

### The Original Descriptions and Key Notations

*Polyommatus irus* Godart, 1824. Here translated from the original French into English (Fig. 5).

It has around 15 lines [in its] wing spread. The upper part of the male is a brownish-blackish iridescent with a small oblong opaque spot [male sex patch] near the middle on the side of the upper wings.

The underside of its first wings [primaries] is nearly the color of the [whole] upperside, with two small rust-colored lines transversal and wavy, on the middle of the surface.

The underside of the second wings [secondaries] is rust-colored at the base, with two darker flexuous [winding] lines; it is sprinkled with gray around the extremity with a point of brown placed near the angle of the anus. We have not seen the female. Is it in America?

#### Designation of a type and type locality for *Polyommatus irus irus*

In 1975 I received Godart's type of *Polyommatus irus* (Fig. 5) from the Paris Museum for examination. I found it to be in very good condition. I sent this specimen to the Allyn Museum, Sarasota, Florida, where it was photographed and examined by F. Martin Brown and affirmed, by the labels and insect pin, to be a specimen of some antiquity. The obvious problem is that Boisduval and Leconte described the type as "very defected and dilapidated" (see *Thecla irus* below). Thus, I believe this type specimen, by its excellent condition, is almost certainly not the original which Boisduval and Leconte viewed. I let this go unchallenged in 1975 and placed a label on it affirming it as the holotype (specimen also figured and additional information provided by Dr. Kurt Johnson in J. Lepid. Soc., vol. 45, pg. 147, fig. 18). Because the validity of this type is so highly suspect, and to further stabilize the nomenclature, I now designate this same specimen also as neotype for *Polyommatus irus* Godart 1824.

The *irus* type locality should also be addressed. Not only did Godart not designate a type locality, he put a question mark after America. There needs to be a type locality established. Accordingly, I herein point out that the *irus* type specimen certainly does not match any southern population. It does line up reasonably with the *Baptisia* feeding *irus* adjacent to Philadelphia in New Jersey. Godart's *Polyommatus falacer*, TL Philadelphia, PA, was described in the same publication with *P. irus*. I believe it is reasonable to assume that the true *irus* type may have come from this same area via the same source. Therefore, to further stabilize the nomenclature, I herein restrict Godart's *Polyommatus irus* to the geocological type locality of the *Baptisia* feeding *irus* populations (Fig. 6) in the southern area of New Jersey east of Philadelphia. My definition of "area," in this case, extends out 50 miles.

*Thecla arsace* Boisduval & Leconte, 1833. As translated from the original French into English (Figs. 3-4).

This *Thecla* is the size of the *irus* to which it resembles a lot by the facies and by its actions, and forms with this species and the following, a small neat group just to the present to North America and to the Antilles.

The dorsal of the wings of the male is a blackish-brown with a small dull oval spot near the side of the primaries; on the female it is more brown, with the extremity a fawn-red, forming on the primaries a large spot a little mellow by its contours with a general tint, and on the secondaries a spot (more small) situated fairly near the anal angle. Beyond that, the four wings are indented, with fringe absolutely like the *Irus*.

The ventral of the wings is brown, with the middle crossed by a common line, sinated with a brown black; the extremity of the primaries is more pale, divided by two small crossing rays more obscures and little distinguishable; the extremity of the secondaries is sprinkled with cinder gray like the *Irus*, divided by a row of brownish spots little marked, lined up [aligned], and forming almost a curved ray uninterrupted.

The caterpillar is a reddish [rosy] flesh color, with the dorsal of the white back from the second ring to the ninth segments, and divided by two parallel lines, brought together and interrupted, an obscure green color. Near the base of the feet, one sees a marginal ray of the same color, bordered with white on the bottom, and between this and the dorsal rays there is like many similar species a series of seven or eight angled traits.

The pupa is reddish, with the anterior part and envelops it with wings of a greenish tint.

The *Thecla arsace* is rare. It lives in Virginia and Georgia on several scrubs of the family *Vaccinieae*.

