

In view of the above considerations, it seems probable that it is only fortuitous that the results reported by McDonald *et al.* approach the Hittorf values as closely as they appear to.

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On a Recent Proposal to Correct an Error Committed by the International Commission on Zoological Nomenclature at the Paris 1948 Meeting

ON October 28, 1950, Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, undertook to circularize by mail the taxonomists working on the insect order Lepidoptera to determine their views on a proposition to correct a serious error made by the commission in its haste at Paris in 1948. Several important principles are involved in this proposal, with implications far beyond the name of the Monarch Butterfly, which was directly involved.

In brief, the proposal is a further extension of Mr. Hemming's campaign to replace the Law of Priority with *Nomina Conservanda*. Like so many previous cases, his proposal is accompanied by almost no justification beyond the statement that "greater confusion than uniformity" would result. His direct statements that "the name universally applied to" the Monarch is *plexippus* and that the Indo-Oriental species involved "is now universally known as *Danaus genutia*" are not only in error but are not even close to the truth.

Furthermore, Mr. Hemming proposes to take no account whatever of a careful lectotype designation already published; he proposes to designate a published illustration as a type of a species; and he proposes to designate a new type locality for that species which is not even the locality of the figured specimen. In choosing this figure, in a group of animals where color is of great importance in taxonomy, he chooses a black-and-white figure, stating that no colored figure is available. At least 4 of the best-known works on American butterflies, from 1904 to 1948 in at least 18 editions, have colored figures that could have been used.

In circulating his proposal Hemming neglected to send a copy to several prominent interested lepidopterists, including the author of the only modern revision of the subfamily involved. (We note with interest that this man had previously taken a stand opposite to that now taken by Hemming.)

These principles and the method of action proposed by Hemming are so objectionable to us that we feel it necessary to present our criticisms and suggestions. We believe that many taxonomists working in other groups will be equally interested in the case.

At the 13th meeting of the International Commission at Paris in 1948, it was the intention of the commission to fix the trivial name *plexippus* Linnaeus, 1758, to the North American species known as the

Monarch Butterfly. Linnaeus had proposed *plexippus* for specimens collected by Peter Kalm in North America and for his own specimens from China, and the name had since been applied to the 2 separate and distinct species found in these two regions. But lepidopterists were not agreed as to whether there was a type for *plexippus*, and the application of the name was thus a matter of opinion. The commission attempted to carry out their intention by designating an official figure (Holland. *Butterfly Book*, pl. 7, Fig. 1, [1931]) to replace the type. They erred in carelessly assuming that this represents the North American Monarch, for it actually is a figure of a distinct subspecies of that butterfly occurring in northern South America and parts of Central America. Thus the name *Danaus plexippus plexippus* (L.), 1758, was fixed to the South American subspecies, and the name of the North American subspecies became *Danaus plexippus menippe* (Hübner), 1816. Hence, the Commission's hurried action resulted in quite a different fixation than that intended. This error has already been discussed by one of the present writers (Field. *Proc. Entomol. Soc. Wash.*, 52, 234 [Oct. 1950]).

Hemming's proposal would correct this error by deleting from the Opinion to be rendered the reference to Holland's figure and substituting a reference to another figure in its place (Clark. *Proc. U. S. Nat. Museum*, 90, pl. 71, Fig. 1 [1941]) and further by designating a type locality, "Pennsylvania."

We are strongly against this proposal for three reasons.

First, because we believe that a strict application of the Law of Priority will serve the best interests of all concerned. Linnaeus' own material came from China and represented the Indo-Oriental species (sometimes referred to as *genutia* Cramer). We know this because he definitely states (in *Mus. Lud. Utr.*, 262 [1764]) "*meus e China*." It is clear that Linnaeus confused several species under the name *plexippus*, for although 2 of the 4 literature references listed by Linnaeus in his original description (*Systema Naturae*, Ed. X, 471 [1758]) refer to the North American Monarch, the other 2 refer to still another distinct New World species. The first part of the Linnaean description would fit either of these American species or the Indo-Oriental species, but he added at the end of his description a sentence ("*alæ primores fascia alba, ut in sequente*" [*chrysippus*] "*cui similis*") that could apply only to the Indo-Oriental species. The fact of the matter is that Linnaeus intended the name for the Indo-Oriental species (his Chinese specimens) and at the same time misidentified these American species with this Indo-Oriental species.

Corbet (*Proc. Roy. Entomol. Soc. Lond.*, 18, pts. 9-10, 188 [Oct. 1949]) has already presented a perfect case for applying the name to the Indo-Oriental species and has designated a Chinese specimen in the Linnaean Collection in London as the lectotype, for he says, "I have no hesitation in taking the male specimen bearing the Linnaean name label" (in Linnaeus'

handwriting) "as the name-type of *P. plexippus*." We regard this as an unequivocal designation of a lectotype.¹ By accepting Corbet's action as final we would be following the intent of Linnaeus.

