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THE GENUS LASIOPOGON (DIPTERA, ASILIDÆ)¹

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The genus *Lasiopogon* is represented in the western states by several common species, some of which are undescribed. As characters separating these species are not difficult to discern the following table is presented in order to bring to date our knowledge of the species of this genus. If male specimens are available identification is facilitated, since distinctive characters are offered by the genitalia.

The species of *Lasiopogon* and *Cyrtopogon* have the face strongly gibbose, thus forming a natural group in the *Dasy-pogoninæ*. At first sight they appear to intergrade, but the two genera are quite distinct in several characters. The species of *Lasiopogon* are browner in general color, and have the abdomen nearly parallel-sided. They possess a vertical row of setæ on the hypopleuræ, lack the short first segment of the arista, and have the anal cell closed just within the margin. *Cyrtopogon* presents a more tapering abdomen, usually more pilose, the hypopleuræ with patch of fine pile, the trichostichal hairs, in place of bristles, the basal joint of the arista usually distinct, and the anal cell usually narrowly open. The male genitalia are different in the two genera; in *Lasiopogon* the lateral valves are most prominent, the lower valves being undeveloped, the dorsal side is deeply emarginate and furnished with a distinctive fringe; in *Cyrtopogon* the lower valves are usually large and there is no dorsal fringe of setæ.

The species of *Lasiopogon* known from North America are separable on the characters given in the following key. Most of the species appear to be western in their distribution. The

¹Contribution from the Zoology Laboratory of the State College of Washington.

structure of the hypopygium affords the most reliable distinctions for identifying the species, and fortunately can be easily discerned without relaxing.

Key to the Nearctic Species of Lasiopogon.

1. Bristles of body and legs wholly or in part whitish; mystax white; abdomen rather dull 2.
Bristles black (not including the long straggling white setiform hairs sometimes present on underside of femora) . . . 5.
2. Legs entirely black, coated with gray pollen 3.
Front tibiae with basal two-thirds and middle tibiae with base yellowish; median and lateral stripes of thorax brownish median stripe very feebly divided by a paler line; abdomen dusted with blackish brown, hind margins gray. (Ariz.) *arizonensis* Schaeffer
3. Abdomen sericeous with short and long white pile; hypopygium with yellow fringe at base above; thorax bivittate on dorsocentral rows. (on sand, Pacific Coast) 4.
Abdomen less pilose, base of segments rufous; thorax with four nearly median brown vittae. (Nebr.) *quadrivittata* Jones
4. Lateral valves of hypopygium emarginate at apex and with a rectangular corner at end of upper edge; bristles typically wholly whitish; scutellum lightly dusted with fulvous. (Cal.) *arenicola* O. S.
Valves with rounded apex and with a broadly obtuse upper corner; lateral bristles of thorax black; scutellum cinereous-dusted. (Wash.) *actius*, n. sp.
5. Mystax wholly or in large part white 6.
Mystax wholly black 9.
6. Tibiae and tarsi and sometimes femora also, reddish brown; wings lightly infumated; abdomen shining black, only hind angles of segments pruinose. (on low damp ground, Mass., N. J.) *terricola* Johnson.
Legs wholly black in ground color; wings quite hyaline . . 7.
7. Large robust species measuring 12 mm.; abdominal segments marked with two anterior semicircular blackish

spots, the gray of hind margins extending triangularly between them; heavily pollinose and quite pilose. (Wash.)

ripicola, n. sp.

Small species of 7 to 9 mm. 8.

8. Nearly bare species; abdominal segments with narrow white pruinose fascia along hind margin; thorax trivittate with brown. (Wash.) *trivittatus*, n. sp.

A great deal of white pile on body; the paler hind portion of abdominal segments extending forward along the middle; thorax bivittate. (Cal.) *drabicola* Cole.

