

*PAPILIO LADON* CRAMER VS. *ARGUS PSEUDARGIOLUS*  
BOISDUVAL AND DECONTE (LYCAENIDAE):  
A NOMENCLATORIAL NIGHTMARE

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**ABSTRACT.** A general discussion of pertinent portions of the International Code of Zoological Nomenclature is given, especially of those parts dealing with names proposed from erroneous localities by the early authors. An example is given of Plate 270 of Pieter Cramer's *De Uitlandsche Kapellen . . .*, and the taxa described therein are figured. Cramer's representations are compared with actual specimens. The problem of the identity of *Papilio ladon* Cramer, described from "Kaap de Goede Hoop" is discussed, and it is determined that it is a senior synonym of the Nearctic *Argus pseudargiolus* Boisduval and Leconte. A neotype is designated for *P. ladon* (TL—Patuxent River, Anne Arundel Co., Maryland). The taxonomy of the New World *Ceastrina argiolus* group is discussed.

"The objects of the Code are to promote stability and universality in the scientific names of animals . . ." (International Code of Zoological Nomenclature, preamble)

But are these objectives being achieved? When one looks at interminable name changes and taxonomic squabbles over the proper choice of names for taxa, one wonders about the efficacy of the present Rules.

One of the cornerstones of all versions of the Code is the "Law of Priority," which states that the oldest name for a taxon is *the* valid name for that entity. This basic regulation is one of the most unpopular among taxonomists—perhaps a well-known name would be upset by a previously undiagnosed and unidentified earlier name. Human beings resist change of familiar patterns. For this reason, the International Commission on Zoological Nomenclature from time to time suspends the Law of Priority and validates more recent names that are in wide use. This does not always happen, so nomenclature is subject to the possibility of a change, which is contrary to the quotation above.

Suspension of the Law of Priority belongs to the Plenary Powers of the Commission. These powers are not invoked haphazardly: there

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must be a real question of whether or not the aims of "stability and universality" will be served by such action. Names thus validated are placed on the appropriate Official List and are accepted without further question. Unfortunately, the procedure is ponderous, uncertain and discouraging to many taxonomists. Even though the names thus conserved or rejected are not always the "right" ones, they are the then "legal" names—in taxonomy, as in other aspects of life what is "right" may not be "legal." Since they have at least the look of "order," rather than "chaos," such lists are useful and are the rules of the "game" that taxonomists accept.

During the past several years, there have been attempts to circumvent the use of senior synonyms on the basis of disuse during the preceding fifty years, or some like time. Fortunately, codifying such a procedure has been defeated but this philosophy reemerges with almost every revision of the Code. The present revision is no exception. While the controversial Article 23b of the 1964 Code was finally repealed in 1973, a similar proposal is incorporated into the present draft, although it requires that the Commission invoke its Plenary Powers. The problem with such an approach, appealing as it first appears, is that *many groups of animals are not even mentioned* during a given fifty-year period. In such a case, *all* of the names could be "unused senior synonyms"! Further, senior synonyms, even when pointed out by authorities, are occasionally ignored and revert to "unused senior synonym" status. Such a "conspiracy of silence," then, may be deemed correct.

It is argued that return to "unused senior synonyms" would wreak havoc with the nomenclature. Such is simply not the case—for a few years, at the most, such "new/old" names are confusing, but the scientific community rapidly becomes accustomed to their use. Several cases among North American butterflies demonstrate the point:

*Pyrgus oileus*. Perhaps the most easily accepted of these resurrections is the ascension of *Pyrgus oileus* (Linnaeus, 1767: 795). This species was described from a specimen from "Algeria" and rarely (Humphreys & Westwood, 1841: pl. 38) was applied to a New World insect. The American species was named *Papilio syrictus* by Fabricius (1775: 534), and two Fabrician specimens still exist in the Kiel collection. This butterfly was known as *syrictus* for many years, until Evans (1953: 221) resurrected the name *oileus* for it based on the type specimen in the collection of the Linnaean Society of London. Subsequent authors have accepted this nomenclatorial change without quibbling.

Specimens that are figured along with the original description are rather easy to accept. Cases of this kind have produced the majority

of applications of “unused senior synonyms.” Two examples will suffice:

*Polites coras* (Cramer, [1775]: 51; Pl. 31, Fig. F). This name was forgotten throughout most of its history—presumably because it was described from “Surinam.” Later, W. Kirby (1837: 300) described this insect as *Hesperia peckius*, and the Cramerian name was forgotten until 1917 when Barnes & McDunnough listed as a synonym of *peckius* (p. 21) “?*coras* Cr.” A little later, Draudt (1924: 932) used the name *coras* for the first time as a senior synonym of *peckius*, an action that was not taken seriously until Evans (1955: 332) used the name in preference to the then-familiar *peckius*. Cramer’s ([1775]: Pl. 31, Fig. F) insect, in addition to being described from “Surinam” is so badly figured that it is referable to the Nearctic insect only by the use of a great deal of imagination! Despite the shortcomings of both the verbal description and the figure of the type, acceptance of the name *coras* in precedence to *peckius* has been rapid and complete—many younger lepidopterists would no longer know what was being referred to by “*Polites peckius*” without having to think a bit and equate that name with the now-familiar *coras*.

