

## THE FERTILISATION OF CACAO.

The number of Cacao pods formed on a tree is very much out of proportion to the number of flowers produced. In Dominica, West Indies, there is formed but one pod to every two hundred flowers. To ascertain why this is so, Mr. G. A. Jones has had plants under observation in that island, but without reaching a final conclusion. This, however, was ascertained that if the common red ants which tend green fly about the flowers are kept away, no pollination at all results. The criticism which comes to the mind on reading the remarks of this observer, is that the pollination only takes on one flower out of every two hundred; and that positive evidence is required to prove that the red ants have anything to do with the fertility of the flowers.

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## CAPRIFICATION IN MALAYA.

A paper in the Philippine Journal of Science, viii., section D., No. 2, (1913) p. 63, by Mr. C. F. Baker, on the fertilisation of the Philippine fig—*Ficus nota*, Merrill, is of great interest. As is usual in fig-trees there are produced on certain sterile trees, figs holding gall-flowers associated with male flowers, wherein the fertilising fig-insects breed; and there are produced fertile figs on other trees, to which the fertilising insects bring the pollen from the sterile trees. The multiplication of the insects, of which on *Ficus nota* there are no less than seven species, goes on all through the year; one insect is a *Blastophaga*, similar to that which fertilises the Smyrna fig. "If a large mature caprifig (gall-fig) be opened, the walls of the interior are found to be thickly massed with the densely packed brown galls, produced from the modified ovaries of the infertile flowers" . . . . . "In due time from certain of the galls appear numbers of queer clumsy wingless yellow insects, the males of the *Blastophaga*. Immediately after they emerge they turn their attention to gnawing small holes in the still unopened galls; this—their quest for the female—seems completely and continuously to occupy their attention. Many times holes are made, then immediately deserted," if the quest has been fruitless. These small holes are made at any accessible point on the surface of the gall. In case the gall happens to contain a female *Blastophaga*, the tip of the male's abdomen which is closely recurved under the body and projects forward between the fore legs and just beneath the mouth, is introduced into the gall without any change in general attitude of the body of the male, and copulation with the imprisoned female takes place . . . . . Copulation accomplished, the males make no attempt whatever to enlarge the minute hole made for this purpose, "but leave the female to gnaw her own way out, which she