferris (1932) and Werneck (1947, 1950) in their studies on lice have made a contribution to the knowledge of the external parasites of the red deer, particularly as regards their taxonomic status.

Materials and Methods

Red deer for this study were collected from the following areas: Kaingaroa (Wairengo, Horomanga, Iwitahi) 10/5/61, 11/5/61; Akatarawa (Wainuiomata) 31/4/61; Southern Ruahines 10/10/62; Tararua Range (Waitewaewae) 20/6/61; Wairau River (Dip Flat) 28/11/60; Lake Rotoiti (Nelson National Park) 17/6/61; Sabine River (Mt. Travers, Nelson National Park) 17/2/62, 18/2/62; West Coast (Taramakau River, Taipo River, Ahaura River, Hurunui Ridge) 21/12/61, 20/12/62, 22/10/62; Fiordland (Five Rivers, Lake Marchant) 8/2/62, 22/4/62; and from Stewart Island (Rakeahua River, Island Hill, Freshwater River) 1950. (Text-fig. 1.)

This material was collected as a result of field trips by members of the New Zealand Forest Service, the Deerstalkers' Association, the Wellington City Council Water Board and the author. Mr P. Bull donated material he collected from Stewart Island and Iwitahi. Specimens have been obtained from widespread localities, involving different types of environment, such as: indigenous forest, exotic forest, high country grasslands and bush bordering farmland.

Field technique

Only on rare occasions could the entire host body be transported to the laboratory for examination. In general, inaccessability, size and weight of the host precluded this, thus selected portions of the viscera and carcass were taken and larger organs such as the rumen were examined on the spot.

When hunting the host, as much care as possible was taken to avoid damage to the internal organs. On occasions, however, this was unavoidable, and in such cases records are incomplete, sometimes only part of an organ being salvaged.

The dead host was first examined for the larger external parasites, visible to the naked eye. Special attention was paid to the regions of thick, fine hair between the fore and hind legs and around the withers, for it was in such places that the biting lice (*Damalinia longicornis*) were usually found. The escutcheon and head area, especially around the ears, were examined for the New Zealand bush tick (*Haemaphysalis bispinosa*). In both cases, if infestation occurred, it was usually localised and fairly intense. The hide was also collected for the purpose of examination for mites and ticks not clearly visible to the naked eye. The infected skin was removed, rolled up, fur side inwards, and placed in a plastic bag. It was found that the ectoparasites rarely detached themselves from the skin of the host, remaining entangled in the hair until removal in the laboratory.