
TRICHOGRAMMA PRETIOSA, RILEY: COLOUR VARIATION IN THE ADULT, WITH DESCRIPTION OF A NEW VARIETY.

BY A. ARSENE GIRAULT, WASHINGTON, D. C.

In the original description of this insect,* Dr. Riley says that on account of its uniform pale yellow colour it is easily distinguished from *Trichogramma minutum*, Riley, which is black. Unfortunately, this does not hold.† Out of the hundreds of specimens of *pretiosa* reared during the entire season of 1904, at Paris, Texas, from the eggs of *Heliothis obsoleta*, Fabricius, there appeared from a lot of host eggs on Sept. 20th a number of dark individuals, which could easily have been mistaken for a distinct species. Previous to this, all of the individuals had been normally coloured.

The origin and subsequent history of this variety is as follows:

On the 10th, 11th and 12th of September a generation of 11 males and 22 females, all normally coloured, emerged in confinement from the host eggs on tomato leaves brought in from the field. Sixty-four eggs from moths in confinement were then supplied them on Sept. 11th, and freely parasitized. As a result, there emerged from these parasitized eggs a second generation of 53 males and 58 females, plus 11.

This second generation varied considerably, some of the individuals were very dark, others wholly black. The variation consisted in very light brown to a deep black, and gradations were present from one to the other. In the latter, the black first appeared in the abdomen, and as the variation became greater extended to the thorax and head, until the whole body became black. In this generation the variety was present in the proportion of 1 to 7. Both the typical specimens and the variety were freely copulating with each other.

The adults of this second generation were supplied with 48 fertile host eggs from moths kept in confinement, on Sept. 21st. Oviposition took place, and as a result a third generation began to appear on Sept. 30th. This generation consisted of 47 adults, of which 7 males and 7 females were the black variety.

*CANADIAN ENT., 1879, XI., pp. 161-162.

†Dyar, 1893, CANADIAN ENT., XXV., p. 236, mentioned that the males of *pretiosa* are often black on the dorsum of the abdomen.

March, 1906

In turn, the third generation was allowed to parasitize numerous hosts from moths in confinement during the 1st of October. As formerly, the dark and light specimens were intermingling. The resulting fourth generation emerged on Oct. 14th, consisting of 25 specimens, including 5 males and 7 females of the black variety.

Eight males and 16 females of the fourth generation parasitized on Oct. 14th hosts from the field. The resulting fifth successive generation began to appear on Nov. 2nd, when a single specimen emerged. Others emerged at intervals up to Nov. 15th. There were 4 females, 3 males, plus 7, all the dark variety. Three females and two of the males were totally black, one male dark, and the remaining specimens were dusky.

A supplementary fifth generation was obtained from a single black female of the fourth generation, which parasitized five hosts on Oct. 14th.

The 9 descendants of this black variety were all black; there were 5 males and 4 females. They appeared on Nov. 7, and later.

Because of the lateness of the season, the parasites began to hibernate, and the work was discontinued. As it became colder the proportion of black individuals increased.

During October and early November *pretiosa* reared from hosts collected from the leaves of corn, included many dark specimens. In fact, the majority were moderately dark, a few entirely black, while many were gradations, having the abdomen only black. Three specimens issuing on Nov. 4th from a single host egg from the field, were similar in colour, the head and thorax yellow, the abdomen black. Thus the variation was not confined to the individuals kept in confinement. It appeared to be quite general. The variety may be named as follows:

Trichogramma pretiosa, Riley, var. *nigra*, n. var.

Like the type. The whole body uniformly black, excepting the antennæ, eyes, legs and wings. Gradating specimens of all degrees present.

From many males and females reared from the eggs of *Heliothis obsoleta*, Fabricius, at Paris, Texas, during September, October, and early November, 1904, in connection with the Cotton Bollworm Investigations, Bureau of Entomology, U. S. Department of Agriculture. Preserved specimens in balsam, therefore no type.