Geanaeus hamiltoni (Griff.). White-crested Kallij Pheasant. Stoliczka says that this Pheasant occurs at Chini.

Lophophorus impejanus (Lath.). Monal. Seen above Taranda and at Daranghati. Its feathers were found in a Willow-Warbler’s nest above Nachar.

Arborophila torqueola Valenc. Hill-Partridge. Several were heard calling between Bagi and Narkanda.

*Alectoris graeca chukar* (Gray). Chukor. Heard calling below Nachar and Sungri and many coveys were seen between Kanam and Namgia.

Francolinus francolinus (L.). Black Partridge. Common at Sarahan. Also seen at Nirth, Taklech and Matiana and below Bahli and Sungri.

Tetrogallus sp.? Snow-Cock. A solitary bird was seen above Namgia.

[Scoiopax rusticola (L.).] Woodcock. Stoliczka says that the Woodcock breeds about and beyond Chini.

**TROUT OF TRAVANCORE**

**BY**

W. S. S. MACKAY

[Continued from Vol. 45, No. 3 (1945) p. 373.]

**PART II**

(With 2 plates)

VI.—River and Hatchery Improvement.

Under ideal conditions Rainbows would have shade, fast running water, gravel, and rocky runs leading into deep pools overhung with trees and bushes. Such conditions are to be found on the Rajamallay river and prophecies of success there made previously had been more than fully justified by 1945.

Rainbows like the fast rocky runs of a river and generally seek them out. Brown Trout on the other hand prefer quiet pools and slow running flats such as Upper Eruvikulam. Rainbows however lose none of their fighting qualities if placed in such water, a fact that is amply borne out by our fine fighters in the Devicolam Loch. Most of the Rajamallay river is fishable but there are certain barren reaches which would soon hold trout if the judicious construction of dams here and there, was undertaken. Much the same applies to the Turner’s Valley river, though this water is teeming with small fish. We are of the opinion that in connection with the rivers on Hamilton’s Plateau, there is an absence of predatory life, and that little or no interference with the spawning beds other than possible spates from the N. E. Monsoon can
be anticipated. From the number of trout seen at Poovar on the last inspection one might be led to believe that something like 25% of the eggs laid by wild fish here hatch out and come through to maturity.

Generally speaking, we have at Rajamaillay the nearest thing to ideal conditions for Rainbows obtainable.

Turning for a moment to the other side of the picture, to Devicolam, a loch which has already proved its popularity, but which can hardly be called ideal water. Work must be undertaken here to speed up the flow of the feeder stream which can be done by the construction of a series of small dams. In making dams for a sluggish stream such as this, it should be remembered that three one-foot dams are of more use than one of say four feet. The more aeration the better, particularly where temperatures are inclined to be high. Next comes the 'Problem of Mud' which may also be called the 'Anglers' Nightmare'. Mud may be composed of mineral matter such as sand, clay, and mica. This is probably harmless, but the black mud of Chittavurrai, and parts of Devicolam, which is made up of rotted vegetation and plant life, is dangerous and sometimes fatal, and when it is stirred up gives off a most unpleasant sulphurous smell. The centre of such heaps are lacking in oxygen, and foul smelling gases are formed. When the mud is exposed to the air or well aerated water, oxygen is used up very quickly and the sulphide gases are exceedingly poisonous to fish. It is therefore quite obvious that at Devicolam where the water already lacks aeration, steps should be taken to control mud to the maximum extent. In England, mud is sometimes controlled by a series of hurdle batteries. When sufficient mud collects behind the hurdles selective weeds are planted in it, and in this way the harmful properties of the mud are gradually dissipated.

In cutting back reeds or overgrown weeds it should be unnecessary to mention that the cut stuff should on no account be thrown back into the water, but should be carefully collected and heaped on the bank for burning. Rotting vegetation soon uses up valuable oxygen supplies and that part of the water where it had been left might soon be rendered quite useless.

All these observations to some extent apply to the hatchery, but here the river and ponds are under constant supervision, and cleaning etc., is carried out under ordinary routine.

