

NEW SPECIES AND VARIETIES OF *SIEROLA*
FROM THE MARQUESAS*

By

D. T. FULLAWAY

ENTOMOLOGIST, BOARD OF AGRICULTURE AND FORESTRY, TERRITORY OF HAWAII

The finding of representatives of the genus *Sierola* in the Marquesan collections of the Pacific Entomological Survey is interesting because it marks a new locality for these insects and extends the range of the genus considerably eastward. Other pertinent facts with regard to the genus are contained in the introductory part of a previous paper on *Sierola*, which may be referred to if additional information is desired.¹ I am describing here 11 species and 2 varieties as new species and varieties.

***Sierola depressa* variety *marquisensis*, new variety.**

Depressed to an extreme degree; shining black, legs (except tarsi) and antennae black also; tarsi yellowish brown, tips of mandibles reddish brown. Head and thorax to the propodeum with a microscopically fine and delicate surface sculpture, a little coarser on gula; finely, shallowly, and fairly closely punctate; clothed with short, fine, silvery white hairs. Head wider than the thorax, longer than wide by a half, length from eye to vertex equaling the width between the eyes; flat above and beneath; vertical margin straight, temples rounded; eyes flatly convex; antennae a little longer than head, all the segments longer than wide; antennal fossae shallow; clypeus extremely short, convex and without a carina, somewhat depressed apically, hardly projecting in front of the anterior margin of the head, which is curved rather than angulate, declivous at the sides; mandibles slender, curved, truncate apically and toothed, base touching the eye above; gula flat, hardly foreshortened, longer than wide, median groove nearly effaced, anterior margin straight, posterior margin arcuately concave; pronotum elongate, propodeum rugose; abdomen flatter than head, short ovate, apically acuminate, apparently smooth and polished; wings hyaline; length 2.75 mm.

Hivaoa: Tapeata, east slope of Mount Ootua, altitude 2,500 feet, May 25, 1929, on *Paspalum conjugatum*, type female, Mumford and Adamson.

***Sierola mumfordi*, new species.**

Female unusually large, shining black. Antennae except basal part of scape, anterior tibiae and tarsi, middle and hind tarsi brown, antennae fuscous outwardly, trochanters and base and apex of middle tibiae brown also. Head and thorax with microscopically fine reticulate surface sculpture, coarser on propodeum, fairly closely and finely punctate and hairy. Head not much wider than the thorax, a little longer than wide, width between the eyes greater than the length from eye to vertex, convex above and beneath, without great depth (less than half length and deepest below posterior end of eye), vertical mar-

¹ Fullaway, D. T., New species of *Sierola* with explanatory notes: B. P. Bishop Mus., Occ. Papers, vol. 7, no. 7, pp. 57-159, 1920.

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gin straight, temples rounded, eyes convex, antennae a little longer than head, all the segments a little longer than wide, the scape much longer than other segments and more than twice as long as wide, pedicel likewise longer, antennal fossae deep, clypeus reduced by erosion from the sides to a curved carinate ridge apically depressed, projecting slightly in front of the anterior margin of the head, sloping at the sides, the carina extending backward on the head beyond the base of the antennae; mandibles stout, curved, concavo-convex, truncate apically and toothed, base reaching the eye above; gula and sides of the head convex, gula very much foreshortened medially, transverse, anterior margin slightly curved (almost straight), posterior margin arcuately concave, median groove faintly impressed; abdomen long, ovate, apically acuminate, smooth and polished, sparsely clothed with silvery white hairs. Wings subinfusate with a faint yellowish brown pigmentation basally; length 3 mm.

Nukuhiva: Ooumu, altitude 3,700 feet, December 13, 1929, beating on shrub F. no. 592, 1 specimen, Mumford and Adamson.

Hivaoa: Kopaafaa, altitude 2,770 feet, August 2, 1929, sweeping on *Metrosideros collina* and miscellaneous plants, 3 specimens, type and paratypes, Mumford and Adamson.

Very similar to *S. osborni* described from Kilauea, Hawaii.

Sierola adamsoni, new species.

