

her wise disposition of her eggs so that the larvæ cannot interfere with each other's supply of food. May not this little insect while fluttering around within the flower, seeking a place to deposit her eggs, accidentally become laden with pollen? Then, when her work is done and she ascends the stigma to regale herself with its sweets, she brings her pollen-laden antennæ in contact with the stigmatic surface, thus unwittingly performing her part in this life drama.—J. M. MILLIGAN.

THE DISTINCTIVE FEATURES OF APPLE FLOWERS. — We make a brief abstract of an essay on this subject by Prof. W. J. Beal, of the Michigan Agricultural College. The essay is contained in vol. iii of the Report of the State Pomological Society. Each flower bud of the apple contains five to eight flowers. The centre flower opens first, and is often provided with poor anthers; it is most likely to set for fruit so far as the author has observed. The immense number and often very great similarity of varieties of apples make it often difficult to recognize and define them by the fruit alone, as is mostly done. No pomologists that he could hear of have made any use of the flowers of apples as a means of classifying them. He says, "the petal of the red astrachan is one and a fourth inches long by three-fourths broad. It is ovate. The petal of a Tolman Sweet is twelve-sixteenths by seven-sixteenths of an inch, and is elliptical. Its length is about the breadth of the red astrachan. The petal of the Porter is thirteen-sixteenths by twelve-sixteenths and is nearly orbicular. It is also cordate at the base, different from the other two varieties. Large numbers of flowers were examined on several trees of each, except the Porter. The petal of the sweet bough is seventeen-sixteenths by fourteen-sixteenths of an inch. It is broadly ovate, with a stem or claw longer than either of the other three varieties mentioned. Other varieties were examined with similar results. The styles also vary much in size and in other respects in different varieties. They are usually united about half-way, and mostly smooth for the greater part of their length. In the Tolman Sweet, the styles are united in one small column for half their length, then appear larger. The upper half of the styles are closely covered and bound together by a dense woolly substance, unlike the styles of any other variety examined. The sepals also differ considerably in different varieties." The author is confident that much use

can be made of the flowers in defining varieties of apples. This may seem a simple matter to botanists, but it must be new to most pomologists, for some of the best of them say there is little difference in the flowers of apples.

ZOOLOGY.

NOTE ON THE SYNONYMY OF *TELEA POLYPHEMUS*.*—In a paper read before the Royal Dublin Society, March 18, 1872, Mr. W. F. Kirby prefers the name *paphia* L., for our common species of *Telea*, and says: "It has, I think, been questioned whether Cramer's *Attacus polyphemus*, from Jamaica, is identical with this common species." It is Dr. Packard who writes of Cramer's figures under the names "Cecropia," "Polyphemus" and "Promethea," as received from the West Indies, that they "would lead one to suppose that they represented distinct species," from those we know from the United States under these names (Proc. Ent. Soc. Phil., 1864, p. 381).

Having received *Telea Polyphemus* from Matamoras, collected by my brother, Capt. F. Harris Grote, and it having been recorded from California by Mr. H. Edwards, we can assign a wide range to this species. Farther to the southward it may be replaced by the Mexican *Telea Montezuma* Grote, Trans. Am. Ent. Soc., 2, p. 118. My studies of this Bombycid lead me to believe that the typical *Attaci* are entirely unrepresented in the West India Islands. The positive demonstration of this as a fact would be highly interesting as throwing some light on the geological history of the Islands. I am, then, inclined to regard Cramer's habitat for our *Attaci* as erroneous, and to account for the discrepancies of his figures, by an infidelity of execution.

I do not find any description of a species of *Attacus* under the name *Polyphemus* by Linné. The first description seems to be that of Cramer, and the species is afterwards described under the same name by Fabricius (*Species Insectorum*). This corrects the synonymy proposed by Dr. Packard, who cites Linné as authority for the species, referring to the "*Syst. Nat.* (1767)."

Linné describes his *B. paphia* first in "*Syst. N. X.*" 1758, as from "Guinea," p. 496, No. 4, and cites "*Petiv. Gazoph.*" tab.

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