Lice on ungulates and other mammals in New Zealand

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The writer is attempting to produce an illustrated key for the identification of lice on mammals in New Zealand. Some hosts, especially domestic mammals, appear to be well collected from, but there are serious gaps in our knowledge of many hosts, particularly feral species. The following list is of hosts from which specimens are required, and an appeal is made for material.

CHEWING LICE (Mallophaga) from horse (♂♂ rare); angora goat; sheep (♂♂ uncommon); chamois (no N.Z. record); moose, axis deer, wapiti, sika deer, rusa deer, sambar deer, fallow deer (all without N.Z. records, some without known lice in their home ranges; red deer (♂ discovered in N.Z. for a world 'first' by Andrews (1971 – *Journal of Natural History 6*: 153–157).

SUCKING LICE (Anoplura) from horse (rare in collections); donkey (no N.Z. record); ox (short-nosed cattle louse rare in collections); thar, chamois, moose, axis deer, wapiti, sika deer, rusa deer, sambar deer, fallow deer, virginia deer (mostly without N.Z. records, some without known lice in their home ranges); sheep (face louse now rare?).

Although all these hosts are introduced to this country, there is clearly an opportunity in New Zealand to contribute to the taxonomy and distribution of their lice. At the same time, mention might be made of the deficiencies in our knowledge of lice from: rabbit, hare (sucking lice taxonomically confused in home ranges); stoat, weasel, and polecat (few N.Z. collections); and dog.

Samples of lice in 70% ethanol or pieces of infested skin would be greatly appreciated by the writer.

Cattle tick *Haemaphysalis longicornis* in New Zealand – ecology and control

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The cattle tick research programme at Wallaceville has had as its aim the construction of a conceptual model of the tick's ecology and life history, which could be used in a strategic control programme.

In order that control measures could be implemented with minimum cost and labour, but with maximum effect, some knowledge of the seasonal activity patterns of each of the developmental stages and their life history was required. Information was also sought on the distribution (macro and micro) of the tick, together with knowledge of possible hosts and the part they play in dispersal. The efficacy of acaricides and habitat modification as direct control measures was established, and some knowledge of potential parasites and predators was acquired.

It became apparent, where these methods were used, that the effort required for control could be reduced in subsequent years. This was because tick numbers should decline as a direct result of control measures in addition to the effects of weather. However, since the long-term success of control procedures cannot be accurately measured, and since there is a possibility that tick outbreaks could occur again, some means of predicting whether a particular season is going to experience a tick 'outbreak' is required. An attempt was therefore made to construct a crude predictive model from the known effects of weather on tick productivity and life span.

Blowfly distribution and phenology

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Liver-baited fly traps are situated at one site in the South Island and 12 climatically dissimilar sites throughout the North Island as part of a trial designed to assess the effect of climate on blowflies and blowfly strike. Observations have now been made for 12 months.

Lucilia sericata was the most common primary strike-fly caught in all traps, except at Kaikohe, where *Calliphora stygia*—another primary strike-fly—predominated. Analysis of grouped data for the year showed that at 6 of 13 stations numbers of *L. sericata* trapped were positively correlated with maximum temperature ($P<0.01$). At two other stations *L. sericata* numbers were positively correlated with sunshine hours ($P<0.01$).

Species other than *L. sericata* were not caught in sufficient numbers to demonstrate correlation between prevalence and climate.