Female unusually large; shining black, the luster somewhat dulled on head, antennae brown, becoming dusky outwardly, the base of the scape dark; trochanters, tibia partially (front tibiae almost entirely) and the tarsi testaceous. Head and thorax to the propodeum with a microscopically fine reticulate surface sculpture, a little coarser on head than on thorax, rather closely, coarsely, and shallowly punctate on head, more finely on thorax, and hairy. Head nearly as wide as long, widest across the eyes, narrowing behind and in front, width between the eyes twice the length from eye to vertex, convex above, depressed in front, tumid beneath, deepest under the eye; vertical margin straight, temples rounded, eyes convex; antennae long, reaching the mesoscutum, the segments of the flagellum all longer than wide, the pedicel twice, the funicle three times as long as wide; antennal fossae deep, transverse, elliptical in outline; clypeus carinate, apically depressed and projecting somewhat in front of the anterior margin of the head, sloping at the sides; mandibles slender, curved, toothed apically, base not quite reaching the eye; cheeks narrow; gula and sides of the head convex, gula medially foreshortened, transverse, anterior margin arcuately concave, posterior margin incised, median groove nearly effaced; propodeum rugulose, opaque; abdomen short ovate, apically acuminate, smooth and polished; wings subinfusate, dotted with short fine hair on the disc; length 3.5 mm.

Nukuhiva: Puokoke [Pukoke], altitude 3,485 feet, December 22, 1929, beating *Glochidion ramiflorum*, 2 specimens, type and paratype; Ooumu, altitude 3,400 feet, November 11, 1929, beating on *Weinmannia parviflora*, 2 specimens; Mumford and Adamson; Tapuaooa, altitude 3,000 feet, June 16, 1931, on *Metrosideros collina*, 1 specimen, LeBronnec and H. Tauraa.

Hivaoa: Kopaafaa, altitude 2,770 feet, August 2, 1929, miscellaneous sweeping, 1 specimen, Mumford and Adamson.

Very similar to *S. compacta* described from the Kilauea region, Hawaii.

Sierola ooumuana, new species.

Slender, somewhat depressed; shining black, rather brilliant, antennae predominantly brown, infuscated basally and apically; legs fuscous brown, the femora and the middle

and hind tibiae very dark, trochanters, tarsi and the front tibiae brown. Head and thorax with a microscopically fine reticulate surface sculpture, finely, shallowly, and somewhat remotely punctate and hairy. Head somewhat longer than wide, width between the eyes equalling the distance from eye to vertex, length in front of eyes not great; convex above and beneath, depressed in front, vertical margin straight, temples rounded, eyes flatly convex; antennae hardly longer than the head, pedicel and funicle a little longer than wide, following segments except the terminal one as wide as or wider than long; antennal fossae deep, extending transversely from the frontal carina to the inner margin of the eye; clypeus carinate, apically depressed and projecting slightly in front of the anterior margin of the head, sloping at the sides; mandibles slender but expanded somewhat at base and apex, curved, truncate apically and toothed, base touching the eye above; gula and sides of the head rather flat; gula medially foreshortened, almost as wide as long, a little convex behind, anterior margin arcuately concave, posterior margin incised; abdomen elongate ovate, apically acuminate, smooth and polished; wings subinfusate, with a dilute brownish pigmentation; length 2.5 mm.

Nukuhiva: Ooumu, altitude 4,050 feet, November 12, 1929, type female; Teuanui, altitude 2,000 feet, October 26, 1929, at light; altitude 1,500 feet, October 26, 1929, at light; Teivipakeka, altitude 2,900 feet, October 16, 1929, on *Glochidion ramiflorum*; Mumford and Adamson.

Hivaoa: Mount Temetiu, altitude 3,620 feet, July 24, 1929; Matauuna, altitude 3,700 feet, March 4, 1930, sweeping, Mumford and Adamson.

Uahuka: Penau Ridge, altitude 2,010 feet, on *Fagraea berteriana*, March 2, 1932, 6 specimens, LeBronnec and H. Tauraa.

Very similar to *S. glabra* of Hawaii.

***Sierola hivaoensis*, new species.**

Shining black, the head a little duller than thorax and abdomen, the antennae brown, fuscous apically and at the very base, legs brownish black, the trochanters, tarsi, and fore tibiae light brown. Head and thorax with a microscopically fine reticulate surface sculpture, very delicate on the pronotum and mesonotum, coarser on the head and propodeum, finely and fairly closely punctate and hairy. Head nearly as wide as long, widest across the eyes, narrowing behind and in front, width between the eyes twice the length from eye to vertex, length in front of the eyes about equal to the length behind, outline in front of eyes (viewed from above) roughly triangular; convex above, depressed in front, a little tumid beneath, vertical margin straight, temples rounded, eyes convex; antennae reaching the mesoscutum, all the segments longer than wide, pedicel and funicle more than twice as long as wide; antennal fossae deep, extending across the front of the head from the frontal carina to the eye margin; clypeus carinate, apically depressed and projecting slightly in front of the anterior margin of the head, declivous at the sides, the carina extending backward on the top of the head beyond the base of the antennae; mandibles slender, curved, truncate apically and toothed, base not quite reaching the margin of the eye above, gula double convex, with shallow median groove and impressed line, medially foreshortened and wider than long, anterior margin arcuately concave, posterior margin incised; abdomen short ovate, apically acuminate, with a smooth and highly polished surface; wings subinfusate; length 2.5 mm.

