

DIPTERA: SCIARIDAE OF SOUTH GEORGIA<sup>1</sup>By Wallace A. Steffan<sup>2</sup>

*Abstract:* Two species of Sciaridae, *Lycoriella caesar* (Johannsen) and *Bradysia* sp., are recorded from South Georgia Is. Both species are illustrated.

A large series of Sciaridae were collected from the South Georgia Islands between 1961 and 1964; most of them by Clagg in 1963 and 1964. Most of the specimens are an unidentified species of *Bradysia*, which has undoubtedly been introduced. Unfortunately, only ♀♀ of this species were collected and it cannot be identified. The other species, *Lycoriella caesar* (Johannsen), is also an immigrant, previously known only from Canada.

**Lycoriella (Lycoriella) caesar** (Johannsen) Fig. 1, a-h.

*Sciara caesar* Jhnsn., 1929, *Canad. Ent.* **61**: 223.

*Lycoriella (Lycoriella) caesar*: Tuomikoski, 1960, *Ann. Zool. Soc., Vanamo* **21**(4): 79.—Stone, *et al.*, 1965, *Cat. Dipt. N. America*, 231.—Steffan, 1966, *U. C. Publ. Ent.* **44**: 50.

♂. *Head*: Interfacetal hairs moderately abundant, extending well beyond outer curvature of facets; eye bridge broadly joined, 2-3 facets wide. Median ocellar bristles moderately developed. Antenna: scape and pedicel with moderately developed scattered setae; flagellomere 4 (Fig. 1b) about 1.7× longer than wide, neck short (less than 0.2× length of joint); flagellar hairs subequal to or slightly shorter than diameter of joint. Prefrons with 24 scattered, moderately developed setae; clypeus with 3 dorsomedial and 1 ventral setae. Labellum well developed. Palpus 3-segmented (fig. 1c), segment 1 with deep sensory pit and 4-6 dorsolateral setae; segments 2 and 3 moderately developed, 2 with 6-7 setae and 3 with 5-6 setae.

*Thorax*: Acrostichals and dorsocentrals weak. Scutellum with 8-10 well developed setae. Posterior pronotum bare; anterior pronotum with 5 setae. Proepisternum with 9 scattered setae. Posterior mesoepimeron elongate, about 2.25× longer than wide. Postnotum with 2 short medial setae. *Legs*: Fore leg ratio 24: 28: 14: 6; hind leg ratio 35: 42: 18: 7. Fore and mid tibial setae undifferentiated; hind tibia with moderately developed posterodorsals along distal third. Fore tibial comb (Fig. 1d) composed of ovoid patch of dense setae, set in a shallow pit. Apex of hind tibia with 11-12 enlarged setae; spurs about 1.5× longer than diameter of tibial apex. Tarsal claws simple. *Wing* as illustrated (Fig. 1a); length 1.8 mm, width 0.6 mm. R-M index 2.8; C-M index 0.8. R<sub>5</sub> ends considerably proximad tip of M<sub>2</sub>. Costa, R<sub>1</sub> and R<sub>5</sub> with macrotrichia, other veins bare; r-m 0.7× length of bM. Cu 0.6× length of bM. Haltere short, with single row of dorsal setae on knob.

*Abdomen*: Tergal setae sparse and moderately developed, sternal setae weaker. Sternum VIII with single posterior row of setae. Male terminalia as illustrated (Fig. 1e). Tergum IX (Fig. 1f) elongate. Basimeres narrowly joined ventrally with small patch of 8-9 median setae; mesoapical setae strong. Dorsal apodeme well developed, extending about half way into genital cavity. Genital rod long, with broad apical fork. Distimere narrow and elongate about 0.7× length of basimere, with strong apical spur and 6 mesal spines and 2 long whip-like mesal hairs proximad of mesal spines.

♀. Similar to ♂. Flagellomere 4 slightly shorter. Wing length 2.4-2.8 mm, width 1.1 mm. R-M index 1.9; C-M index 0.7. Legs generally longer—fore leg ratio 30: 51: 15: 6. Postnotum generally bare. Terminalia: cercus as illustrated (fig. 1g); vaginal furca (fig. 1h), stem elongate, arms joined posteriorly.