And now a word about otters. It is thought that the common Indian Otter (Lutra Nair) (Tamil, Nir Nye) is a much maligned animal. There is no doubt that he is a sporting 'jolly little dog' and we love nothing better than to watch him at play. At times however he can be a destructive pest and given the opportunity will kill fish by the hundred, far in excess of his own food requirements. We recently experienced most bitter examples of his capabilities in this direction. The run from the big pond at the hatchery was, until quite recently, unscreened, and there can be no doubt that these little robbers succeeded in getting away with several
brace of fine three-year olds which had come up to spawn. On another occasion otters succeeded in getting into the 'stews' for yearlings, and took no less than 300 fine trout in one night. Wire mesh fences set into the ground to a depth of about one foot and sloped outwards, to 6' above the ground have proved most satisfactory in keeping otters out of the stews. A wild spawner taken from the river in 1944 had its nose, and the side of the gills, torn away in a manner suggesting that it had been attacked by a cat. It was thought that this must have been the work of a wild cat or jackal. The latter feed freely on crabs, and a large trout coming into the shallows at night would prove an easy prey. The Brown Mongoose (*Herpestes fuscus*) should also be on the black list.

Hatchery improvement during the year 1942-43 consisted principally of the construction of a large pond for breeders. Water was diverted from the main stream into a natural ravine at the bottom of which a concrete dam was constructed. The water is exhausted over this dam into the river, below, about 100 yards from the intake. Surface water is also taken off by concrete boxes, each 18"x9", which fit into one another, control the level of the water, and facilitate drainage when the pond is due to be cleaned out. Absolute control is of course necessary in constructing any sort of fish pond as otherwise it would be impossible to undertake cleaning efficiently. We have now at the hatchery, four stews, four grading tanks, and the large pond or 'stew' for breeders. For our own requirements this is ample accommodation, though of course trout should never be overcrowded. The figure given at home for two-year olds is one trout to one cubic yard. Out here at least five times that space should be allowed in our opinion.

From the new pond, spawners first began to come up the run in November 1943. Wild fish were showing signs of spawning about a month before that and up to the end of January. A small percentage of eggs from natural reds and wild spawners were taken. These eggs are usually much healthier in appearance and it is desirable to collect as many of them as possible. The trapping of wild spawners presented some difficulty owing to transport restrictions and pressure of other work on the Estate. Spawners were trapped in the main Rajamallay river and the Aneikad river which joins the former above the Swing Bridge pool. There are many perfect natural spawning beds in this area. Early each morning men are sent out to look for fish, and as soon as these are discovered on the reds suitable lengths of wire mesh of the kind generally used for withering green leaf in the tea factories, are stretched across the river above and below the runs. These improvised fences are quickly clamped down with stones and supported with stakes. The spawners are then netted and stripped on the spot, the ova being taken up to the hatchery in a galvanised pail. It is an interesting provision
Rajamallay Hatchery under construction.

A trout coming up the spawning run.
of nature that eggs will stand a certain amount of movement immediately after impregnation, and there is thus no difficulty in carrying them a distance of three or four miles, provided the sun is kept off them with a damp towel. A fine hen fish 24/" in length was tailed under a bank and placed in one of these screened runs. She appeared to be a ripe fish but there was a hard spot round the vent and after a month she still showed no signs of laying.

We will conclude this chapter with the observations that while the eggs of wild fish appear in every way more desirable than those of pond fish, the cost of obtaining it is very considerably greater.

Also the eggs of wild fish seem to be more delicate, though it is not quite clear why this should be. The acid test is fertility and the colour of the eggs has nothing to do with it. Provided well shaped alevins hatch out then the rest is merely a matter of correct feeding and sanitation. The rich pink of eggs from some wild fish is a question of feeding entirely and shows that they have come from water rich in crustaceous food.

VII.—Transport, Stocking and River Management

Transport.—Transport from the hatchery has been carried out to all parts of the Concession, mostly by cooly headload. Where possible, trout are taken in fish carriers by lorry. This can easily be done where roads lead to the water, but transport to Eruvikulam and the Sambumallay river is undertaken in half a day by headload from the hatchery.

A big undertaking in connection with fish transport was completed successfully in 1942. This was the stocking of the Pooar river in the remote areas lying towards the Northern boundaries of the Company’s Concession. This is a river notable for its beauty and fishing possibilities, and it has been the dream of many, interested in trout culture, to see it stocked. It has always been our policy to undertake headload transport in the height of the monsoon, it being argued that at such a time the danger of the water in the fish carriers overheating, or running out of oxygen, was minimised. Such expeditions, however, called for great hardship and endurance from the labour, and those in charge of the operations, so that it was decided that the Pooar project should be engaged upon in two stages, and in comparative-ly fine weather.