Hivaoa: Mount Temetiu, northeast slope, altitude 2,500 feet, July 29, 1929, miscellaneous sweeping, type female; Kopaafaa, altitude 2,770 feet, August 2, 1929, beating on *Crossostyles biflora*, 1 specimen (broken); Mumford and Adamson.

Sierola freycinetiae, new species.

Shining black, the head and pronotum a little duller, at least not brilliant like the abdomen and parts of the thorax, antennae brown, fuscous apically, the legs brownish black, the trochanters, tibiae, and tarsi brown. Head and thorax with a microscopically fine reticulate surface sculpture; finely, shallowly, and closely punctate on the top of the head, hairy clothing fairly long and conspicuous. Sides of the pronotum aciculate. Propodeum more coarsely sculptured. Head longer than wide by fully one half, widest across the eyes at middle, narrowing in front and behind slightly, width between the eyes 1.5 times length from eye to vertex, convex above, tumid beneath, depth greatest under hind quarter of eye and a little more than half the length; vertical margin slightly curved outwardly, temples rounded, eyes convex; antennae about as long as the head, first six segments longer than wide, following (except last) moniliform; antennal fossae deep, transverse but not quite reaching either the margin of the eye or the frontal carina; clypeus reduced by erosion at the sides to a carinate ridge, depressed apically and projecting a little in front of the anterior margin of the head, the carina extending backward on the top of the head beyond the base of the antennae; mandibles slender, curved, truncate apically and toothed, base nearly reaching the margin of the eye above; gula and sides of the head rather flat, the former medially foreshortened, narrowing behind, anterior margin arcuately concave, posterior margin incised, median groove very faint; abdomen elongate ovate, apically acuminate, smooth and highly polished; wings subinfusate with a faint yellowish-brown pigmentation; length 2.5 mm.

Hivaoa: Kopaafaa, altitude 2,770 feet, August 2, 1929, on *Freycinetia* species, type female; Tapeata, east slope of Mount Ootua, altitude 2,500 feet, May 25, 1929, on *Paspalum conjugatum*, 1 specimen, Mumford and Adamson.

Sierola freycinetiae subspecies **matauunaiana**, new subspecies.

Differing from the above in the following details: under side of the head sculptured like the upper and duller on that account. Mandibles moderately stout, bent at middle, base reaching margin of eye above; abdomen elongate and slender, length 3.00 mm.

Nukuhiva: Ooumu, altitude 3,600 feet, November 10, 1929, on shrub F. no. 580, 1 specimen (without abdomen), Mumford and Adamson.

Hivaoa: Matauuna, altitude 3,760 feet, August 1, 1929, sweeping, type female, Mumford and Adamson.

Sierola tahuataensis, new species.

Moderately large and thickset, shining black, the head and thorax duller, not brilliant like the abdomen; antennae brown to fuscous, trophi, trochanters, tibiae, and tarsi brownish; head and thorax to the propodeum with a microscopically fine reticulate surface sculpture, a little coarser on the head than on the thorax; rather closely, coarsely, and shallowly punctate and hairy. Head nearly as wide as long, widest across the eyes, narrowing behind and in front; width between the eyes almost twice the length from eye to vertex; convex above, depressed in front, tumid beneath, deepest under posterior end of eye, vertical margin straight, temples rounded; eyes convex; antennae reaching to mesoscutum, the segments of the flagellum all longer than wide, the first eight segments all more than twice as long as wide. Antennal fossae deep and wide, extending from frontal carina to eye margin; clypeus carinate, apically depressed and projecting a little in front of the anterior margin of the head, sloping at the sides; mandibles slender, curved, toothed apically, base not reaching the eye; cheeks very narrow; gula and sides of the head convex, the former medially foreshortened, transverse, anterior margin arcuately

concave, posterior margin incised, median groove nearly effaced; propodeum rugulose; abdomen short ovate, apically acuminate, smooth and highly polished. Wings subinfusate, with a yellowish-brown pigmentation; length 3.00 mm.

Upou: Teavaituhai, Hakahetau Valley, altitude 3,020 feet, November 20, 1931, 1 specimen on *Cyrtandra* species, 1 specimen on *Sclerotheca* species; Paaumea side, altitude 3,020 feet, November 19-20, 1931, on *Vaccinium* and *Cyrtandra* species, 3 specimens; Teavanui Pass, altitude 2,900 feet, November 30, 1931, 14 specimens, 1 specimen on *Cyathea*; Tekohepu Summit, altitude 3,000 feet, November 27-28, 1931, on ferns and *Cyathea*, 2 specimens, paratypes; LeBronnec.

