

**A New May-Fly from Natal (Ephemeroptera).**

By

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With 1 Text-figure.

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Family POLYMITARCIDÆ.

Ulmer, Peking Nat. Hist. Bull., vii, p. 197, 1933 (key to genera).

ON consulting Ulmer's key it will be seen that the form to be described below fits in best with *Exeuthyplocia*. It differs in that the legs are not less strong in ♀ than in ♂, and that the latter has the cerci setose as in ♀. In the original description of *E. minima* the venation of the hind-wing was not described, but in his key Ulmer gives "venation reduced, R not arising from base of wing but from the sector at the end of the first third, M and Cu not forked". In the Tillyard notation these latter veins are the convex (+) MA and the concave (—) M. In the present species both R and Rs have an irregular attachment to the base of MA.

Nevertheless, and in spite of considerable difference in size, the resemblances justify the inclusion of the present species in the same genus as *minima* Ulmer, for which Lestage proposed the generic name *Exeuthyplocia*.

From *Polymitarcys*, the only other South African member of this family (see Barnard, 'Tr. Roy. Soc. S. Afr.', xx, p. 209, 1932), the genus is easily distinguished by the subparallel sigmoid cross-veins in the anal area of the fore-wing.

Gen. *Exeuthyplocia* Lest.

Lestage, Rev. Zool. Afric., vi, p. 74, 1918 (for *Euthyplocia minima* Ulmer, 1916).

Ulmer, *l. c.*, p. 198, 1933.

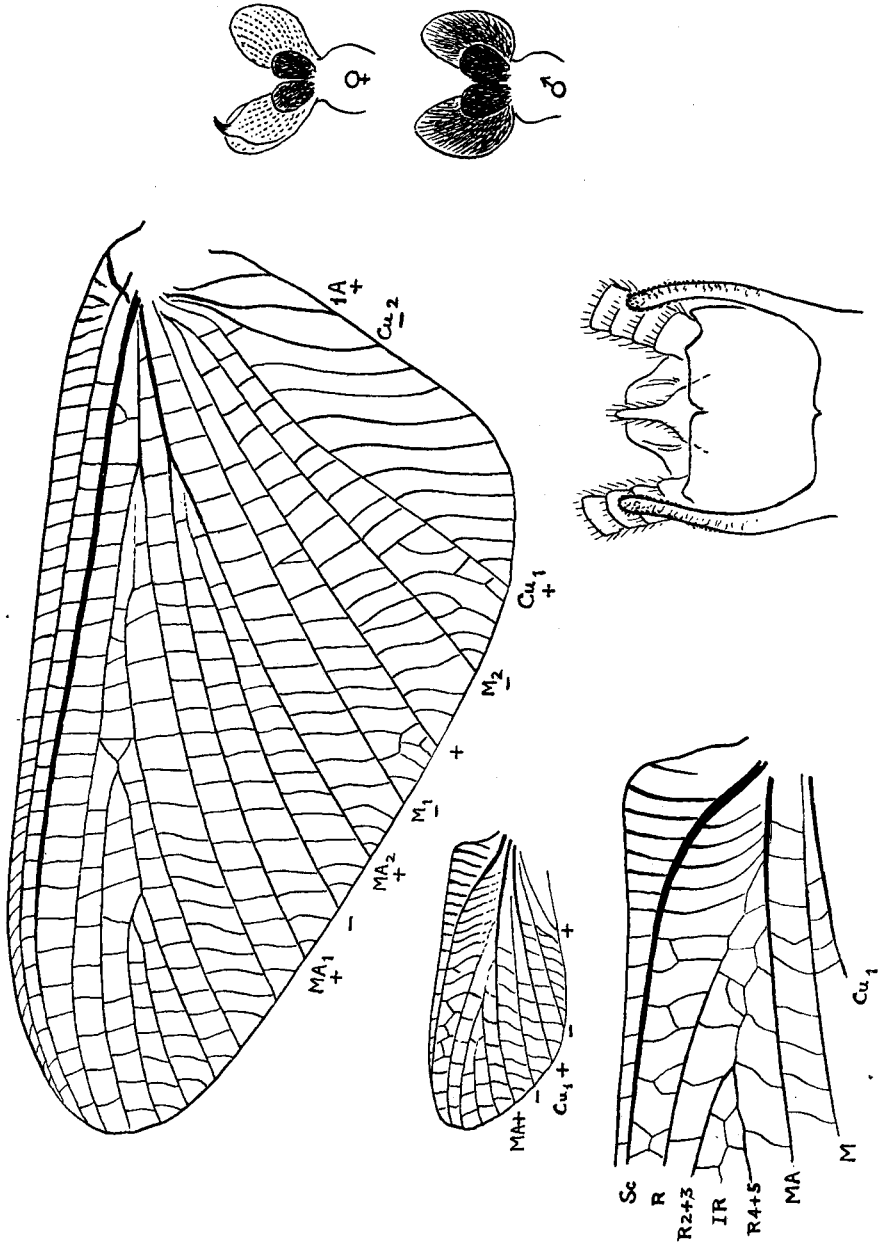
Up to the present the genus contains only one species: *minima* (Ulmer) ('Arch. Naturg.', lxxxi, A, p. 8, fig. 8, 1916), from Togoland and the Belgian Congo. (Fore-wing 8-9 mm.)