A stew pond was made at Eruvikulam, and on the first day the fry were successfully brought there without mishap, a distance of about 12 miles. Unfortunately the sides of the stew pond had been made flush with the bank, and only about 18" above the level of the water. Consequently during the night a few fry succeeded in jumping out and wriggling their way into the grass, where they were found dead in the morning.

The carriers used for headload transport are ordinary earthen-ware jars made locally, and fitted with a perforated metal cover-
ing. They form the most excellent carriers and the water keeps remarkably cool, even at noon on a hot day.

On the second day of the transport the weather was so fine that we were able to film the whole proceeding from the start at dawn, to the actual liberation of the fish. This half of the journey, over a distance of eight miles, was a difficult undertaking on account of the percipitous nature of the country and the absence of any sort of path other than the rough game tracks, a network of which are to be found everywhere on the grass hills. The expedition arrived shortly after noon and it was found that the temperature of the water in the river was 4 degrees below that of the water in the carriers. The process of liberating the fish had therefore to be carried out with great care and two hours were occupied in bringing the temperatures together, by the gradual application of river water.

In stocking a virgin river the correct procedure is to commence as near the source as possible, and to dibble the trout out in families of seven or so, at intervals, downstream. Hatchery bred fry tend to keep together in swarms and if this is not done they become an easy prey for their natural enemies. Although the work was carried out very carefully, fry were actually seen in the river well over a mile below the point where the last had been liberated, on the same evening, thus showing at what rate they will move off down stream.

It should have been mentioned that an experimental transport of 100 fry had been undertaken some months previously, in February 1942. The fish of this stocking were seen rising freely down the river, and in 1943 a number were caught weighing 2 lbs. What was still more gratifying, however, was that their sons and daughters were seen in numbers in May 1943, thus proving another stream to be successful, from the breeding point of view. In 1944 a stream in British India 35 miles from the Hatchery was successfully stocked with Rajamallay yearlings.

We have studied in the foregoing a brief history of the introduction of trout of Travancore, and something of the lessons learnt in the hatching and transport of these fish. Let us now turn to a study of the fish itself, and, later, to a very important item, the question of overstocking.

The first trout tried out in Travancore was the Brown Trout (Salmo fario) which is indigenous to Scotland, and nowhere excelled for beauty and sport, unless by its first cousin the Loch Leven Trout (Salmo levinensis) believed by many to be the same fish. It was discovered that though these trout had all the apparent qualifications for success in our waters, they would not stand such a high range of temperature as we experience here. In consequence breeding was upset, the sexes never being in season at the same time. The Rainbow Trout successful in Ceylon and the Nilgiris was next introduced with undoubted success, but let us try to study the actual degree of success obtained, and probable difficulties of the future.
The Migratory Instinct.—We came into close contact with the Rainbow Trout only after coming to the East, and for what little knowledge we now possess we are indebted to Mr. Fowke of Ceylon who appears to have arrived at the answers to the most of the problems. Mr. Wilson H. Armistead in his book ‘Trout Waters’ refers to the introduction of Rainbow Trout from America, in 1900, to the British Isles, while in ‘Fish Farming for Pleasure and Profit’, Rainbow Trout (Salmo irideus) are referred to as being native of the country extending from California near the Mexican Boundary to Southern Alaska. Mr. Fowke states that the pure Rainbow (Salmo shasta) is a river fish, whereas Salmo irideus which should properly be called the Steelhead, is anadromous, that is to say, it lives in the sea like a salmon, and has to come to fresh water to spawn. The two varieties are so alike that it is only by careful scale counting and vertebrae counting, that they can be accurately distinguished. Our trout are a cross between the two and the resultant fry in which the Steelhead predominates, will make for the sea at a certain age, while those in which the Rainbow predominates, are left behind. Trout have been caught in our waters which in some respects resemble the Scottish Brown Trout. Is some interesting change taking place due to our local conditions? The theory that cross breeding with Brown Trout had taken place previously either in the Nilgiris or in Ceylon does not seem to have any foundation.

