

form, and *Contarinia negundifolia* Felt, a species which attacks the leaves while still within the bud. *Contarinia coloradensis* Felt infests and destroys the terminal buds of *Pinus scopulorum* in Colorado and occasionally appears to be somewhat abundant. Spruce buds are destroyed in Canada and probably in the Adirondacks by *Phytophaga tsugae* Felt and the terminal ones in part by *Rhabdophaga swainei* n. sp.

RHABDOPHAGA SWAINEI n. sp.

The midges described below were reared by Mr. J. M. Swaine, Ottawa, Canada, the latter part of May, 1914, from spruce bud galls. This species apparently confines its attack to the terminal bud. It is easily differentiated from other known species of *Rhabdophaga* by the characters given below.

Gall. The enlarged bud has a length of about 7 mm. and a diameter of 4 mm., the lateral scales being somewhat reflexed and the apical portion of the gall loose and open. It contains a central, oval cell about 1.5 mm. long.

Male.—Length 2.25 mm. Antennae probably nearly as long as the body, dark reddish brown, presumably with 14, and possibly with more, segments, the fifth with a stem about $\frac{1}{2}$ the length of the basal enlargement, which latter has a length $2\frac{1}{2}$ times its diameter. Palpi: first segment ovoid, the second $\frac{1}{2}$ longer than the first, moderately stout, the third $\frac{1}{2}$ longer than the second, more slender, the fourth $\frac{1}{2}$ longer than the third, slender. Mesonotum shining dark brown, the submedian lines sparsely gray-haired. Scutellum, postscutellum and abdomen dark brown, the latter sparsely haired. Genitalia reddish brown. Halteres, coxae and femora basally reddish brown, the distal portion of femora, tibiae and tarsi mostly dark brown; claws moderately stout, curved, minutely unidentate, the pulvilli $\frac{1}{2}$ longer than the claws. Genitalia: basal clasp segment moderately stout; terminal clasp segment rather short, swollen near the middle; dorsal plate deeply and triangularly emarginate, the lobes divergent, the outer margin tapering roundly to a narrowly rounded setose apex; ventral plate rather long, broad, deeply and roundly emarginate, the lobes short, stout, sparsely setose. Harpes broad, broadly rounded and thickly setose apically; style short, tapering, narrowly rounded distally.

Female.—Length 2.25 mm. Antennae probably extending to the second abdominal segment, sparsely haired, light brown. Mesonotum dull dark brown, the submedian lines sparsely fuscous haired. Scutellum dark brown, postscutellum a variable yellowish and dark brown. Abdomen dark brown, the margins and ovipositor reddish orange, the venter reddish brown. Halteres yellowish orange. Coxae yellowish brown; femora and