THE VISITS OF INSECTS TO DIFFERENT COLOURED FLOWERS OF *LANTANA CAMARA* L.

Lantana camara L. exists in two varieties, one in which the flowers contain yellow pigment, and the colour changes from yellow to orange as red pigment develops, the other in which yellow pigment is absent, and the flower colour changes from white to pink. I hope to investi-

gate the genetics of this difference. Meanwhile, as mixed populations are very common, it seemed worthwhile to find out whether mating was at random in nature. From 29th May to 5th June 1958, I watched three plants with yellow pigment and three without it in the morning from 8 a.m. to 9 a.m. The only insects seen visiting the flowers were the Lepidopteran species *Precis almana* L. and *Catopsilia pyranthe pyranthe* L. I often noticed that more than one of the latter species visited the plants at a time.

TABLE I

Numbers of insect visits to flowers of Lantana camara L.

	Butterfly	No. of visits to red-yellow flowered plants	No. of visits to white-pink flowered plants
I	*Precis almana* L.	12	0
II	*Catopsilia pyranthe pyranthe* L.	2	25

The numbers of visits are given in Table I. With two exceptions, each species remained true to one variety.* In so far as these species carried pollen from one flower to another the two varieties were almost endogamous. It is of course possible that at other times of year there may be much more crossing. However, if one of the two varieties of *Lantana camara* L. is recessive to the other, a population must contain much fewer heterozygotes than the number calculated if matings were at random.

There is plenty of evidence[2,3] that a Lepidopteran species may prefer one colour to another, and that this preference varies between species. And there is evidence[4] dating back for over 2,000 years that insects distinguish between different species. So far as I know, however, this is the first evidence that two different insect species each prefer one of two varieties of the same plant species. The observation has several interesting evolutionary consequences. The relative abundance of the two insect species might determine the relative abundance of the two colour varieties in a given area and perhaps conversely. And selection by insect pollination offers a possible method by which one species could give rise to two species.

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* Fisher's[1] exact method shows that the probability that this selectivity in visiting should be due to chance is $2{\cdot}327 \times 10^{-8}$.

1. Fisher, R. A., *Statistical Methods for Research Workers*, 1948, Oliver & Boyd, London.
†2. Ilse, D., *Ueber den Farbensinn der Tagfalter. Zeitschr. Wiss. Biol. Abt. C. Zeitschr. Vergl. Physiol.*, 1928, **8** (3/4), 658-92.
†3. —, *Ueber den Farbensinn der Tagfalter. Forsch. u. Fortschr.* (Berlin), 1929, **5** (34), 397-98.
4. Darwin, C., *The Effects of Cross and Self-fertilisation in the Vegetable Kingdom*, Murray, London, 1876.

† Seen in the abstract form.