

species of *Phora* in the south, when the food gives out even when larvæ are apparently not nearly full grown, they transform successfully, and the resultant adults are much smaller in size than normal individuals.

—Dr. Gill said that he had noticed similar extraordinary variations in size in the common house-fly, and stated further that Salamanders had been found to develop more rapidly than usual in pools which were drying up. He also referred to the relation between reduction of heat and light, and retardation of development in the Amphibia and corresponding acceleration of development by the increase of heat and light, the same relation holding in Pisciculture and elsewhere. He also referred to abortion in the case of injury in the mammalia as bearing some relation to the observations described by Mr. Howard.

—Mr. Hay said that he had noticed that when food was lacking with crayfish or when they were thrown under normal conditions in large numbers in an aquarium profuse conjugation was immediate result.

—Mr. Benton said that when a queen bee was about to be replaced on account of exhausted vitality and failure to keep up the stock, and the production of a new queen is already begun, she will often "take a spurt" and in the last two weeks of her life will lay great quantities of eggs.

—Dr. Gill remarked that the sexual appetite is frequently increased by under-feeding rather than by over-feeding.

The final paper of the evening was by Mr. Dyar and was entitled:

#### ON THE SPECIFIC DIFFERENCES BETWEEN *ALYPIA OCTOMACULATA* FAB. AND *A. LANGTONII* COUP.

By HARRISON G. DYAR.

I am not aware that the male of *Alypia langtonii* has been described. Since it is practically indistinguishable from *Alypia octomaculata*, captured specimens are naturally referred to that species, so that all specimens in collection under the label are females. In the last published account of the species (Neumögen and Dyar, Journ. N. Y. Ent. Soc., II, 22, 1894), only the female is described. I have given a description of the larva (Can. Ent., 27, 278, 1895), and showed the differences between it and that of *Alypia octomaculata*, which are considerable, as is evi-

dent from the specimens which I exhibit before you. The habitats of the species are different. *Alypia octomaculata* occupies the Atlantic States from New York to Texas, and, living upon the grape and woodbine, is frequently common in our large cities. In fact, it is far commoner in such places than in the country districts. *Alypia langtonii* is found in northern New York, the mountains of New Hampshire, Canada to the Pacific Coast, and the mountains of California. It lives on the fireweed and is a wild species, found mostly in the woods remote from habitations. If the habitats of the two species overlap, it is not so to any marked extent. The female of *Alypia langtonii* differs obviously from that of *Alypia octomaculata* in lacking the basal spot of the hind wings completely or nearly so. In *octomaculata* the basal spot is constant, the outer spot occasionally disappearing. The males of the two species are alike in markings. It has been suggested to me that this was a good case to resort to the male genitalia, the expectation being that these organs would show marked differences. Such, however, is not the case, as the accompanying slides and drawings show.

The correlation of these species suggests the following questions:

1. Why should two species, obviously distinct, show no marked differences in the male genitalia when others are separable practically only by this character?

2. What are the causes determining the choice of food plants in two closely allied species, recently diverged from a common stock? In this case the woodbine and fireweed seem to be more nearly related in some way than their botanical affinities would indicate. It happens that two other closely allied species, *Eudryas grata* and *Eudryas unio* have selected these same plants as their respective foods.

In briefly discussing the paper D1. Gill remarked that the similarity in the males and differences in the females noted in this species is entirely opposed to the rule which holds in birds where the females resemble each other and the males possess the sharpest differentiating characters.

—Dr. Dyar said that the instance was unusual in insects, the males as a rule being more distinct than the females.

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The 156th regular and annual meeting of the Entomological Society of Washington, was held at the residence of Dr. L. O.