NOTE IV.

ON THE DIFFERENCES BETWEEN DANAIIS LIMNIACE, CRAM. AND DANAIIS MELISSA CRAM.

BY

R. VAN EECHE.

(With a textfigure).

In „The Rhopalocera of Java”, Danaidae, Satyridae, Ragadidae and Elymniadae by M. C. Piepers and P. C. T. Snellen (the Hague, M. Nyhoff, 1913) I have found on page 30, that D. melissa Cram. should be synonymous with D. limniace Cram. On the same page one read: „The forms of this species (limniace Cram.) have been dealt with extensively by Frühstorfer in „Berliner Entom. Zeitschr.”, 1899, and by Dr. L. Martin in „Deutsche Entom. Zeitschr. Iris”, 1910, where they have based several species and subspecies on these various forms; the latter attributes them to climatic influences. I suspect that here again we have simply to deal with phenomena of colour evolution; the specially pronounced spreading of the white, which plays the chief role here, being doubtless nothing else.”

Always it will be a danger to determine a butterfly only by its external morphological characters, especially by its pattern and colour, even when people will explain the differences of pattern and colour by phenomena of colour evolution. Mr. Piepers is here not right, because there are also anatomical differences, which separate the two forms of Danais specifically. In „Die Grossschmetterlinge der Erde”, Tom. 9, pag. 202, Mr. Frühstorfer has published, that the valvae of the two quoted species as well as the uncus are different. He wrote the following:

„Untersuchungen der Generationsorgane (melissa and sep-

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It is not clear to me, what is the meaning of Mr. Fruhstorfer! Is the thorn of the valva of limniace not pointed, or has the valva not at all a thorn? All the species of the group Tirumala Moore bear a thorn on the valva, which thorn is very well visible even with the
naked eye. The differences, which I found in the copulatory-apparatus of these two species, which however are very related to one another, will be cleared up by the accompanying figures.

The two species are to be separated also by their pattern, but there are specimens in which this will be rather difficult.

How it is with *D. choaspes* Btlr. from Celebes and with *D. limniace* is still a question to me, because our material is as yet insufficient.

It is I suppose well known, that *D. limniace* Cr. has not yet been found in Sumatra and the islands West of it.

Leyden Museum, February 1914.

*Notes from the Leyden Museum, Vol. XXXVI.*