*Exeuthyplocia sampsoni* n. sp.

IMAGO.—Pronotum broader than long, posteriorly nearly twice as broad as the median length. Legs without sexual differences: fore-leg about equal in length to thorax, femur  $\frac{2}{3}$  length of tibia, which is twice length of tarsus; mid-leg slightly longer than fore-leg, femur slightly shorter than tibia, which is twice length of tarsus; hind-leg about as long as fore-leg, but slender and feebly chitinized. Tarsal claws in ♀ alike on all legs, broadly oval, with a hook on inside of the outer claw (apparently the outer claw, but the legs are much twisted); in ♂ those on mid- and hind-legs similar to those of the ♀, but those on fore-leg larger, more pad-like and without any hook. Fore-wing: forks of Rs and MA at same level, no intercalary in the "1st anal area", *i. e.* on the anal side of  $Cu_1$ , between  $Cu_1$  and margin of wing about 9 sigmoid cross-veins. Hind-wing: costal area very broad proximally, R and Rs feeble and irregular proximally, arising from the simple unforked MA; M also unforked; on anal side of  $Cu_1$  (interpreted as this vein because convex) there is one intercalary, from which about 9 sigmoid cross-veins run to the margin. Margins of wings in imago (as in sub-imago) very finely ciliated. Genital forceps ♂ one-jointed, slender, very slightly tapering to blunt apices, without trace of a second joint. Two cylindrical egg-masses, about  $7 \times 1$  mm. Cerci 3 in ♀, 2 in ♂, the median cercus in ♂ being a mere remnant; setose in both sexes, but less so in ♂ than in ♀.

Head and thorax brownish, abdomen greyish, wings clear, without any milky opacity in imago, but with a vinous suffusion

TEXT-FIG. 1.



*Exeuthyplocia sampsoni n. sp.* Fore- and hind-wings (to same scale); portion of latter further enlarged to show origin of R and Rs; fore claws of ♂ and ♀; ventral view of end of abdomen of ♂, showing forceps, and the reduced median cercus (imgo).

in the costal and subcostal areas of fore-wing (much less noticeable in hind-wing), veins brown, the stronger ones with a vinous tinge, eyes black, fore- and mid-legs fulvous, hind-legs pale, cerci white, egg-mass deep yellow.

Body ♂♀ about 13-15 mm.; fore-wing ♂ 15 mm., ♀ 18-20 mm.; hind-wing ♂ 5-6 mm., ♀ 6-7 mm.; cerci in subimago about 30 mm.; in imago about 20-25 mm.

LOCALITIES.—Umzimkulu River, October 28th, 1936. Dr. B. F. Sampson. 1 ♂, 2 ♀♀ in alc. Eight dried and mutilated specimens from the Mooi and Yarrow Rivers, October and November, 1933. L. A. Day.

This fine insect I have much pleasure in naming after Dr. Sampson, of the Government Health Laboratory, Durban, in recognition of his keen interest in the natural history of the trout in Natal.

Dr. Sampson says the flies emerged late in the evening, when it was almost too dark for the trout to see them; and this corresponds with Mr. Day's statement that the flies emerge in swarms about the middle of October, and for two or three weeks afterwards, between 4.30 and 6.30 p.m.

The discovery of the nymph is much to be desired. This should not be difficult, as it must be a fair-sized nymph, say  $\frac{3}{4}$  in. in length, if search be made in the mud and amongst the bases of water-weeds during the first fortnight in October.