***Thecla irus*** Boisduval & Leconte, 1833 (= *henrici*). Here translated from the original French into English (Figs. 1-2).

Godart is the first author who made the acquaintance [or made known] this Lepidoptera; but the description he gives of it having been made on an individual male very defected by dilapidation, it would not have been possible to recognize this type if we had not seen it in the collection of the National Museum the only example that served him in his work.

It has about 15 lines of scales, that is it has [is] about the size of *Quercus* of Europe. The dorsal of the wings of the male is (of) a blackish-brown, with a small oval spot, flat grayish (color), near the side of the primaries, as in many of the species of the same kind; on the female it is more brown, with the rear section a reddish color more or less visible, which blends in with the general tint. Beyond that, the four wings are indented, with the fringe (cut between) with a whitish color.

The ventral of the wings is brown, with a crossing white line situated a little upwards of the middle and fades and is sinuate. The primaries have in the cell an obscure trait. Their extremity is a little reddish, divided by a ray little visible and interrupted by nervials. The secondaries have an extremity strongly sprinkling of a cinder gray, and divided by a crossing line interrupted by a purplish [wine] brown, little marked, often followed by one or two small brown spots. The base is lightly sprinkled with gray, and separated from the tint of the middle by a crossing, waving line.

The caterpillar is much like (resembles) the *liparops* (probably *favonius*). It is a yellowish green, with two dorsal rays interrupted by a lateral ray, and eight oblique lines of a light obscure green. The pupa is rust colored, garnished with little hairs, with two longitudinal rays more obscure. This species is found, but pretty rarely, in Georgia on several species of *Vaccinium*. It also lives in the Antilles.

**Note:** Their description of the male is based on the holotype which they saw and documented as having a male scent patch (*irus*). The male they figured was produced by Abbot and clearly lacks a scent patch (*henrici*). The rest of their description apart from that of the male, is based on Abbot's information and likewise applies to *henrici*.

**Note:** Scudder (1889) on page 839 reports that Abbot recorded rearing *irus* (= *henrici*) on *Ilex* (holly). *Ilex* is the only confirmed larval host of *henrici* in the non-montane southeastern US. The above statement that Abbot found the butterfly on several species of *Vaccinium*, most likely refers to adults at nectar. *D. irus* larvae feed only on *Baptisia*, not *Vaccinium* (blueberry). The false association of *irus* with blueberry throughout the old literature stems from Boisduval and Leconte's confusion of Godart's *P. irus* with the then unknown *D. henrici*.

***Thecla henrici*** Grote and Robinson, 1867.

Male and Female – size and form of *Thecla augustus*, Kirby. Above, of a uniform dark brown shaded diffusely over the nervules of primaries (♀), and on secondaries before anal angle (♂ ♀) with brighter rusty brown; in the male these latter show a light brassy reflection. The fringes on the primaries are white, interrupted and entirely and very narrowly tipped with blackish. On the secondaries, the fringes are much as on the primaries, but more prominently interrupted with black at the extremity of the nervules, where also they are somewhat extended, especially inferiorly, and most prominently so before anal angle, the latter twisted inwardly, and prominent owing to the excavation of the internal margin within it; the white color is for the most part reduced to a narrow basal line. Beneath the primaries are of a brighter brown from the base outwardly to the single transverse line at apical third running over the nervules. The “veins” are here obsoletely marked with blackish. The single transverse line is straight, once inwardly and slightly notched opposite the disc and, not attaining internal margin, is discontinued at the last branch of median nervune. The internal margin, below median nervune, is of a duller and fainter more obscure brown. Outside of the transverse line, the wing is paler, being of an obscure ochre's, divided centrally by a faint light brown shade, and of a similar hue along internal margin inferiorly, leaving the lighter color to appear as interspatial blotches; fringes as on upper surface. Secondaries with the base of an intense blackish-brown, paler along the costa, and limited outwardly by the median line; this portion of the wing is sparsely clothed with pale and longer hairs, except on costal region outwardly. The median line is shaped as in *T. augustus*, but is succeeded by white scales. These are very prominent at the inception of the line on costa, before the first outward inflection, are obsolete centrally, but again appear, edging the line externally, before internal margin. Outside the line, the wing is ochreous brown, (nearly as on primaries outside of the transverse line); this color is most evident superiorly, inferiorly it is obscured by the hoary appearance of the wing and obtains here more narrowly. It is succeeded by an undulating series of semilunate, black, interspacel points edged obsoletely inwardly by white scales. Beyond these marks, the terminal space is apically bright intense brown; below this, the wing is entirely hoary, somewhat of a lilac hue. There is a narrow, terminal, interrupted, blackish line, outside of which the extreme external margin is again entirely clear brownish; fringes much as on upper surface some white scales linearly arranged within the extra anal angle on the margin.