**DISTRIBUTION:** Canada (Ontario), and South Georgia Is. (New Record).

**SOUTH GEORGIA I.:** 1 ♂, 9 ♀♀, King Edward Cove, Grytviken Penn., from grass along ditch, sea level, SG #92, 12.XII.1963, Clagg; 1 ♂, Husvik Harbor, Stromness Penn., sweeping

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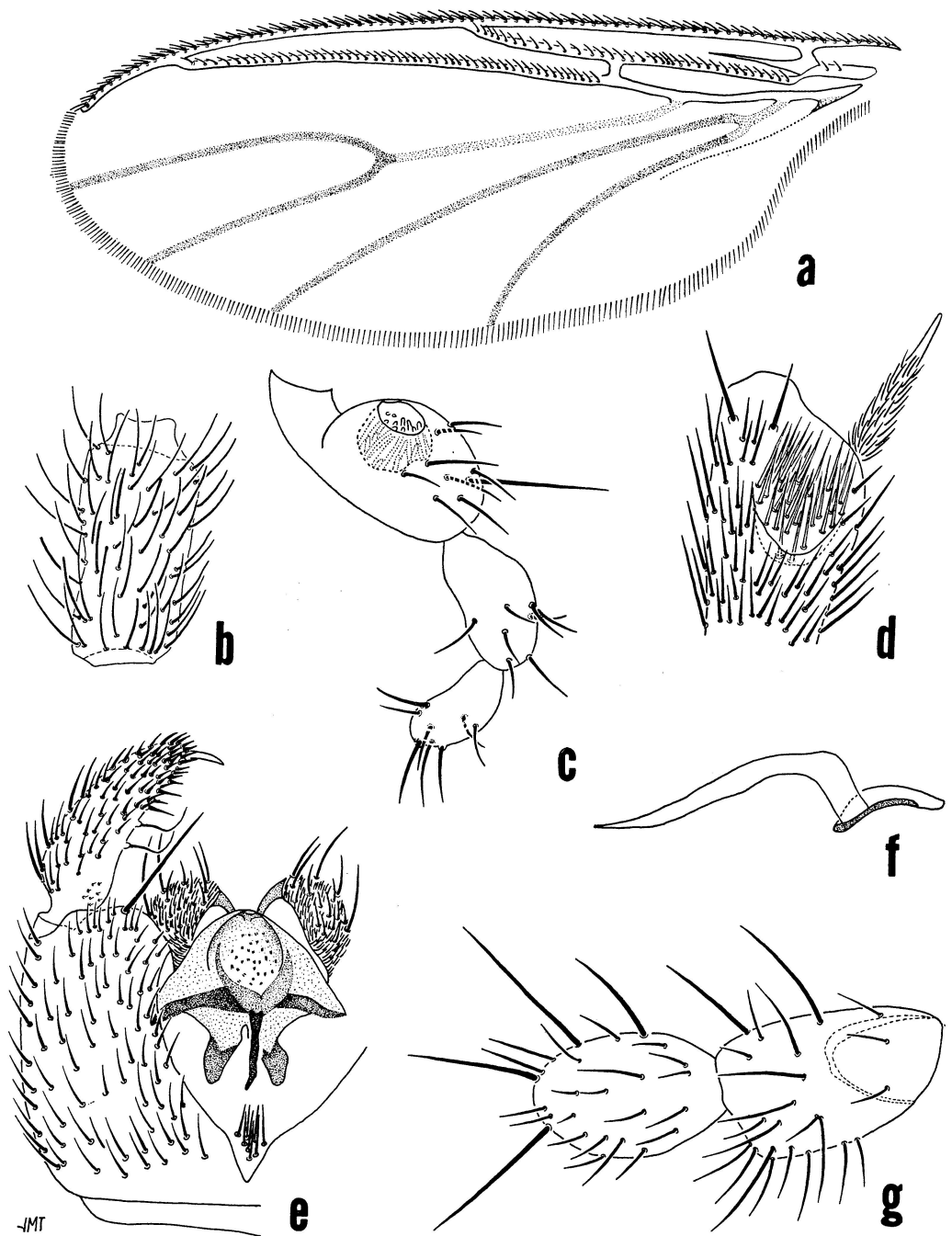


Fig. 1. *Lycoriella caesar*, a, wing; b, flagellomere 4, ♂; c, maxillary palpus, ♀; d, apex of fore tibia, ♂; e, ♂ terminalia, ventral view; f, vaginal furca, ♀; g, cercus, ♀.

