

Moorestown, N. J. The cocoons were spun about September 2 and were shipped 2 weeks later. The experiment was begun on September 21. Fifteen *A. luna* each were exposed to 0-, 11-, 16-, and 24-hour photophases at 24–25° C using the same apparatus described above. The pupae exposed to the 16-hour photophase emerged in an average of 69 days and those exposed to the 24-hour photophase emerged in an average of 152 days. At the conclusion of the experiment (200 days), 67% of the pupae exposed to the 11-hour photophase and 17% of those kept in darkness had emerged (Fig. 1).

The difference in the number of days required for emergence of the adult moths from previously chilled pupae under the various photoperiods does not appear to be significant, and these experiments therefore suggest that day-length has little or no effect on the termination of diapause of overwintered *A. luna* pupae. On the other hand, the difference in the time of emergence of the unchilled pupae is significant, and we may conclude that photoperiod does play an important part in the termination of diapause of such pupae.

These results are interesting because they suggest that in *A. luna*, photoperiod is important in the termination of diapause of unchilled pupa but not of previously chilled pupae, whereas Williams and Adkisson demonstrate that in *A. pernyi* photoperiod affects the termination of pupal diapause of both chilled and unchilled pupae.

Literature Cited

- WILLIAMS, C. M., AND P. L. ADKISSON, 1964. Physiology of insect diapause. XIV. An endocrine mechanism for the photoperiodic control of pupal diapause in the oak silkworm, *Antheraea pernyi*. Biol. Bull. 127:511–525.
- WRIGHT, D. A., 1967. The effects of photoperiod on the initiation of pupal diapause in the wild silkworm, *Actias luna*. Jour. Lepid. Soc. 21:255–258.

FIELD NOTES ON THREE SKIPPERS IN TEXAS (HESPERIIDAE)

While collecting in the Rio Grande Valley-Brownsville area in southern Texas, the author took three skippers rarely taken in the United States. All were collected in the Santa Ana National Wildlife Refuge, Hidalgo County, Texas. The first, *Synapte salenus* Mabille (♀) was taken on the trail between the Old Spanish Cemetery and the Inland Lake in a shaded, grassy, low spot on 27 August, 1968. *Pyrgus albescens* Floetz (♂) was captured in a clearing at the river end of West Gate Road, 29 August, 1968. A female *Pyrgus communis* was also taken at the same time and place. On the foot-trail between West Lake and West Gate Road, on 19 October, 1968, *Celaenorhinus stallingsi* Freeman was taken when it settled on a low plant growing in a patch of sunshine coming through the trees overgrowing the trail. This is the second United States record for this species. Determinations were made by H. A. Freeman, Garland, Texas.

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