9. Tibiae and tarsi reddish-brown; wings quite infumated; halteres with black spot on knob; abdomen dull, the posterior two-fifths of each segment with gray fascia. (mountain species, Wash.) *fumipennis*, n. sp.

Legs black in ground-color; wings nearly hyaline. 10.

10. Thorax evittate; hypopygial valves polished; small species, 6 to 8 mm. 11.

Thorax vittate 12.

11. Mesonotum uniformly brown pollinose; hypopygial valves twice as long as wide, with strong projection below near base, dorsal fringe black. (Wash.) *delicatulus*, n. sp.

Mesonotum brownish gray pollinose; valves short, very convex, almost hemispherical, dorsal fringe reddish. (Mass. to Col.) *opaculus* Loew.

12. General color gray pollinose; hypopygial valves cinereous, about three times as long as wide, without basal prong or swelling. (on stones about streams, Or., Wash.)

cinereus Cole

General color brownish pollinose; hypopygial valves polished, or of *tetragrammus* grayish-brown pruinose. 13.

13. Space between intermediate and lateral stripes of thorax polished black; ovipositor white pilose; about four conspicuous bristles across each abdominal segment. (Can., N. H.) *tetragrammus* Loew

Thorax without shining stripes; no transverse rows of bristles on abdominal segments. (western species) 14.

14. Hypopygium greatly enlarged, wider than abdomen, its valves nearly as broad as long, with basal swelling below; abdomen largely polished.....15.
Hypopygium not wider than abdomen, its valves about twice as long as wide, with strong tooth on inner edge toward base; abdomen dull. (Wash.) *monticola*, n. sp.
15. Thorax narrowly vittate; anterior crossvein beyond middle of discal cell. (Cal., Or.).....*bivittatus* Loew
A narrow median dark line extending down the center paler stripe between the broad principal vittæ; anterior crossvein before middle of discal cell. (Id., Wash.)
aldrichii, n. sp.

Lasiopogon actius, sp. nov.

Male.—Length 7-9 mm. Front and upper occiput dusted with brownish, face with white, hairs of upper part of head and of antennæ whitish with yellowish tinge; style three-fifths as long as third antennal joint. Notum rather closely pollinose, changing in color according to incidence of light, dorsocentral vittæ distinct, dark brown, curved, the broad undivided middle stripe yellowish brown, sides fulvous brown, connecting with the dorsocentral vittæ behind the gray humeri; scutellum, postalar callosities and a vitta extending forward from each callosity cinereous; hairs and bristles of mesonotal disk and of scutellar margin yellowish, lateral bristles stout and black; pleuræ cinereous, the mesopleura brownish, hairs of meso-, sterno- and hypopleuræ pale. Abdomen quite dull, first segment gray, 2-7 segments marked with paired basal semicircular brown spots and apical gray band, vestiture abundant and whitish; hypopygium slightly wider than abdomen, dorsal piece centrally polished, not emarginate, fringe fulvous becoming almost golden laterally, valves lightly dusted and with abundant yellowish hair, curved, over twice as long as wide and parallel-sided as seen obliquely from above, their apex rounded and furnished with short blackish hairs, base below strongly widening and then narrowed at attachment; venter cinereous, the coating thinner posteriorly. Legs gray dusted, hairs and femoral bristles whitish,

bristles of tibiae black and whitish mixed, of tarsi black, claws reddish, tipped with black. Halteres with pale yellow knob, wings hyaline, veins blackish, crossvein a little before middle of discal cell.

Female.—Third antennal joint even shorter, the style two-thirds or three-fourths the length of the third joint; ovipositor shining black, the terminal rosette consisting of long black hooks.

Types.—Sixteen specimens, collected on the dry sands of the seabeach near Seaview and Nahcotta, Washington, May to July. (Melander). The species is closely related to *L. arenicola*, but that species has a less patterned thorax, subshining scutellum and abdomen, wholly pale bristles, yellow rosette on ovipositor and a different construction to the hypopygium. The lateral valves of *arenicola* are squared off at the end and even emarginate, the dorsal fringe is golden, and the dorsal piece is polished.

