

Female.—Length, 1.2 mm. Head finely and rather weakly lineolate-reticulate, the frons along the inner eye-margins with a few scattered punctures and the occiput a little more coarsely reticulated than elsewhere on the head; antennal pedicel subequal to or very slightly shorter than the first funicle joint; ring-joints minute; first funicle joint a little less than twice as long as thick; second joint slightly longer than the first and a little more than twice as long as thick; third joint subequal to the first; club subequal in length to joints two and three of the funicle combined and a little broader than the funicle, fusiform, the joints indistinctly separated by shallow sutures, the apical joint smaller than the others and terminating in a short spine; thorax robust, scarcely longer than broad, the mesoscutum and scutellum finely lineolated, the latter convex, a little broader than long with the two dorsal grooves distinct; propodeum medially very short, without a median carina, with distinct shallow reticulate-punctate sculpture, the spiracles placed in a small and very shallow depression which is nearly smooth; pleura weakly sculptured; marginal vein of the forewing nearly twice as long as the short submarginal and terminating very slightly beyond the middle of the anterior margin of wing; stigmal vein about one-third as long as marginal; joints of hind tarsi all subequal; abdomen slightly longer than head and thorax combined, nearly as broad as the thorax, conic-ovate in outline, with faint reticulations above and below; ovipositor not exerted. Head and thorax dark metallic bluish, often almost black; antennae dark fuscous to fusco-testaceous, the scape frequently almost black; the femora at apex, all tibiae and the middle and hind tarsi, except apically, pale testaceous; front tarsi entirely and the apical joint of median and hind pairs fuscous; wings hyaline, venation dark brown; abdomen black with bluish or bronze reflections above.

Male unknown.

Type-locality.—Baltimore, Md.

Type.—Cat. No. 25592 U. S. N. M.

Host.—*Diarthronomyia hypogaea* F. Lw.

Type and twelve female paratypes mounted on card points and reared by C. C. Hamilton of the University of Maryland, December 30, 1921, from the above named Cecidomyid infesting chrysanthemums. Also nine paratype females from the same source mounted in balsam on a single slide.

THE IMMATURE STAGES OF HYDROPHORUS AGALMA WHEELER (DIPTERA).

BY CHARLES T. GREENE, *Bureau of Entomology.*

The large family Dolichopodidae is well represented in many collections by adult material, and numerous species have been described from all parts of the world. The immature stages however are almost unknown having been described in only about six species. The genus *Hydrophorus* is known principally from the north temperate zone and includes about fifty-five species. The adults are found about the edge of water and

frequently walk upon its surface. Up to the present time no immature stages have been known in this genus. The discovery of the larvae of the above species by Professor Charles H. O'Donoghue, of the University of Manitoba, Winnipeg, Canada, is therefore of uncommon interest. The material herein described was received from Professor O'Donoghue, who writes as follows: "The specimens were taken in water only a few inches deep on the north side of the spit where it joined the main ridge. The bottom here is a mixture mainly composed of sand with a little mud and owing to its sheltered position is practically undisturbed." An interesting thing about the larva is that the cell which it makes is too short to permit it to lie straight. Each of the cells opened contained one larva and the head was bent backward over the dorsum, the two ends nearly meeting. The two upper lobes at the caudal end of the larva can be folded down over the stigmal plates, probably to protect them. The long anterior spiracle of the pupa projects through the sand cocoon about the length of the last joint.

Hydrophorus agalma Wheeler.

(Plate 5).

Proceedings California Academy of Sciences, Vol. 2, No. 1, 3d Ser., 1899, p. 66, Plate 4, figs. 120, 121.

Larva (fig. 1).—Small, cylindrical, yellowish-white, nearly opaque; there are eleven segments of unequal length, last segment somewhat globular, and a small segment at the head which is very often retracted; cephalic end tapers slightly towards the head; caudal end has four lobe-like projections, two above and two larger ones below; the lobes are flat, fleshy, rounded and tapering slightly towards the apex; on the ventral surface there is an area along the apical edge of the last eight segments which is covered with short, pale yellow, chitinous pointed spines used in locomotion; the mouth hooklets (*cephalopharyngeal skeleton*) are large and heavily chitinized and retractile (fig. 1 d, e); the posterior end (fig. 1 b) has the appearance of a faint cavity; above its center and towards the outer edge are located the posterior spiracles; the spiracle is at the center of the base of the upper lobe; each spiracular plate (fig. 1 a) is chitinous, brownish-yellow, nearly round with a slight indentation on the upper, outer edge; the surface is flat with a dark brown area reaching the outer edge at six different places; the two upper lobes can be folded down over the spiracular plates; they are semi-transparent and the spiracles can be faintly seen in the lateral view.

Length, 6.5 mm., diameter 1 mm.

Berens Island, Lake Winnipeg, July, 1918, Prof. Charles H. O'Donoghue, Collector.

Pupa cells or cocoon (fig. 3). Cylindrical, a little longer than its diameter; made entirely of sand and held together by a transparent, colorless, gelatine-like substance; inside is a cell just large enough to hold the pupa.

Length, 7 mm., diameter, 4.5 to 5 mm.

Pupa (fig. 2).—Small, robust, yellow; anterior spiracles are quite long, slender,

three joints of equal length; first joint pale yellowish-white, swollen in the middle and tapering towards each end; second and third joints very slender, cylindrical, dark brownish-yellow, with a black band at the base; in the middle of the front of the head is a black, heavily chitinized tubercle (fig. 2 c) which is divided into four sharp points at the apex, the larger points below; on each side of the center is a very slender, small, cylindrical, yellow tube-like projection with a fine bristle at the apex; the head and all the thoracic parts are dark yellowish-brown; leg capsules are paler towards the apex. Abdomen is composed of nine segments, the apical one is very small; abdomen is a pale, whitish-yellow and tapers nearly to a point at the apex; on segments two to eight there is a transverse dorsal row of brownish-yellow, sharp-pointed, bristle-like spines; this row is slightly above the middle of each segment and the spines in the middle of the row are a little longer than those at the ends.

Length, 4 mm., diameter (at thorax) 1.5 mm.

THE ROLE OF THE TAXONOMIST IN PRESENT DAY ENTOMOLOGY.¹

BY A. B. GAHAN.

My first inclination was to entitle this screed "The Tax on Taxonomists," but lest some might interpret this title as pre-saging the advocacy of some new and radical form of revenue production, or still worse as a wail from a disgruntled systematist anent his own hard lot, rather than the cheerful ebullition of one thoroughly contented with his job, and who revels in the difficulty of it, the less dangerous but somewhat more inclusive title of the "Role of the Taxonomist in Present Day Entomology" was substituted.

It is not an easy matter for one working in a purely taxonomic field, and that a strictly limited one, to choose a subject for an address which will be of interest to the general membership of this society. Inured though I know it to be to varied brands of verbal bombardment, I have no desire to go down in the annals of the Society as the one who added the proverbial last straw. Bearing in mind this hazard it was not without considerable trepidation that I chose as my subject for this occasion the theme indicated by the title. If what I am about to say does not come up to expectations, I beg of you to place the blame upon the precedent which makes it necessary for a retiring president to deliver an address rather than upon the unlucky individual who happens to be the chief victim of that precedent.

A Bit of Speculation.

An entomologist may be defined as one who is interested in the study of insects.

It seems reasonable to suppose that man's first interest in

¹Annual Address of the President.