*Hyllolycaena hyllus* (Cramer, [1775]: 67–68; Pl. 43, Figs. B–C). This species was described from “Smirna,” and for many years it remained in the literature as an unknown copper from the Palearctic. Meanwhile, Guérin-Ménéville ([1831]) and Boisduval and Leconte ([1833]) independently (?) redescribed both sexes of the beast as *Polyommatus thoe*, a name that was used for the species almost universally until Brown & Field (1970) unsnarled the nomenclatorial tangle and resurrected the name *hyllus* for our North American butterfly. That decision is now accepted by nearly all taxonomists (e.g., Opler, 1975: 312 and Miller & Brown, 1979: 15–17). Such acceptance in less than ten years belies the idea that nomenclature will be hopelessly upset by resurrection of “unused senior synonyms”—one must admit that taxonomists are either an adaptable or a gullible lot. We would prefer to believe the former.

The third method of resurrecting “unused senior synonyms” is perhaps the least satisfactory. In this case, no specimen or published figure exists, and the description itself is so vague that it could apply to almost any species. Most such cases are, regrettably, also mislabelled as to locality. The mechanism for validating these names seems less than satisfactory, based more on assessment of the work of the modern taxonomist than on evaluation of the merits of the case. The HesperIIDae again offer us some superlative examples: when one reads the original descriptions of *Hesperia origenes* Fabricius (1793: 328, described from “Indiis”) and *Hesperia aesculapius* Fabricius

(1793: 347, described from "America boreali"), it is difficult to associate the names with the once-familiar *Polites manataaqua* (Scudder, 1863: 175) and *Amblyscirtes textor* (Hübner, [1827]–[1831]: Figs. 515–516), respectively. No type-specimens exist for either species, and Evans (1955) rather arbitrarily assigned the names to North American species; nonetheless, it is a tribute to the regard held for Evans' work that these names, once pointed out by him, have become universally accepted. We suggest that names based on poor descriptions and not accompanied by plates might be better candidates for suppression under the Plenary Powers of the I. C. Z. N. than others accompanied by figures.

#### Quality of Plates in *De Uitlandsche Kapellen*

Cramer's early plates, especially those published between [1775] and [1778] were reasonably good representations of the insects they pictured. Later, as Cramer approached death, the quality of the plates was much less satisfactory. Even at best, though, Cramer's illustrations of small butterflies were little more than caricatures, frequently unrecognizable ones at that.

At the height of production of *De Uitlandsche Kapellen* Cramer would do a drawing indicating what he wanted to show, and other artists would copy the shapes and colors to the best of their abilities. Perhaps an "assembly line" approach was taken, with Cramer "roughing out" the plate, then other artists adding this or that color until the job was completed. This was a time-honored procedure among illustrators, but it is troublesome to assign work to a specific artist—the most we can say about the plates in *De Uitlandsche Kapellen* is that they were done by "the school of Pieter Cramer." We shall never know who did what in these illustrations. No two of the sets of hand-colored plates are exactly alike, and for this reason, it is necessary to consult more than one copy of Cramer to begin to get a "feel" for what he meant to show. The other avenue of determining what Cramer had in mind is to consult the pattern plates that are now in the possession of the British Museum (Natural History).

Small insects were frequently illustrated slightly larger than life-size, and wing shapes are sometimes inaccurate (usually the apex is more rounded than natural), but his representations of maculation are generally correct. In the plates, the colors are frequently about right for the insects reproduced.

#### Reliability of Data in *De Uitlandsche Kapellen*

Many of the species described by Cramer in *De Uitlandsche Kapellen* were based on specimens brought to him by seafarers, and

Cramer accepted their locality labels as correct. This procedure caused Cramer to describe a sizable minority of his species from the wrong localities and/or zoogeographic regions. This is not especially strange, since Cramer was dealing with what he thought were immutable species created by God, and the Creator could place closely allied species anyplace He wanted. It has caused us difficulty, though, and whereas most of these mislabelled species have been assigned correctly to extant material, others have not been and remain either forgotten species or species assigned to the erroneous localities as "lost" species.

It is not surprising, then, that several North American butterflies were described from the wrong localities—in fact, it would have been amazing if it were otherwise. A quick look through the Cramerian names yields such spurious type-localities as "Smirna," "Indiis," "Cape of Good Hope," etc. Such widely disparate localities did not bother the older workers, but they do disturb us. Such things must be taken in context.

Difficulties such as those outlined in this section and the last have made Cramer's species difficult to identify. Nevertheless, recognition of the conditions under which Cramer worked should help in the identification. Many such determinations have been made already, and it is to be hoped that the others can be done speedily.

#### Butterflies in Cramer's Plate 270

Cramer's Plate 270 of *De Uitlandsche Kapellen* was published posthumously by Caspar Stoll. The date assigned is [1780] (I. C. Z. N., Opinion 516, 1958), and this information has been placed on the Official List of Works . . . as of 1958. This plate obviously suffered from the absence of the "master" and is more of a caricature than are many in the work. This plate is reproduced (Fig. 1). A look at the insects represented on the plates and comparison with actual specimens is informative.