***Lasiopogon aldrichii*, sp. nov.**

Male.—Length 8 mm. Entirely black, the halteres yellow, calypteres yellowish, front brownish-gray pollinose, the pollen of face slightly more yellowish, mystax black, hairs of face and lower occiput cinereous pollinose with long silky white pile; style thick, one-half as long as third joint of antenna. The usual pair of anteriorly diverging stripes of mesonotum distinct and blackish, the immediate brownish stripe medially bisected by a distinct blackish line, lateral stripes vaguely represented by darkenings above root of wings; bristles and sparse hairs black; scutellum dusted at base, its hairs and bristles black; pleuræ dull gray pollinose; the hypopleural fringe consisting of a single row of long black bristles. Major portion of abdomen polished black, the hind margins of the individual segments grayish-pollinose, lateral hairs whitish, becoming black on posterior segments; genitalia large, forming a club-like globular termination to the abdomen, hairs rather short and black, the lateral valves strongly convex, nearly quadrate, the apical edge crenulate-truncate, lower basal angle not toothed but with an umbo, dorsal incision deep and U-shaped, the marginal fringes black, the hairs obliquely crossed; venter uniformly dark grayish-

pollinose, subshining, the short sparse hairs pale. Legs entirely black, the coxæ pollinose and concolorous with pleuræ, remainder of legs shining, very lightly dusted, the hairs and bristles black except the fine pile at base of femora beneath, pulvilli fuscous. Wings lightly infumated, veins black, anterior crossvein slightly before middle of discal cell.

Female.—Pile of lower occiput more sordid white; lateral whitish hairs of abdomen shorter and confined to basal segment, ovipositor highly polished, short-conical, the ventral keel brown.

Types.—Male and female, Moscow Mountains, Idaho, June 29, 1918 (Melander). Sixty paratypes from same locality (Melander) and from the Blue Mountains of southeastern Washington (Piper and Melander) and Nahcotta, Washington (Melander). The two specimens from Nahcotta, male and female are indistinguishable from the others, notwithstanding their totally different provenience. These specimens have been taken on almost every visit to Moscow Mountain. They occur along the trails and frequent rocks on the summit. It is a pleasure to dedicate this species in honor of Dr. J. M. Aldrich, and in memory of the many trips we have made together to this interesting collecting ground. The species is evidently very closely related to *L. bivittatus* Lw. but is constant in showing the bisected median stripe of the thorax.

***Lasiopogon delicatulus*, sp. nov.**

Male.—Length 6 mm. Ground color entirely black, halteres yellow, the root of wing and the calypteres light brownish. Vertex dusted with dull yellowish-gray, face almost silvery, mystax and rather sparse facial hairs white, upper occiput brownish dusted, lower occiput becoming whitish, the lower hairs short silky and white, hairs and bristles of upper part of head short and black, style scarcely one-half the length of the broad third joint of antenna. Thorax brownish-pollinose, the dorsocentral stripes only vaguely indicated, middle stripe not divided, bristles black, scutellum completely dusted, bare except for the few marginal hairs; lower pleuræ becoming grayish-blue, hypopleural fringe consisting of about five black setæ. Abdomen

slender, mostly shining, the hind margin of the segments narrowly whitish and with thinner cinereous pollen extending across the posterior two-fifths of each segment and also triangularly filling the extreme sides, first segment entirely cinereous pollinose, hairs very sparse, short and whitish; hypopygium of same diameter as abdomen, the lateral valves curved, two and one-half times as long as the width of the apical half, abruptly broader on basal half so as to form rectangular projection at middle beneath, apex of valves rounded, hairs rather sparse long and black, dorsal notch broad and deep, fringe of each side with black hairs; venter uniformly grayish dusted, its hairs fine, short, sparse and whitish. Legs entirely black, lightly dusted, the coxæ cinereous, the hairs of femora and coxæ white, of tibiæ and tarsi black, bristles strong and black, pulvilli piceous. Wings hyaline, veins black, anterior crossvein a little before middle of discal cell.

