

The Bitter Lakes occupy part of the channel of what once formed a communication between the Red Sea and the Mediterranean. At the time of the cutting of the Suez Canal in 1869, the site of the Bitter Lakes was dry land; but the opening of the Channel into the Gulf of Suez admitted the waters of the Red Sea, and the Bitter Lakes came into being. As time went on they became colonized by immigrant organisms from the Red Sea and among these was *Murex tribulus*.

The collection and preliminary study of the shells from Fayid were made in ignorance of the Red Sea forms from which they were presumably derived. It was therefore with much interest that specimens from the Red Sea were later examined. In these the blunt spines of the specimens from the Great Bitter Lake were found to be sharply pointed, as shown in Fig. 1 (lower). This specimen came from the shallow waters between the coast and the coral reef at Hurghada. There these spines may well constitute a most effective armature against the voracious enemies among which this species lives.

I have to thank Mr. D. E. Morgan, of the Anglo-Egyptian Oilfields, Ltd., for facilitating the collection of 185 specimens from Hurghada on the west side of the Red Sea close to the opening of the Gulf of Suez, and 114 from Ras Matarna on the east side of the Gulf of Suez. To him and his colleagues and to many others who have responded to my appeal in *Nature*<sup>1</sup>, I must extend my warmest thanks.

To the general zoologist, the facts summarized here are of great interest. *Murex tribulus* is an organism which by its perfect adaptation has been able to survive and flourish amid all the complexities and dangers incidental to the luxuriant and varied fauna inhabiting the coral reefs and their immediate neighbourhood. The Fayid specimens represent members of the species that have wandered into the placid environment of the Bitter Lakes with their comparatively sparse fauna; and the lesson they teach is how a species, freed from the shackles of the environment to which it has been through long ages adapted, gives way to the general instability of living substance and shows untrammelled variability.

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<sup>1</sup> *Nature*, 171, 756 (1953).

### A Hydroplyp in the Biological Cycle of a Freshwater Jellyfish

DURING investigations on the invertebrates of Lake Tanganyika we have been able to find all the stages of the sessile generation of the well-known Tanganyikan Trachymedusan *Limnocoñida tanganyicæ* Günther. We have also collected them in Lakes Mohasi and Sake (Ruanda), where the sexual reproduction seems to be more important. These hydroplyps are completely invisible when living and must be treated first with some fixative (Bouin's or Zenker's fluids); they are very minute (less than 0.5 mm. for one individual) and transparent.

Exceedingly voracious, they feed on midge larvæ. They live in quiet places (Gulf of Burton) in Lake Tanganyika, or in calm lakes (such as Mohasi or Sake). They attach themselves principally around the septa of *Phragmites* stems, and they are very often mixed with colonies of Bryozoa.

In Lake Mohasi, sexual reproduction takes place from mid-April to the beginning of September. In Lake Tanganyika it only begins at the end of May.

This finding shows that, contrary to the marine Trachymedusa, most of the freshwater forms have a sessile sexual stage.

The complete study of this sexual generation will be published elsewhere.

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### "Sixth Commonwealth Entomological Conference"

IN the account in *Nature* of September 18, p. 541, of the Sixth Commonwealth Entomological Conference, I am reported as saying that the results of insecticides used against tsetse fly suggest that tsetse populations "may be unable to recover after reduction below a certain level".

My point was quite different. It was that the tsetse population might be found to maintain itself permanently at *any* level (above, of course, a low minimum) to which the insecticide had reduced it. This idea, first put forward by me in 1937 (*Proc. Zool. Soc. Lond.*, 1936, 811, Section X), is now supported by some of the findings of the East African Colonial Insecticides Research Unit (Hocking, Parr, Yeo and Anstey, *Bull. Ent. Res.*, 44, 627; 1953), and has the greatest practical importance as, for example, when a few flies straggle back across a barrier into country from which they had previously been evicted.

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It is regretted that, in the attempt to convey in a few lines the gist of long and complex discussions, Dr. Jackson has inadvertently been misrepresented. The relevant passage in his paper is as follows: "To my mind, the fundamental fact arising from all this work is that isolated tsetse populations by no means always tend to recover, when applications of insecticide cease." At an earlier meeting, Dr. Jackson had indicated more precisely the point he now emphasizes, namely, that the results of insecticide experiments seem to confirm his view that the size of tsetse populations is not controlled by density-dependent factors. The discussion, however, had been principally directed to the question, which he now dismisses in a parenthesis, of whether there was a *minimum* size of stable population of tsetse. It was suggested that a percentage reduction of the order that can be achieved by insecticides might, with an initially small population, result in a density so low that the fly could not maintain itself, particularly—as Dr. Jackson pointed out—if the environment were then altered by settlement. It was this thought, which was evidently felt to be of the highest practical importance, that the offending sentence sought to convey.

THE WRITER OF THE ARTICLE