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LARVAL FOODPLANTS FOR SEVEN SPECIES OF HAIRSTREAKS (LYCAENIDAE) FROM MEXICO[1]

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From 17-XII-1973 to 28-II-1974, my wife Connie and I did field work on the Lepidoptera, primarily Rhopalocera, in the area around Ciudad Mante, Tamaulipas, Mexico. The objective was to determine larval foodplants for as many Texas/Mexican Rhopalocera as possible. This area was selected for study because it is relatively near Texas (*ca.* 375 air km); the Thorn Forest & Scrub, and Thorn Desert of the area provide an abundance of plants, many of which also are found in extreme south Texas; the nearby Tropical Deciduous, Tropical Semi-Evergreen, Evergreen and Cloud Forests provide additional diversified habitats and climates for related studies.

So far as I can determine, the larval foodplants given below are recorded from Mexico for the first time. Standley (1920-1926) was the principal reference used in making the botanical determinations. Of the 7 lycaenids, 5 are found in the United States, and 4 of the 5 have been found only in Texas. No attempt has been made to give total range or distribution of the insect, but if it occurs north of the Rio Grande, this fact is mentioned.

Pseudolycaena marsyas damo (Druce) 1875

This insect was found in fair numbers in the mountains around Cd. Mante; however, all examples taken were worn. On 19-I-74, about 20 km west of Highway 85 on the road to Ocampo, at about 1545 hrs., Connie observed a ♀oviposit on the juvenile leaves of *Croton niveus* Jacq., EUPHORBIACEAE. The egg and female were recovered. Attempts to obtain additional eggs in the field lab failed until 23-I when very succulent juvenile growth of *C. niveus* was provided; six eggs were deposited near 1500 hrs. the same day. Two eggs were preserved, others hatched on the 23rd (1), 25th (1) and 28th (3) of January. Larvae were offered *C. niveus,* but all died. It was undetermined whether the larvae eat the foliage or possibly blossom buds. It was to early in the season for blossoms. Therefore, it was assumed that insufficient

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succulent growth was provided the young larvae.

Evenus regalis (Cramer) 1775

This species was collected once, and no other specimens were seen. Near the village of Gomez Farias, Tamaulipas, in a small garden spot chopped out of the jungle and supporting numerous boulders, tree and shrub stumps, a ♀ was observed demonstrating oviposition behavior around secondary growth of *Chrysophyllum mexicanum* T. S. Brandeg., SAPOTACEAE, on 17-I-74. The specimen was so fresh and beautiful that it was immediately placed in a killing jar, later to become a cabinet specimen. Ordinarily I would have kept the female alive for possible egg production. Examination of this and other like plants yielded 36 eggs deposited on top of the leaves and on the stems. Except for 2, all the eggs were parasitized and from these, 2 species of hairstreak were produced. The *E. regalis* egg hatched 22-I; larva ate *C. mexicanum* foliage and pupated 6-II; a ♀ emerged 20-I-74, about 2300 hrs. The other strangely beautiful species, also a ♀, has not yet been determined.

The spot was revisited 3-II-74. Many more eggs were collected together with 5 larvae. These larvae pupated on the 10th (1), 14th (2) and 15th (1); the remaining larva, in last instar, was preserved together with one of the pupae from 14-II. Adults emerged on the 25th (1 ♀) and 28th (1 ♂, 1 ♀) of January. None of the eggs collected 3-II hatched within a reasonable time and they were preserved.

Oenomaus ortygnus (Cramer) 1779

This species has been recorded once from the United States (Clench, 1964) from a ♀ collected by Jack E. Lipes in Brownsville, Cameron Co., Texas. It is possible that cultivated varieties of the larval foodplant are grown in Brownsville both as ornamentals and for their fruit.

In the mountains around Cd. Mante, this species was found to be quite common. Several females were observed ovipositing on the fruits of *Annona globiflora* Schlecht., ANNONACEAE. Some 59 eggs and 27 larvae were collected between 8-I and 22-II-74. A good series of immatures was preserved. Larvae pupated from 13-I to 10-III. Adults emerged from 28-I to 1-IV-74. Some larvae proved to be parasitized. Larvae bore into the fruits and eat immature seeds and pulp from around the numerous mature seeds in each fruit. Sometimes the larva will seal up its entrance hole preparatory to molting. Occasionally one will pupate inside the dried fruit shell, but mostly the larvae pupate on the ground under debris.

Callophrys amyntor distractus Clench 1946

Although this species has not yet been found in Texas, the likelihood of its being found here seems even greater than the preceding species because of its larval foodplant.