Female.—Hairs of face in large part black, the polished ovipositor as long as sixth segment, blunt, ventral keel castaneous.

Types.—Mount Rainier, Washington. Six specimens from Alta Vista, Crystal Mountain, and Van Trump Park, July and August, 1922 (Melander).

The collection of these specimens was largely made possible through a grant from the Elizabeth Thompson Science Fund for a study of the alpine insect fauna of Mt. Rainier.

***Lasiopogon fumipennis*, sp. nov.**

Female.—Length 8 mm. Black in ground-color, heavily dusted. Upper part of head brownish, hairs short, sparse, fine and black, face cinereous, pile long, abundant and black, pile of lower occiput fine dense and white; style one-third the length of the third joint of antenna. Mesonotum thickly brown-pollinose, dorsocentral vittæ widely separated, moderately narrow and brown, median stripe not divided; humeri and pleuræ cinereous, no pile, four black setæ in hypopleural row, no dorsocentral bristles, two prealar black bristles, anterior part of notum with scattered minute appressed black setulæ, no hairs; scutellum brownish gray pollinose, its sparse marginal hairs black. Posterior two-fifths of abdominal segments cinereous pollinose,

anterior portion nearly black and subshining, first segment alone with outstanding hairs which on the hind margin are setiform and black and white mixed, remainder of abdomen with minute black setulæ; ovipositor polished black, nearly as long as sixth and seventh segments combined, the ventral keel castaneous. Legs black, very lightly dusted, the posterior tibiæ with brownish tinge, hairs of femora very short, sparse and whitish, of tibiæ black, bristles black, two preapical extensor bristles on front femur, one on anterior face of middle femur, an imperfect row along upper front face of hind femur, under side of femora with about three straggling long white setiform hairs. Pulvilli alutaceous; wings infumated, veins black, anterior crossvein at middle of discal cell; halteres yellow, the upper side of knob with distinct black center, calypteres yellow.

Types.—Paradise Park, Mount Rainier, Washington, Aug. 1921 (Melander). Two paratypes, same locality and south slope of Mount Adams, Washington. (Melander).

Lasiopogon monticola, sp. nov.

Male.—Length 9 mm. General color brownish-gray due to heavy coat of pollen, vertex and upper occiput dusted with brown, face cinereous brown, mystax entirely black, hairs of lower occiput fine silky and white, of upper occiput black; style two-fifths the length of third antennal joint, thorax marked only with the narrow dorsocentral brown stripes which diverge anteriorly, median space not bisected, bristles black, two lateral bristles in front of suture, about five on postalar callus, about five presutural dorsocentrals; scutellum margined with about eight black bristles in addition to interspaced black hairs, bare on disc; six bristles in hypopleural row, mostly black, four black hairs at posterior margin of mesopleura. Anterior half of abdominal segments piceous, posterior half cinereous brown, hairs white, becoming black at apex, five black bristles in lateral row of first segment; hypopygium globose black shining, somewhat wider than termination of abdomen, the dorsal incision very broad, its fringe black, lateral valves very broad, less than twice as long as wide, truncate at apex, the lower margin with very

strong tooth, hairs coarse and black, venter concolorous with posterior portions of tergites, its hairs fine and whitish. Hairs of femora white in large part, the outer half of femora with about five extensor setæ, the upper front face of hind femora setose; tarsi concolorous with remainder of legs, claws piceous with black apex, pulvilli alutaceous. Halteres and calypteres yellowish; wings lightly cinereous, veins black, anterior crossvein slightly before middle of discal cell.

Female.—Ovipositor short, ventral keel black, hairs of abdomen short and mostly black.

