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## Mites and Lice from Mice of the Genus *Peromyscus* from Oregon<sup>1</sup>

### Abstract

Ectoparasitic mites (excluding chiggers) and lice were examined from 414 deer mice (*Peromyscus maniculatus*), 10 canyon mice (*P. crinitus*); and 2 piñon mice (*P. truei*) from Oregon. The more abundant mites and lice were as follows: (1) deer mice—lice, *Hoplopleura hesperomydis*, *Polyplax auricularis*; mites, *Androlaelaps fabrenbolzi*, *Eubrachylaelaps debilis*, *Glycyphagus hypudaei*, *Echinonyssus utabensis*; (2) canyon mice—mites, *Eubrachylaelaps hollisteri*, *Ornithonyssus bacoti*; (3) piñon mice—mites, *Eubrachylaelaps circularis*, *Androlaelaps fabrenbolzi*.

### Introduction

Allred (1957a, b, c; 1958) and Allred and Beck (1966) published papers on mites from *Peromyscus* in Utah, and Whitaker and Wilson (1974) summarized information on ectoparasitic and phoretic mites of North American mammals. Hansen (1964) was the only other person who examined a large number of mice (426) in the genus *Peromyscus* from Oregon. He examined 211 individuals of *P. maniculatus* from Steens Mountain in Harney County but found only 19 mites of six taxa; 13 of them were *A. fabrenbolzi*. We present the results of a rather extensive survey of mites and lice of the genus *Peromyscus* from Oregon.

Ectoparasites were collected by searching the fur with the aid of a dissecting microscope and were preserved in 70 percent ethanol. Smaller forms were taken in low numbers. Lice and mites were cleared and stained in Nesbitt's solution containing acid fuchsin. Specimens were mounted in Hoyer's solution, and the cover slips were ringed with Euparal.

### Results

Deer Mice: *Peromyscus maniculatus* (N = 414).

Two species of anopluran lice were taken on deer mice (Table 1). *Hoplopleura*

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*besperomydis* was more abundant than *Polyplax auricularis*. Both species of louse are to be expected on deer mice, and both were taken by Hansen (1964) along with two individuals of *Hoplopleura acanthopus*, an accidental or contaminant from its normal microtine hosts.

TABLE 1. Ectoparasitic mites (other than chiggers) and lice from 414 deer mice (*Peromyscus maniculatus*) from Oregon.

Species	Number		Animals infested	
	Total	Average	Total	%
LICE				
<i>Hoplopleura besperomydis</i>	603	1.46	73	17.6
<i>Polyplax auricularis</i>	156	0.38	19	4.6
MITES				
<i>Androlaelaps fabrenbolzi</i>	372	0.90	91	22.0
<i>Eubrachylaelaps debilis</i>	140	0.34	42	10.1
<i>Glycyphagus hypudaei</i>	32	0.08	5	1.2
<i>Euryparasitus</i> sp.	28	0.07	12	2.9
<i>Echinonyssus utabensis</i>	26	0.06	18	4.3
<i>Echinonyssus obsoletus?</i>	12	0.03	5	1.7
<i>Haemogamasus reidi</i>	11	0.03	6	1.4
<i>Radfordia subuliger</i>	9	0.02	3	0.7
<i>Proctolaelaps</i> sp.	8	0.02	6	1.4
<i>Haemogamasus ambulans</i> type	6	0.01	5	1.2
<i>Cyrtolaelaps</i> sp.	4	0.01	4	1.0
<i>Eulaelaps stabularis</i>	3	0.007	3	0.7
<i>Amorpbacarus bengererorum</i>	3	0.007	3	0.7
<i>Laelaps alaskensis</i>	3	0.007	3	0.7
<i>Hypoaspis</i> sp.?	3	0.007	3	0.7
<i>Ornithonyssus bacoti</i>	3	0.007	2	0.5
<i>Echinonyssus isabellinus</i>	2	0.005	2	0.5
<i>Laelaps kochi</i>	2	0.005	2	0.5
Anoetidae	2	0.005	2	0.5
<i>Bakerdania</i> sp.	2	0.005	1	0.2
<i>Echinonyssus affinus</i>	1	0.002	1	0.2
<i>Haemogamasus occidentalis</i>	1	0.002	1	0.2
<i>Androlaelaps casalis</i>	1	0.002	1	0.2
<i>Echinonyssus "obsoletus"</i> variant	1	0.002	1	0.2

