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MITES OF THE GENUS *PYGMEPHORUS* IN OREGON

BY Wynn W. CUDMORE¹, John O. WHITAKER, Jr.² and Robert L. SMILEY³

ABSTRACT: Fourteen species of mites of the genus *Pygmeplhorus* are here reported from Oregon, all of them new to the state, 2 of them (*P. brevipes* and *P. forcipatus*) new to North America, and 3 of them apparently new to Science. These latter ones are currently under further study by SMILEY and WHITAKER.

INTRODUCTION

A number of species of pygmephorid mites, genus *Pygmeplhorus*, from North America have been collected and described in recent years, many from Indiana but also from other parts of the United States. Phoretomorphic females of these mites are commonly associated with insectivores, pocket gophers and pine voles (MAHUNKA, 1973, 1974, 1975; SMILEY and WHITAKER, 1979, 1984). Mites of the genus *Pygmeplhorus* show remarkably little host specificity (WHITAKER, FRENCH and SMILEY, 1982).

Thirty-one species of *Pygmeplhorus* are currently known from North America (SMILEY and WHITAKER, 1984), but only 7 are known from western North America, and only 2 from Oregon. They are *P. californicus* (from California), *P. idei* (Montana), *P. johnstoni* (Oregon), *P. lutterloughae* (Oregon), *P. mustelae* (South Dakota), *P. nidicolus* (Colorado), and *P. plurispinosus* (Washington).

However, during studies on small mammals of Oregon we have found many mites of this genus, mainly on shrews and moles. The purpose of this paper is to present information on mites of the genus *Pygmeplhorus* from Oregon, mainly from insectivores.

MATERIALS AND METHODS

Mammals were taken in sunken cans and snap-traps in forested habitats in Oregon. They were then examined for mites under a binocular dissecting microscope, using dissecting needles to manipulate the fur. Mites were preserved in alcohol, cleared and stained in Nesbitt's Solution, mounted on slides in Hoyer's Solution and cover slips were ringed with euparal.

A total of 600 mammals of 12 species was examined during the study, six species of shrews (482 individuals), 2 of moles (46 individuals), rodents of 3 species (71 individuals), and 1 Short-tailed Weasel (*Mustela erminea*).

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RESULTS

A total of 306 individuals of 14 species of *Pygmephorus* were taken from these hosts (Table 1), and as in the east, mites of this genus were concentrated on insectivores. One individual of *Pygmephorus* n. sp. #3 was taken from the weasel, one individual of *P. whitakeri* was taken from *Peromyscus maniculatus* and one was taken from *Neotoma cinerea*. All other individuals were taken from insectivores. Of the 14 species found, 3 are being described as new, and all are new to Oregon.

**Table 1. Pygmephorus** species from small mammals from Oregon.

<table>
<thead>
<tr>
<th>Host</th>
<th>No. hosts examined</th>
<th><em>P. whitakeri</em></th>
<th><em>P. brevipes</em></th>
<th><em>P. forcipatus</em></th>
<th><em>P. pacificus</em></th>
<th><em>P. spinosus</em></th>
<th><em>P. savulkina</em></th>
<th><em>P. zezerina</em></th>
<th><em>P. trowbridgei</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorex trowbridgei</td>
<td>268</td>
<td>55</td>
<td>24</td>
<td>10</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sorex monticolus</td>
<td>60</td>
<td>3</td>
<td>10</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sorex Pacificus</td>
<td>117</td>
<td>38</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sorex vagrans</td>
<td>13</td>
<td>1</td>
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<tr>
<td>Sorex bendirei</td>
<td>20</td>
<td>1</td>
<td>4</td>
<td></td>
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<tr>
<td>Sorex palustris</td>
<td>4</td>
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</tr>
<tr>
<td>Neurotrichus gibbsi</td>
<td>34</td>
<td>9</td>
<td>6</td>
<td>1</td>
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<td></td>
<td>1</td>
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<td></td>
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<tr>
<td>Scapanus orarius</td>
<td>12</td>
<td>6</td>
<td>13</td>
<td>69</td>
<td>11</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>110</td>
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<tr>
<td>Peromyscus maniculatus</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Neotoma cinerea</td>
<td>30</td>
<td>1</td>
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<tr>
<td>Neotoma fascipes</td>
<td>35</td>
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<td></td>
</tr>
<tr>
<td>Mustela erminea</td>
<td>1</td>
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</table>

115 67 69 14 12 9 7 4 3 2 1 1 1 1 306

As in the east, there is little host specificity. *Sorex trowbridgii* hosted 6 species of *Pygmephorus* among 98 individual 5 mites, *S. monticolus* hosted 6 among 22, *S. pacificus* 4 among 49, *Scapanus orarius* 8 among 110, and *Neurotrichus gibbsi* 4 among 17. *Pygmephorus whitakeri* was the most abundant species found (total of 115 individuals). It was the most abundant form found on *S. trowbridgii*, *S. pacificus* and *Neurotrichus gibbsi*, and it was found on a total of 9 of the 10 host species on which *Pygmephorus* was found. The second most abundant species, *Pygmephorus spinosus* (n = 69) was found on only one host, *Scapanus orarius*. *Pygmephorus horridus* was the third most abundant (67 individuals found). It was also on 9 of the hosts, and was the most abundant species on *Sorex monticolus* and *Sorex bendirei*.

Two species, *P. brevipes* and *P. forcipatus*, had not previously been taken in North America. *Pygmephorus brevipes* Savulkina, 1976 was described from *Clethrionomys glareolus* from Russia and *P. forcipatus* Willmann, 1952 is known from several hosts from Germany.

CONCLUSIONS

*Pygmephorus* is common on Oregon insectivores, but is uncommon on non-burrowing terrestrial rodents. As in the east, these mites show a remarkably low degree of host specificity.

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LITERATURE CITED