Head and body, above blackish, with longer and sparsely scattered pale hairs. Antennae, black, prominently annulated with white; club, black, tipped with fulvous. Palpi, black, with some longer whitish hairs beneath. Eyes, very narrowly

margined with white behind. Under thoracic surface and legs at base, clothed with long whitish hair. Tarsi, testaceous, with lateral white scales; tibiae marked within with whitish. Abdomen, beneath, obscure whitish.

Expanse, 1.10 inch. Length of body, 0.40 inch. Habitat. – Atlantic District. (Maine! To Pennsylvania!)

This species is intermediate between *Thecla augustus*, Kirby, (*T. augustinus*, West.) and *Thecla irus*, as illustrated by Boisduval and Le Conte, and is apparently associated geographically with the former. It differs from *T. augustus*, in the ornamentation of the wings beneath and the brighter colored antennal tips. It is smaller than *T. irus* and, while resembling it in the ornamentation of the wings beneath, is at once distinguishable by the absence of the inner purplish basal space circumscribed by arcuate white line. From *Thecla arsace*, Bdv. and Lec., it differs by the markings of both wings beneath; the shape of the transverse line is very different, and these are not followed by white scales in Le Conte's figures, which *Thecla henrici* has nor the brown discal patch and the series of interspatial, subterminal, brown blotches in the secondaries beneath.

To the kindness of Mr. Scudder we owe a specimen of this species, ticketed as from "Maine" (Smith), which does not differ from a number of specimens from the vicinity of Philadelphia, except in that the secondaries show a very few white scales, very narrowly arranged, edging the secondaries linearly along external margin. There is a variation in the extent of the brown apical space on the secondaries beneath. In some specimens this encroached on by the hoary shading so that it is nearly lost. On the under surface of the primaries the veins margining the cell are most prominently discolored with blackish. In the males the brighter shadings of the primaries above are obsolete. With reference to *Thecla augustinus*, West., (*Thecla augustus*, W. Kirby), it may be remarked that Fabricius' *Hesperia augustus*, Ent. Syst., 3 p 275, will very probably be irrecoznizable. The description: – "H. R. alis caudatis albis; limbo fusco, subtus ferrugineo flavoque variis, posticis strigis duabus cineris" – refers to **a tailed species**, and a reference is made to "*Papilio augustus*, Jon., fig. Pict. 6 tab. 3, fig. 1," while the habitat is given of "America" on Drury's authority. The work cited is of very old date and unknown to us; until the species intended is identified, there can be no impropriety in retaining Kirby's name for our common species.

[N.B. I suspect the "unknown work" may be Jones' "Icones" - R.R.I.]

**Note:** This OD of *T. henrici* was sent to me as a hand written copy of the OD. The odd spellings are clearly in the original as the handwriting is very good. However, there are a couple places in the Latin, at the end, where I had trouble reading the script. Unfortunately, I failed to make a notation on this copy sent me as to whom I received it from (nearly 30 years ago)! It may have been from the late Dr. J. F. Gates Clarke (USNM) (as I have some other hand written notations from him on this project in similar handwriting), or the late C. F. dos Passos.

