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A New Ephemeropteran Record in
South Africa

by

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Pretoria.

(with 3 figs.)



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A New Ephemeropteran Record in South Africa

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During a recent intensive ecological investigation, carried out between 1959/60 in the Olifants River and Klipspruit system near Witbank, Transvaal, three Ephemeropteran nymphs of a genus new to South Africa were found. The nymphs were representatives of the subfamily *Dicercomyzinae*, genus *Dicercomyzon*, DEMOULIN.

Sampling stations on the Olifants River were situated in the Bushveld at the foot of the Highveld escarpment at an altitude of 4,500', and at approximately longitude 25°37' east and latitude 29°13' south. The sampling area was approximately 79 miles northeast of Pretoria and about 20 miles south-east of Loskop Dam, in the northern Transvaal. This region is situated in the Waterberg system and consists of Matsaplea formation, composed of gritstone, conglomerate, shales and andesite. These components are typical of this system, and add little dissolved solids to the water of the catchment area.

The nymphs were collected in the marginal vegetation on the 19.11.1959 and 19.1.1960 and catalogued under OKS 50 D and 69 D. The main plant components of this habitat were *Phragmites communis* and *Polygonum* spp. As a result of acid pollution in this river system, the pH of the water where the samples were taken, varied between 5.4 and 7.2.

The flow of the water in the Olifants River where the samples were collected, was slow.

Only three nymphs were found, and no adults were bred out. The species found in the Olifants River, seems to be similar to that described by D. E. KIMMINS (1955) from Nyasaland, based largely

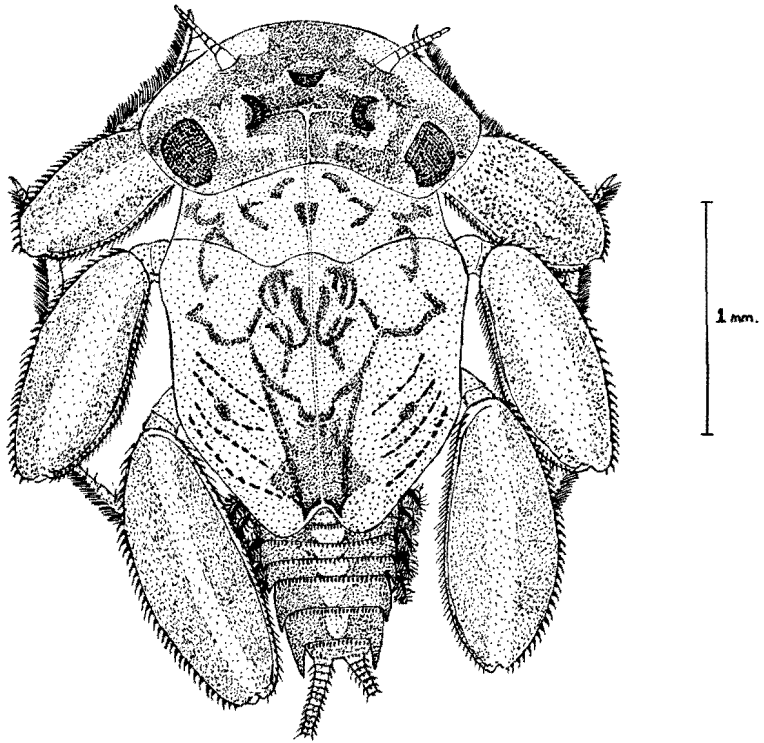


Figure 1. Dorsal aspect of nymph of *Dicercomyzon costale*, KIMMINS.

upon the general characteristics and colouration of the nymphs (Fig. 1 and 2). Furthermore, close agreement was found between the description of mouth-parts as given by KIMMINS (1955) and that given in Figure 3. As a result, I consider the Olifants River material to belong to the species *Dicercomyzon costale*, KIMMINS.

The dimensions of the three nymphs are compared in table I. The measurements are expressed in millimeters.

According to KIMMINS (1955, 1957) species of *Dicercomyzon* are widely distributed in Central Africa, Equatorial Africa, Gold Coast and the Belgian Congo. This, however, is the first record of this species in South Africa.

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- KIMMINS, D. E., - 1957 - New species of the genus *Dicercomyzon* Demoulin (Ephemeroptera, Fam. Tricorythidae) *Bull. B.M. (Nat. Hist.)* 6 (5): 127—136.

