

ABERRANT *CHLOSYNE LACINIA* (NYMPHALIDAE) FROM
CENTRAL TEXAS

Chlosyne lacinia (Geyer) is an extremely variable nymphalid butterfly. The phenotype present in central and southern Texas is *adjutrix* Scudder, a form with brownish-black ground color and various spots and bands which are white, yellow, orange-brown and orange-red.

An aberrant specimen of *adjutrix* was collected on 18 October 1973 at the Brackenridge Field Laboratory of the University of Texas at Austin within the city limits of Austin, Travis County. The normal-sized adult, believed to be a female (abdomen is missing from the specimen), was feeding at a flower garden with normal *adjutrix*, which were common at the time. This melanic individual is almost totally brownish-black. The normally prominent median orange-brown band of the hindwing is represented only by a small red-orange anal spot on both dorsal and ventral surfaces. Submarginal spots are represented by barely-visible dark smudges which appear shadowy. Pin-prick sized post-median spots of the hindwings are slightly subnormal in size. Orange pigmentation on legs and basal costal margin of VHW is normal.

It is noteworthy that the only two constant wing pattern characteristics that Higgins (1960, Trans. Roy. Ent. Soc. London 112: 381-467) found for this extremely variable species are present in this specimen: 1) orange streak at basal costal margin of VHW and 2) red-orange anal spot on VHW. Although some populations of *lacinia* are normally melanic (*crocale* Edwards in southwestern North America and *quehtala* Reakirt in Middle and South America), this specimen is the extreme melanic form known for *lacinia*.

Another aberrant form was collected on 15 October 1969 in Bexar County, Texas (Farm Road 1518, 3.2 km W of U.S. 281). This female was apparently searching for oviposition sites on *Verbesina encelioides* Cav. (Compositae). It has normal pigmentation except that all spots on DFW and VFW are white; spots are normal in size, shape, number and position. The modified color in the bands and spots of the forewing and retention of normal hindwing pigmentation gives this individual a resemblance to nominate *lacinia* (see Godman and Salvin, 1882, v. 38, pl. 19, fig. 6-7). Comstock (1931, The Butterfly Book, rev. ed., pl. 18, fig. 10) also illustrates nominate *lacinia* (labeled as *C. janais* (Drury)). It differs in the retention of post-basal and sub-median spots. There is no break in my specimen in the median DFW band as in nominate *lacinia*.

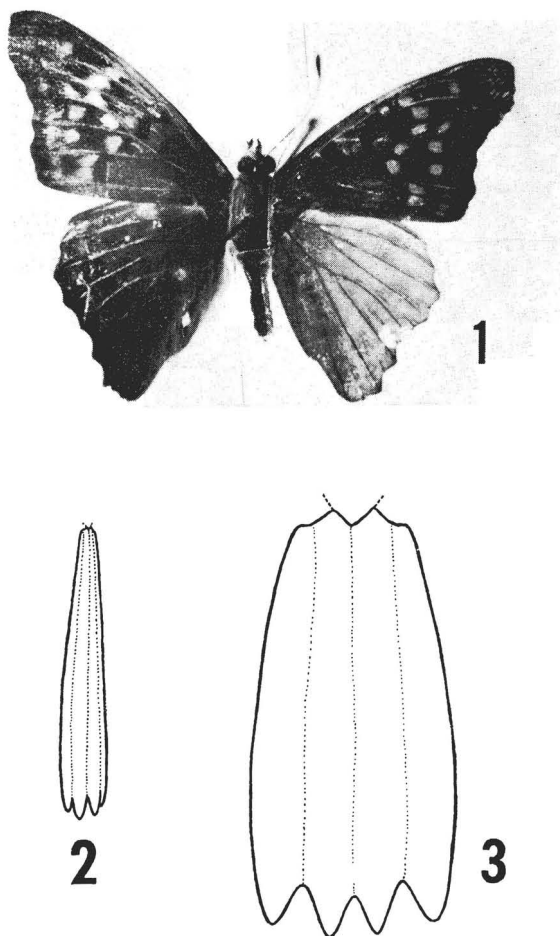
A second female specimen with white forewing spots was collected at the Brackenridge Field Laboratory on 24 September 1971 as it fed at flowers of *V. encelioides* along the banks of Town Lake (Colorado River) about 400 m from the collecting site of the melanic specimen. Forty-seven normally pigmented adults were reared from eggs laid by this wild-mated female.

