

## ACKNOWLEDGMENTS

I thank Drs. C. R. Bell, Guy L. Nesom, and J. N. Rinker for their critical review of this manuscript and Drs. John C. Downey, Herbert Neunzig, and Thomas Eisner for their enlightening discussions and encouragement. Linda S. Treiber and Mary L. May have my appreciation for their field assistance; and I thank Paul Marx for his photographic advice and assistance.

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*Journal of the Lepidopterists' Society*  
33(4), 1979, 244

A NEW METHOD OF INDUCING COPULATION IN *PHYCIODES THAROS*  
(NYMPHALIDAE)

While engaged in breeding experiments using various populations of *Phyciodes tharos* Drury, I happened on a method of inducing copulation that may be widely applicable to other butterfly species. It proved extremely difficult to achieve matings by the hand-pairing technique or in small cages using several population cultures of *P. tharos* in my laboratory. The difficulty appeared to be both an unusually low level of courtship activity in the males and an unusually low proclivity toward acceptance by the females. However, I noticed that stray males that had escaped from the mating cages and flown to a large screened window often showed greatly increased aggressive behavior and sexual approaches toward each other. Females placed on the screen near courting males still refused to mate, but when they were restrained by holding the wings together over the back with a pair of flat forceps, the males were often able to copulate. Greater success was achieved by stroking the female's abdomen on the male's antennae to elicit repeated copulation attempts and by moving the female's abdomen to bring her genitalia into contact with the male's. If the female was released at this point, she still attempted to avoid copulation and would often dislodge the male by her struggles. I had better success by pinching the forceps handle with a spring-type clothespin and putting the clothespin across the mouth of a small jam jar. The quiescent male then hung from the female's abdomen until copulation was complete, when he dropped to the bottom of the jar. This method may prove to give better results than either cage or hand-pairing for a number of difficult species.

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