These gradually spread, and by 11 o'clock it was looking so black and stormy that many of the bouls left the fishing ground and made for the hotel. (I should say here that the test fishing was always on the north side of Bora Trande Pars, i.e. furthest away from the bay where the house tout was moved and it was in the island of Gasparette where was a hight house and small pier that we used to land at noon to stretch our legs and have tunet, so that in neturning to our float ing quaters we had about three miles of a row, the first mile and a half of which were quite exposed to easterly or westerly winds.) The nest of us some dozen boats in all landed as usual by the prox, thinking to want till the storm had blown over so me could get fishing again in The afternoon. We were just ashere in time and had rought shelder under the revander of the light house, when a thurwherstorm burst report us accompanied by torronts of rain, and followed by the virloest equalts: in a few moments the waters of the pars which hat an how is two before had been steepity tasking under a blazing sun, were lashed into or seething mass of from We had our times and would patiently for it to clear gain but this it showed no intention of doing, and at 3 o'clock it was as tad as ever. The waves were rolling on to the beach in a way that threatened to damage our boats which were left there, so we turned out and dragged them higher up into a place of safety, not before it was meded either, for me found some of them already swamped. The next question was whether me should get back at all that night, or home to tresposs on the hospitality of the hight house leeper. By 4 o'clock the Town was off and there was a shight tall in the storm. to, after holding a conneil of war with the guides, we decided it was now or never, and first one then

another determined to make a rush for trome I was not work gatting after as we had to wode in up to our moder to get the touts through the breaking surf, the timble in as best we would. about 500 yous from the shore: my boy troushed one of his owns, fortunately we had a spare one and we got through all right, as did the other toats with withing worde Itian a souking. an Olmerican who had his wife with him would not face it, very wisely, for he would never have got across with Three, in the power trut he hard. They spent the night in the tight house, and managed to get arross next morning. The following morning I was wakened by hearing a great commution in the house book and feeling the old thip Liveying about in a most unaccountable manner. I turned out to see what was the matter. All the small boats in The place were honging round us and most of the boys from of shore were abourd running round in the greatest exertement. It seems that the storm had caught us ornel we had dragged. When first this was found out me were sailing merrily along, heading for the mouth of the pass, and but for the turn of the tide and a fortunate change in the wind we should probably have taken a quite unpremeditated cruise in the Griff of Mexico. Dut things how out all right and with the aid of a Friendly steam lanch, in a few hours we had our unehor down again in a snug tittle harbour. The storm Tasted three whole days and was quite exceptional for The line of the year Speaking in general of the trip to Punton Gorda, There is one drawback may be ringed agound it, viz: The Jishing is apt to become monotonous. Of course of one is not keen on the sport it might be so ony and dun now and then to liven things up.



There are lots of wild foul about, but they are out of season when starpon are in. Then one can go alligator hunting in the swamps, but there are very few gator to be seen there now and as the place swarms with makes it is hardly good enough, and so it comes about that one has either to fish or do nothing and one day is very much like another. But what matters it if one day is like another when each and all of them are injugable and full of interest. Given a delightful climate, bright hot days and cool nights, a good company of English and american sportsmen (and the true Umerican sportsman is a very good fellow) and the chance of a big fish every now and then. Well! he's a poor sort that finds time hanging heavily on his hands Take any day as a sample. There is the early morning tub on the veranda, then breakfast (nothing very grand but quite good enough) then outside again and holler for our guide, of he is not atready along, which he generally is. fine picture it makes this fine sunny moining, The fleet of small boats made fast to the steps of our floating home, the crowd of guides, while and black, running round after timeheon buskets, fishing tackle and the owners, as first one then another tout is loaded up; The white soil is spread (if the wind is fair) and away we go to the fishing grounds, full of hopes for the coming day, may be truck runs our way this morning, or perhaps not, anyway it how been delight fut on The water and we have lots to talk about, of fish we have eaught or ought to have eaught, when

when we meet at moon under the shade of the old wooden pier. Then there is the ramble along the shell-strewn beach and probably a dip in the warm waters of the Gulf (though this always with a weather open for sharks) of terwards tuncheon, a smoke, and possibly for some a half howis nap, while the more the more energetically inclined fish from the pier end for small fry, or set heavy times bailed with great chunks of tarpon and so rid the waters of some few of the pestetential sharles. Then away in the boats again after that tarpon we did not catch in the morning, and later as - The sun drops down towards the water edge me once more hoist our soil and speed towards home und dinner. after dunner time posses merrily enough with cards, music and yourns of fishing explorts, old

and new and so to bed as old Pepy would say.