In Travancore the artificial ponds, holding only muddy water and with no proper inlet stream, were a failure. Here the trout put on tremendous weight in the first two years, disappeared, or died in the mud. Loch Finlay a splendid sheet of water, but lacking aeration and a feeder stream, was a partial success only; the trout seemed to do quite well in the first and second years, and then disappeared. Here also it was thought that trout had developed one of these strange diseases to which Rainbows placed in stagnant water are prone. The Devicolam Loch had proved a 90 per cent success but required restocking every second year. The Loch is fed by a good stream and weed and shade is plentiful. Rainbows require plenty of food and plenty of shade to be successful, and Devicolam has both assets. Lack of shade might cause ophthalmic trouble, a point sometimes overlooked. Eruvikulam, 7158′ above sea level had proved a great success and natural breeding took place from the very first. The original trout grew to a tremendous size, some close on five pounds having been caught. Most of these disappeared in the third year and in company with many other trout went down over the falls into Turner’s Valley, a drop of 1000′. That trout have actually reached the Lower Vagavurrai Estate, an elevation of 4540′ is an established fact, and from that, it is safe to assume that many have reached the borders of Travancore, an elevation of 1480′.

A trout can adapt its temperature to that of the water it travels through, and Mr. Fowke has successfully moved trout in Ceylon from a temperature of 56° to 83°.
The question of what happens to our trout when they leave our highland areas is a contentious one, and a subject upon which none of us are at the moment in a position to debate. The natural breeding at Eruvikulam has been augmented with fry from the Rajamallay Hatchery, with the result that the head waters have now been so overstocked that the pound trout is the exception rather than the rule. As a result, further stocking has been postponed meantime, but it is a great pity that the larders were not more sparingly used, and thus a higher weight average maintained for a little longer. The waters here lack shade, but this is being planted up gradually. The Turner's Valley stream stocks itself from Eruvikulam, but trout tend to congregate here either at the top, near the falls, or at the bottom, where the river enters the forest. This is because good deep pools with shade and shelter for the dry weather months are not available in the intermediate stretch. Much river work such as the construction of stone dams and deflectors to create good holding water throughout the whole valley remains to be done. The First Turner's Valley trout was caught by Mr. E. H. Francis on 27th October 1941, weighed 1 lb.

The Sambumallay River which is within 20 minutes' walk of the Eruvikulam camp is a small river containing a few pools at the bottom. It is excellent water in which small trout are thriving. The river at Kanniamallay is holding trout. The head waters of this stream come through the tea for about two miles and the river is subject to spates of dirty water. It is very doubtful if natural spawning will take place. The Rajamallay River contains several miles of splendid water, with deep pools and cataracts, very reminiscent of the highland streams of Scotland. So far it seems that trout are going to do well there. The water was first stocked with a few trout in 1941 and these were liberated on the slopes of Aneimudi. The summit of Aneimudi is 8840' above sea level, and the trout were probably put out at 7500'. These worked downstream but not quite so rapidly as in other rivers. In March 1943 a hen fish which had died spawned, was taken from the river some three miles below. It weighed 8 lbs. and was 25" in length! This is another example of what can happen when a few of these trout are liberated in such well stocked larders as our Highland streams in Travancore. But let us beware of using up these valuable larders indiscriminately. Rather let us see to it that we preserve them and where possible increase them. Let us preserve our trees and shrubs, on the river banks, and where there is no shade let our motto be PLANT, PLANT, PLANT. The penalty for cutting trees should be death! Clumps of Black Wattle are being encouraged, and also Hakea saligna (The Needlewood tree of Queensland), but it is difficult to find a suitable tree which will thrive under such inclement weather conditions as exist in the monsoon months. However the work MUST go on from year to year, or many of our present gains may be lost. Aquatic plants (Watercress) (Nasturtium officiale) and grasses have been successfully brought from Chittururrai and Devicolam and established in ponds at the hatchery. The Raja-
mallay river in common with most of our best water rises close to Hamilton's Plateau, which is the principle water shed in these hills. It is, however, subject to even greater spates than probably elsewhere, on account of the fact that the South West face of Aneimudi upon which it rises, receives the full blast of every monsoon burst. The average rainfall, taken a few miles below the hatchery, amounts to no less than 315 inches over the last ten years, and on 13th July 1943, 22" of rain was measured between the hours of 6 p.m. and 8 a.m. It is therefore useless to attempt planting weeds by artificial means in the main streams under such conditions. The answer is to make experiments in side streams and ponds not subject to serious floods.

