

***Perdita punctifera* n. sp.**

Female. Runs in my table in Proc. Phila. Acad., 1896, to *P. mentzelia* Ckll., to which it is nearly related, differing by the white lateral face marks being longer, and sharply pointed above, though notched on inner side (they are like those of *P. pallidior* Ckll.); the clypeus with a small white spot, more or less distinctly triangular, on its upper margin; the light color of the antennæ creamy-white instead of yellow. From *P. pallidior* it is easily known by the heavily banded abdomen and largely darkened legs, both characters being as in *mentzelia*.

Type: Cat. No. 16844, U. S. N. M. Three specimens collected on August 27.

Certainly this insect is very close to *P. mentzelia*, and from its combination of characters one might suppose it to be a hybrid, *mentzelia* × *pallidior*, were those species present. Further investigation of the series of species to which this belongs will, I believe, elicit some facts of great interest. The differential characters may behave in a Mendelian manner in hybrids, and some of the apparently distinct species may represent the results of earlier crosses.

The *Thurberia* bees certainly do not show any great degree of modification or specialization. The impression gained is that *Thurberia* may have entered the region within comparatively recent times, its bee-fauna being apparently in the earliest stages of differentiation. It is singular that we do not find the bees which habitually occur on other Malvaceæ in the southwest.

—In connection with the papers on the *Thurberia* weevil Mr. Barber spoke of two of his breeding experiments and has furnished the following abstract of his remarks.

**ON INTERSPECIFIC MATING IN PHENGODES AND
INBREEDING IN EROS.
(COLEOPTERA.)**

BY HERBERT S. BARBER, *Bureau of Entomology.*

The results of an experiment started in 1912 show some contrast to the results of Messrs. Coad and Pierce in interbreeding the *Thurberia* and Cotton Boll Weevils, but the writer does not believe that the mere interbreeding of forms proves their specific identity. A few females of a species of *Phengodes* were received through Mr. Charles Schæffer from Long Island, and there being no males of the same species at hand were confined with males of our local species *P. laticollis*. The two species appear to live in different types of

country, and to be easily distinguished in the male, female and larval stages. Several males were confined, one after the other, with each female. Usually, when a male *laticollis* is introduced into a jar with a female of its own species, mating occurs very quickly, but with the females of this other species most of the males failed to recognize the female, and only in a few instances displayed sexual excitement, which was of short duration except in two cases. One of these males attempted copulation a few times without success, while the other succeeded after many fruitless attempts, but displayed great difficulty in disengaging himself afterward. This female that had been fertilized laid eggs in due time. The other was restless and abnormal in actions, but laid three infertile eggs, and finally died. All the other females died without laying eggs. Of the 48 eggs laid by the fertilized female, many were infertile. In others the embryo developed but failed to issue, and only ten larvæ hatched. Of these most were very badly deformed and unable to feed. Two of them, however, fed and have lived fifteen months in confinement. They display the specific characters of the male parent. It appears from the above that in addition to the isolation of the two species by habitat the species are separated by (1) lack of sexual attraction, (2) mechanical difficulty in copulation, and (3) in some manner the fertilization is faulty and results in gross abnormalities. The writer believes that these two forms are very distinct species, but that chance migration of the males may, very rarely, result in interspecific unions, with a slight chance of the survival of hybrid offspring which would naturally be reabsorbed in the local species if it should prove to be fertile.

The question of sexual attraction even within a single species is in itself a very interesting and important question. We are, of course, utterly unable to detect the difference in odors or other factors by which one sex recognizes the opposite sex of its own kind, and is stimulated to sexual excitement while with another species the stimulus may be absent or repulsive. Some groups are sexually mature as soon as they have hardened after issuance from the pupa, and mate with their own brothers or sisters, but most appear to have some obstacle that prevents breeding. The first group are usually somewhat degraded and are inclined to form numerous local races or color forms. An example of this group is *Eros humeralis* of which the following brief observation is significant:

From a colony of larvæ found last spring (1913) in a rotten sycamore log, the individuals were isolated in plaster cells where they pupated and matured. The adults showed no desire for migration but lay quiet in the cells. A male was introduced into a cell

with a female and immediately mated. Next day he was placed with another female and immediately mated. Both females deposited eggs, and the young began feeding in the wood, but the female parents at no time displayed a desire for a migration flight. It is believed the colony was originally from a single set of eggs and that more than two generations would have been passed within the log in nature.

In the second group the "provisions" against, or obstacles to inbreeding assume varied forms. Usually the ratio chance of unions between brothers and sisters to unions between unrelated individuals, is so low that the offspring would be quickly reabsorbed into the normal form, but the details of habit that control this low percentage may be varied. Chief of these is the instinct for migration, which appears to precede sexual maturity in many social insects, but there appears to be also a remarkable difference in time of development of the opposite sexes among the progeny of a single parent of some species. The writer believes from preliminary experiments, that in *Phengodes* the males develop after two years in the larval stage, while their sisters must spend three or more years as larvæ. In this genus the males are strong migrants while the females must lay their eggs where they have transformed. The writer has shown that in *Micromalthus* the males issue about two weeks after their sisters are out, but subsequent observations indicate that males issue abnormally or irregularly at times. Attempts to mate specimens from different colonies in the breeding cells all failed, and as both males and females manifested only a desire to migrate from the time of their issuance almost until death, it is believed sexual maturity will develop only after such migratory flight.

ON THE PROPER GENERIC NAMES FOR CERTAIN THYSANOPTERA OF ECONOMIC IMPORTANCE.

By J. DOUGLAS HOOD, *United States Biological Survey.*

The tobacco thrips, the pear thrips, and the orange thrips—species responsible in the United States for damage amounting to many thousands of dollars every year and each the subject of several published accounts—are at present wrongly placed in the genus *Euthrips* Targioni-Tozzetti by all North American workers. The purpose of this paper is to correct the generic positions of these and other allied species and to direct attention to several papers which have been overlooked in America, that the proper names for these insects may be used in the rapidly-growing economic literature.