

*brassicæ* L., *Myzus persicæ* Sulzer and *Macrosiphum pisi* Kalt. colonies were searched frequently, but in vain, for larvæ and pupæ of the syrphid.

### Stages and Parasitism.

At El Centro 8 ova of *fracta* deposited March 22nd hatched 4 in two, 4 in three days, and two resultant larvæ pupated after a stage of 11 and 12 days; one individual emerged as an adult fly 8 days after it pupated. Six other individuals varied in the pupal stage from 5 to 12 days in April. From March 22 to April 30 the minimum daily temperatures ranged from 50 to 63 F., and the maximum from 71 to 96 F.; the average daily minimum was 58 F., and the average daily maximum 86 F.

Between the middle of February and the end of April 45 large larvæ and pupæ of *Allograpta* were collected in the field; of these 12 died in the pupal stage, 14 yielded mature *A. fracta*, 1 yielded mature *obliqua*, and 18 yielded parasites. From two of the parasitized puparia several imagoes of *Pachyneuron* issued, and from the other 16 puparia single Ichneumonid adults emerged. Most of the latter were *Eiplazon laetatorius* Fabr., adults of which were commonly observed flying about the fields. The puparia of the parasitized flies turned brown almost immediately after pupation. Within the puparia the parasites developed a little more slowly than the hosts.

### DESCRIPTIONS

The egg is white, microscopically sculptured, elongate oval, in length about .85 mm.; in diameter about .25 mm.; deposited by the parent beside a colony of aphids. Eggs observed on barley plants were all placed so that their long axis was aparallel to the long axis of the blade.

At birth the larva is nearly cylindrical, widest at the middle, whitish in colour, the mouth-parts gray. Each segment bears small, fleshy, conical elevations. The posterior respiratory tubes are short, not fused, and divergent; they are whitish, tipped with light brown. The transverse folds of the body are faint. After feeding the colour of the larva during the first instar becomes grayish white, the area about the dorsal vessel pink.

After the first moult the larva measures about 4.5 mm. in length, and 1 mm. in breadth. The green colour which persists until the pupa is about to give forth the imago is now obvious. Each of the fleshy conical elevations of the integument is surmounted by a short pale bristle. The posterior respiratory tubes become lengthened, basally fused mesad, divergent at the apices, twice as long as their combined basal width, pale green tipped with brown. For a few days after the first moult the pink dorsal stripe is apparent, gradually fading away. The fat bodies show through the integument as two narrow whitish stripes running longitudinally one down either side of the narrow dark dorsal vessel.

The full-grown larva is 8 to 9 mm. in length, 2 mm. wide, and about 1.2 mm. in height; elongate oval, somewhat flattened on dorsum, the anterior end drawn out to a point when the insect extends itself; integument finely papillose, transversely wrinkled, the fleshy conical elevations surmounted with pale spines, colour green, with two narrow whitish longitudinal stripes flanking the dorsal vessel, posterior respiratory tubes fused mesad, .5 mm. long, the combined base about .27 mm. wide. The structure of the stigmal plates is very similar to