About three miles below the hatchery, the river flattens out into a swamp which has recently as 1926 was the home of Elephants and Bison, and a place well known to 'Shikaris'. Silt from the clearings has turned most of this swamp into a sand bank through which the river flows at an almost imperceptible pace. At the corners of the river there are several exceedingly deep pools overhung with jungle trees, and in these, many trout averaging not less than two pounds have been located. Their age cannot be greater than three years, and we are convinced that several of them are over 5 pounds in weight, judging from the one already referred to as having been found spawnbound. Below the swamp the river falls away into rapids and great pools overhung by rocks. The man who has the luck to hook one of these monsters in such heavy water will have an experience worth remembering.

Since writing the above, several trout were caught at night on a fly resembling a Peter Ross, but with a woodcock wing. Their weights were from 2 to 5 lbs. 12 oz. The stomach of one trout of 2 lbs. was crammed full of recently devoured and quite undigested fresh water shrimps, 87 of them, no less. The voracious habits of the Rainbow are truly remarkable. Once again we say, for indeed it can never be too often said, 'BEWARE OF OVERSTOCKING', and explore all methods of food conservation.

The importation of the eyed ova of the pure American Rainbow Trout (Salmo sastaita) and Brown Trout (Salmo furio) has been advocated. This might be done but the writer can see no advantage in such an undertaking, or in what direction the fishing would be improved. Our hybrid trout which can never return from the Sea if they ever reach it, and which can therefore safely be called Rainbow, are hardy, sporting, and prolific, and seem well suited to our water. What more can be wanted?

The growth rate of trout is governed solely by the amount of feed available, so that in the hatchery it is possible to tell the exact amount of food required to grow a pound of flesh. We have already seen what our trout can do when liberated in such virgin waters as Eruvikulam and Poovar. We have also seen, alas, how quickly food stocks deteriorate and how quickly the weight average falls. Our future policy must centre round two very important points: These are:—(a) conserve and increase the food content
of our streams and (b) keep a sound balance between food and stock, by increasing limits, or netting, where water has already been overstocked.

Since writing the foregoing the question why big trout die spawnbound has been asked. Unless trout have suitable conditions they lose the incentive to spawn, though the ova continues to develop until eventually the mass so formed presses against the pericardium and heart causing death. Trout must have low temperatures and range with access to shallow evenly running water flowing over gravel and small stones. Semi-stagnant or muddy conditions upsets metabolism particularly in the case of these fish which, as has already been explained, are to a great extent migratory.

The broad principles of Trout Stream improvement as they apply to the High Range were dealt with in a supplement to the General Report for the season 1944-45. In this work great stress was laid upon the necessity for making the best use of natural food reservoirs. Ditches and side streams can by judicious management be made to maintain large stocks of many fresh water animals. Shrimps (Gammerus pulex) will breed freely all the year round and their introduction to almost any class of water is no very difficult matter. In conjunction with shrimps, snails (Paludomus stomaticodon) which are very prolific in our waters, can be introduced. Often old game wallows or hollows below the level of the main stream can be turned into excellent food farms by diverting water through a channel and controlling the level and the pace of the water through the artificial pond so formed, by means of sluice gates. In such ponds vast supplies of the natural food of trout can be built up and maintained, and from time to time a proportion of this can be induced to make for the main stream by opening up the gates. Any such work on food conservation is absolutely invaluable.