Figures A and B represent the type specimen of *Papilio mesentina* Cramer, an insect now equated with *Papilio aurota* Fabricius (1775: 197); this butterfly is presently placed in the genus *Belenois*. The Cramerian insect is a male from the "Coromandel," probably "Kaap de Goede Hoop," and we illustrate (Figs. 2–3) a male from South Africa of *B. aurota*. Cramer described the species on Plate 270 from the van Lennep collection the remains of which are now contained in the British Museum (Natural History), via the Rothschild collection. The forewing in the Cramer figure is not as acute as an actual specimen, and the under surface of the hindwing is ochreous yellow in the plate but only very faintly overlaid with yellow scales in the most

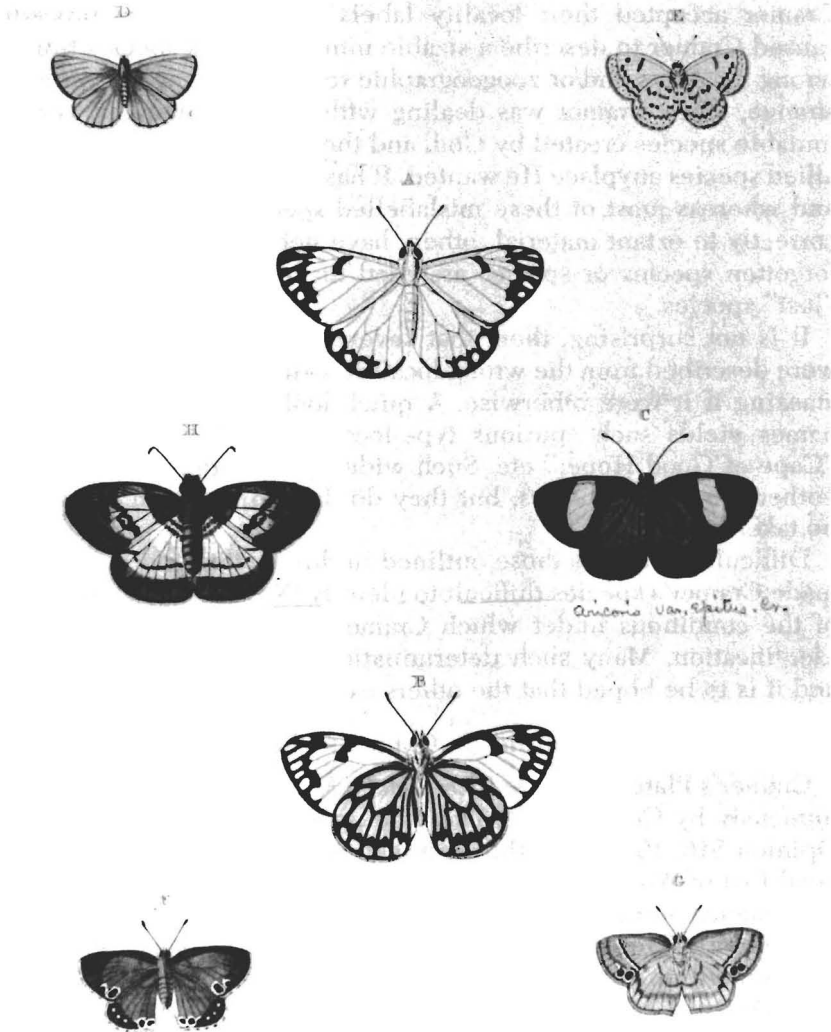
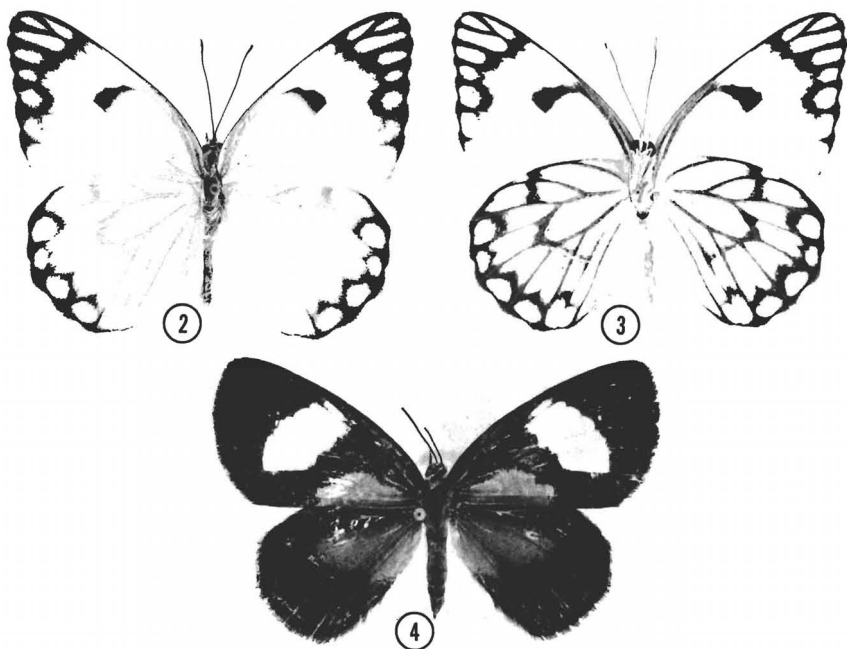


FIG. 1. A copy of Cramer's Plate 270 from *De Uitlandsche Kapellen*, vol. 3 [1780]. The identities of the species figured are discussed in the text, and the handwritten determination under Fig. C was done by Dr. Ellison A. Smyth, Jr.

yellow specimen we could find. Nevertheless, because the type-locality is corrected, it is easy to associate *mesentina* with *aurota*.

