Further Experiments on the Production of Artificial Baits.

By

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Since the publication of the last paper a number of experiments have been made in connection with the Bait question. The object aimed at was to obtain some material which would serve as a medium for the application of some or other of the extracts prepared by the methods given in the previous report. A number of common substances were tried without success. The majority were either not sufficiently porous, or, if possessing that qualification, they lacked that strength and toughness which is absolutely necessary in a bait which must lie in the water for some hours.

It is this length of time which renders such materials as sponge, however fine, quite useless, since no extract, even if very much thickened, will remain in a piece of sponge more than a few minutes. Mr. Bateson in his report on this subject suggested the use of China clay; I tried a number of experiments with this, both dried and soft. In the latter case disintegration occurred at once, and the dried clay did not absorb sufficient extract to render it attractive; besides this, fish always reject any hard substance, even if it be made attractive with the smell of a favourite food. A somewhat promising material was obtained by boiling down skate skins until they were quite soft, and pressing them into blocks. The large amount of gelatine in these skins caused the fibres to adhere, forming a compact mass. This was somewhat porous and elastic, and took up a considerable amount of extract, but, like a number of other gelatine preparations, would not withstand the prolonged action of the water. A number of experiments were tried with this material, but no mixture could be obtained which would remain unacted on by water for a sufficient time. Other substances, such as gums, were tried, but without success.

Throughout my experiments I have never found any substance at all attractive to the conger other than the extracts, &c., prepared from pilchard, squid, or whelks; these were always attractive, particu-

larly the squid and pilchard preparations. It seems unlikely that anything other than these should be attractive, although there are cases where substances, which animals in the ordinary course of events would not meet with, are extremely attractive. In these cases it would seem likely that there is a strong resemblance between the smell of these substances and that of some favourite food of the animals, although in most cases it is not easy to find.

It will be seen from the above account that the difficulty of finding a "medium" still remains unsolved, and, on that account, the work is still incomplete. If this were discovered, further experiments could be made in the preparation of extracts, and a satisfactory bait would soon result.

At the same time, if nothing is found attractive but preparations of the bait now in use, no very great advantage will be obtained, since the same result could be arrived at by keeping the ordinary bait in a frozen condition. This can be done for a considerable time—six to eight weeks; and the expense, when done on a large scale, would not be very great.

The question appears to me to be one of those which are not so likely to be solved by continuous investigation as by some accidental observation, since it is probable that some substance may be found suitable for the purpose which at first it would appear absurd to use. In the same way some material, other than squid, &c., might be found to be attractive to the fish.