DESCRIPTION OF THE PREPARATORY STAGES OF PHY-CIODES CARLOTA, REAKIRT (CHARIDRYAS ISMERIA, SCUDDER).

BY WM. H. EDWARDS, COALBURGH, WEST VA.

Egg.—Pear-shaped, broad at base and rounded, tapering rapidly to a small, slightly depressed, truncated summit; marked by about twenty-four low, vertical, not sharply defined ribs, which extend a little more than half way from the top to base, but vary in individuals; below the ribs to base thickly covered with shallow and irregular (both as to size and shape) indentations, not separated by definite ridges or threads; colour, when laid, pale green. Duration of this stage, nine days.

Young Larva.—Length, at one day from the egg, .08 m.; cylindrical, even, each segment rounded, with black hairs or processes rising from concolored minute tubercles, arranged as in *Tharos* and *Nycteis*; colour green with a tint of brown; head scarcely broader than 2; obovoid, bilobed, black-brown, with many short and curved black hairs over the face. Duration of this stage, between two and three days.

After first moult: length, at one day, 12-inch; each segment rounded; colour variable, either dark-brown altogether, or light yellow-brown with a darker sub-dorsal stripe; under side, feet and legs, yellow-brown; armed with spines as in the genus, these being small, conical, shining black, with black bristles about the sides, and one larger at the top; head nearly as before. Duration of this stage, three days.

After second moult: length, at one day, .18 to .20 inch; shape as before, the spines somewhat longer in proportion; colour variable, some being wholly yellow-brown, some light-brown (not so yellow), and both these types sometimes have a dark-brown sub-dorsal stripe; some are all dull green, and some are pale black, a little mottled with gray; the spines are black and rise from small shining black tubercles; head as before. To next stage, from two to three days.

After third moult: length, at one day, .3 inch; same shape; the lower lateral spines brown-yellow, the upper rows black, and in shape as before; colour variable, some being light yellow-brown, with a dark subdorsal stripe, some brown-black, with a patch or red-fulvous on dorsum of 2; others have a mid-dorsal row of such patches, one to each segment; others are reddish-brown; in all the lower half of the side is different from the upper part, being either greenish-brown, mottled more or less with whitish, or light brown and so mottled, but without green; head as before,