Figure C represents the type of *Papilio epitus* Cramer from "Surinam." This species is presently assigned to the genus *Orimba*, and

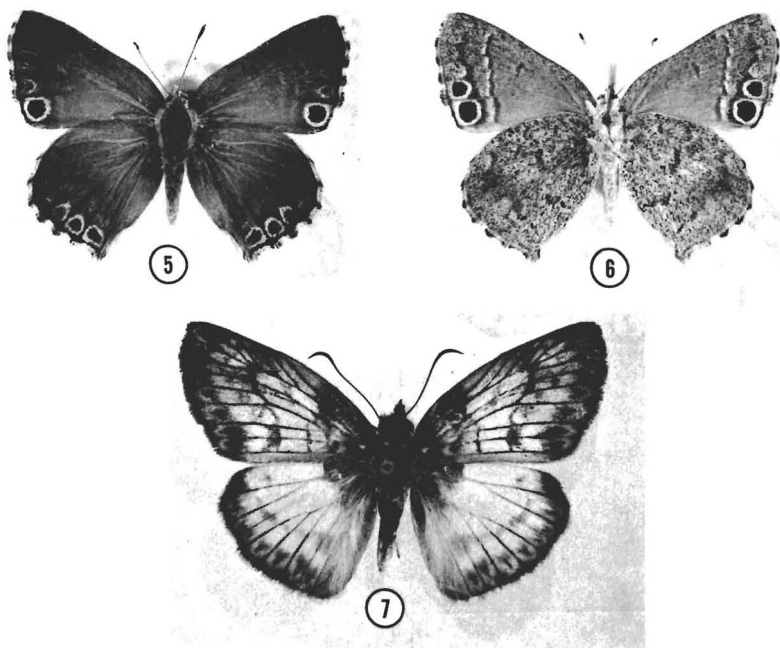


FIGS. 2-4. Species illustrated by Cramer [1780]: Plate 270. 2-3, *Belenois aurota* (Fabricius), ♂, upper (2) and under (3) surfaces; REP. SOUTH AFRICA: TRANSVAAL: Struben's Valley, 13.xii.1970 (W. Henning) (Allyn Museum photos 031080-1/2). 4, *Orimba epitus* (Cramer), ♀, upper surface; GUYANE FRANÇ.: St. Jean du Maroni (LeMoult colln.) (Allyn Museum photo 031080-5). All specimens in this and other plates in the collection of the Allyn Museum of Entomology.

the type is a female (the male is blue above). Only the upper surface is illustrated by Cramer, and we illustrate a female (Fig. 4) from French Guiana for comparison. The illustration is perhaps the most accurate of any on this plate, but the specimen is larger than any female of *epitus* that we have seen, and the forewing apex is more rounded.

Figures F and G are of *Papilio iolaus* Cramer, described from the Cape of Good Hope. This insect is now considered a synonym of *Papilio lara* Linnaeus (1764: 320) and is a member of the genus *Lepatomyrina*. We illustrate a representative male from South Africa (Figs. 5-6) of *L. lara* for comparison. The forewing of the illustrated specimen is rounder than that of a specimen, and Cramer overemphasized the markings of the hindwing.

Figure H is of *Papilio melander* Cramer, a South American hesperiid that is now synonymous with *Papilio menippus* Fabricius



FIGS. 5-7. Species illustrated by Cramer [1780]:Plate 270. 5-6, *Leptomyrina lara* (Linnaeus), ♂, upper (5) and under (6) surfaces; REP. SOUTH AFRICA: CAPE PROVINCE: Oudtshoorn. 2.xi.1966 (J. C. McMaster) (Allyn Museum photos 031080-7/8). 7, *Mylon menippus* (Fabricius), ♂, upper surface; BRASIL: GUANABARA: Leblon, 2.ii.1971 (C. Callaghan) (Allyn Museum photo 031080-3).

(1776: 292), a member of *Mylon*. We here illustrate a representative *M. menippus* (Fig. 7, upper surface only). The forewing of Cramer's representation is again too rounded, and the markings are badly caricatured. The size is a bit too large, even though *menippus* is a fairly large skipper.

