

THE GENUS *LAGOPOECUS* (PHILOPTERIDAE: MALLOPHAGA) IN NORTH AMERICA

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Lagopoecus Waterston 1922

Ent. Mon., Mag., LVIII, p. 159.

Genotype: *Lagopoecus lyrurus* Clay 1938. Proc. Zool. Soc. Lond., Ser. B, CVIII, p. 187. (Nom. nov. for *Lagopoecus cameratus* (Burmeister, 1839), preoccupied).

Description of the genus

Head circumfasciate. Antennae filiform in both sexes. Eye prominent, with a long seta arising from the dorsal surface. Temples convexly rounded, each with two long setae; cephalic margin without setae.

Prothorax short, wide, and armed dorsally with one long seta on each posterolateral angle. Pterothorax short, wide, and with dorsal posterior pterothoracic setae. Legs short.

Abdomen short and wide. Tergal plates with median setae; long setae in the posterolateral angles; and post spiracular setae. Sternal plates with a pair of median setae.

Male genitalia simple.

Discussion of the genus

Within the genus, the North American species fall roughly into two group. The members of one group, *L. gambellii* and *californicus*, have a pointed clypeal margin; and except for the filiform antennae might be placed in the genus *Colinicola*. In the other species, the clypeal margin is rounded, and they resemble each other very much, forming a very compact group. The chaetotaxy, male genitalia, and size can only be illustrated to show differences between the species. These differences cannot be adequately described, therefore no attempt has been made to separate the species in a key. It is believed that plates I and II will illustrate adequate differences for separation. All figures on plate I are drawn to the same scale; hence, differences in size, shape, and chaetotaxy are very readily noticed. These figures are the dorsal view; of the head in outline, the thorax, and the first four abdominal segments. The dorsal chaetotaxy of the remaining abdominal segments is the same as that found on the third or fourth segments. The ventral abdominal chaetotaxy is similar for all species and has not been used in this study. All figures of the male genitalia on plate II are drawn to the same scale.

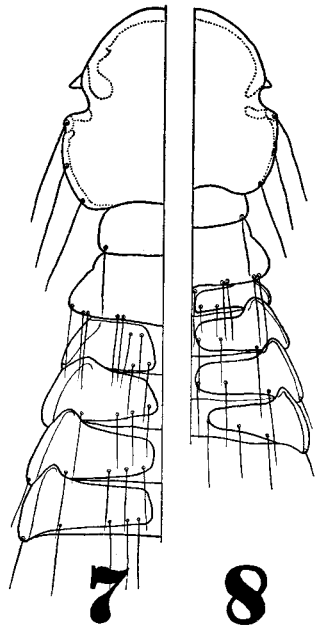
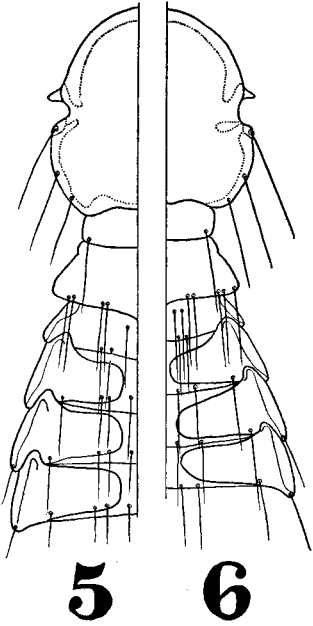
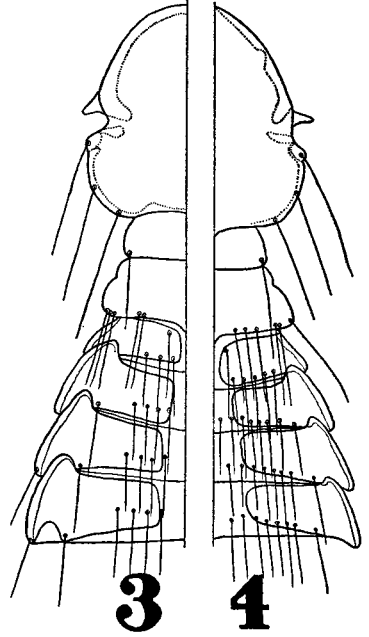
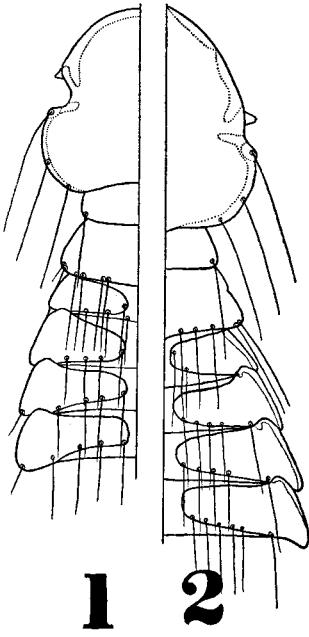
Lagopoecus gambellii Emerson 1949