Second, we are opposed to this proposal because we believe the evidence advanced by Hemming and Corbet to support a *nomen conservandum*² is not conclusive.

It is claimed that the application of the name *Papilio D. plexippus* Linnaeus, 1758, to the Indo-Oriental species would result in greater confusion than uniformity. Hemming, in presenting the proposal to place this name on the Official List of Specific Trivial Names in Zoology and to conserve it for the North American species, states that it would be most confusing to apply the trivial name *plexippus* to a species other than the North American Monarch.³ Further, on page 2 under point (7) of the present proposal sent out to specialists by Mr. Hemming, he states that "Dr. Corbet realized the confusion to which this conclusion would give rise." On page 2 under point (4) he says: "... this species" (the North American one) "came to be known as *Danaus plexippus* (Linnaeus), the name universally applied to it."

We believe that these statements cannot be justified by the facts. We ask, Confusing to whom? Universally applied to it by whom? The American species is not now, and never was, universally known as *plexippus*. If we examine the record (figures compiled from the revision of the American Danaidae by D'Almeida. *Mem. inst. Oswaldo Cruz*, 34, fasc. 1, 44 [1939]), the following is evident. Six different names have been applied to the North American Monarch. The name most commonly used is *archippus* in slightly over 49 per cent of the literature (individual references), whereas the name *plexippus* has been used in only about 30 per cent of the literature on the North American species. After Barnes and Benjamin (*Can. Entomol.*, 56, 16 [1924]), pointed out that *archippus* was a homonym and that *Danaus menippe* (Hbn.) should be used for the North American species, the name *archippus* gradually dropped out of the literature and was replaced by the names *plexippus* and *menippe*. D'Almeida (see above) rejects the name *plexippus* for the North American species and applies it to the Indo-Oriental species. Forbes uses the name *menippe* for the North American species in 1939 (*J. N. Y. Entomol. Soc.*, 51, 297). Talbot, in his paper "Revisional Notes on the Genus *Danaus Kluk*" (*Trans. Roy. Entomol. Soc. Lond.*, 93, pt. 1, 115 [1943]), uses the name *menippe* for the North American species

¹ Before taking any action in this case the commission should first consider this designation. Corbet's designation should be voided before any attempt is made to apply the name *plexippus* to the North American species.

² The International Congress of Zoology, meeting in Monaco in 1913, gave the International Commission on Zoological Nomenclature the plenary power to suspend the rules where in its (the commission's) judgment the strict application of the rules would clearly result in greater confusion than uniformity.

³ It is our belief that it might perhaps be inconvenient, but no more confusing one way than the other.

and the name *plexippus* for the Indo-Oriental one. Not only Talbot, Forbes, Barnes, and Benjamin, but a number of others, have used the name *menippe* for the North American species, so that there are altogether approximately 20 separate papers in which the name *menippe* is used for the North American species.

Hemming further states (on p. 2, under point (5) of the proposal being here discussed) that "... Species 'B'" (the Indo-Oriental species) "... is now universally known as *Danaus genutia* (Cramer)." We believe that this also is a misstatement of fact. According to the latest catalogue treating the literature for the Indo-Oriental species (Bryk. *Lepidopterorum Catalogus*, pars 78, Danaidae I, [1937]), there are 64 references in which the Indo-Oriental species (the typical subspecies, plus its forms) is treated as *plexippus* and about 30 in which it is treated as *genutia*. In other words, there are twice as many references in which the name *plexippus* is used for the Indo-Oriental species as there are references in which the name *genutia* is used for this species. If we consider the literature for all the subspecies of the Indo-Oriental species, it is immediately apparent that there is an overwhelming preponderance of usage for the name *plexippus* as opposed to *genutia*. Even in the total usage for the name *plexippus* in literature, we see that this name has been used in 64 references of the Indo-Oriental species and only slightly more often (68) in references to the American insect.

In a survey made of the usage of the names *plexippus*, *genutia*, *menippe*, and *archippus* by Talbot (*Trans. Roy. Entomol. Soc. Lond.*, 93, pt. 1, 115 [1943]) made from books written by reputable authors in systematic and faunistic work, he stated that a large majority of those who recorded the Indo-Oriental species used the name *plexippus* for that species, whereas most of those who recorded the American insect did not use the name *plexippus* but used the name *archippus*.

In the face of these facts, how can it be claimed that there would be more confusion than uniformity in applying the name *plexippus* to the Indo-Oriental species?

Our third objection to this proposal is our belief that the method to be employed to fix this name to the American species is contrary to the best modern nomenclatural practices and is, indeed, somewhat contradictory. It would be equally objectionable to use this method to fix the name to the Indo-Oriental species.