Once or twice some few of us turned out ugain after dinner and fished at night. This was right enough once in a way as on ese persence, but rather too uncoming to be made a regular practice, for to hear all soits of weird brutes snothing and splashing round, within a few feel of the boat was not altogether comfortable. at the same time it was well worth turning out to see a targon teaping in full moonlight or When the only means of seeing your fish was by the phosphorescence in the sea when out one anking potch dark night as he leaped, his white form showed up against the black sky with or pale greenish glow and the water flew from his sides like drops of mollen medal But I fear I have already trespossed too long on your partience with this rambling your, and I will conclude by answering a question which I have always found is ordered, when the subject of largon is mentioned. "How does tarpon fishing compare with origing for twent or salmon? My answer is there is no comparison between them, any more than between try game shooting and project shooting; they one so totally different. But if you were to aske me if fishing for these monsters had not sported me for the I matter of our over worters, I would repty: Time me is day by some five flowing theorn, through good old English wood and meadow, with soft west wind and cloud flecked they, and here with finest gout and dainty split came, let me by my skill on the speckled beauties that haunt its crystal depths, for these Things have charms for me, that tarpon, sharles, or even The very Devil fish hunself can never make me foresalee.

was about the heaviest meal I ever heard of one toking. The forvirle hount of the Jorison anyter just now is off The coast of west Florida, round about Charlotte Harbour. This Harbour is a large irregular sheet of comparatively Thallow water, roughly speaking 30 miles in length by ten in width, into which own several owers. It is protected from the heavy storms of the July by a chain of low tying islands covered with palmetto palms and mangrove, which form a natural break water from north to south; between these islands are channels connecting the Gulf with this internol sea, and varying in width from a hundred yards or to to the moin entrance or Bora Trande pass between the islands of Gasparelle and La costa which is more than or mile across. Through these passes the Toupon come in shouls at certain states of the tide, and rove about The shallow waters of the harbour, making their way up into the Estructies of the rivers, it is believed for spononing purposes, but I could obtain no certain information on this point The roots used for Jarpon fishing are from 6 to 8 feet tung and very stiff, they are made usually in two prices a short butt and a tip or top joint, and may be either of totil came, whole came, green heart or iron wood. The rungs are large in diameter, with long bearing surface and in good rods the end ring is bushed with a piece of polished agate. The rest is of the regular Olmerican type with multiplying gear and should hold 200 yards of time; they are made with a rather ingenious optional theek worked with a side lever, which can be thrown out of action altogether, bearing the reel free; or when in use only oreing in one direction. a.e. when drowing line off the reel.

Through the numedal.

Abel Heywood.

Our route to Numedal was via Christiania to Kongsberg by train leaving at eight in the morning and arriving at Kongsberg at about eleven.

Kongsberg is only a small place, but the Royal Silver Mines are there, which anyone so inclined can inspect, but it occupies a long time, and you ought to wear your worst suit of clothes. Through the little town flows a great river the Laagen, which we are going to trace to its source. Here it supplies the town with electricity, though the foss is almost blocked up with logs, with which the water is crowded, as are many of the big rivers in the South of Norway. The timber business is a vast and important one not only for export as sawn timber, but for paper and pulp, and when I tell you that one mill on the Glommen made some twenty thousand trees into pulp last year, you may imagine the log business is a considerable one. It is also a complicated one, for every log has to be credited to its sender, who casts his bread upon the water indeed. An army of men is employed in getting logs over places where they jam or get stranded. You may see hundreds of these logs, almost any day, piled up on the top of the foss at Kongsberg, one having stuck, and the rest mounted and interlaced until they have become a solid heap requiring much skill and courage to get them moving again.

