to base *Papilio plexippus* Linnaeus on a figure by Clarke, published in 1941—a figure of an insect collected in Kendall, New York, and we have to say that the type locality is the state of Pennsylvania!

We were, indeed, very much surprised to see such statements in Hemming's mail proposal. We here in Brasil strongly protest against this kind of systematics—the designation of a figure not seen by Linnaeus as the type of an insect described by him, when there still exists in the Linnaean collection a specimen of this insect that was seen and labeled by Linnaeus. To designate a figure "as the standard for identifying" (Hemming's own expression) really amounts to a designation of a type[1] for the species and subspecies. To designate a figure based upon a specimen from Kendall, New York, and at the same time to say that the type locality is Pennsylvania shows a real and obvious ignorance of what is meant by the term "type locality."

We must also say concerning footnote 5 on page 70 of the Field, Clarke, and Franclemont paper that one of us (Almeida) received Hemming's mail proposal. It was received, however, after the date specified in their paper (i.e., December 10, 1950). Hemming's letter is dated October 31, 1950. We have not checked the date it was posted, but apparently there was some postal delay.

Finally, we want to state that we agree with the conclusions set forth by Field, Clarke, and Franclemont, and we also request (as they did) that the commission reconsider the whole matter of fixing the name *Papilio plexippus* L.

We have discussed this matter with some of our colleagues who work on systematic zoology in scientific institutions in the cities of Rio de Janeiro and São Paulo. We wished to learn their opinions about the way Hemming was trying to solve this question of *P. plexippus,* because it involved not only matters of interest to lepidopterists, but also matters of interest to all systematic zoologists and with implications about which all right-thinking systematic zoologists should be warned.

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After a careful discussion of the paper above, the undersigned agree *in toto* with the views therein contained.

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[1] We realize that Hemming has not used the word "type" here but uses the phrase "the standard for identifying." We interpet this expression (as did Field, Clarke, and Franclemont) to mean "a type" and, indeed, can see no other meaning. Nevertheless, we would not be surprised to hear from Hemming that in his new systematics this expression does not mean a type but some other thing.

Mathematics and Science

Although the authors of three communications (*Science,* **112**, 233 [1950]) take issue with some of my statements (*Science,* **110**, 566 [1949]), they do not try to controvert my contention that the theory of probabilities is very useful in applying principles for successful prediction, but not in discovering them.

In stating that "disordered systems can be specified with the same degree of precision as ordered systems," John C. Neess surely cannot mean what the words imply—that greater knowledge does not permit greater precision in specification. Does disorder mean anything more than that we do not yet grasp the order, perhaps very complex, that there may be in a situation? He rightly refers to "the confused atmosphere of du Noüy's *Human Destiny,*" but his statement is reminiscent of du Noüy's extraordinary conclusion (p. 26) that "*order is born of disorder.*" He states that we "have removed a barrier to intellectual and scientific progress" by replacing "an older notion of causality" "with one of chance determination of events." Does "chance determination" mean anything more than that we don't know how the events have been determined? Arguments based upon ignorance are suspect. The "indeterminancy" of an electron represents the continuing ignorance of the investigator (H. N. Russell, *Science,* **27**, 249 [1943]) and is surely meaningless as to the character of the thing investigated, except as limited by our relations with it. "Relativity" expresses this limitation for man. When one of its leading exponents (Eddington) argues: "What we can't know doesn't exist," he should add "in us" or "for us." If he is logical, anyone who accepts this idea without the qualification is sure to founder on the rock of solipsism, since he must finally conclude