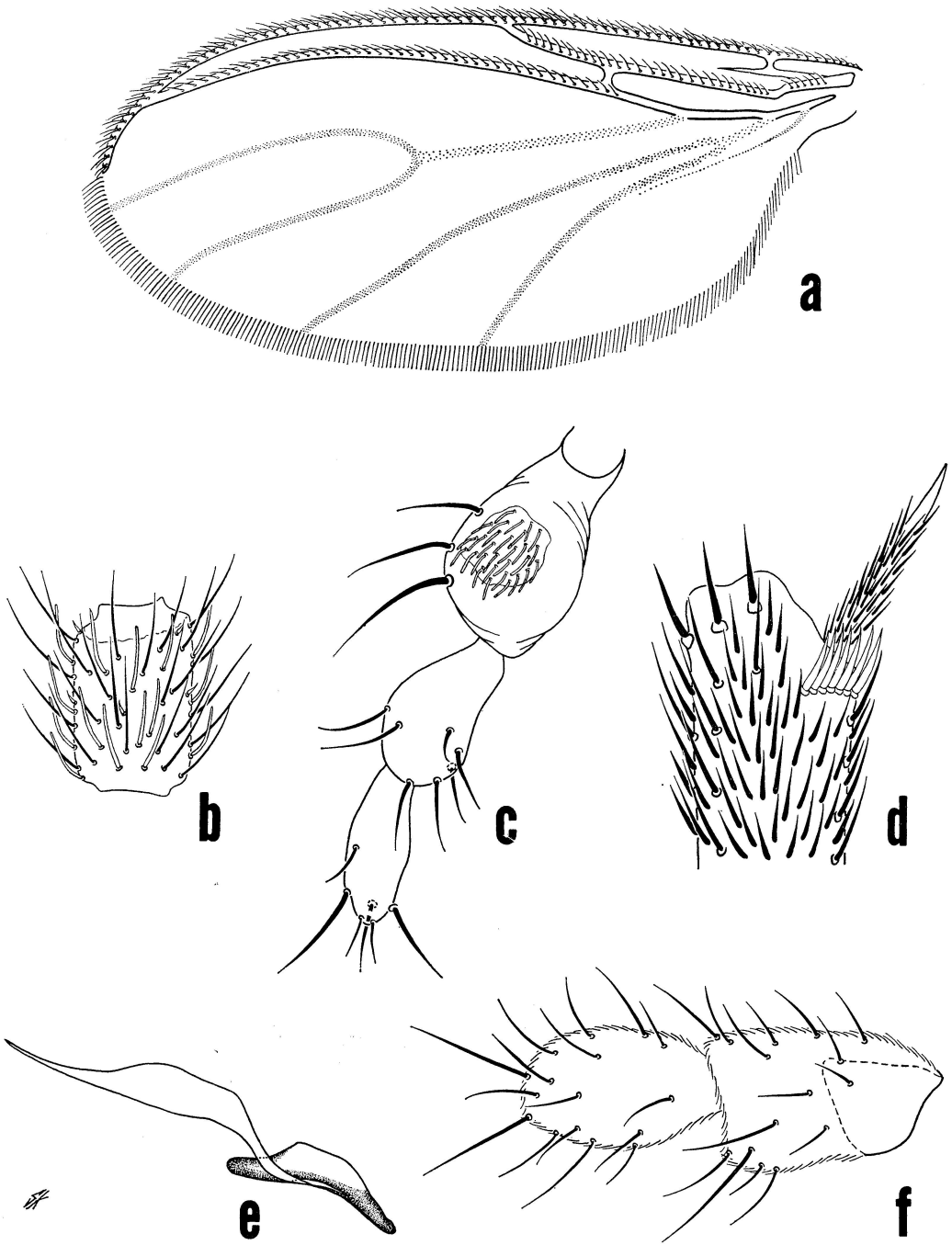


Fig. 2. *Bradysia* sp., ♀, a, wing; b, flagellomere 4; c, maxillary palpus; d, apex of fore tibia; e, vaginal furca; f, cercus.

