

the ventral fin is distinctly beginning to prolong. The young find refuge in the nest during the first days of their life, under the protection of their parents; they do not soon disperse, but keep together in schools under the guidance of the parent fish.

Table 4. Summarized features of goramy nests recovered from ponds in the Philippines.

Nest	Date recovered	Locality	MEASURE- MENTS			Contents	Composition
			Cm. Length.	Cm. Width.	Cm. Depth.		
A.	Nov. 10, 1932	Manila Propagation Ponds.	30	18	9	Remnants unfertilized eggs that have become decayed, soft and mossy.	Roots, stalks, and leaves of water hyacinths; rattan; vines for tying kangkong, the feed of the fish; stalks of <i>Hydrilla verticillata</i> ; mud.
B.	Aug. 16, 1935	Do.	28	20	10	Newly hatched fry, with yolk sacs and some decayed unfertilized eggs.	Mostly roots, stalks and leaves of water hyacinths with scatterings of mud.
C.	Oct. 19, 1935	Mexico, Pam-panga.	28	26	10	Unrecorded.	Grasses and twigs made compact and somewhat woven with roots of grasses and some wire, and pasted with mud.

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June 19, 1939.

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XV.—TROUT FISHING IN KASHMIR.

(With a plate).

I have been fishing in Kashmir on and off for the last eighteen years or so. Last year I managed to put in nearly three months, and, as I fished most of the beats now open to the public, it is rather interesting to look back and consider how the original experiment of stocking these streams has fared.

Brown trout were, I think, first introduced into some of the streams about 1901, and, after a few initial difficulties, thrived and

multiplied exceedingly. I have no first hand knowledge of these very early years, but, from all accounts, a large number of very big fish were killed from about 1908 up to the outbreak of the war. My own experiences started in 1920 when I was lucky enough to be able to spend nearly a whole summer on the Kashmir streams. At that time the state of the rivers was peculiar and the fishing was quite unlike any I have met elsewhere. There were on the whole very few medium sized fish. There were however a large number of really big fish, while in most streams there were quite a lot of fish of 6 to 8 inches, showing that natural breeding had got a good start. The fishing, however, was unlike most trout fishing. One spent one's time trying for the very big ones, spinning where spinning was permitted, fishing a large sized salmon fly or lure elsewhere. This was the golden age as regards big fish. Trout of three pounds and over were ordinary, 5 and 6 pounders were quite common, while fish of 8 to 10 pounds were no great rarities. My own best fish was one of eight and a half pounds, while I had quite a number of between 5 and 7. To show what the average then was I will quote two bags—one of 24 fish killed in a week on the Lower Bringhi weighing 78 lbs., and another of 6 fish killed on the Naubug in one day weighing no less than 29 lbs. There was lots of other sport to be got in those days, for from my camp at Wyl on the Bringhi I got a black bear in the morning, an 8½ lb. trout in the evening and over 50 Chukor to my own gun next day.

The trout in these days were in marvellous condition and I have never seen finer fish than these Bringhi trout. They looked perfect, they fought well, while on the table they cut like fresh-run sea trout.

About 1931 there came a change in all this, and it looked as if something had gone radically wrong. Rivers like the Bringhi, which had formerly been famous for the quality of their trout began to fall away. People began to haul out a lot of medium sized fish in poor condition, and, although there were still a certain number of big fish about in really good condition, the majority were poor and lanky. It was quite obvious that something had gone wrong with the food supply, and it looked as if the glory was departing for ever from the Kashmir streams.

Looking back I put this falling away down to a combination of two causes. There were, I think, tremendous floods in Kashmir in either 1928 or 1929. These scoured out the beds of the rivers, and, worse, cleaned out the side streams altogether, so that many of them which had held masses of watercress and other food harbouring weeds, were reduced to barren streams trickling over bare gravel and silt. This meant an immense and sudden drop in the food supply.

This happened, moreover, just at the wrong period, when natural breeding of trout had begun to get ahead of the normal food supply. The result was a regular famine, and overstocking of the worst kind. I can't help thinking that the State fishing rules also contributed to this state of affairs. These allowed far



THE CHATERGUL.
Burn fishing on a large scale.



MY LAST DAY—UPPER NAUBUG.
Best $3\frac{1}{2}$ lbs.

too few trout to be killed by license holders, so that there was nothing to keep the stock under control. As a result the stock of trout far outran the food supply. One can hardly blame the State authorities, however, for it is only recently that people, even at home, have begun to realise that overstocking is worse than understocking and much more difficult to remedy.

