

rod, but holds the arm perfectly immovable in any position, three contacts being made. The arm will support any weight that will not actually break it. On some clamps a micrometer screw allows the arm to be moved while supporting the full weight that it can carry. Those who have struggled with the old type of retort stand clamp which wobbles in all possible directions will welcome the new invention should it be put upon the market.

WILFRED MARK WEBB.

THE THIRD TANGANYIKA EXPEDITION.¹

I LEFT London for Cape Town on March 24, 1904, proceeding thence to Chinde, and up the Zambesi and Shiré Rivers, to Blantyre and Zomba, in British Central Africa. In Zomba I reported myself to Sir Alfred Sharpe, and from him received much advice and assistance before leaving shortly for the Upper Shiré and Lake Nyasa. In the region of this lake I stayed, roughly, three weeks—one week on the gunboat anchored at the south end, one week ascending the lake, and a week in Karonga—before starting to cross the plateau to Tanganyika.

I collected, as far as possible in the short time, specimens to illustrate the flora of the lake—dried specimens, algæ scraped from rocks, &c., and tow-nettings containing diatoms and other of the more minute organisms. I made no systematic attempt to collect fish, but brought a few specimens, in addition to some leeches, crabs, a species of prawn (of interest as none had been hitherto recorded from the lake), and a sponge.

Karonga was left on July 5, and after an unavoidable delay on account of illness among my men, I arrived at Niamkolo, at the south end of Tanganyika, on July 27. I made this spot my headquarters for more than two months, though during the period I stayed a week at Kituta. I purchased at once a large dug-out canoe and hired a crew, so that I was able from the first to fish, dredge, and take tow-nettings. Meanwhile, I made arrangements with the owner of a large dau in Ujiji to hire his vessel, and this was dispatched to the south end of the lake to pick me up. I sailed on board the dau on September 23, and for the rest of my time on the lake cruised about, visiting as far as possible the most interesting and likely places on the lake shore. I camped on land whenever circumstances permitted, but my stays varied, according as I found much or little of value to me. Although I made some attempts, I found it almost impossible to dredge satisfactorily in deep water by means of the dau, so I was reduced to dredging from the canoe, in which case, of course, we had not sufficient power to dredge at any depth. On one occasion, by the kindness of the captain, I was permitted to make an attempt from the German gunboat, but unfortunately I lost the dredge and a large part of the rope, by the snapping of the rope under the strain.

I collected fish on every possible occasion, but though we tried various methods of catching them, the majority were obtained direct from the native fishermen. The largest fish I saw was a Siluroid (probably *Clarias*), 155 cm. in length, and weighing 30.6 kilograms. Tow-nettings were taken systematically at various times before and after dark, in various places and at various seasons. These consisted, as a rule, principally of phyto-plankton, but there were also prawns, copepods, ostracods, and insect larvæ taken in this fashion. The quantity of material obtained by tow-netting became markedly less during the rainy season. The larger representatives of the flora were also collected, but show, on the whole, little difference from the corresponding water-weeds of Nyasa. Scrapings from the rocks and submerged stems of plants produced various of the smaller algæ, while a few fungi were brought from the rotting wood of the canoe.

Five or six species of prawns were collected, in addition to those already known from the lake, some among the rocks at the water's edge, others by dredging in a few fathoms. Some two or three species of crabs were obtained, and at least two species of *Argulus*. These latter were perhaps most common from the mouth-cavity, gill-bars, and surface of the body of various large Siluroids,

¹ From a report by Mr. W. A. Cunningham, Christ's College, Cambridge.

but they were also frequently present upon large specimens of Lates, and occasionally on other scaly fishes. Two forms of true parasitic copepods were found—one on the gills of a Siluroid, and the other attached at the junction of the pelvic fins of a *Polypterus*. Of worms, a few *Oligochætes* were collected and a considerable number of leeches.

In addition to these were some Turbellaria, and various endo-parasites—Cestoda, Trematoda, and Nematoda—principally from the gut of fishes. Among the Polyzoa is, at any rate, one form with horseshoe-shaped lophophore, which has not yet been described from Tanganyika. There is probably little of interest in the molluscs collected, as my work was confined to the comparatively shallow water. I was struck by the irregularity in the appearance of the Tanganyika medusa, or rather the uncertainty of finding it at any particular time or place. It is doubtless, like all such forms, driven to and fro by wind and currents, but it is curious that one may be a month or more on the lake without seeing a single specimen. I have brought back a few in formalin, for museum purposes, and others preserved with a view to the histology. Some quantity of sponge was collected, encrusting in every case submerged rocks or shells.

Apart from actual collecting, some observations of physical interest were made. Attempts were made, both on Nyasa and Tanganyika, to observe the seiche alterations in water-level, and at the south end of Tanganyika the actual level of the water was marked, with the view of affording some basis of comparison for the use of future investigators. A good many readings of the water temperature have been taken, which should prove interesting, as I believe nothing has ever been recorded from these lakes before. The temperature in general seems very high, the lowest obtained on the lake being only 73°.3, and the highest recorded 81°.0. At a depth of 76 fathoms (length of the sounding-line) the temperature appears fairly constant, for readings taken on various occasions, and at different spots, only vary between 74°.1 and 74°.8.

The total length of time spent on and around Tanganyika was about eight months. Dismissing the dau at Usumbura, at the north end of the lake, I began on March 18, 1905, the journey overland to the western shore of the Victoria Nyanza. This took rather longer than was expected, owing to the bad weather and the famine-stricken nature of the country, but Bukoba, a German station on Nyanza, was reached on April 16. During a stay of ten days waiting for the steamer, and during a short stay in Entebbe, the British capital, I was able to do some collecting in this lake also. As far as possible, representatives of the water flora were obtained, for the sake of comparison with the plants collected on Nyasa and Tanganyika. A few tow-nettings were taken, and, in addition to the smaller plants and animals thus obtained, there were also collected a few molluscs, some *Argulus*, and certain endo-parasites. More interesting was the finding of a species of prawn and a sponge, as no sponge had been recorded from the lake before.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

THE council of King's College, London, has received a donation of 500*l.* from the Drapers' Company for the further equipment of the physics laboratory, especially for the promotion of research.

PROF. W. W. WATTS, F.R.S., assistant professor of geology and professor of geography at the Birmingham University, has been appointed professor of geology at the Royal College of Science, South Kensington, vacant by the retirement of Prof. J. W. Judd, C.B., F.R.S. In view of the changes in organisation that may be found desirable in the Royal College of Science and the Royal School of Mines after the consideration of the report of the departmental committee on the college, the appointment has been made a temporary one.

THE council of the Armstrong College of Durham University in Newcastle has resolved to found a chair of