

## ECTOPARASITES OF BIRDS AND MAMMALS IN BRITISH COLUMBIA

### V. Parasites of Domestic Animals (Mammals)

by G. J. Spencer\*

If one may define domestic as "pertaining to the place of residence and the person of Man", then I propose to call the following animals domestic:- cattle, horses, sheep, goats, pigs, dogs, cats, rabbits, guinea-pigs, monkeys, white and brown rats, and Man himself. From these animals in this Province I have specimens of the following parasites:-

#### On Cattle:

**Bovicola bovis** (Linn.) Ewing's new genus; (**Trichodectes bovis** (Linn.)) (**T. scalaris** Nitzsch), the biting red cattle louse. University herd, 1928; Langley, 1938.

**Haematopinus eurysternus** (Nitzsch), the short-nosed sucking cattle louse. Milner, 1936; Kamloops, 1938. This louse seems to occur more on bulls than on other cattle.

Neither species is common.

#### On Horses:

**Haematopinus asini** (Linn.), the sucking horse louse. Vancouver, 1926; Kamloops, 1938.

**Trichodectes equi** Linn., (**T. parumpilosus** Piaget), the biting horse louse. Vancouver, 1926.

Horses, as well as cattle, are generally free from lice, although ranchers have told me that horses that have wintered out on the range sometimes develop tremendous infestations of the biting louse in spring.

#### On Sheep:

**Melophagus ovinus** (Linn.), the ubiquitous sheep tick or Ked, is very common and widespread.

**Linognathus pedalis** (Osborn) (**Haematopinus**), the sucking sheep foot-lice. This is a curious insect, infesting as it does, only the feet and legs and apparently being prevented from spreading upwards to the body of its host, by the lanolin of the wool. Vancouver, 1925, the only record.

#### On Goats:

Five species of lice have been recorded from goats in North America, but so far I have encountered only one—**Bovicola caprae** (Gurtl), (**Trichodectes**) (**T. climax** Nitzsch), the biting louse of goats, which I collected in numbers at Tofino, V.I. in 1926. Small herds of goats are widely kept in southern British Columbia so I suspect that this louse, and possibly several others, are relatively common.

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### On Pigs:

*Haematopinus suis* (Linn.), the sucking hog louse and the only species found on domestic pigs. It is not common on herds of swine in this Province but crops up sporadically and although it is supposed to be most prevalent on thin pigs, it is especially difficult to eradicate from between the great rolls of skin and fat on the necks of boars.

So far I have not encountered, locally, the tremendous outbreaks of fleas that occasionally develop in pig-pens in Ontario.

### On Dogs:

I have known dogs all my life, in tropical and temperate climates, but I never met a lousy dog until I came to British Columbia. Here, I have taken *Linognathus setosus* (Olfers) (*Pediculus piliferus* Burm.), the sucking dog louse, which turns up now and then in Vancouver, chiefly on terriers, and *Trichodectes canis* De Geer (*T. latus* Nitzsch), the biting dog louse, which I have encountered three times in the last five years, at Kamloops. In one instance it appeared on a batch of puppies and not on the mother, although she must have infested them in the first place. Curiously enough, in 1938, I had it sent down from Quick, in the Bulkley Valley, on a slab of coyote hide. The sender reported that, that spring, all coyotes around Quick were in a terribly mangy condition, sometimes with only the tail intact. From the slab of skin, I obtained a large number of specimens of this louse, but no mange mites. It seems scarcely possible that swarms of lice could depilate a colony of coyotes, but I could find nothing else in the filthy, matted lumps of fur. In 1939 I was informed by a reputable observer that many coyotes in the Merritt district were not worth hunting, all being "flag-tailed": it is possible that this same louse was concerned.

*Ctenocephalides canis* (Curtis), and *C. felis* (Bouché), dog and cat fleas respectively, attack all dogs at one time or another; some dogs never seem to be free of them. The cat flea, especially, often becomes a serious pest in Vancouver in homes where fuel sawdust provides the necessary moisture for their development in basements. They persist in some basements during every month of the year.

I find that both species of lice and both species of fleas on dogs, yield most satisfactorily to a wash of the derris powder that is compounded for treating warbles in cattle, at a strength of one heaping dessert spoonful to one gallon of warm water: the animals do not seem irritated by the wash.

*Otodectes (Chorioptes) cynotis* (Hering) var. *canis* Sewell, the ear mite, occurs not infrequently in long-eared or flop-eared dogs, such as spaniels and retrievers. Any dog that sits whining and slowly scratching at his ears is almost certain to have these mites. I have seen valuable retrievers partially or completely deafened by them. The mites produce what is commonly called canker of the ear. Treatment for these minute, slow-moving, globular, white mites consists of swabbing out the ear with cotton wool on the end of a flexible little stick in order to remove accumulations of wax and the dead bodies and cast skins of

the mites, and then with an eye-dropper, pouring in a few cubic centimetres of the following mixture:-

Beta-naphthol .....	1 gram
Ether .....	3 c.c.
Castor Oil .....	10 c.c.