Figures D and E represent the type specimen of *Papilio ladon*, a name used later in the same volume (Cramer [1780]: 164; pl. 284, fig. G) for an Indo-Malayan skipper now considered synonymous with *Badamia exclamatoris* (Fabricius) (Evans, 1949: 72). It was described from "Kaap de Goede Hoop," and the figure definitely represents some polyommata blue. Examination of South African lycanids (Dickson, 1978) reveals no very close matches for *ladon*. The most similar are *Azanus j. jesus* (Guérin-Ménéville) and *A. natalensis* (Trimen), but both of these species have prominent subapical bars on the forewing beneath, characters that would have been em-



phasized rather than ignored, by Cramer. Consequently, we must look elsewhere than the Cape region of South Africa to find *ladon*.

The title of Cramer's work suggests we must look beyond the confines of Europe for *ladon*. We must examine the shipping routes that seafarers might have taken and ports that they might have visited, for such adventurers supplied Cramer with his material. Captains in the slave trade stopped at such places as Capetown, Sierra Leone, Surinam, Jamaica and one or another ports in Colonial America (New York, Savannah and possibly ports on Chesapeake Bay) and supplied many of the specimens. Other captains of Cramer's acquaintance sailed to the Dutch East Indies (now Indonesia) and brought back many specimens, especially from Amboina (Ambon) and Java. In these places, then, we must search for what *ladon* might represent.

#### The Identity of *Papilio ladon* Cramer

Ménétriés (1857: Pl. 10, Fig. 5) labelled his illustration as "*Lycaena ladon* var.," an insect from Japan that de l'Orza (1869: 20) later named as *Lycaena ladonides*. That butterfly is now known to be a member of the *Celastrina argiolus* complex. Certainly both Ménétriés and de l'Orza saw at least a hint of *Celastrina* in the original illustration of *Papilio ladon*.

*Celastrina* is a genus, unfortunately, whose range encompasses many of the areas from whence Cramer received material, but it is not found in the Cape region of South Africa. Nevertheless, it has been necessary to examine representatives of the group from the Holarctic and Indo-Malayan regions to determine which (if any) of the species *could* be the true *ladon*. Discussion with Col. J. N. Eliot at the British Museum (Natural History) suggested several *Celastrina* that approximated Cramer's figure of *ladon* (insofar as one could!). Most of the Indo-Malayan "look alikes" are found in the foothills of the Himalayas, an area from which Cramer was unlikely to obtain specimens.

Most Indo-Malayan *Celastrina* with well-patterned under surfaces are deficient for consideration as *ladon*. Many (*puspa* Moore, and relatives) have white areas on the upper surface of one or both wings; other species are too purplish-blue to qualify (the type of *ladon* is supposed to be caerulean blue). Other *Celastrina* are blue enough, but they have broad margins on the forewings, and often on the hindwings as well. Most of the species in the Indo-Malayan region fail on the wider margin criterion; the only one close to Cramer's figure is *C. limbata* (Moore), and that species is too purplish on the upper surface (D'Abbrera, 1977: 381).

We must, then, look to the New World for *ladon*. Scudder (1889:

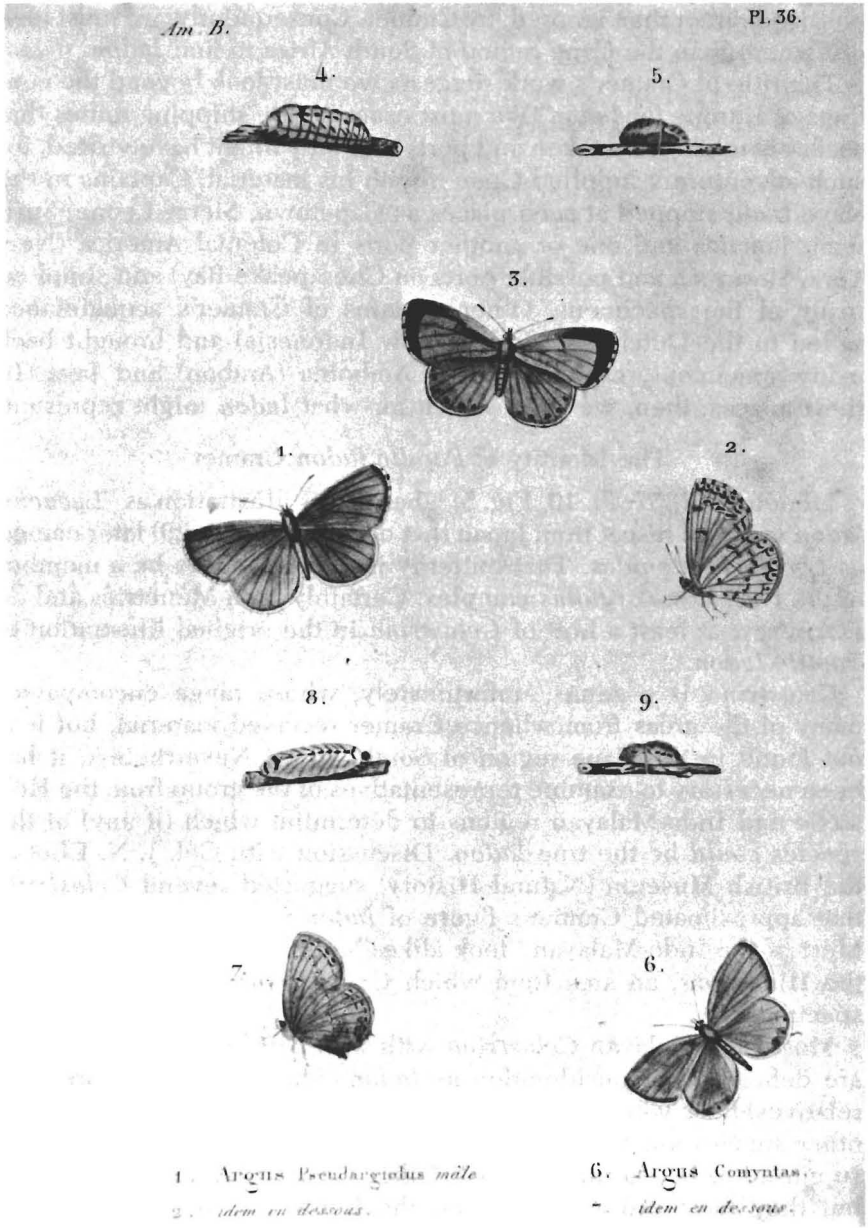


FIG. 8. A copy of Boisduval and Leconte's plate 36 from *Histoire Lepidoptères ... Amerique septentrionale*. [1833]. Figs. 1-5 represent *Argus pseudargiolus*.



FIGS. 9-10. *Papilio ladon* Cramer, Neotype ♂, upper (9) and under (10) surfaces; MARYLAND: Anne Arundel Co.: Patuxent River, 19.iv.1964 (W. H. Evans). See text for designation. Scale represents 10 mm.

928) may have been the first to associate this name with the familiar *Celastrina pseudargiolus* (Boisduval & Leconte [1833]: 118-119; Pl. 36, Figs. 1-6, as *Argus p.*), stating in his discussion of *pseudargiolus*, "Not *Papilio argiolus* Linn., but possibly *Pap. ladon* Cram." A few later authors (for example, Dyar, 1902: 45, and Draudt, 1921: 818) went a step further and used *ladon* in preference to *pseudargiolus*.

Although Cramer's renditions of maculation are overdone, he had an "artist's eye" for colors. Assuming this is so with *ladon/pseudargiolus*, we can restrict Cramer's specimen to a spring brood individual from the Middle Atlantic States. The under surface maculation is heavy (not so heavy as Cramer illustrates), and the upper surface is uniformly sky blue with narrow dark margins. The size of the illustration cannot be taken literally—Cramer often exaggerated the size of small butterflies, presumably to obtain the details of maculation that he wanted. The differences in markings between Cramer's illustration (Fig. 1) and that of Abbot (redrawn in Boisduval and Leconte [1833]: Pl. 36) (Fig. 8) are insignificant when one recognizes Cramer's overemphasis of the dark markings.

Spring specimens from New England and montane New York and Pennsylvania usually are referable to the forms "lucia" (W. Kirby) and "marginata" (W. H. Edwards), but further south specimens approach the pattern shown by Cramer's illustrations. By the time one reaches Georgia, spring brood specimens are too pale to be referable to *ladon* with certainty. A specimen that conforms to the Cramerian figure is here illustrated (Figs. 9-10).

Later in the spring, and during the summer, individuals from later broods are much paler beneath with finer markings; on the upper surface males of these broods frequently show some white. Both the

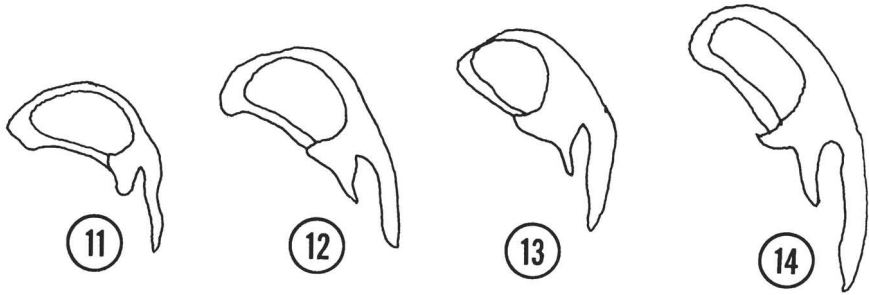
Cramer and the Boisduval and Leconte plates, then, represent spring specimens.

Is the North American *Celastrina*  
Conspecific with *argiolus*?

For years it has been fashionable to equate North American animals with their Palearctic counterparts. This "modern" thinking has pervaded taxonomic thought and has aided elucidation of some intriguing ideas. In a few instances, however, such thinking has obfuscated natural relationships and, indeed, caused spurious affinities to be accepted. Each case must be reexamined strictly on its own merits.