Tussock grass near beach, SG #156D, 7.I.1964, Clagg; 1 ♀, Husvik, Stromness Penn., from Tussock grass near sea level, SG #122B, 22.XII.1963, Clagg; 1 ♀, Jorobihaan, Barff Penn., sweeping Tussock near beach, SG #191, 21.I.1964, Clagg.

Remarks: This series of specimens is very similar to *Lycoriella caesar* (Johannsen) specimens from the type locality, Brampton, Canada. In Tuomikoski (1960), both the South Georgia and the Canadian specimens key out near *fuorum* (Frey) and *auripila* (Winnertz). Frey (1954), in his study of Diptera from Tristan da Cunha, discussed a male he considered to be *Bradysia* (*Chaetosciara*) *mycorum* Frey, which he had previously described from Finland. Tuomikoski (1960) synonymized *mycorum* under *L. solani* (Winnertz) (for other synonymies of *solani*, see Tuomikoski, 1960: 84). The South Georgia and Canadian species are similar and possibly identical to *L. solani*; however, until they can be compared with Tuomikoski's material, they will be considered distinct.

**Bradysia sp.** Fig. 2, a-f.

♀. *Head*: Interfacetal hairs long and abundant; eye bridge broadly joined, 3 facets wide. Median ocellar bristles moderately developed; posterior vertex broad. Antenna: scape and pedicel with moderately developed, scattered setae; flagellomere 4 (Fig. 2b) about  $1.5\times$  longer than wide, with very short neck; flagellar hairs subequal to or slightly shorter than diameter of joint. Prefrons with 18–20 scattered setae, clypeus with 3 to 5 median setae. Labellum well developed. Palpus 3-segmented (Fig. 2c); segment 1 with 3–4 dorsal and lateral setae and with hyaline sensillae set in a shallow pit; segment 2 with 7 setae, segment 3 with 5–6 setae.

*Thorax*: Acrostichals and dorsocentrals weak. Scutellum with 4 strong and numerous weaker setae. Posterior pronotum bare; anterior pronotum with 4–5 well developed setae. Proepisternum with 8–10 weaker, median setae. Posterior mesoepimeron about  $1.6\times$  longer than wide. Postnotum bare. *Legs*: Fore leg ratio 26 : 28 : 11 : 5; hind leg ratio 35 : 40 : 16 : 7. Fore tibia without enlarged setae, fore tibial comb (Fig. 2d) single rowed, composed of 5–6 enlarged setae; mid tibia with some enlarged posterodorsal setae; hind tibia with enlarged posterodorsal setae along distal  $2/3$  and with some enlarged anterodorsal setae along distal  $1/2$ ; apex of hind tibia with 10 stout setae, spurs about  $1.3\times$  longer than diameter of tibial apex. Tarsal claws simple. *Wing* as illustrated (Fig. 2a); length 2.1 mm, width 0.9 mm. R-M index 1.8, C-M index 0.6.  $R_5$  ends opposite or slightly distad of  $M_2$ . Costa,  $R_1$ ,  $R_5$  and occasionally distal portion of r-m with macrotrichia, other veins bare; r-m 0.7 length of bM; Cu 0.6 length of bM. Haltere short with single row of dorsal setae on knob.

*Abdomen*: Tergal setae moderately developed, sternal setae slightly shorter. Terminalia: cercus (fig. 2e) normal, vaginal furca (Fig. 2f), stem inflated medially, arms join stem near posterior third.

♂. Unknown.