Tahuata: Haaoiu Summit, altitude 2,700 feet, July 9, 1930, type female, Mumford and Adamson.

Very similar to *S. compacta* from Hawaii.

***Sierola lebronnecii*, new species.**

Shining black, the legs and antennae brown to fuscous, trochanters, tarsi, and fore tibiae yellowish brown, pedicel and two funicle segments reddish brown; head and thorax to the propodeum with a microscopically fine reticulate surface sculpture, a little coarser on the head than on the thorax; coarsely, very shallowly and somewhat closely punctate and hairy; head longer than wide by a half, widest across posterior end of eyes, narrowing somewhat behind and in front, length in front of the eyes not great, shape angular; convex above, depressed in front, slightly tumid beneath at level of posterior end of eyes; depth less than one half length; vertical margin straight, temples rounded, eyes convex; antennae longer than the head, almost reaching mesothorax, all the segments longer than wide, the pedicel and following three segments twice as long as wide; antennal fossae deep, extending from close to frontal carina almost to margin of eye; clypeus carinate, apically depressed and projecting slightly in front of the anterior margin of the head, declivous at the sides, the carina extending backward on the top of the head a little beyond the base of the antennae; mandibles slender, curved, truncate apically and toothed, base touching the eye above; gula and sides of the head flatly convex, gula punctate and hairy, medially foreshortened, a little wider than long, anterior margin arcuately concave, posterior margin incised, smooth, and polished; abdomen ovate, apically acuminate, smooth and polished; wings with a straw-brown pigmentation; length 2.5 mm.

Hivaoa: Kopaafaa, altitude 2,770 feet, August 2, 1929, sweeping *Crossostylus biflora*, type female; Matauuna, altitude 3,760 feet, August 1, 1929, beating *Rapanea* species, 1 specimen; Mumford and Adamson.

***Sierola tauraaiana*, new species.**

Shining black, antennae brown, fuscous outwardly, legs mostly black, the trochanters and tarsi brownish. Head and thorax with a microscopically fine reticulate surface sculpture; finely, shallowly, and fairly closely punctate and hairy. Sides of the pronotum aciculate. Head wider than the thorax, longer than wide, width between the eyes greater than the length from eye to vertex by nearly one half, convex above, slightly tumid beneath, depressed in front, vertical margin straight, temples rounded, eyes convex; antennae a little longer than the head, all the segments longer than wide, pedicel twice as long as wide; antennal fossae deep, reaching the margin of the eye on one side but not quite to the frontal carina on the other; clypeus carinate, apically depressed and projecting slightly in front of the anterior margin of the head, sloping at the sides the carina extending backwards on the top of the head beyond the base of the antennae;

mandibles slender, widening outwardly, curved, concavo-convex, truncate apically and toothed, base touching the eye above; gula medially foreshortened, as long as or longer than wide, double convex, with a shallow median groove and impressed line, surface punctate, anterior margin arcuate, posterior incised; sides of the head rather flat and impunctate, narrowing behind somewhat; propodeum somewhat rugose on top, the sculpture rather aciculate; abdomen depressed, short ovate, apically acuminate, smooth and polished; wings infusate, with a yellowish-brown pigmentation; length 2.75 mm.

Hivaoa: Kopaaftaa, altitude 2,770 feet, August 2, 1929, beating *Scaevola* species, type female; on *Freycinetia* species, 1 specimen, resembles the type somewhat; Tepuna, altitude 3,010 feet, July 1, 1929, in miscellaneous sweeping, 1 specimen, resembles the type somewhat; Mumford and Adamson.

Nukuhiva: Puokoke [Puikoke], Tunoa Valley, altitude 3,485 feet, October 22, 1929, on shrub F. no. 565, 1 specimen, Mumford and Adamson. This specimen has the head smoother and more convex, legs less impunctate. It may constitute a different species but at present I consider it only a variety to which the name *pukokiana* is applied.

Resembles *S. lepida* from Hawaii.

Sierola cookei, new species.