On 22-I-1974, near Cd. Mante, a ♀ was observed ovipositing on the buds and juvenile leaves of *Celtis iguanaea* (Jacq.) Sarg., ULMACEAE. The female and 2 eggs were recovered; additional eggs were deposited in the field lab under artificial light. Eggs hatched between 26-I and 1-II. A series of immatures was preserved. Larvae pupated from 16 to 22-II; adults emerged from 3 to 8-III-74, for a total of 3 ♂, 6 ♀.

Dolymorpha jada (Hewitson) 1867

Specific data on the first or other United States records for this species are unknown to the writer. Holland (1931) states: "This is a rare straggler into our territory upon our southwestern borders". Clench *in* Ehrlich & Ehrlich (1961) gives "southern Arizona?".

In Mexico we found it fairly common at San Fernando, Tamaulipas (±200 km

south of Brownsville, Texas) and around Cd. Mante. On 5-I-74, 63 larvae were collected within an hour feeding on the foliage of *Solanum umbellatum* Mill., SOLANACEAE. Additional larvae were collected at various other spots near Cd. Mante on this same plant. Several larvae were parasitized by dipterons, others by ichneumonids. A good series of immatures was preserved, except for eggs. Larvae pupated from 10 to 23-I; adults emerged from 21-I to 1-III-74.

Strymon rufofusca (Hewitson) 1877

Freeman (1950) collected and recorded the first specimens of this species for the United States (1 ♂, 23-XI-46; 1 ♂, 15-XII-46; 1 ♀, 7-XII-46, 1 ♀, 21-XII-46; 1 ♀, 1-XII-47; all near Pharr, Texas). Since then, other collectors have taken it, at times in fair numbers, but it still remains rare in collections from Texas.

In Tamaulipas, Mexico we found it common at various collecting sites. On 20-I-74 near Cd. Mante a ♀ was observed ovipositing on blossom buds of *Malvastrum coromandelianum* (L.) Garcke, MALVACEAE. Eggs are deposited deep within the "hairy" covering of the blossom buds. The observed ♀ and 4 eggs were recovered. Eggs started hatching 24-I. The foodplant, with inflorescence, was difficult to locate at this time of season; it became necessary to preserve 3 of the larvae; the remaining one pupated 15-II but died before emergence. Larvae were offered blossom buds of *Abutilon incanum* L. which they refused.

Strymon yojoa (Reakirt) 1867

Stallings & Turner (1947) recorded the first United States record of this species; a ♂ collected by H. A. Freeman at Pharr, Texas, 12-XII-45. So far as I can determine, only one other authentic specimen has been collected in Texas.

At Cd. Mante and vicinity *S. yojoa* was found to be fairly common. On 28-XII-73, 1 & 29-I-74, females were observed ovipositing on the blossom buds of *Hibiscus sp.* (hybridized ornamental) and *Hibiscus tubiflorus* DC, MALVACEAE. Eggs are laid between the calyx and corolla. Larvae bore into the blossom bud and feed from within. A few larvae were found in fallen blossoms (including 1 *Strymon melinus*). Eggs required about 4 days to hatch. From both eggs and larvae collected, pupation occurred between 16-I and 20-II; adults emerged from 27-I to 5-III-74. A good series of immature stages was preserved.

Strymon albata sedecia (Hewitson) 1874

Kendall (1972) recorded and illustrated the first examples of this species for the United States; specimens collected by Michael A. Rickard and John E. Hafernik Jr. and taken in Cameron and Hildalgo Counties, Texas. Since then, several additional examples have been collected in extreme south Texas which would indicate that the insect is now established in our fauna.

This hairstreak is well established in the area around Cd. Mante. On 7-I-74 near Cd. Mante, while working independently, Connie and I each observed a ♀ oviposit on the blossom buds and juvenile leaves of *Abutilon incanum* (Link.) Sweet, MALVACEAE, time about 1600 hrs. (It is interesting to note that this plant is found over virtually all of Texas.) The females were not captured but the eggs were recovered. Again on 26-I, same location and about the same time of day, another ♀ was observed ovipositing on blossom buds of this plant; both the ♀ and egg were recovered. Some 15 more eggs were deposited in captivity. Hatching required about 4 days. All except 1 larva perished; it pupated 17-II and a ♂ emerged 28-II-74.

To feed these larvae we had relied on a good stand of the foodplant growing around our field headquarters. Unexpectedly the natives cleared the area of this and other low plants; other flowering stands were not sufficiently near to warrant the travel; thus, most larvae were lost.

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