

EMERGENCE AND LONGEVITY OF *CATOCALA FRAXINI* (NOCTUIDÆ)

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There is a gradually increasing amount of information becoming available on the periodicity of pupal emergence in insects. Lepidoptera appear to emerge at a set time of day which varies from species to species and may be either a short and fairly sharply defined period or an extended time of twelve hours or more. In many cases the time of emergence is governed by the preceeding conditions of light and darkness. Much of the available information has been briefly summarised by PALMEN (1955). The longevity of comparatively few species of adult Lepidoptera is known. It would seem useful therefore to put on record my own observations on the emergence and longevity of *Catocala fraxini* L.

The observations were made over a period of three years, on 20 pupæ in 1955, 63 in 1956, and 58 in 1957. All these pupæ emerged between 7:00 p.m. and 8:30 p.m. Greenwich mean time. An account of the breeding conditions under which the larvæ were raised and the pupæ kept has been described in an earlier paper (Gardiner, 1956). It is perhaps best, however, to restate here that this was in an unheated wooden shed, which while getting rather warmer than the outside temperature when the sun was shining, otherwise gave natural conditions of light, temperature and humidity.

There have been two earlier observations on the emergence of *fraxini*. HOWARTH (1950) states that all his specimens (a total of 42) emerged after 10:30 p.m., while MORLEY (1950) had one emerge at 9:30 p.m. and 11 between 9:30 and 10:30 p.m. Neither of these authors however states which time system he is using. On the reasonable assumption that it be British summer time my results are in agreement with those of MORLEY and earlier than those of HOWARTH. It seems clear from these results that *fraxini* emerges over a short period of about an hour and a half just after the onset of dusk.

In 1956 and 1957 observations were kept on the period over which the brood emerged. In 1956 63 specimens emerged between August 7th and September 5th. In 1957 58 specimens emerged between August 2nd and 26th. The pattern of emergence for the year 1957 is shown in fig.1, which also shows the rate of death of the specimens for 1957 when

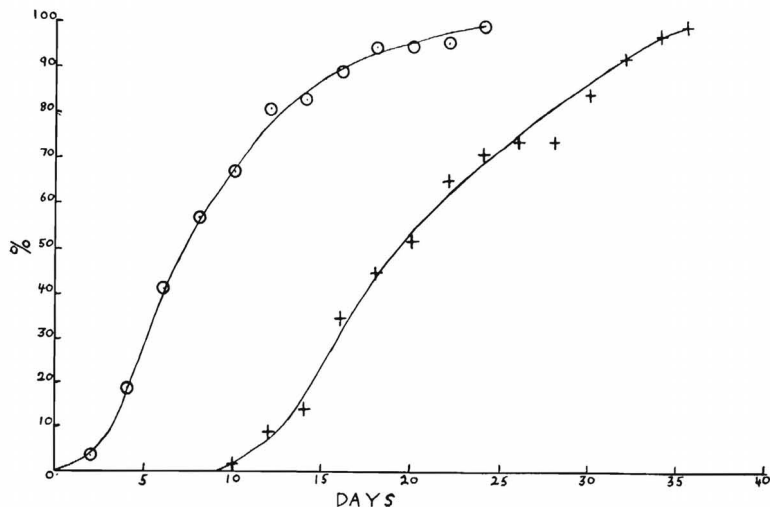


Fig.1. Graph showing the emergence (o-o) and death (+-+) of *C. fraxini* in 1957.

all were kept. The average longevity was about 12 days. In 1956 only a total of 22 specimens were kept. Of these, 12 had an average life of 14 days. The remaining 10, however, lived on for an average of 30 days, and one female lived for a total of 55 days.

References

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