VIII.—Some Fishing Incidents

This work will, I am told, be incomplete without some reference to fishing itself. So many factors of wind and weather, and other conditions, come into the question, that when I am asked what are the best flies to use on our rivers I am unable to give an answer. The ancient 'Book of St. Albans' mentions twelve flies. The 'Dunfly', body of dun wool and the wings of the partridge would appear to be the oldest and most popular. The best known after the 'Duns' are the 'March Browns' and the 'Greenwell's Glory,' and on most brown trout streams at home these take as big baskets as any other fly. A long list of new-fangled flies has crept in. The list is so long in fact that one's brain reels on attempting to memorise it. A great many are mere 'catch pennies', for nothing looks more attractive and alluring than a host of flies neatly set out in the tackle expert's shop. Many trout are taken on small salmon flies, and such new inventions, with silver bodies, as the 'Butcher' and 'Peter Ross' which
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are really lures. In some respects the capture of fish with them is tantamount to spinning, as they suggest the small fry of indigenous fish found in most waters, but certainly the bigger trout are often caught that way, which is a very good thing indeed. It has been stated that the Rainbow Trout is easier to catch than his cousin Salmo fario, and at certain times of the year this is undoubtedly true. The Rainbow Trout often accepts a big variety of flies under similar fishing conditions. In my experience the never-failing fly or lure contains red, with either a teal or woodcock wing, but when the water is heavy the silver body is very deadly. For the late evening a black fly with a silver twist, red hackle, and jungle cock wing such as Watson’s Fancy does good work, and late at night the Teal and Silver. Rainbow trout when they are on the feed are much less ‘gut shy’ than the Brown, and if anything the splash of a badly cast fly seems to attract them. It is necessary, however, under almost all conditions, to keep well out of sight. I know of a pool on one of our rivers where big trout lie. The head of the pool contains many rocks and boulders affording the most magnificent sanctuary for wary trout. The ‘hing’ or end of the pool is full of gravel and sand, and the big trout if undisturbed, will lie there throughout most of the sunny part of the day. I always found great difficulty in approaching this pool and on each occasion managed somehow to give myself away. At last I discovered an infallible line of approach, some trick of the light, or the particular location of the pool, making all others impossible. Having got into position I began very carefully to look from behind the ‘hide out’, and soon discovered two of the trout lying in their favourite spot. When a light breeze sprang up I cast and immediately hooked one of the fish which on being netted was found to weigh two pounds. When big wary trout are lying in clear water they can be caught if patience, combined with careful observations, are applied.

At nearly all times of the year the floating fly will do well on Upper Eruvikulam and most of the Pooar river. One year the fishing in April and May fell off very badly and for a month no records were sent in except those of a keen dry fly fisherman who consistently collected 2 or 3 brace of trout, particularly on windy days.

The waters of the High Range will in time, all provide sport of the very finest, but the cost of the success to date has been heavy, and the Company and their employees have borne the whole expense themselves. It is therefore no wonder that so far the waters which are private, are seldom open to visitors, though occasionally a guest of the Company is granted permission for a day on one or other of the streams or lochs.

The following is an extract from the author’s Fishing Record Book:—‘The Eruvikulam River falls into Turner’s Valley and then winds its way through grassland and jungle, eastwards and then North eastwards towards the plains and the Coleroon which it ultimately joins. After leaving Turner’s Valley it falls away sharply in a series of great falls and cascades towards Luckham
and the Lower Vagavurrai Tea Estate, where there is a famous pool called the Luckham pool. In February 1944 an old planter who has been connected with sport in these hills for many years, reported trout in this water. The elevation is about 4,100 feet above sea level here, but as the water pours straight off the high hill temperatures probably do not exceed 65° at the hottest time of the year. All the water from this point downwards for some miles, is in every respect ideal, although it is very unlikely that trout will breed successfully in it. On the night of 29th February 1944, I went with this planter down to the pool to try a cast or two. Towards 7 o’clock a big trout came into the shallows at the mouth of the pool together with three or four smaller ones. In crossing the river however, I fell and smashed the point of my rod just above the last rung but one. This made further fishing exceedingly difficult, for with each cast the line whipped itself round the broken end of the top joint. But for the moment the big trout had disappeared into the black depths of the pool. The light was going fast when its shadowy form appeared again in the shallows, and several casts were made over it with a large fly, “a grouse and claret”. Suddenly when hope had been given up, the fish took the fly with a tremendous splash and was off like an express train into the centre of the pool, but I fortunately had the presence of mind to lower the point of my rod after striking, thus freeing the line. The fish rolled several times like a salmon, and then came back to the shallows, but after the initial rush it gave little trouble, although with the anxiety of the broken rod and the thought that it was very lightly hooked and the cast frayed the final outcome was in doubt up to the last moment when it was netted successfully. It was immediately taken up to the Factory and accurately weighed there at 7 lbs. 2 ozs. It was 24½” in length and had a girth of 15½”. It was a hen full of almost mature ova which weighed a pound and a half. The stomach was quite empty arguing that it was a late fish in season and about to spawn. I was of the opinion that it was not spawnbound and that it would have got rid of the eggs within a few weeks. This is the largest trout to be taken on the rod in Travancore, and I have not so far heard of anything bigger in the Nilgiris, though no doubt such fish must have been caught there in the early stages. Trout when they come into season do not feed readily and in many cases probably do not feed at all. A trout in this condition is however either annoyed into taking a fly by its frequent appearance adjacent to a favourite lie, or because the fly represents some insect dangerous to the spawning beds. Mr. Philip Fowke wrote on the 11th March 1944 that this fish broke his long standing record for Ceylon of 6 lbs. 12 ozs.