At Kongsberg you begin driving, and it is not until you are behind a horse that you feel you are in Norway. You have no more trains now with their fixed times. You are as free as a bird. This was no doubt what was in the mind of a workman I once sat by the side of in Trafford Park. It was before it was crowded with works as it now is, rooks were walking about fields that are now covered. The car was late, it seemed as though it would never start. "This car" said my friend "is like a blooming crow." "What's it like a blooming crow for "I asked. "It starts when it likes" he replied, and I was answered, he had the true idea of liberty. Well you are as free as the crows in Norway. You start when you like, and that is really a great part of the enjoyment.

If you expect to reach your first station in a couple of hours you can telephone, as we did, that mud days mad, which means that dinner must be ready by you arrive, and when you descend from your cariole or stohl yoerra, you find it so.

Our first station was Sversversund. It is not particularly beautiful, and they don't provide sumptuous dinners there. But ours was ready when we arrived, and that is something. There is a fine big river here, as you see. I shall not attempt to give a description of each particular Station as we reach it. Stations are about two hours drive apart from 14 to 16 Kilometres, and pretty nearly the whole of the first days drive is through pine forests, the road through which is sandy and very heavy for driving, it is also very often cut in very long straights, which are less interesting than winding roads. There are however distant views of the river here and there. We are on Norway's lower plain, which extends northward for a hundred miles or so, when it suddenly rises, reaching after a time a higher plain, as it may also be called, which is from two to four thousand feet above the sea.

This great plain, cut by fjords, or by river valleys which run into the fjords, extends for some hundreds of miles and is the source of much of the glory and grandeur of Norwegian scenery. The valleys which have been scraped and washed out by ice and water, are the inhabited parts of the country, and the cliffs and mountains which bound the valleys are really the sides of the gullies which water and ice have made. Our first night was spent at Alpstad, a poor little place and the third station from Kangsburg. It is some distance from the river, which is here widened out into a lake. After getting what food we could, we walked down to the water where we saw swarms of tiny fish rising, and where at half past ten at night we heard the cuckoo calling until he ought to have been tired of it, but he, apparently, was not, for the first sound we heard next morning was his monotonous voice. When we got our bill here, for afternoon's meal, bed and breakfast, we found it to be about 1/6 (7 ½ p) each.

The first station next day Hille was reached after a drive through richly wooded land, with the river of lake like proportions as before. Just before reaching Hille the river is crossed, close by a very fine foss, but my camera went wrong here, as it subsequently did on many important occasions, and I am unable to introduce you to a bit of beautiful scenery. By the next station was reached Vaale the river as you see is still calm and large and the rise is only slow.

The telephone does not reach Vaale and so we had to order dinner on our arrival, but as there was next to nothing to cook, it was soon ready. The woman said she had one fish (it was a trout of half a pound) and we said we thought we might manage it between us. She fried it, brought also some raw ham, and some stuff like raw sausage meat, and some potatoes. I felt rather dubious about the quantity she had to offer, and so asked if she could make some pancakes, when she said she could and she did, very quickly, so we did

famously. She found a bottle of wine too, which Mr Austin finished, I think and the bill for the lot was 2/9. I asked her if she had forgotten the latter, but she said no, and the amount was paid with six pence for the baby.

At Alpstad a Norwegian gentleman had advised us to go from this place Vaale to Ole Loftsgaard, a few miles further on, where he said we should find good fishing. Our landlady knew Ole, and all about him and provided us with a sort of phaeton, called a trille, with her son to drive it. The road for some distance is by what is called Nora Fjord though it is really part of Laagen river, the view on the screen, as you see, is taken from the road.

We are journeying now towards the lofty plain I spoke of, and by we have driven half a dozen miles we had begun a really serious ascent towards it. This ascent begins at a stone bridge which crosses the river and carries the road to Opdal, but we keep still on the left bank, and at once begin a regular scramble. The river has completely changed its character and we hear its roar as we take the rising road. After a time this road becomes a heavy, rocky, narrow track, and we have to walk by the side of the trap to prevent it turning over as its wheels bump against or surmount the protruding rocks. It is a fine bright afternoon, and far above us we see little farms dotting the hill side, and we wonder where, and how far we are going. At last we see one house, the last but one on the hills side, which has an "Altan", that is, a high porch, extending from top to bottom of the building. After weary bumpings and threatened dislocations of the wheels, we come to a stand some twenty yards below Loftsgaard. We have reached Ole's. The sky has become somewhat clouded and this what we see as we look back over the track we have come along.