For the past thirty years most systematic workers have accepted all North American *Celastrina* as subspecies of the Eurasian *C. argiolus* (Linnaeus, 1758: 483), a species of undeniable kinship to the American insect. This relationship, or lack thereof, was one of the aspects of *Celastrina* taxonomy that we wished to examine when we began our review of the group some twenty years ago, and it soon became apparent to both of us that while *argiolus* and "*pseudargiolus*" were very close, it took imagination to state that they were conspecific. Some interesting patterns (that were confusing if viewed according to the "conventional" logic of the day) began to emerge: 1) the androconial scales differed between New and most Old World *argiolus*-group butterflies; 2) the male genitalia showed some intriguing differences and 3) *argiolus* in its several Old World subspecies has an iridescent dusting of blue-green scales near the base of the under hindwing, whereas "*pseudargiolus*" and the Japanese *ladonides* either do not show this characteristic, or it is very weak. *C. ladonides* is an anomalous Palearctic insect, most closely resembling Nearctic material and perhaps representing an eastern Palearctic subspecies of the American "*pseudargiolus*." We argued long and hard over *Celastrina* taxonomy before finally Clench (1972) described *C. ebenina*. Incidentally, *C. ebenina* is much less distinct from "*pseudargiolus*" than either is from *argiolus*.

The valvae of *argiolus* (Fig. 11) are rather different from those of *ladonides* (Fig. 12), *ladon/pseudargiolus* (Fig. 13) or the Mexican-Central American *gozora* (Boisduval, 1870: 17) (Fig. 14), especially regarding the shape of the distal process and the extent of the dorsal process. The dorsal process is simple in *argiolus* and all of its putative subspecies, but it is progressively more bilobate in the other taxa, distinctly so in *gozora*. The distal process is shorter and rather contorted in *argiolus*, but straighter and more evenly curved in the other populations. If these populations are subspecies, they are very far along the path of speciation.



FIGS. 11-14. Inner faces of valvae of selected *Celastrina*. **11**, *C. argiolus* (Linnaeus). **12**, *C. ladonides* (de l'Orza). **13**, *C. l. ladon* (Cramer). **14**, *C. ladon gozora* (Boisduval).

A possible nomenclatorial solution to the *argiolus*-group problem was put forward by Amadon & Short (1976). These authors may be criticized for "dodging" the fundamental species *vs.* subspecies argument, but by so admitting a degree of uncertainty, they cannot be accused of dogmatism. Much of the rhetoric surrounding circumpolar species *vs.* subspecies *is* dogmatic, and perhaps a system that immediately states assumed relationships at the outset will serve to elucidate relationships better than either conventional approach.

Using the Amadon-Short system, *argiolus* becomes a "superspecies" and is denoted as "*Celastrina* [*argiolus*]." The allopatric taxa within a superspecies that are accorded specific ranking are known as "allospecies," and in the case of *Celastrina* are denoted as "*Celastrina* [*argiolus*] *argiolus* (Linnaeus)" (Palearctic); "*Celastrina* [*argiolus*] *ladonides* (de l'Orza)" (Japan, Korea); "*Celastrina* [*argiolus*] *ladon* (Cramer)" (most of North America) and *Celastrina* [*argiolus*] *gozora* (Boisduval)" (SW U.S. through Central America).

There is some doubt as to the status of the latter name, however, since *cinerea* (W. H. Edwards) occasionally interbreeds with more definite *ladon* populations. This eventuality can be accounted for by assuming that the allospecies *gozora* is an extremely differentiated subspecies of *ladon*, in which case *gozora* would be a "megasubspecies" and denoted as "*Celastrina* (*ladon*) *gozora* (Boisduval)." Note that an allospecies is tied to its superspecies with the latter's name in square brackets; a megasubspecies is written about as normally, but the species epithet is in parentheses. This megasubspecies (if it is one) is more distinct from the eastern *ladon* than is *echo* (W. H. Edwards), the latter taxon being written as "*Celastrina* *ladon* *echo* (W. H. Edwards)." The only problem then is, to which species do we assign *cinerea*? If one considers *gozora* an allospecies, it would be

"*Celastrina gozora cinerea* (W. H. Edwards)"; if *gozora* is a megasubspecies (it must be one or the other), the name becomes "*Celastrina ladon cinerea* (W. H. Edwards)." This scheme, complicated as it seems, gives a shorthand for elucidating complicated relationships.

Our conclusion, then, is that *Celastrina argiolus* is a superspecies with a single New World allospecies, *ladon*. *C. [argiolus] ladon* is divided into at least one megasubspecies, *gozora*, and a plethora of subspecies. This idea can be transferred profitably to many other American Rhopalocera, especially the Hesperiiidae. Evans (1955: 124–125) lists *Monca telata* (Herrich-Schäffer) with three subspecies, *tyrtaeus* (Plötz), *telata* (Herrich-Schäffer) and *penda* Evans. Bell (1941: 183–185) made a very strong case for the distinctness of *tyrtaeus* and *telata*, based on genitalic differences and moderate sympatry. *M. telata* would seem to be a classic example of a superspecies, and *tyrtaeus* (which gets into southern Texas) could profitably be denoted "*Monca [telata] tyrtaeus* (Herrich-Schäffer)." A similar solution could be employed with the *Hesperia comma* complex, a knotty problem for treatment by "conventional" means.