After my experiences in 1931, therefore, I was not too optimistic about last year's fishing. I am glad to say, however, that on the whole I was agreeably disappointed. There is undoubtedly a great deal of overstocking in most of the rivers. But nature is definitely beginning to strike a balance, and the trout, though much smaller on the average than they used to be, are on the whole in better condition than they were a few years ago. There are doubtless some of the old stagers left, but the trout are now striking a natural average and one which is balanced by the food supply. Another point is that the fishing is becoming more like real trout fishing, and instead of hurling enormous bunches of feathers into the streams, it now pays to fish really fine and with the smallest possible flies. My five best fish this year, all of which weighed over 3 lbs., were caught on *oo* midges or something similar, sometimes fished wet and sometimes dry. It is in fact trout fishing now, and that is what we exiles are looking for.

This state of affairs does not hold in all rivers, however, for many of them are in earlier stages of development. The Madmatti and the Kishengunga, for instance, which are very large streams, and were stocked later, have not yet reached this natural balance, and at present are in the early stage of holding a lot of big fish in first class condition. It will be interesting to see how their stock develops in the years to come.

Now, as to the rivers themselves. There are about 25 beats open to the public, and I understand these will very soon be increased to thirty or more. With as many beats as these there must be a great variety both in the type of water and the method of fishing, but the beats can be roughly divided into three main masses.

Firstly there are the extreme upper waters of the big rivers and some of their smaller mountain tributaries. These are real torrents, and fishing them is glorified burn fishing. But though the methods are very like the tactics employed on a highland burn at home, the results are very different. In these streams a small bright fly, let it be a small Jock Scott, a Cock of the Walk, or a Silver Grey, will bring up a trout from behind almost every stone. These will be no fingerlings, however, like our wee burn trout, but will be lusty fish, eight or ten inches or more, while many of them will scale $1\frac{1}{2}$ or 2 lbs. and will be fine fish at that. On a good day, however, they will be just as eager as our hungry little moorland trout. In this class are streams like the Chatergul, the Deosoo and the Mantar, and very fine little streams they are.

Further down, where the valleys open out, we get typical South-

land trout streams, the Kokarnag, with its green watermeadows, and its overhung shady stickles, and the Naubug with its grassy willow planted flats. These to my mind are the best of the Kashmir streams, and here is real trout fishing, not a gaudy oriental imitation. The dry fly man will come into his own here, and many a fine trout will come up at a well cocked dry fly floated down the runs between the weeds at the tail of the pools. A word of warning, however. There is very seldom a real hatch of fly on any of these streams, and the dry fly fisherman will not do well if he waits to tackle only a rising fish. Sometimes he will see his fish, more often not, but big fish lie under the weeds at the edge of almost every narrow channel, and a dry fly run down one of these will nearly always get its reward. On almost all the big rivers, too, there are little side streams, mill leats and the like, which nearly all hold good trout, and where a small fly fished either wet or dry will kill fish even when the main river seems quite hopeless. In all this type of water do not forget the nymph. These Kashmir trout, although they are not tremendous surface feeders, are very fond of taking nymph under water, and they love grubbing about amongst the weeds for any minute life they can find. A nymph sunk quickly and fished past any weed bed is very killing at times, and will often bring up fish in the middle of a bright sunny day when they will look at nothing else.

The last class comprises the middle and lower beats of the big rivers, the Bringhi proper, the Sind, the Liddar, the Madmatti and the Kishengunga. These are like vast salmon rivers, with heavy rapids and great sweeping pools. Here you will want big flies and spinning tackle. Remember in these, although the big tempting pools do hold a certain number of trout, there is more feeding and consequently are more trout in the lighter water. Spend most of your time, therefore, on the bouldery streams where the river divides, the shallow tails of the pools and the like, and especially where any weedy side stream flows into the main river. You are fishing for trout, not salmon. Salmon are not worried by the food supply question and lie out in the big pools. Trout follow their food, and where there is feeding, there will you get them.

And now to some conclusions as to the fishing as a whole. Well, it is first class, but it might easily be much better. We owe all of it to the Game Preservation Department of the State, and it seems ungrateful to be critical. I am sure, however, that there are many points where improvement could be effected, without any serious difficulty or great expense. The first and most important question is that of overstocking. In nearly all the rivers natural breeding appears to be unusually good and there is a very marked tendency for the natural stock of trout to outrun the food supply. This is especially so in the Bringhi area where overstocking has already got out of hand. I am sure the aim in trout preservation should be quality, not quantity. It is far better to have a medium stock of well conditioned fish, than



Ross, E J. 1939. "Trout Fishing in Kashmir." *The journal of the Bombay Natural History Society* 41, 437–442.

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