Types.—Mount Adams, Washington, July 24, 1921 (Melander). Other localities, Moscow Mountain, Idaho, and Mount Rainier, Washington. Thirty specimens.

***Lasiopogon ripicola*, sp. nov.**

Male.—Length 10 mm. Dull brownish-gray, heavily pollinose and rather densely pilose species, upper part of head alutaceous, with abundance of black hairs but no bristles, face whitish, the dense hairs nearly white with slightly yellowish tinge, with a few black hairs intermixed on upper portion, lower occiput heavily white pilose, antennal hairs black, third joint compressed cylindrical, slightly more than twice the length of the acuminate style. Dorsum of thorax brownish-gray, the dorsocentral vittæ widely separated, dark brown and rather narrow, bearing about six very fine black setæ of which three are presutural, humeri cinereous, lateral markings very indistinct, three prealar bristles; scutellum dark cinereous, the apical fine bristles black and hairs white; pleuræ cinereous with faint yellow tinge, mesopleura with black hairs behind, sternopleura with fine white hairs, hypopleural fringe consisting of a few white and black bristle-like hairs. Abdomen not shining, the segments dark brown with apical two-fifths cinereous, the brown color intensified as two semicircular spots, the gray color extending forward triangularly between the brown markings, pile conspicuous and whitish, long on sides of second and third segments, sides of first segment with a cluster of black bristles in addition to the pile; hypopygium larger than diameter of end of abdomen,

black, subshining, mainly black-hairy, dorsal fringe transverse and black, declivous beneath fringe and not emarginate but with strong central broad projection, lateral valves spoon-shaped, the inferior margin entire, without tooth below but with slight basal umbo, venter uniformly gray pollinose and with an abundance of fine whitish hairs. Legs coated with gray pollen, front femora with two preapical extensor bristles, hind femora with a complete row of black bristles along upper anterior face, bristles of tibiæ and tarsi black, hairs of legs abundant, fine and white, pulvilli alutaceous. Wings hyaline, veins black, anterior cross-vein at two-fifths the length of the discal cell, halteres yellow, the base brown, calypteres and fringe yellow.

Female.—Facial hairs more yellowish, ovipositor black polished, short, carina usually black.

Types.—Wawawai, Washington, May 20, 1911 (Melander) Eighteen paratypes from same locality and from Wilbur, and Yakima (Jenne) Wash. Most of the specimens were taken in the month of April.

Lasiopogon trivittatus, sp. nov.

Female.—Length 7 mm. Entirely black in ground color, the halteres and calypteres pale fuscous, the carina of the ovipositor castaneous, upper part of head yellowish-gray, bristles and hairs black, face whitish, its hairs nearly white with slightly yellowish tinge, lower pile of occiput fine and white. Thorax thickly coated with cinereous pollen, the dorsocentral stripes full brown, a median stripe of similar brown color and supraalar indications of lighter brown; bristles prominent and black, a strong presutural dorsocentral present, scattered black setulæ on anterior portion of mesonotum; scutellum densely cinereous, bare except for black marginal bristles and setula; pleuræ heavily coated with cinereous, almost pruinose, a slight tinge of yellowish developed beneath root of wing. Abdomen scarcely at all shining, first segment wholly cinereous, second to seventh segments fulvous over greater portion, the posterior margins narrowly cinereous, the gray color extending forward at the sides to merge into the fulvous, no long pile, hairs

appressed, whitish, becoming black on posterior segments, ovipositor slightly longer than seventh segment, polished, blunt, but little tapering; venter heavily cinereous pollinose. Legs densely coated with gray pollen, femora with a few whitish long bristle-like hairs beneath, no coating of pile but the short hairs of femora and under side of tibiæ white, hairs of remainder of tibiæ and of tarsi and bristles black, pulvilli brownish. Wings nearly hyaline, veins blackish, anterior crossvein slightly before middle of discal cell.

Holotype.—Gold Creek, Montana, July 29, 1918 (Melander.)



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