After we have waited a few minutes wondering "What next?" a rough man came to us and I asked him if he was Ole. Yes he was. So we at once proceeded to take control of his premises. We find there is a scantily furnished sitting room, and a large bedroom. In the latter we find two beds, each with the usual feather bed on top of it. There is a small basin on a chair by the wall, some soap, and a small tooth-comb. The jug and basin are German tin ware, and the jug, we afterwards find, has a big hole in its neck, making pouring to be rather a difficulty. But the house is quite roomy and fairly clean, and by we get down stairs, after first lugging our traps up, we ask for food. We got what they had. Eggs and coffee, flabby rye bread and fladtrod, and did the best to satisfy our hunger on those dainties, but it was hard work. After breakfast we walked about a mile to the river, where is a foss and a bridge over the foaming torrent as it now is. The situation of Loftsgraad is charming. It is about 2,500 feet above the sea. Higher than the top of Pen-y-Ghent, but the air is warm bright and delightful. As Duncan says in Macbeth,

"The air

"Nimbly and sweetly recommends itself "Unto our gentle senses."

We can see far down the valley we have ascended, where hills are piled on hills. Turning towards the direction we follow tomorrow, the mountains rise higher still. Though we are so high, trees are by no means absent, and as we sit on our return from the river in the shade of the porch we bless the fortune to have led us here. How many swallows build their nests in the rafters? I do not know, we watched them literally by the score, and I was reminded of another passage from Macbeth, where

Banquo speaking of swallows says,
"Where the most breed and haunt, I have observed
The air is delicate."

How true this is of Lostsgraad. We sat thankfully in our porch till our watches warned us that it was time for bed, and then ascended our ladder. Next morning the view down the valley was changed to this. We had only a very poor breakfast, and then set off to the lake to fish with Ole and another man. It is only about a mile, over rock and bog and tree stumps and roots, but a new road is about to be made, which will make the rough places smooth. The boat house is finely situated on what appears to be a lake of a mile or two long.

We had a fine hot day. Bye and bye the boats are ready, but one of them, as I know well, leaked so badly that the passenger was occupied almost constantly in baleing. We pulled to the extremity of the lake, to find a short swift river connecting it with another and larger lake, which in its turn connects with a third, and still very much larger one.

Our fishing, however, did not take us beyond the first two not that we found it so excellent in the lower water that change was unnecessary. By chance I put on a small minnow, not much more than an inch long and I got fish with it, though not many. Mr Austin used a larger minnow and got no fish, though he had one close up to the boat, ergo, I suppose a small minnow is best, and the reason, probably, is that the water is very clear. This the view of the mouth of one of the rivers.

I had five trout by early evening came, the biggest about two pounds and none of the rest under a pound. I also got a few small ones with the fly in a little bay, near the connecting river where we landed for

lunch. This lunch consisted of some flabby rye bread, some still more flabby and highly scented cheese, and a dry piece of shoulder of mutton, which looked as if it might have been mummified a thousand years ago. Our men sawed pieces off it, but hungry as we were, we were not far gone enough for that. We gave up early, because the sport did not seem good enough, and we thought it best to return to our Hotel, as I must call it, to hasten dinner. It was six o'clock when we reached "home," and we explained to the girl how anxious we were. By seven she entered with two plates, two knives and two iron forks.

At 7-20 a basket of flad brod arrived. A few minutes later a jug of milk, and then potatoes, trout and the pancakes!!

She gave us no invitation to start—an omission I never met with before—and when we drew up we found the plates were quite cold. So we called her back, told her to warm the plates, and to keep the pancakes hot until we were ready for them. By and bye the plates came again and we did our best at the trout and potatoes, and when we called for the pancakes they were Red hot if that is possible and much crisper than when they came in first. After dinner we both tried the river, which is awfully rough, but with very little result Mr Austin getting two and I one, all small. I was ready to try the lakes for another day, but Mr Austin was sick of them, so next morning I told Ole we would go on, and I ascertained from him that on our way to Voes we should pass a tourist hotel at Bu Vand where we should find fishing, so we determined to make the place our next stop.

