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THE HOST PLANT, *ERYTHROXYLUM* (ERYTHROXYLACEAE), OF *AGRIAS* (NYMPHALIDAE)

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ABSTRACT. A male of *Agrias amydon philatelica* DeVries was reared from its host plant, *Erythroxylum fimbriatum* Peyritsch, in the wet Caribbean lowland forests of Heredia Province, Costa Rica. This is the first host plant record for *Agrias amydon*.

A male of *Agrias amydon philatelica* DeVries (DeVries, 1980) was reared from its host plant *Erythroxylum fimbriatum* Peyritsch, at Finca La Selva, an Organization for Tropical Studies field station in the wet Caribbean lowland forests of Heredia Province, Costa Rica. This is the first host plant record for *Agrias amydon*.

In March 1979, a penultimate instar larva was found feeding on a 2.5 m individual of *E. fimbriatum* in the forest. The plant was a member of a clump of five individuals of *E. fimbriatum* within a space of 100 m along the Holdridge Trail. The plants have been vouchered and deposited in the Duke University Herbarium, Hammel 8929, Kress 76-526. The larva was fed in the lab on leaves from the same plant. Pupation occurred on the upper surface of the cage. The adult emerged in April. The last larval shed skin and head capsule, the empty chrysalis, and the preserved adult were deposited in the collections of the Museum of Comparative Zoology of Harvard University. The specimen was designated a paratype by DeVries (1980).

Previous records of the subspecies, all since 1977, were from the Pacific lowland dry forests in Guanacaste Province, Costa Rica, the Caribbean lowland wet forests of Herrera Province, Panama, and Finca La Selva (DeVries, 1980). This suggests that the butterfly has a wide geographical distribution and occurs in widely varying habitats, though it must be very rare.

Subsequent to my observations, D. Janzen and W. Hallawachs (pers. comm.) raised *A. amydon philatelica* from *Erythroxylum havanense* Jacq., at Parque Santa Rosa in Guanacaste. In Guanacaste, *E. havanense* is one of the most common shrubs; thus, the rarity of *Agrias* in Guanacaste cannot be explained in light of the abundance of its host plant. However, the recent discovery of *Agrias* in Guanacaste marks the first record of *Agrias* outside of wet forests.

In view of the long history of collecting in Costa Rica, it is surprising that *Agrias amydon* was first collected there in 1977, although there have been at least nine subsequent records (DeVries, 1980) from Central America. This suggests that there may have been a recent increase

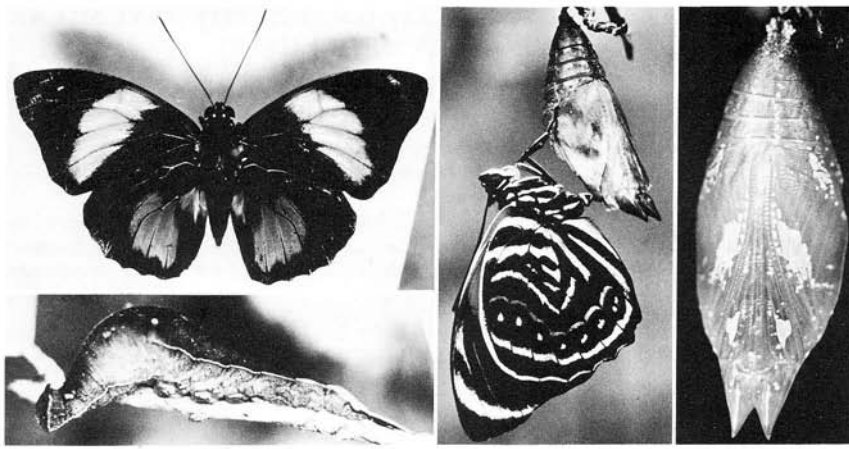

FIG. 1. Developmental stages of *Agrias amydon philatelica* (left to right): adult (top), larva (bottom), adult emerging from chrysalis, and chrysalis.

in abundance, and/or possibly a range extension. We know that *Agrias* is capable of using two species of *Erythroxylum* as its host plant. It may also be possible that *Agrias* is capable of using the commercial species *Erythroxylum coca* Lam. and *E. novogranatense* (Morris) Hieron. as its host plants. This is very speculative, and it must be considered that the commercial species have higher alkaloid contents. However, it has been noted that *Agrias* is very common in the Tingo Maria region of Peru (C. Pringle, pers. comm.), known as a hot spot for the production of cocaine. *Agrias sardanapalus claudina* "claudianus" is reported to feed on *Quiiana glaziovi* (Barselou, 1983).

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