

THE EGGS OF *LUTZIA BIGOTII*, *BELLARDI* (CULICIDÆ).

BY ALLAN H. JENNINGS, ANCON, CANAL ZONE, PANAMA.

On May 30, 1908, while collecting along a rapid mountain stream on the Island of Caldera, Porto Bello Bay, Rep. Panama, I secured several masses of mosquito eggs, which subsequently proved to be those of *Lutzia Bigotii*.

They were taken from a small pool in the rocky bank of the stream, the water of which was supplied by the stream itself, the pool being nearly filled with vegetable matter consisting of dead leaves, twigs, petals of flowers, seeds, etc.

Nearly full-grown larvæ of *Lutzia* were present, as well as many of *Anopheles eiseni* and many of several species of *Culex*, none of the latter, however, being bred.

The eggs were cylindrical, about one thirty-second of an inch in length, as nearly as could be estimated (no means of accurate measurement being at hand), slender, and terminated in a nearly hemispherical head of the same diameter as the body of the egg, which, however, was drawn to a low point or apex. The body of the rod-like egg was of a pale yellowish-white, with a metallic reflection appearing almost golden in certain lights, while the apex or head, which was sharply defined, was of a pale blue colour.

The eggs were arranged in a double row, forming a raft or boat. The largest mass contained twenty-five pairs, but with nothing to indicate its original size. Several smaller masses were taken from the same pool, but whether they had formed a part of the same or another raft it is impossible to say.

The eggs adhered to each other rather tenaciously, and did not become separated by being poured into a collecting vial nor by the rather rough journey back to camp.

The "boat" floats low in the water, the rod-like portion being nearly submerged, only the "head" showing above the surface.

I should think that these eggs were laid during the night of May 28th.

At 8 p.m. on May 30th, or presumably 48 hours after being laid, hatching began, the young being easily identified, and showing the characteristic attitude and habits of the larva of this species. They immediately began preying voraciously upon each other, and materially reduced their numbers before the next morning, when they were separated.

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In hatching the young larvæ emerged from the bottom of the egg, the clear yellowish-white colour becoming dark and blackish and the cohesion of the empty cases being lost, the eggs fell gradually apart and the mass finally disintegrated.

The young larvæ were carefully separated and grew rapidly, increasing by the next morning fully 50 per cent. in length and doubling their size within 24 hours. The adults began emerging in ten days from date of oviposition, though an unavoidable lack of food material for a short time may have slightly lengthened the normal time of development.

TWO NEW SEED-INFESTING CHALCIS FLIES.

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Prodecatoma phytophaga, n. sp.—Female: Length, 2.4 to 2.7 mm.; abdomen, 1.2 to 1.3 mm.

Head and thorax densely umbilicate-punctate. General colour black; face, cheeks and a ring around the eyes light yellowish-brown; sides of prothorax, lateral angle of scapulæ, mesopleuræ and ventral side of abdomen more or less suffused with brownish; pronotum with two small brownish spots sometimes obsolete.

Head seen from above as wide as the thorax, concave behind, strongly convex in front, a distinct frontal furrow present, in which the front ocellus is placed; seen from in front a little wider than high; the eyes small and widely separated. Face with a system of fine ridges radiating from the clypeus.

Propodeum with a median longitudinal depression, broad and regularly concave; propodeum on the sides rugose-reticulate, within the furrow densely, finely and distinctly reticulate-punctate; anterior end of depression with two smooth submedian pits, posterior end with a semi-circular row of similar pits. Between this row and the insertion of the petiole there is a transversely striate elevation. No median carina present, except between the two anterior pits. Colour of propodeum black, except that in some specimens there is a testaceous streak on each side of median depression.

Antennæ dusky, under side of scape yellowish; club and scape of about equal length; pedicel short; funicle joints submoniliform, the first slightly longer than the others; club elongate-oval, obtusely pointed at tip, the last two segments not separated by a distinct suture. Coxæ black, in some specimens more or less yellowish; rest of legs dull yellowish;

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