Ole and another man shouldered our portmanteaux and the rest of the luggage, and without apparent difficulty carried them the mile that separates us from the lake. Here we took the leaky boat again went through the lakes one and two where we trans shipped, as the river was too heavy for the boat to ascend it. Our goods were again carried, this time merely over a strip of land to another boat house, out of which came quite a fine large boat with appliances for a sail in it. This boat also leaked like a sieve, but Mr Austin dexterously caulked it, by ramming string and old flannel in to the cracks and this reduced the bailing by one half. When we got away we were soon able to hoist the sail, but the men did not know how to work it, so Mr Austin came to the rescue again, and took command. We went on swimmingly for a time, then we lost the wind, then pulled for about an hour, then turned an abrupt corner, and catching the wind again, we sailed finely for another hour or more, about eight miles. The scenery on the way was nothing extraordinary as we were too high up for the hills to be any great height above us.

At the end of the lake our goods were again hoisted to the backs and breasts of the men, who carried them another mile to Sonstegaard, where there are several farm houses as well as Sonste. This is the place. At this house, which is a Post Office, visitors are sometimes taken in, and I hope to try my luck here some day, taking food, and I think a hammock with me.

The large lake we came along Vunhord Va, flows from another large one further West, and the two are, of course, connected by a river. The Norwegian gentleman I mentioned some time back informed us that both lakes and river contained good fish and plenty of them.

At Sonstegaard Ole told us we should be able to get a horse to take our traps on to Bu Vand, but when we got there we found the house shut up, the farmer and his people being away. There was no horse therefore. So I told Ole to try for one at another farm and he set off to do it. In the photo we are waiting for the horse, and we had to wait, though Ole returned in half an hour and said it was coming "Strox". In another half hour it came, and what I did not expect a cart also.

We soon got our things in. Bu Vaud was not far away, so we set off in good spirits, after bidding farewell to Ole. Here we are on the road, and after five or six miles through pleasant scenery and delightful weather, we came to the lake. It is only a small sheet of water perhaps three miles long, and near the far end on the northern side we found the little hotel, and soon ascertained that we could be accommodated. We ordered dinner and while it was preparing reconnoitred the situation.

The place is some 2,500 feet above the sea, the hills about it are low, and so it is about the top of the line of vegetation, the trees are small and most of them birch, though a slight drop as you will see brings us to pines. I may say here that the fine thin atmosphere we have been breathing for the last six days or so, has had a wonderful effect upon our feelings, we feel the lightness and almost dread to go down again, and when we came to leave Bunas Broenna as this house is called and to make the rapid descent that the road makes to Hollingdal, we both felt the heaviness of the denser atmosphere very markedly.

Our dinner was a great triumph, we had soup, we had nice silver forks instead of two pronged iron ones, nice clean table appointments, flowers, bright glass, and every luxury, and a nice little dinner too.— This is a road view here about that we can look at while we dine. After dinner we thought we would try the quality of the fishing, but it was a case of caulking and baling a leaky boat, each had a few rises and that was all. This may be partly explained when I say that we had the satisfaction of seeing the hotel men netting the place to supply the table. It is a small lake, is apparently netted everyday while visitors are up, and angling

as usual is nowhere. Unfortunately Norwegians look up their lakes and rivers as inexhaustible; they never think of the possibility of over fishing, and thus they net and trap their streams and net and otter their lakes, so that angling on the frequented parts is killed.

The hotel is established as a sort of sanatorium and a very healthy and pleasant place it is. It consists of a number of bungalows, so that if you are staying there, you can have a bungalow to yourself. There is also a central house in which we stayed, and there is nearly ready, probably quite ready by this time, a modern hotel of Norwegian pattern that will accommodate twenty or more guests. Next morning in very fine sunny weather we set off to walk to Noes in Hallingsdaal, about fifteen miles away, and some 2,000 feet lower down. Why it was, I don't understand, but by we had walked about ten miles, we were both foot sore. I had a blister each foot, a thing I had hardly ever had before, we in consequence ignominiously climbed into the Stol Bjerra that was loaded with our luggage. And made the rest of the journey in that way. The whole descent from Bu Vaud to Voes is most beautiful. It is first through grand pine forests as you see in this and the next picture. Then when a few miles from Hallingsdaal, you come in sight of the immense and beautiful valley, which English tourists are often told is not worth doing. It is strange how these English go in flocks. Judging by the road books I should say until we ascended Numedal, an Englishman had not done so for ten years and one is almost a rarity in Hullingdal.

