

The Most Wonderful Butterfly in the World

Source: Journal of East African Natural History, 84(1) : 1-2

Published By: Nature Kenya/East African Natural History Society

URL: [https://doi.org/10.2982/0012-8317\(1995\)84\[1:TMWBIT\]2.0.CO;2](https://doi.org/10.2982/0012-8317(1995)84[1:TMWBIT]2.0.CO;2)

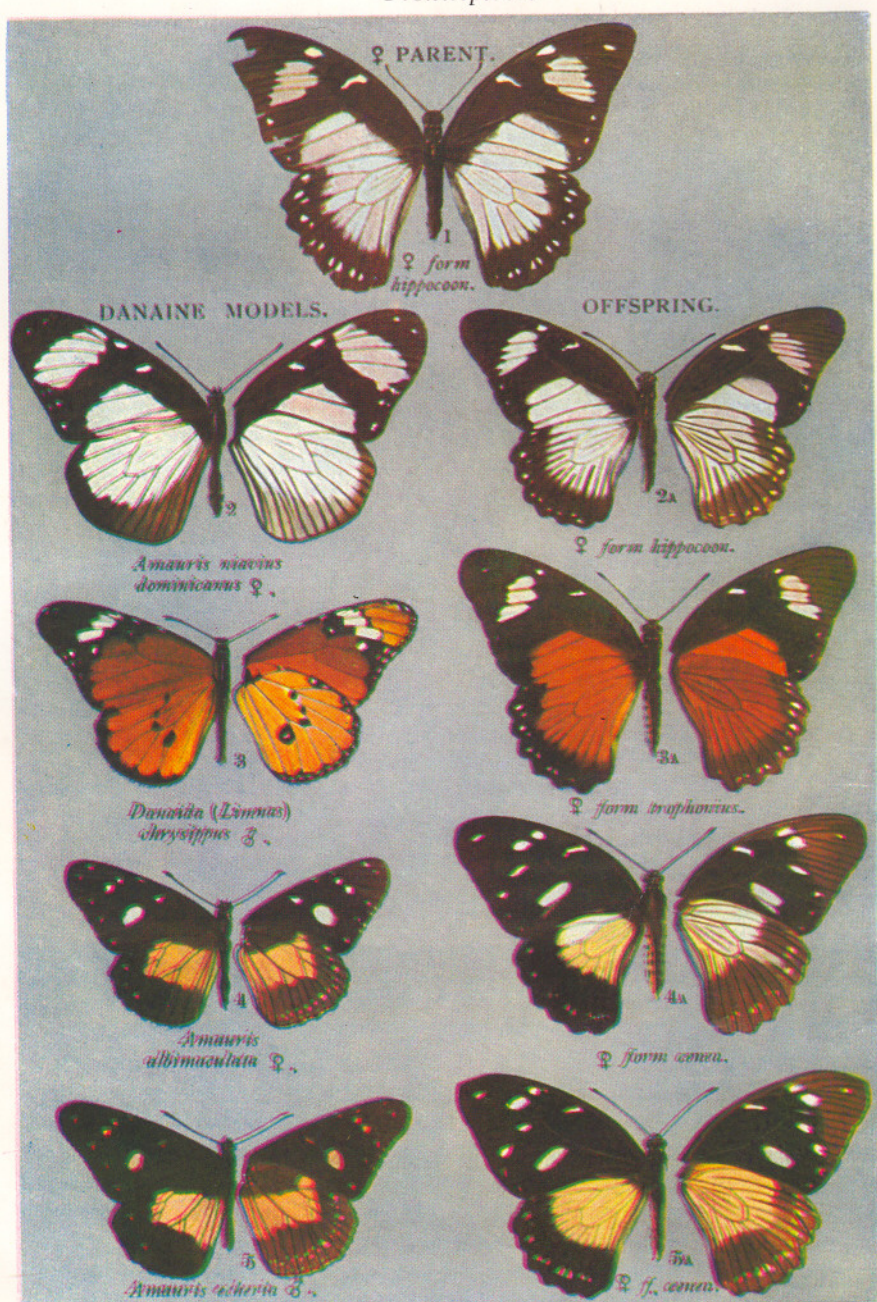
BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

PLATE I.
Frontispiece.



Mrs. P. P. Whelpley, pnx.

André & Sleigh, Ltd.

All figures are about $\frac{2}{3}$ of the natural size.

Examples of the mimetic female forms of *Papilio dardanus*, subsp. *cenea*, bred in 1906 from a *hippocoon* form of female: Durban, Natal. The female parent and the Danaïne models from the same locality are also figured.

The Most Wonderful Butterfly in the World

In 1924, a paper was published in this *Journal* (No. 20: 4–23) with the fetching cover title “*Papilio dardanus*, the most wonderful butterfly in the world” (in a rare but happy error by the editor, the word “wonderful” was substituted on the cover title for the word “interesting” in the title on page 4). The paper was written by Professor E.B. Poulton who was one of the leading champions of the idea of natural selection at a time when Darwin’s theory found little favour with the biologists of the day. Poulton was especially interested in the subject of mimicry as it appeared to provide a convincing example of natural selection in action. The idea of mimicry was first suggested in 1862 by Henry Walter Bates following his collecting trips in the Amazon, where he had noticed extraordinary resemblances in the colour patterns of quite unrelated butterflies. Bates suggested that these resemblances occurred between poisonous and edible butterflies and that they had evolved as a result of predators mistaking the latter for the former.

Poulton introduced his paper by commenting on the good fortune of Nairobi naturalists in living in an area where so many important discoveries had been made concerning this “most remarkable butterfly”, and he went on to recollect hearing about *dardanus* as an undergraduate “nearly fifty years ago”. The main purpose of his paper was to review the diversity of the female forms and provide a simplified nomenclature which would aid naturalists in recording field and breeding observations. He ended by promising a future paper on a “splendid series of families bred from known female parents at Nairobi by Dr. van Someren”. Dr van Someren was, at that time the editor of the *Journal of the East Africa and Uganda Natural History Society* (as this journal was then known).

More than 70 years after Poulton’s paper with the fetching title, we are publishing a review of current thinking on mimicry in *Papilio dardanus* and other butterflies. Sir Cyril Clarke, the senior author of this paper, was in his teens when Poulton’s paper was published and he has been at the forefront of research on swallowtail butterflies for over forty years. Together with Phillip Sheppard at the University of Liverpool, and in the face of great difficulties, he conducted a series of hybridisation experiments on *Papilio dardanus* which have become classic studies in evolutionary biology. Sir Cyril is, in fact, a physician and his contributions to mainstream biology have been more than equalled by his research in medical genetics. Stimulated by his studies of the genetics of butterfly wing patterns, he was drawn to a study of haemolytic disease of the new born—Rhesus babies—and to develop a cure known as the “Liverpool jab”. Routine administration of the Liverpool jab to Rhesus negative women has now reduced the incidence of this formerly lethal disease in the UK to such low levels that younger doctors are no longer familiar with it (Clarke & Hussy, 1994).

The history of research on swallowtail genetics thus echoes a consistent theme of modern conservation biology: biodiversity is precious and its scientific study can lead to benefits that no-one can predict. In publishing Sir Cyril’s review, we celebrate both this fact and the historical contributions of our members to the study of East African Lepidoptera. Like Isaac Newton, if we see further today, it is because we stand on the shoulders of giants.

The Editors