Big Trout.—Other notable trout have already been referred to the biggest of these being the eight-pounder found lying dead in Rajamallay river in 1943. Mr. E. H. Francis caught fish of 4½ lbs. to 4¾ lbs. on several occasions. The visit of Major-General (now Lieut.-General) E. F. Norton, C.B., D.S.O., M.C., in 1939 when six trout were caught weighing 20 lbs. has also been
Transport of trout fry over the grass hills.

Record trout for South India—7 lbs. 2 oz.
referred to. The biggest in that basket was caught by the General on a dry fly and weighed 4\(\frac{3}{4}\) lbs. One of the biggest trout record-
ed previously, came from the Chittavurrai Lake. It was 5\(\frac{1}{2}\) lbs. and was caught by Philip Gouldsbury who was also connected with the early efforts to establish Brown Trout.

Exciting incidents make more pleasant reading than a mere list of records and we will try to glance through the Association’s Game Book and recall a few of these. The description of the catching of the first Rainbow Trout at Eruvikulam has already been given. This should have been a signal for the opening of the river to fishing, in the opinion of many, for in the spawning months that followed none of these monsters were seen again. Many of them succeeded in negotiating the 1000’ falls in the monsoon and getting into Turner’s Valley, where in September 1942 the most perfect specimen of a Rainbow Trout so far seen was caught by Mr. Francis. On that occasion I had received instuctions to meet Mr. Francis at a point half-way between the High Range and the Anamallais, the next range of hills, from whence he was walking on an inspection of concession land. It was a longish trek taking in all three days, and on arrival in Turner’s Valley on the homeward journey it was about 12 noon, with time enough for a few hours’ fishing before proceeding to the last camp. The sky was cloudless and the water clear as gin, but it was decided to try a few casts in the runs towards the end of the valley. At the second or third cast a heavy trout was hooked on a ‘teal and silver’. After the first rush the fish bored back into rough water and at such speed that for a time there was several yards of slack in hand. However after a splendid fight the net was slipped under him and a fine trout of 3\(\frac{3}{4}\) lbs. was brought to the bank. That was the only trout seen that day but one well worth and even longer trek. Those who are known to have caught trout over four pounds, are only seven in number and as these monster trout will always be few and far between, a note of their names will be of interest.

W. S. S. Mackay from the Luckham Pool ... 7 lbs. 2 ozs. length 24\(\frac{3}{4}\)”.
Philip Gouldsbury at Chittavurrai ... 5\(\frac{1}{2}\) lbs.
E. H. Francis at Eruvikulam and Turner’s Valley. 2 @ 4\(\frac{3}{4}\) and 1 @ 4\(\frac{1}{2}\) lbs.
Mrs. W. S. S. Mackay at Chittavurrai ... 4\(\frac{1}{2}\) lbs.
Lient.-General E. F. Norton at Eruvikulam ... 4\(\frac{1}{2}\) lbs.
W. S. S. Mackay at Eruvikulam ... 2 @ 4\(\frac{3}{4}\) and 1 @ 4 lbs.
Alasdair Steven at Rajamallay ... 4\(\frac{1}{2}\) lbs.
W. S. S. Mackay at Rajamallay ... 8\(\frac{1}{2}\) lbs.

It is thought probable that J. S. B. Wallace and J. M. Bridge-
man caught trout over 4 lbs. but these were not recorded by the Association.

John Hamilton Wilkes did a great deal of work in connection with stocking the rivers. How he caught his first trout, and gave the name ‘Hamilton’s Hole’ to the Big pool at the bottom of Turner’s Valley makes a story worth recording. He had been fishing for some hours without result, when he felt a steady pull on a large salmon fly which he was drawing across the river at a