The more abundant species of mites on deer mice were *Androlaelaps fabrenbolzi*, *Eubrachylaelaps debilis*, *Glycyphagus hypudaei*, and *Echinonyssus utabensis*. *Androlaelaps fabrenbolzi*, probably a complex of closely related species rather than a single species, occurs on a wide variety of hosts. *Echinonyssus obsoletus* variant is similar to *E. obsoletus*, but the spur on coxa II is acute rather than blunt. One species is listed as *Haemogamasus ambulans* type. Hansen (1964) reported *H. ambulans* from Oregon. Many of the earlier specimens reported as *H. ambulans* from Oregon, however, have been reidentified as *H. reidi* (see Redington 1970). We have not found *H. ambulans* in Oregon, although some closely related forms are present and are currently under study. Mites of the genera *Euryparasitus*, *Proctolaelaps*, *Cyrtolaelaps*, and *Bakerdania* and of the family Anoetidae were found during this study (Table 1). Although they are commonly associated with small mammals, their taxonomy and relation to their hosts need to be studied.

Canyon mice: *Peromyscus crinitus* (N = 10).

The more abundant species found on our small sample of canyon mice were mites: *Eubrachylaelaps hollisteri* and *Ornithonyssus bacoti*. These species (Table 2) are commonly taken on canyon mice (Whitaker and Wilson 1974), but the specimens of *O. bacoti* in our study differed from typical *O. bacoti* by having branched sternal setae. These specimens are being studied.

TABLE 2. Ectoparasitic mites (other than chiggers) from 10 canyon mice (*Peromyscus crinitus*) and 2 piñon mice (*P. truei*) from Oregon.

Species	P. crinitus				P. truei			
	Total	x	No.	%	Total	x	No.	%
<i>Eubrachylaelaps hollisteri</i>	21	2.1	5	50.0				
<i>Ornithonyssus bacoti</i>	20	2.0	2	20.0				
<i>Eubrachylaelaps debilis</i>	3	0.3	2	20.0				
<i>Haemogamasus occidentalis</i>	2	0.2	2	20.0				
<i>Androlaelaps fabrenholzi</i>	1	0.1	1	10.0	1	0.5	1	50.0
<i>Eubrachylaelaps circularis</i>					2	1.0	2	100.0

Piñon mice: *Peromyscus truei* (N = 2).

Only three mites, *Eubrachylaelaps circularis* (N = 2) and *Androlaelaps fabrenholzi* (N = 1) (Table 2), were taken from the two piñon mice examined.

Too few data are available to comment concerning the ectoparasites found on *P. crinitus* or *P. truei*. A total of 24 taxa of mites (some identified to genus or family only) were identified from the 414 deer mice examined. This, of course, much exceeds the listing of six taxa by Hansen (1964).

Allred and Beck (1966) listed 36 taxa from *P. maniculatus* (N = 3077) in Utah; Mumford and Whitaker (1982) listed 9 taxa from this species from Indiana (N = 454), and Whitaker and Lukoschus (1982) listed 26 taxa from Pennsylvania. The mite community on *P. maniculatus* may have been somewhat reduced because in Indiana only one subspecies of that host exists and it inhabits a rather uniform habitat (open and cultivated fields). In addition, the differing results from Oregon, Utah, Indiana, and Pennsylvania likely result in part from differing degrees of thoroughness in making the examinations, as well as from geographic differences in parasite communities.

The following species of mites have not previously been reported from deer mice: *Echinonyssus obsoletus*, *E. affinus*, *Amorphacarus bengererorum*, *Laelaps alaskensis*, and *Haemogamasus occidentalis*. A new host record for canyon mice was *H. occidentalis*.

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