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A FIELD-CAPTURED *ASTEROCAMPA CLYTON* (NYMPHALIDAE)
WITH ABERRANT SCALATION¹

An aberrant male of *Asterocampa clyton* (Boisduval & LeConte) (Nymphalidae) was collected about 0.5 mi. N of Hoges Chapel, Giles County, Virginia, on secondary road 613, on 3 August 1967. This aberration involves a malformation of the wing

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Figs. 1-3. *Asterocampa clyton*: 1, dorsal aspect of male contrasting the aberrantly-scaled right hindwing with the normal wings (composite photograph); 2, wing scale from aberrant hindwing, upper surface; 3, wing scale from normal frontwing, upper surface.

scales of the upper and lower surfaces of the right hindwing, giving the wing a superficially bare appearance (Fig. 1). The scales are pigmented so that the normal wing pattern is clearly visible, but it appears as a tint in the wing membrane. The scales are narrowed and underdeveloped (Fig. 2) when compared to the normal fan-shaped wing scales of the other three wings (Fig. 3). The "hairs" and venation of the aberrant wing appear to be normal, but the wing membrane is contracted, pulling the veins toward each other, thus giving the aberrant wing the appearance of being slightly reduced in size.

Dornfeld ("1970"(1971), J. Res. Lepid. 9: 25-28) reported a field-captured aberration of *Anthocaris sara* Boisduval (Pieridae) showing a similar type of wing-

scale deformity involving all four wings. The aberration involved extensive loss of scales, with those remaining being restricted largely to the veins. Also the scale pockets were abnormal, a fact to which Dornfeld attributed the loss of scales. The aberration of *Asterocampa clyton* involved no apparent loss of scales. Both specimens, however, exhibit the same type of scale aberration (narrowed and elongated rather than fan-shaped, and having the distal prolonged margins ill-defined, reduced or lacking). Dornfeld observed that the individual of *Anthocaris sara* displayed weak flight, which was not the case with the individual of *Asterocampa clyton*. Dornfeld speculates that this aberration may have a low survival rate due to its weak flight pattern, and thus it has not been collected more frequently in the field.

Restricted deformities such as that displayed by the specimen of *Asterocampa clyton* are probably not gametic in origin, and thus survival rate would have no effect on the frequency of occurrence of such aberrations. Thus, a low frequency of occurrence of scalation aberrations in the field would persist, and the chances of encountering such an aberration would remain more or less constant with time. Apparently scalation aberrations are rare in nature and thus encounters are rare. However, chance field-capture of the restricted scale-deformed specimen of *Asterocampa clyton* has shown that scalation aberrations do occur occasionally; thus, additional field-captured specimens possessing scalation deformities should appear in the future.

The specimen of *Asterocampa clyton* is located in the personal collection of the author.

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ASSOCIATION OF ANTS WITH OVIPOSITING *LYCAENA RUBIDUS* (LYCAENIDAE)

Many species of Lycaenidae associate to varying degrees with ants (Ford, 1957, Butterflies, Collins: London; Malicky, 1970, J. Lepid. Soc. 24: 190–202; Owen, 1971, Tropical Butterflies, Oxford: Clarendon Press). While some ant-lycaenid interactions have been observed in detail, many associations are known from scanty data. This paper reports another ant-lycaenid association, the first such instance reported for either species involved.

Adults of *Lycaena rubidus* (Behr) were observed 22 July 1968 at Maverick, el. 2377 m, Apache County, Arizona. The butterflies were common at the abandoned townsite in a grassy meadow bisected by Pacheta Creek. Many female *L. rubidus* exhibited oviposition behavior at wild-rhubarb, *Rumex hymenosepalus* Torr. (Polygonaceae). Each such female hovered near a plant, and then alighted on one of the leaves. She then walked down the leaf toward the base of the plant. Upon reaching a height about 2–8 cm above ground, she laid an egg, which fell to the substrate, sometimes bouncing on one or more leaves of the plant on its way. The ground was covered by a sparse layer of dead plant matter. After laying each egg, the female then walked back out toward the top of the plant. She then either sat for a minute or more before going back down to lay another egg, or flew to another plant. Each egg was laid singly.

Small black ants, *Formica altipetens* Wheeler, were observed on the ground litter beneath, as well as on, some of the *Rumex* plants. When one butterfly laid an egg,