(Plate I, figure 4; Plate II, figure 5)

J. Kans. Ent. Soc., XXII, p. 75, f. 3-5.

Type host: *Lophortyx gambellii gambellii* Gambel, Gambel's Quail.

The type series collected in Tucson, and the Santa Rita Reservation, Arizona; was studied.



Lagopoecus californicus (Kellogg and Chapman 1899)

(Plate I, figure 2; Plate II, figure 4)

Occ. Papers Calif Acad. Sci., VI, p. 103.Type host: **Oreortyx picta picta** (Douglas), Plumed Mountain Quail.

Material examined was collected from the type host collected in California.

The species has been recorded from: **Oreortyx picta picta** (Douglas), Plumed Mountain Quail, collected in Nevada; and **Oreortyx picta palmeri** Oberholser, Northwestern Mountain Quail, collected in California.**Lagopoecus affinis** (Children 1836)

(Plate I, figure 1; Plate II, figure 1)

App. Bach's Arctic Land Exp., p. 537.**Nirmus cameratus** var. **nigrescens** Evans 1912. **Scott. Nat.**, p. 280.**Nirmus protervus** Kellogg 1899. **Occ. Papers Calif. Acad. Sci.**, VI, p. 31, Pl. III, f. 4.Type host: **Lagopus lagopus lagopus** (Linnaeus).The material examined was from the following collections: **Lagopus lagopus albus** (Gmelin), Keewatin Willow Ptarmigan—Craig Harbour and Pangnirtung, N.W.T.; Les Pas, Manitoba; and Kapuskasing, Smoky Falls and Cape Henrietta Maria, Ontario. **Lagopus lagopus alexandrae** J. Grinnell, Alexander's Ptarmigan—Kodiak Island, Alaska. **Lagopus lagopus leucopterus** Taverner, Baffin Island Ptarmigan—Lake Harbour, Baffin Island. **Lagopus lagopus alasensis** Swarth, Alaska Willow Ptarmigan—Point Barrow, Alaska.**Lagopoecus colchicus** (Emerson 1949)

(Plate I, figure 3, Plate II, figure 3)

J. Kans. Ent. Soc., XXII, p. 78, f. 6.Type host: **Phasianus colchicus torquatus** Gmelin, Ring-necked Pheasant.

Material was studied which had been collected from the type host in Logan, Utah; Williamston, Michigan; Homer, and Urbana, Illinois; and Hamilton, and Lake County, Montana.

Lagopoecus gibsoni (Hopkins 1947)

(Plate I, figure 5; Plate II, figure 7)

Ann. Mag. Nat. Hist., ser. 11, XIII, p. 172, f. 1-3.Type host: **Centrocercus urophasianus** (Bonaparte), Sage Grouse.

Material was studied which had been collected from the type host in Fergus and Ravalli Counties, Montana; Burns, and Lake County, Oregon; Dixon, Wyoming; and Mayfield, Idaho.

Lagopoecus obscurus (Emerson 1948)

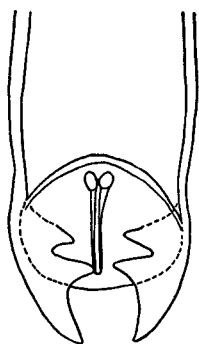
(Plate I, figure 6; Plate II, figure 2)

J. Kans. Ent. Soc. XXI, p. 137, Pl. I, f. 1-3.Type host: **Dendragapus obscurus richardsonii** (Douglas), Richardson's Grouse.

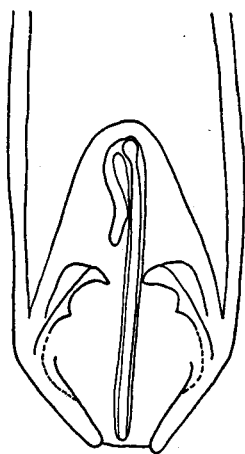
EXPLANATION OF PLATE I

Figures 1-8. Dorsal view in outline of the female head, thorax and first four abdominal segments of **Lagopoecus** spp.