We object to the designation of a published picture to represent a type, when there are still specimens available in the original collection from which to choose a type, and especially when one of these original specimens has already been selected as a lectotype! In the last analysis (when original specimens are available), the only true and correct method of identifying a name is to resort to an official (type) specimen that represents that name. Modern systematics of Lepidoptera often requires that structures not ob-

servable in pictures be studied in order to identify species. Very often type specimens have to be dissected and studied in minute detail to settle questions of identification. In such cases official figures would be of no use. Why continue to foster a practice that very possibly someday would be of no aid in settling questions of identification, a practice that very likely would still have to be further clarified?

In addition to the objection above to the designation of published type figures instead of type specimens, we most certainly object to the designation of an official figure made from a specimen collected from one locality and the designation of another locality as the type locality. In this case Hemming would delete from the Opinion to be rendered, the reference to the Holland figure and substitute as the official figure one published by Clark (*Proc. U. S. Nat. Museum*, 90, pl. 71, Fig. 1),⁴ a figure that was made from a specimen collected by H. S. Burnett at Kendall, New York. Hemming, then, would further designate as the type locality "Pennsylvania." Does not this action have the effect of making, in a backhanded fashion, the specimen illustrated by Clark a sort of type for the species, if not an actual type? The locality in which this specimen was collected would become another type locality, and thus we would have two type localities. What could be more confusing?

We further submit that, if it is decided to designate an American locality as a type locality, something more definite could be selected than Pennsylvania, for Peter Kalm (the collector of the American material studied by Linnaeus) has given us an excellent account of his travels in America (for the latest account of his travels in English, see A. B. Benson, *Peter Kalm's Travels in North America*, 2 vols. New York: Wilson-Erickson [1937]). It can be determined from this work that his explorations extended from the state of Pennsylvania to New York, New Jersey, and southern Canada. All localities where Kalm spent some time are mentioned by name, and in addition dates are given. Much time was spent around Philadelphia, so that

⁴ This figure of Clark's is a *black-and-white* half-tone and was apparently selected on the belief as stated by Hemming, that "There is in fact no coloured figure" of the North American subspecies "to which reference can be made. . . ." This belief is, of course, absolutely false, as every student of American butterflies can verify. We cite four easily available references: Comstock, J. H., and Comstock, A. B. *How to Know the Butterflies*, pl. 32, Fig. 3, (1904, 1920, 1929); Lutz, F. E. *Fieldbook of Insects*, pl. 21, Fig. at top of pl. (1918, with twelve printings down to 1948); Comstock, J. A. *Butterflies of California*, pl. 17, Figs. 1, 2 (1927); Wright, W. G. *Butterflies of the West Coast*, pl. 12, Fig. 100 (1905).

this could be designated as the type locality, and this would certainly be more useful and specific as a type locality than "Pennsylvania." On the other hand, a good case could be presented for Fort St. Frédéric (Crown Point), New York, being the locality where Kalm may have collected the North American Monarch, for in his account of this locality (see work by Benson mentioned above, 387, 574) he mentions the abundance of *Asclepias syriaca* and *Asclepias variegata*, two of the food plants of the Monarch.

Because of the objections to the present Hemming proposal presented above, we request that the commission reconsider the whole matter of fixing the name *Papilio D. plexippus* L., 1758; we further express the hope that the commission (instead of suspending its rules of procedure, as it did at Paris—see *Bull. Zool. Nomen.*, 4, pts. 1-3, 7, [1950]) will follow the rules of procedure agreed to and adopted at the third session in Paris, 1948 (*ibid.*, 55). These rules would require the publication of a notice of a proposal to suspend the rules in the *Bulletin of Zoological Nomenclature* and in two other serials, *Nature* (published in Europe) and *SCIENCE* (published in America). These rules would give specialists, institutions, laboratories, and all interested persons a six-month period⁵ to present arguments for or against the suspension under consideration and would require at least a two-thirds majority of the commission voting on the proposition in order to suspend the rules.

In closing, we should like to add that it is regrettable that Secretary Hemming failed to send copies of his proposal to all prominent specialists in Lepidoptera (we know of 6 who did not receive this proposal by this date, December 10, 1950).⁶ Furthermore, no space was provided for a record of the names of interested specialists who disagreed with his proposal even though there was provided as point 7, page 6, of this proposal, a place for the names of specialists who thought the Hemming proposal would constitute the most satisfactory solution of the problem.

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⁵ We would prefer the one-year period originally required by the International Congress of Zoology, meeting in Monaco in 1913.

⁶ It is most interesting to note that one of these six men is R. Ferreira d'Almeida (of the staff of the National Museum of Brazil), the author of the only modern and complete revision of the subfamily Danainae of the New World (*Mem. inst. Oswaldo Cruz*, 34, fasc. 1, pp. 1-113, 30 pl. [1939]).