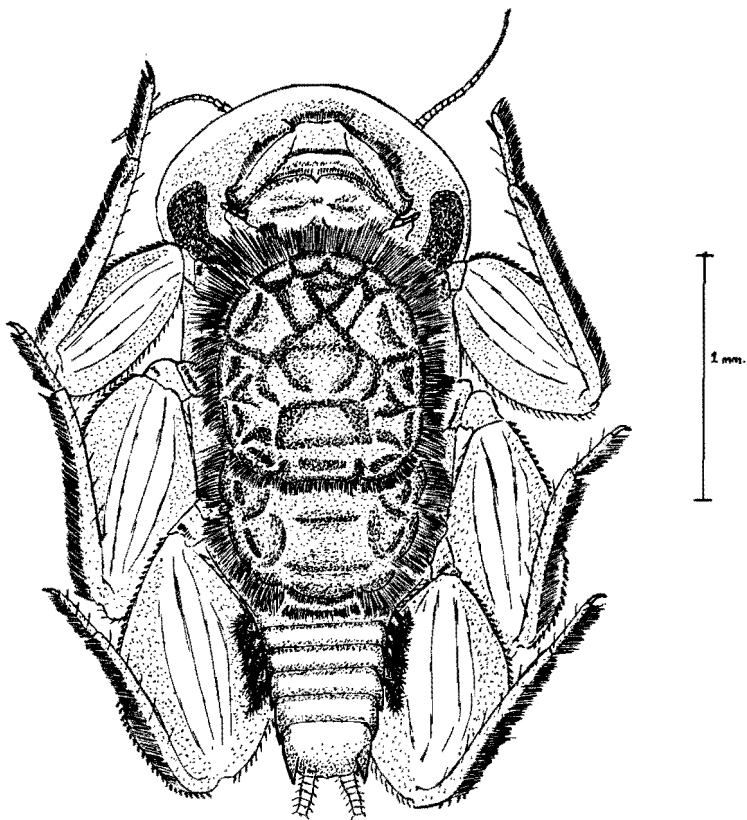


Figure 2. Ventral aspect of nymph of *D. costale*, KIMMINS, showing the thoracic "suckerlike-disc".

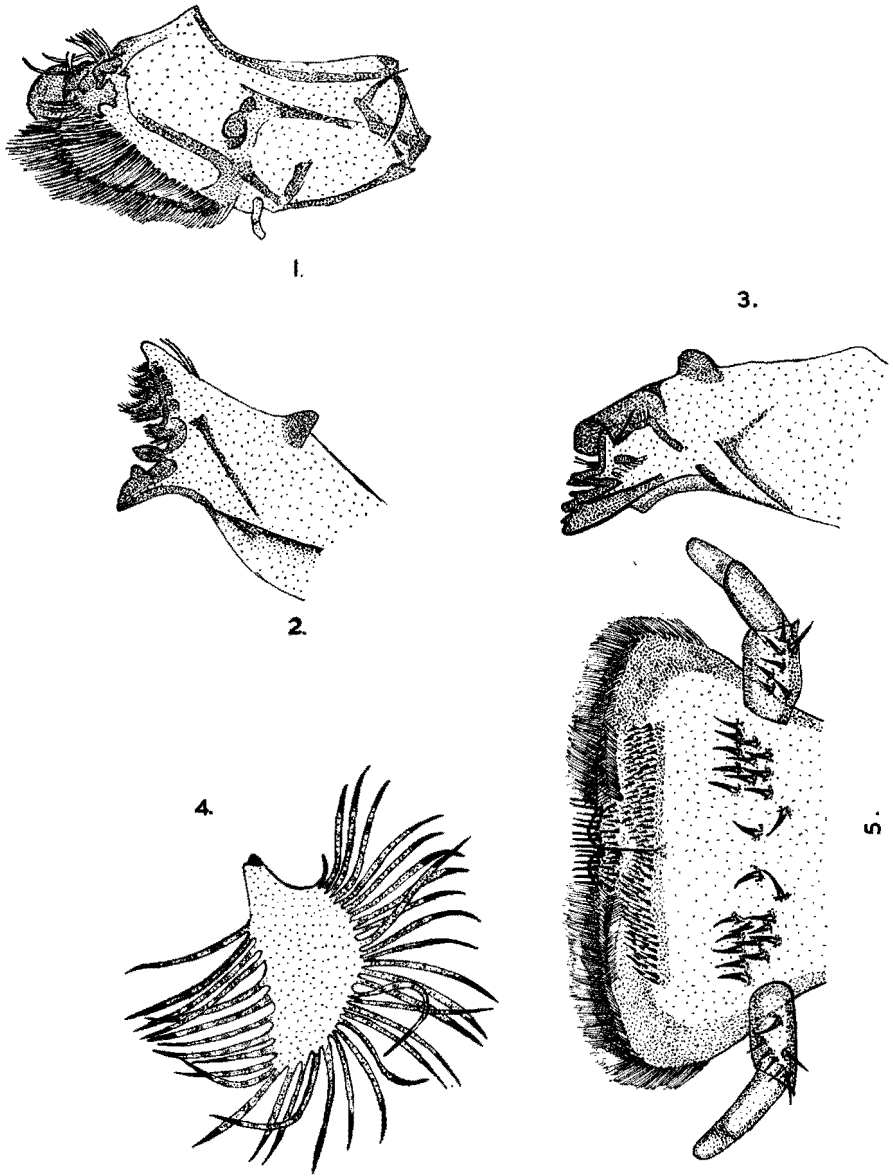


Figure 3. Mouth – parts of *D. costale*. 1. Right maxilla; 2. Right mandible; 3. Left mandible; 4. Fourth gill of 5th segment; 5. Labium.

TABLE I.

| | | Nymph (OKS 50D) | Nymph (OKS 50D) | Nymph (OKS 69D) |
|--------------------|-----------------------------------|--------------------|--------------------|--------------------|
| BODY: | Length without cerci ¹ | 2.9 | 3.7 | 3.15 |
| | Width | 1.1 | 1.2 | 1.15 |
| THORACIC | | | | |
| "Suckerlike-disc": | Length | 1.4 | 1.7 | 1.5 |
| | Width | 1.05 | 1.1 | 1.1 |
| THORAX: | Length | 1.4 | 1.7 | 1.5 |
| | Width | 1.1 | 1.15 | 1.15 |
| ABDOMEN: | Length | 0.9 | 1.4 | 0.9 |
| WINGBUDS: | Length | 1.6 | 2.0 | 1.6 |
| | Width | 1.4 | 1.45 | 1.4 |
| HEAD: | Length | 0.6 | 0.6 | 0.75 |
| | Width | 1.5 | 1.5 | 1.5 |
| SYNTHLIPSIS: | | 0.9 | 0.9 | 0.9 |

¹ Cerci Incomplete.