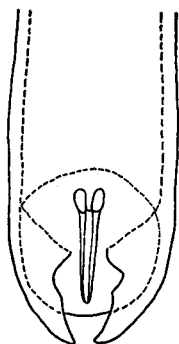
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| 1. affinis (Children). | 5. gibsoni Hopkins. |
| 2. californica (Kellogg and Chapman). | 6. obscurus Emerson. |
| 3. colchicus Emerson. | 7. perplexus (Kellogg and Chapman). |
| 4. gambelli Emerson. | 8. umbellus n. sp. |



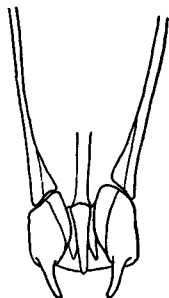
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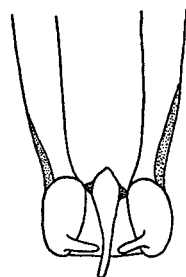
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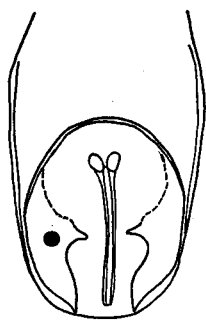
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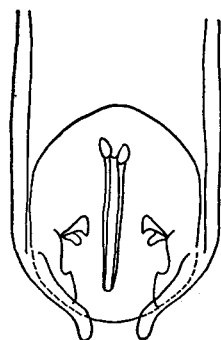
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6



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Material was examined from the following: **Dendragapus obscurus fuliginosus** (Ridgway), Sooty Grouse—Nicola, and Trangville, British Columbia; Conlitz and Okanogan Counties, Washington; and Kings River Canyon, California. **Dendragapus obscurus richardsonii** (Douglas), Richardson's Grouse—Ravalli County, and Florence, Montana.

Lagopoecus perplexus (Kellogg and Chapman 1899)

(Plate I, figure 7)

Occ. Papers Calif. Acad. Sci., VI, p. 103, Pl. VII, f. 5.

Type host: **Pedioecetes phasianellus columbianus** (Ord), Columbian Sharp-tailed Grouse.

The male of this species was not encountered in this study.

Material was examined from the following: **Pedioecetes phasianellus columbianus** (Ord), Columbian Sharp-tailed Grouse—Pullman, Washington. **Pedioecetes phasianellus phasianellus** (Linnaeus), Northern Sharp-tailed Grouse—Kirkland, Ontario.

Lagopoecus umbellus n. sp.

(Plate I, figure 8; Plate II, figure 6)

Female: Head circumfasciate; clypeal margin evenly rounded, and with scattered small setae. Eyes prominent, each with a long seta arising from the dorsal surface. Temples convexly rounded, each with two long setae; caudal margin without setae. Prothorax short, wide, and armed dorsally with one long seta on each posterolateral angle. Pterothorax more than twice as wide as long. Dorsal chaetotaxy of thorax and first four abdominal segments as shown in plate I, figure 8. Abdominal segments with tergal plates as shown in plate I, figure 8. One pair of sternal setae on each abdominal segment. Vulva with a posterior marginal row of short setae.

Male: Head approximately the same size as in the female. Thorax and abdomen essentially the same shape as in the female, but smaller. Chaetotaxy, except for the posterior abdominal segments, same as in the female. Genitalia as shown in plate II, fig 6.

Type host: **Bonasa umbellus** (probably) **phaia** Aldrich and Friedmann, Idaho Ruffed Grouse.

Type material: Holotype male and allotype female and paratypes, collected by S. D. Beak, from the Moscow Mountains, Latah County, Idaho; deposited in the Entomological Collection of Washington State College.

Other material has been examined from the following hosts: **Bonasa umbellus umbellus** (Linnaeus), Eastern Ruffed Grouse—Mifflin County, Pennsylvania; and New York State. **Bonasa umbellus togata** (Linnaeus), St. Lawrence Ruffed Grouse—Brule Lake, Frank's Bay, Buckshot Lake, and the Denora District, Ontario.

EXPLANATION OF PLATE II

Figures 1-7. Male genitalia of **Lagopoecus** spp.

1. **affinis** (Children).
2. **obscurus** Emerson.
3. **colchicus** Emerson.
4. **californicus** (Kellogg and Chapman).
5. **gambellii** Emerson.
6. **umbellus** n. sp.
7. **gibsoni** Hopkins.