The mixture should be made to reach all parts of the ear by manipulation of the base of the ear.

**On Cats:**

I have taken both dog and cat fleas, but chiefly the latter. I venture to say that every cat in Vancouver harbours fleas sooner or later, or all the time, and every cat should be treated at intervals with dry derris dust, which is far superior to pyrethrum powder for this purpose. One teaspoonful of powder dusted over a cat at night, chiefly along the back and worked well into the fur, will completely rid the beast of its fleas by next morning. The powder makes some cats sneeze badly, so should be carefully applied when near the neck and top of the head: it does not seem to irritate the skin. At the same time, the basement floor should be completely covered with fumes of creosote oil (costing about 80 cents per gallon, retail) pumped vigorously through a good fly sprayer, or the animals will become re-infested in a week's time. One pint of creosote oil is enough for the average cellar.

**Otodectes cynotis** (Hering) var. **felis** Huber, the cat ear mite, is very general on cats in this city and, like fleas, occurs again and again. The naphthol treatment as for dogs, works perfectly with cats, but must be more carefully administered because some cats put up a tremendous fight if their ears are swabbed out or if liquid is poured in. The canker of cats ears produced by these mites, if neglected, may cause swellings the size of pigeons eggs, necessitating the destruction of the animal.

**On Rabbits:**

**Ctenocephalides canis** (Curtis), the dog flea, often occurs locally on rabbits, both commercial ones and those kept by children as pets, although probably only as stragglers from dogs.

**Haemodipsus ventricosus** (Denny) (**Haematopinus**), the sucking louse of the rabbit, can generally be found on rabbits kept by local dealers.

**Notoedrus cati** var. **cuniculi** Gerlach, the ear mite. What was probably this species occurred once on laboratory rabbits, forming scabs and crusts on the insides of the long ears. This is a mange-producing form almost identical with that of cat mange, but one that is difficult to transmit from the cat to the rabbit, according to Hirst of the British Museum.

**On Guinea-Pigs:**

**Gyropus ovalis** Nitzsch, and **Gliricola porcelli** (Linn.) (**Gyropus gracilis** Nitzsch), are the two biting lice of guinea-pigs. Both species are specific on these animals and occur commonly in Vancouver. The species **ovalis** is larger and broader than the slender **porcelli**.

### On Monkeys:

On monkeys kept as pets in homes and on laboratory animals, I have recovered:-

The cat flea, probably as a straggler, and two species of sucking lice, *Pedecinus longiceps* Piaget and *Pedecinus eurygaster* (Burmeister). Specimens that I have of *P. eurygaster* differ in certain definite respects from the precise descriptions of that master-draughtsman, Ferris, but the genitalia of the male are practically identical. Professor Ferris very kindly checked over my material and states that the form is very variable but that my specimens are this species.

Monkeys are perpetually scratching themselves and hunting what are usually spoken of as fleas, but judging from the severity of the infestations that have come to my notice, it is likely that they suffer mainly from lice and not from fleas.

### On Rats:

There are three species of wild rats in the city of Vancouver but I have examined only *Rattus rattus norvegicus* (Erxl.), the Norway rat, and from it I have taken three parasites:-

*Polyplax spinulosa* (Burm.), the sucking louse of rats.

*Ceratophyllus fasciatus* Bosc., the common rat flea.

*Liponyssus bacoti* (Hirst), the common rat mite.

White rats, maintained in the laboratory, occasionally develop sporadic outbreaks of *Polyplax spinulosa* (Burm.), the sucking louse. Since some individuals only become infested, it seems probable that the source of infection is brown rats which have eaten their way into the rat house.

### On Man:

The two races of *Pediculus humanus* Linn., namely, *capitis* De Geer and *corporis* De Geer, the head louse and body louse respectively, of Man, and *Phthirus pubis* (Linn.), the crab-louse, are present in Vancouver at all times although their occurrence is sporadic. They are reported chiefly to doctors of the outpatients wards of local hospitals. Derris powder, either dry or as a saponified wash, is highly efficient against all three and will probably soon supplant all other treatments.

*Pulex irritans* Linn., the human flea, is slowly but surely spreading in Vancouver. It occurs throughout the year but is especially abundant in autumn months. One report concerned an outbreak on two hundred yards of beach at a summer resort on Vancouver Island. Fleas from such an infestation could very well be carried to homes in all directions.

*Ctenocephalides canis* (Curt.), the dog flea, and *C. felis* (Bouché), the cat flea, in homes in the city, have already been discussed.

**SUMMARY**

On eleven mammals, more or less domestic in British Columbia, occur twenty-four species of parasites consisting of nine sucking lice, seven biting lice, three fleas, four mites, and one bird-louse; man brings into the picture three more sucking lice and one flea, making twelve mammals with twenty-eight parasites. Several lice and fleas, recorded elsewhere, have been omitted from the list, and mice have not been considered at all as the list of their parasites is not yet complete. When complete, the list of parasites on domestic animals in this Province will approximate forty species.



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