PARC NATIONAL DE LA GARAMBA. — MISSION H. DE SAEGER

en collaboration avec

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Fascicule 19 (1)

PERLIDAE[1]
(PLECOPTERA)

BY

H. B. NOËL HYNES (Liverpool)

Fifteen adult stoneflies and five samples of nymphs collected by the Mission H. DE SAEGER in the Parc National de la Garamba were sent to me for study by the President of the Institut des Parcs Nationaux du Congo et du Ruanda-Urundi, to whom I am grateful for the opportunity of examining this material.

LIST OF LOCALITIES.

The numbers refer to the sites of collection listed by DE SAEGER (1956) where further details are given, as well as a key to the symbols used in defining the localities.

Adults (all collected by H. DE SAEGER, and preserved dry) :

315, I/a/1, 20.III.1950, ♀ ; 345, I/b/3, 29.III.1950, ♂ ; 497, I/a/3, 5.V.1950, ♂ ; 2225, II/fd/15, 7.VIII.1951, ♀ ; 2247, II/fd/17, 13.VIII.1951, ♀ ? (no abdomen); 2814, II/fd/16, 28.XI.1951, ♀ ; 2910, II/fd/17, 14.XII.1951, ♀ ; 3327, Pidigala, 23.IV.1952, ♀ ; 3347, mont Embe, 20.IV.1952, ♀ ; 3358, Pidigala, 23.IV.1952, ♂ ; 3463, Aka, 15.V.1952, ♂ ; 3501, PpK/14/2, 9.V.1952, ♀ ; 3514, Aka/2, 22.V.1952, ♂ ; 3719, II/gd/17. 30.VI.1952, ♀ ; 3983, II/fd/17, 27.VIII.1952, ♂ .

Nymphs (all collected by G. DEMOULIN and preserved in fluid) :

253, riv. Mogbwamu, 15.II.1950, 7 nymphs; 257, riv. Aka, 20.II.1950, 3 nymphs; 360, riv. Aka, 24.III.1950, 11 nymphs; 619, riv. Kpaika, 20.VI.1950, 4 nymphs; 737, riv. Mogbwamu, 28.VI.1950, 1 nymph.

(1) Manuscript deposited on November, 20, 1959.

THE SPECIES PRESENT.

I have earlier shown (HYNES, 1952 *a* and *b* 1953) that, apparently, only a single, very variable, species of stonefly, *Neoperla spio* (NEWMAN), has so far been collected in Central Africa. The present collection seems to support this suggestion, as most of the specimens are within the known range of variation of the species.

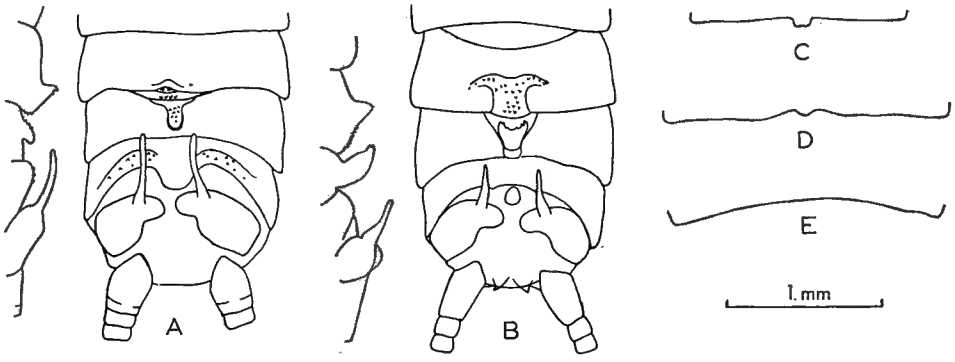

FIG. 1. — *Neoperla spio* (NEWMAN).
Male genitalia in dorsal and profile views :
A, specimen 345; B, specimen 3358.
Female subgenital plates (8th sterna) :
C, specimen 3501; D, specimen 3347; E, specimen 2814.

Thus, in coloration, the adults vary from very pale, with single dark spots round each ocellus, to specimens in which both ocelli are enclosed in a dark spot and there is some darkening of the tibiae. Only one (No. 345) has slightly darkened wings.

The genitalia of the males, as in most such collections, are markedly variable, and belong to the types I have elsewhere (HYNES, 1958 *a* and *b*) defined as C, E and G. Type E, which is an intermediate condition, has not hitherto been recorded from the Congo. The specimen is illustrated in fig. 1 A. Four of the males have genitalia of the extreme type G, and in three of these both the ridge on the seventh segment and the process on the eight segment are clearly bifid, and the inner margins of the forwardly directed processes of the tenth segment are slightly serrated (fig. 1 B). These variations are slightly outside the range which has hitherto been observed, but would not appear to indicate any specific difference.

The eighth sterna of the females are also varied, some being simple and others variously drawn out into small lobes. Three of these forms are illustrated (fig. 1 C, D, E). The oviducal eggs of these three specimens were also studied and were found to consist of two types. Those from specimen 2814 were longitudinally grooved while those from the other two were spirally grooved. It has, however, been shown previously that egg-sculpture does not seem to be of taxcnomical importance.

The nymphs are all similar to those described previously and all that are large enough to display colour-markings belong to the basic colour-pattern as defined by HYNES (1953). Only one nymph ready to emerge is included, in collection 253.

ECOLOGICAL NOTES.

This collection contains few specimens and so can give little information on ecology, but it may be significant that, of the three months in the year when no adults were collected, January and February are the height of the dry season in the park and July is one of the driest months in the rainy season (DE SAEGER, 1954). This supports my earlier suggestion that these insects fly during the rainy season (HYNES, 1952 *b*).

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