Shining black, the head and pronotum a little duller, at least not brilliant like the abdomen and parts of the thorax; antennae brown, fuscous apically, the legs brownish black, fore tibiae and middle and hind tarsi yellowish brown. Head and pronotum with a microscopically fine reticulate surface sculpture, finely, shallowly, and closely punctate on the top of the head, some distant pin punctures on the pronotum, hairy clothing fairly long and conspicuous, sides of the pronotum aciculate. Propodeum more coarsely sculptured. Head longer than wide by fully one half, width between the eyes greater (by nearly one half) than length from eye to vertex, convex above, depressed in front, slightly tumid beneath, greatest depth behind the eye, vertical margin straight, temples rounded, eyes flatly convex; antennae about as long as the head, all the segments a little longer than wide, the pedicel 1.5 times longer than wide; antennal fossae deep, transverse but not quite reaching either the margin of the eye or the frontal carina; clypeus reduced by erosion at the sides to a carinated ridge, depressed apically and projecting a little in front of the anterior margin of the head, the carina extending backwards on the top of the head beyond the base of the antennae; mandibles slender, curved, truncate apically and toothed, base reaching the margin of the eye above; gula and sides of the head rather flat, gula foreshortened, narrowing behind, anterior margin arcuately concave, posterior margin incised, median groove distinct; abdomen elongate ovate, apically acuminate, smooth and highly polished; wings subinfusate with a faint yellowish-brown pigmentation; length 2.5 mm.

Uapou: Teavaituhai, Hakahetau Valley, altitude 3,020 feet, November 19, 1931, type female; Vaihakaatiki, altitude 2,800 feet, November 19, 1931, 1 female, paratype; LeBronnec.

Hivaoa: Temetiu Summit, altitude 4,160 feet, January 20, 1932, beating *Metrosideros* species, 1 specimen, LeBronnec; altitude 3,200 feet, September 13, 1929, and August 3, 1929, 2 specimens, Mumford and Adamson.

Sierola gregoryi, new species.

Shining black, rather brilliant; antennae brown to fuscous, legs black, only the tarsi brownish. Head and thorax polished, microscopic surface sculpture hardly visible; finely, shallowly and sparsely punctate and hairy. Head longer than wide by one half, widest across the posterior end of eyes, narrowing somewhat behind and in front, width between the eyes exceeded by length from eye to vertex, length in front of eye not great; convex above, depressed in front, tumid beneath; greatest depth, which is less than half the length, considerably behind the eye; vertical margin concave inward, temples rounded, eyes flatly convex; antennae just a little longer than the head, all the segments longer than wide, pedicel twice as long as wide; antennal fossae deep, elongate, and extending backward and outward from side of clypeus but not reaching margin of the eye; clypeus carinate, short, apically depressed, projecting a little in front of anterior margin of head, sloping at sides, carina extending backward on top of head beyond base of antennae; mandibles slender, curved, truncate apically and toothed, base reaching the margin of the eye above; gula rather flat and smooth, narrowing a little behind, as long as wide, anterior margin arcuately concave, posterior margin incised a little, median groove shallow; sides of the head a little convex; abdomen elongate ovate, apically acuminate, somewhat depressed, smooth and polished, posterior margin of the tergites conspicuously emarginate; wings subinfusate; length 2.25 mm.

Hivaoa: Temetiu Summit, altitude 4,160 feet, January 20, 1932, beating *Cheirodendron* species, type female, LeBronnec.

Sierola bryani, new species.

Dull black on head and thorax, abdomen shining black, polished; antennae brown fuscous outwardly, legs black or brownish black except trochanters, front tibiae, tip of femora, and base of tibiae of the hind legs and all the tarsi, which are brown to yellowish brown. Head and thorax with a microscopically fine reticulate surface sculpture; finely, shallowly, and closely punctate and hairy. Head longer than wide by more than one half, width between the eyes a little more than the length from eye to vertex, length in front of the eyes less; convex above, a little depressed in front, tumid beneath, greatest depth, less than half the length, just behind eye, vertical margin straight, temples rounded, eyes flatly convex; antennae longer than the head, all the segments longer than wide, the pedicel twice as long as wide; antennal fossae deep, extending backward and outward from side of clypeus to the margin of the eye; clypeus carinate, short, apically depressed, projecting a little in front of the anterior margin of the head, sloping at sides, carina extending backward on top of head beyond base of antennae; mandibles fairly stout, short, and curved, truncate apically and toothed, punctate and hairy on outer surface, base not reaching margin of eye; gula and sides of the head convex, gula narrowing a little behind but almost quadrangular, a little foreshortened, anterior margin slightly arcuately curved, posterior margin concave inwardly, median groove very indistinct, practically effaced; abdomen elongate ovate, apically acuminate, smooth and polished; wings subinfusate; length 2.5 mm.

Uapou: Tekohepu Summit, altitude 3,000 feet, November 20, 1931, beating on *Cyathea* species, type female, LeBronnec.