DISTRIBUTION: South Georgia I.

SOUTH GEORGIA I.: GRYTVIKEN PENN.: 1 ♀, Cumberland, East Bay, ex nest materia of *Phaebetria palpebrata*, SG #195C, 24.II.1964, Clagg; 11 ♀♀, SG #81B, sweeping grass 60–90 m, 75 ♀♀, SG #77A, from *Rostkovia*, sea level to 150 m, sweeping, 6 ♀♀, 15 ♀♀, SG #82A, sweeping short grass, 150 m, all 11.XII.1963, Maiviken, Clagg; 17 ♀♀, Maiviken, Tussock, 26.II.1964, Tilbrook; 70 ♀♀, King Edward Cove, sweeping *Acaena* near sea level, 12.XII.1963, SG #89, Clagg; 2 ♀♀, King Edward Pt., under paper sack in Tussock grass area, 150 m, SG #199G, 24.II.1964, Clagg. BARFF PENN.: all, Jorobihaan, Clagg—1 ♀, Tussock grass near beach, SG #182B, 18.I.1964, 15 ♀♀, sweeping Tussock grass, SG #191, 21.I.1964, 12 ♀♀, trap net series #4, sample #1, 10 m, SG #187B, 28.I.1964; 4 ♀♀, trap net series #4, sample #2, 10 m, 29.I.1964; 1 ♀, Hound Bay, Ocean Harbor, from moss dryer, SG #12D, 14.I.1961, Jones; 1 ♀, Hound Bay, 763 m, from dry scree, SG #13C, 14.I.1961, Jones; 3 ♀♀, Ocean Harbor, from antlers in Tussock grass, SG #11C, 14.I.1961, Jones; 15 ♀♀, Ocean Harbor Sta., sweeping Tussock near beach, SG #174, 16.I.1964, Clagg; 17 ♀♀, 1 L, 5 pupal skins, Ocean Harbor Valley, under moss and rocks, 150–300 m, SG #176D, 16.I.1964, Clagg; 5 ♀♀, Lonnberg Valley, from pond with hand net trawl, 150–300 m, SG #196C, 8.II.1964, Clagg; 21 ♀♀, Lonnberg Valley, sweeping short grass, about 150 m, SG #200B, 8.II.1964, Clagg;

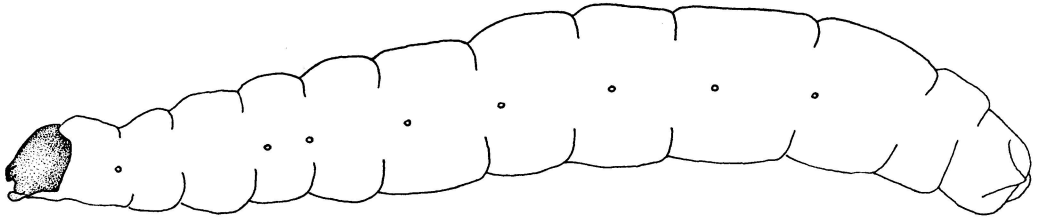


Fig. 3. *Bradysia* sp., larva, lateral view.

32 ♀♀, Sorling Valley, sweeping short grasses, sea level to 150 m, SG #190C, 21.I.1964, Clagg; 2 ♀♀, Usbas Valley, in reindeer carcass, SG #170, 16.I.1964, Clagg; 2 ♀♀, Collewik Hubs, Bay of Isles, from mosses, SG #8B, 2.I.1961, Jones; 2 ♀♀, Kelpbugten, from mosses, SG #16C, 2 ♀♀, Kelpbugten, from mosses and rock, SG #23D, both 15.I.1961, Jones; 1 ♀, South Georgia, SG #67.1E, 1.III.1961, Jones; 1 ♀, Hestesletten, from under wood, 29.II.1964, Tilbrook.

This species cannot be identified since the ♂♂ were not collected. It probably is an immigrant species. A small series of larvae, presumably of this species, was also collected and the gross appearance of the larva is shown in fig. 3.

#### LITERATURE CITED

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