

regalis and its other host plant species are warranted to test this hypothesis.

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DOUBLY OVERWINTERING *CITHERONIA REGALIS* FABRICIUS (LEPIDOPTERA: SATURNIIDAE)

In 1975 I reared 94 larvae of *Citheronia regalis* Fabricius which overwintered successfully. Among these were 50 males and 44 females. In 1976, many eclosed, but 18 males and 5 females remained dormant. This represents 36% of the males and 10% of the females, or 24.5% of the total sample.

Later, in 1977 I secured two matings between doubly overwintered moths. From ova of those females, I reared 41 larvae, the pupae of which were still viable in the spring of 1978. I could now observe whether or not the tendency of these pupae to remain in diapause over their first summer had been reinforced by the selective matings of their doubly-overwintered parents.

The pupae consisted of 20 males and 21 females. Five of these died before emergence. Among these, two males and one female developed but failed to eclose, while one male and one female showed no signs of metamorphosis. The five dead pupae were excluded from the data.

Of the remaining 17 males, 15 emerged in 1978, with only two (11.8%) remaining in diapause. Of the 19 females, 16 emerged, and only three (15.8%) remained in diapause. Thus of the total population 13.9% remained in diapause.

These observations do not support the hypothesis that double overwintering is under simple genetic control. I could not discern any other determining conditions for the phenomenon, though double overwintering must obviously have survival value for the species by carrying it through occasional catastrophic years.

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