#### *Celastrina ladon* (CRAMER)

For the reasons given in the preceding sections, we contend that the proper name for the North American *Celastrina* is *ladon* (Cramer, [1780]). The Nearctic and Old World members do not appear to be conspecific, even though they are mutual closest relatives. Further, the name *pseudargiolus* (Boisduval & Leconte, [1833]) is a junior synonym, the two names both based on spring brood material. Boisduval and Leconte's name was proposed for a specimen (or specimens) presumably from Georgia, and Cramer's specimen probably came from further north: nevertheless, material from both places are subjectively placed as belonging to the same subspecies, as well as species.

The problem, then, is straightforward: shall we accept a long-used junior synonym, or shall we invoke the Law of Priority in favor of the older Cramerian name? To those who would advocate the former course, we can say that invoking priority for a long-used junior synonym need not cause the confusion that some authors claim. Cases in point are many among North American butterflies, and in all cases where the older name is used, it is accepted by the lepidopterological community in short order. Who but the older lepidopterists now remember "*Euptychia eurytus*" (*Megisto cymela*), "*Polites manataqua*" (*Polites origenes*) or "*Polites taumas*" (*Polites themistocles*)? Still, these were the accepted names fifty years ago for those three butterflies, and there are similar cases scattered through the North American Rhopalocera, plus countless others in the moths. Lepidop-

terists, and scientists in general, are adaptable and do not cling to erroneous beliefs (or names) for long, once the error is pinpointed.

We have attempted to find a type specimen of *Papilio ladon* Cramer by searching and requesting that searches be made. Unfortunately, the type appears to be no longer extant. Since it must have come from the Atlantic Coast, one can pinpoint the exact locality no nearer than the Mid-Atlantic States, perhaps as far north as New York City. Examination of material at hand suggests that the area near Baltimore, Maryland might be a prime candidate for a type-locality. We have found a single early brood male from that area that satisfies most of the criteria emphasized in Cramer's original plate. This specimen is designated as the Neotype of *Papilio ladon* Cramer, as follows:

**Neotype** a specimen in the Allyn Museum of Entomology is hereby designated as the Neotype of *Papilio ladon* Cramer. It bears the following labels: a handlettered label "14 April 1964/Patuxent River/Anne Arundel/Co., Maryland" (specimen collected by William H. Evans); a machine-printed label, "A. C. Allyn/Acc. 1970-48" and a partly printed, partly *handwritten* label, "Allyn Museum Photo/No. 031080-9/10." To these labels we have added a fourth, a red label printed and *handwritten* in black, proclaiming the specimen's status: "NEOTYPE ♂/*Papilio ladon*/Cramer, [1780]/ designated by H. K. Clench & L. D. Miller, 1980."

This specimen is here figured (Figs. 9–10). Its forewing length is 12.1 mm.

We contend that the eventual stability of nomenclature is better served by accepting the priority of *ladon* over *pseudargiolus* than by ignoring the Cramerian name. Whatever name is eventually accepted, it will probably take a decision of the I. C. Z. N., especially if the Boisduval and Leconte name is to be accorded legitimacy. Such a decision would end the *ladon-pseudargiolus* argument that seems to surface about every fifty years. In any event, merely ignoring *ladon* can no longer be done with impunity.

The Nearctic subspecies of *ladon* are precisely those cited in most references (dos Passos, 1964) for *argiolus*, the only exception being the replacement of *pseudargiolus* by *ladon* and the subspecies being allied with *ladon*. The nomenclature cannot be too upset by this change. An even more radical taxonomy of the Nearctic *argiolus*-group utilizes the Amadon-Short (1976) scheme, wherein the American species and subspecies would be (without synonymy):

- Celastrina* [*argiolus*] *ladon* (Cramer, 1780)
  - a. *Celastrina ladon lucia* (W. Kirby, 1837)
  - b. *Celastrina ladon ladon* (Cramer, 1780)
  - c. *Celastrina ladon argentata* (Fletcher, 1903)
  - d. *Celastrina ladon nigrescens* (Fletcher, 1903)
  - e. *Celastrina ladon sidara* (Clench, 1944)
  - f. *Celastrina ladon echo* (W. H. Edwards, 1864)
  - g. *Celastrina (gozora) cinerea* (W. H. Edwards, 1883)
  - h. *Celastrina (ladon) gozora* (Boisduval, 1870)
- Celastrina* [*argiolus*] *ebenina* Clench, 1972

Note that these combinations include superspecies, species, mega-subspecies and subspecies and show relationships somewhat better than conventional synonymy. Parenthetically, we hasten to add that we do not expect this scheme to be adopted generally for some time.<sup>2</sup>

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<sup>2</sup> When this paper was in final preparation, I received a note from Col. Eliot concerning *ladon*. In part, it read as follows: "Since I saw you, I have examined Cramer's original watercolour. It is a very much more life-like representation than the caricature in Pl. 270, Figs. D, E. As a result, I now have no hesitation in identifying *ladon* with *pseudargiolus* and *violacea*, and I shall now use *ladon* in Kawazoe's & my paper for the *argiolus* subsp. from eastern USA."

The assignment of *ladon* to *argiolus* is still a matter of some disagreement, except with the latter being considered a superspecies, as is discussed in the present paper. [LDM]



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