I find Fabricius' mention of "a tailed species" of great interest because both southeastern subspecies of *D. henrici* have long tails. One is further lured by the fact that both Fabricius' *Papilio* (= *Cercyonis*) *pegala*, and *Papilio* (= *Phoebis*) *drya* (= *eubule*) were described from Charleston, South Carolina – an area where the tailed *D. h. yahwehus* (? = Fabricius' and Jones' *augustus* ?) is not uncommon. I have never seen Jones Icones. Someone with access to these publications should investigate this further and resolve this indeterminate taxonomy. Are these names valid, but long dormant, and in need of resurrection and proper application. Or are they, as Scudder states, unrecognizable, and thus potentially disruptive, and in need of formal suppression. Has this already been done? To this point, both *Hesperia augustus* and *Papilio augustus* are *nomen incognitum*. If they are clearly recognizable as tailed *henrici*, they would be available to supplant *D. henrici* as the nominotypical taxa (specifically subspecies *yahwehus*) and negate the species name *D. augustus*.

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## LITERATURE CITED

- BOISDUVAL, J.A., & J.E. LECONTE. 1833. *Historie générale et iconographie des Lépidoptères et des chenilles de l'Amérique Septentrionalis*. Vol. 1. Paris 228 pp.
- CLENCH, H.K. 1943. Two New Subspecies of *Incisalia* (Lepidoptera: Lycaenidae). *Canadian Ent.* 75(10): 182-185.
- COOK, J.H., & F.E. WATSON. 1909. *Incisalia* (Lepidoptera) from Texas. *Canadian Ent.* 41(6): 181-182.
- DOS PASSOS, C.F. 1943. Some New Subspecies of *Incisalia* from North America. (Lepidoptera, Lycaenidae) *American Museum Novit.* No. 1230: 5 pp.

- GODART, J.B. 1824. Encyclopédie Méthodique Paris. 9: 674 pp.
- GROTE, A.R., & C.T. ROBINSON. 1867. Descriptions of American Lepidoptera, No. 2. Trans. of the Amer. Ent. Soc. 1 (2): 171-192.
- HARRIS, L., Jr. 1972. Butterflies of Georgia. Univ. of Okla. press, Norman OK. 326 pp.
- HEITZMAN, J.R., & J.E. HEITZMAN. 1987. Butterflies and Moths of Missouri. Missouri Dept. of Conserv., Jefferson City, MO. 385 pp.
- HOWE, W.H. 1974. The Butterflies of North America. Doubleday & Co., Inc. New York, NY. 633 pp.
- JOHNSON, K. 1992. The Palaearctic 'elfin' butterflies (Lycaenidae, Theclinae). Neue Ent. Naschr. 29:1-141, ill.
- LAYBERRY, ROSS A., PETER W. HALL & J. DONALD LAFONTAINE. 1998. The Butterflies of Canada. Univ. of Toronto Press, Toronto, Canada 279 pp.
- PAVULAAN, H. 1998. A New Subspecies of *Incisalia henrici* (Grote & Robinson) (Lepidoptera: Lycaenidae) from the Outer Banks of North Carolina. Maryland Ent. Vol. 4 (2) 1-16.
- RADFORD, A.E., H.E. AHLES & C.R. BELL. 1968. Manual of the Vascular Flora of the Carolinas. Univ. of North Carolina Press, Chapel Hill. 1183 pp.
- REMLINGTON, C.L. 1968. Suture-zones of Hybrid Interaction Between Recently Joined Biotas. Evol. Biology, Vol. 2 (8) 325- 413.
- SCOTT, J.A. 1986. The Butterflies of North America, A Natural History and Field Guide. Stanford Univ. Press, Stanford, CA. 583 pp.
- SCUDDER, S.H. 1889. The Butterflies of the Eastern United States and Canada with special reference to New England. Publ. by author. Cambridge, MA. Pages 834-841.
- SHULL, E.M. 1987. The Butterflies of Indiana. Indiana Academy of Science, U. of Indiana Press, Indianapolis, IN. 262 pp.

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