

accurately plotted spirals by adjusting the diameter and orientation of its projected silhouette on an opaque white paper screen which bore a group of these curves, drawn from a common centre in black ink. The rapidity of this method was outweighed to some extent by its failure to provide the more permanent records of profiles afforded by the other two methods.

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<sup>1</sup> Pollard, A. F. C., *Eng. Inspection*, Feb. 14, 1935, pp. 79-113.

<sup>2</sup> Stott, V., *Report Nat. Phy. Lab.*, 1925, p. 151.

<sup>3</sup> MacLennan, R. M., and Trueman, A. E., *Proc. Roy. Soc. Edin.*, 61, Pt. 2, 212-32 (1942).

## Death of St. Peter's Fish in Lake Huleh, Palestine

PALESTINE has been having some extremely cold weather and the past winter was probably one of the severest in recent years. Snow in Jerusalem and on the hills caused delight and amazement to much of the human population, but the bitter cold caused havoc and death among some of the fish in the north of the country.

In Lake Huleh, very large numbers of fish died and were eagerly collected by the local inhabitants. Altogether in three days early in January, more than 30 tons of fish were taken dead from the lake, which is a large number when it is realized that the total annual catch from the lake is only about 80 tons, of which 60 tons belong to the family Cichlidae. It is, of course, impossible to estimate the amount of fish that died and which could not be collected, but it must certainly be large. Fish in Lake Huleh die whenever there is a very cold winter, but not on a large scale as on this occasion. The last time that appreciable quantities were killed was in 1921, but a few died of cold so recently as 1935. Usually in winter a large proportion of the fish congregate in the small rivers running into the lake and in the swampy areas around the shores. In these waters the temperature is higher than in the main part of the lake and the fish are protected from the floods of very cold water coming down from Mount Hermon.

In the past it was the custom to cut the reeds to keep the river mouths clear and so help the fish escape from the lake. In recent years, however, the reeds have not been cleared, and the river mouths are partially blocked, making it more difficult for the fish to enter. This factor may well have increased the destruction of the fish during the last cold spell. Among the dead only the family Cichlidae, particularly the members of the genus *Tilapia* or St. Peter's fish, were represented, the remaining families, Cyprinidae and Clariidae, being apparently more hardy and able to withstand the cold. The European carp which have recently been introduced into the lake also came to no harm. Strange as it may seem, it was only the large *Tilapia* that were killed, though it is possible that the smaller specimens were in deeper water and the dead were not collected.

The lowest temperature recorded from the lake was 9° C., near the eastern shore. This does not seem very low, but probably the rate at which the temperature fell was more important in affecting the fish than the actual temperature. Since Lake Huleh is a shallow basin, fed by the Jordan River and by

many small streams running down from Mount Hermon, and since all mountains in this region were thickly covered with snow at the time, it is probable that the water coming down was extremely cold and capable of causing local and very sudden drops in temperature in the lake, far below the 9° C. recorded.

The death of so many fish caused consternation in the country and much speculation as to whether the stock has been seriously damaged. Unfortunately it is impossible to know what proportion of the stock has been killed, for it is extremely difficult to estimate the number of *Tilapia* in the lake. The facts that the water is full of weeds and that much of the shore is swampy makes fishing difficult, and I do not believe that the lake is normally being fished as intensively as it should. A weight of 30 tons, or an amount equal to half the annual catch, of *Tilapia* is therefore probably not a large proportion of the stock as a whole. Also as only the larger fish appear to be affected and as there are huge areas of swamps, particularly in the great papyrus zone in the north, where the fish can take refuge, the damage is probably not so serious as at first appeared. Similar mass deaths must have occurred in the past during exceptionally cold years, but the lake is still well stocked and there is no evidence to suggest that the size of the stock is being reduced either by the rigours of the climate or by too intensive fishing—would that the same could be said of the depleted Sea of Galilee.

In actual fact it probably would not be a serious matter if the stock in Lake Huleh was damaged, for if the basin is likely to be drained in future, as has often been suggested, a large proportion of the fish will be destroyed in any case. Better that the lake should yield up some of its wealth now than in the future, when the need for locally produced food should not be so urgent.

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## Russian-English Technical Dictionary

THERE is an urgent demand at the present time for an up-to-date Russian-English dictionary of scientific and technical terms. It is known that a number of Russian-English glossaries of specific terms have been compiled by various scientific institutions and individuals, and it is thought that it would be extremely helpful to scientific workers and technical translators if copies of these glossaries could be collected together and placed in the Science Library in London, where one complete set could be consulted.

Will, therefore, any institution or individual who has compiled a glossary of Russian scientific or technical terms, whether printed or in manuscript, please send a copy to the Secretary, Anglo-Soviet Scientific Collaboration Sub-Committee, The British Council, 3 Hanover Street, W.1, who will collect these for the Science Library.

It is hoped at a later stage to compile a large dictionary, but the immediate aim is to collect the different glossaries in one place where they can be consulted. Each glossary will be known by the name of its compiler.

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