This is not a very successful peep at Hullingsdal from the road we descended. It is not far from Noes, which we reached at about one o'clock. Noes is quite an important place though the station is scarcely on the scale of magnificence one would expect. It seemed to be afternoon with all the stable men and loafers who were crowding the yard, and none of them paid the slightest attention to us. However we got the things out, left the horse to look after itself, walked into the house, thumped on the inevitable white door, and ordered dinner, which we had not been able to telephone from Bu Vas. We had to wait a long time, so we changed our clothes in the drawing room, and I rectified my camera, which had gone wrong as usual. Dinner came, and went and we went too, driving upstream in a north westerly direction.

There are very fine views of the great valley all the way. Here is one of them, sadly degraded by the camera. We got on to Rolfstrus, where is a most comfortable station and where we both of us had been before. The hostess professed to remember us, but these ladies often say so, and sometimes not truthfully "Jig rjente Dem Strax" she said, when she was told we had some years ago spent an odd night in the house. What an impression we evidently leave behind us!

We fished at Rolfstrus the last time, and although we found the fishing abominable we tried it again, with the old results. This view of the river was taken before reaching Rolfstrus. How many fingerlings we took would be difficult to say; but what a river! It is impossible to imagine anything more beautiful, from an angler's point of view that is. It is pure as ice, flows not too rapidly in a continually broken course, is beautifully surrounded by any amount of cover, but yet turns out no fish. There is only one reason for it, the one I alluded to just now, and which there is, I fear, no help for. The only use for the river now is to float down logs to the sea and there are any amount of these on their travels where ever you go, up or down. It was Sunday morning when we left Rolfstrus and drove to the next station Kleven. The road makes a long and very steep ascent for some miles, on which this is one of the views. A fine sunny morning and all the peasants on their way to church, and all men, women and children dressed in their Sunday best, and magnificent costumes the elders, at any rate wore. The fronts of the ladies gowns from top to toe were made of gaudy flaring prints, their heads too were fearfully got up, but I cannot remember these articles of millinery. One lady was good enough to stand for a moment while I took her portrait, but alas, it was one of the several misses that wretched camera inflicted on me. I have sometimes not done badly, as you have seen, but it goes wrong at times and it is always (as is the nature of things) over something very particular that it fails. I used a Freena camera, and if it never went wrong it would be an admirable instrument. In this view you see a party of church goers whom I did not allow to get near enough before photographing, a fault I am very liable to. This road it is hard exaggerate the charms of, especially on such a grand day as we were favoured with. Here is a peep down a gorge in Hemsedal as the vale is now called. It is a long way from presenting the grandeur of the scene, or the depth of the ravine, but all the way to Kleven, which we are now in search of we are kept in a state a little short of excitement by the glories we had passed through.

We reached Kleven at about one o'clock, a place that formerly was a very wretched one, so far as accommodation is concerned, but which now is kept by a smart young woman and her husband, is nicely furnished, and where excellent food is provided. We ordered dinner for two o'clock and to fill up the interval, put up our rods for the river though much smaller than at Rolfstrus, is a very charming one. This is a peep at it just before Kleven is reached.

The fishing was scarcely an improvement on the last; I got two trout of 5 or 6 ounces, both at one cast and that was all except an innumerable lot of (fingerlings) spratlings. Mr Austin did no better. It would

have been far better to have sit by the stream and admire it, you see how beautiful it is, rather than fish it. But how often might not the angler who comes home tired with any empty creel have to say that?

We had an excellent dinner here, and a pleasant chat with the lady of the house, who provided us for our journey to Fanshe (the next stage) with a "trille" that is a four wheeled phaeton instead of a stohl bjerra, with a girl to drive us. We get much higher on this stage, and the last one was nearly all up hill, so it did not surprises us to feel it grow much colder and to meet a rough biting wind.

Fanshe is not much of a place, the house is rough the keeper of it is old, he has a big family and consequently is poor. Of course the house is poor too; but the situation is exquisite. We reached it about two hours. We knew there to be a small lake near, that held big fish and we intended to fill up the day by trying it, but our landlord, poor old chap, who has a curious habit of talking to himself, when he is not talking to anyone else, threw difficulties in the way. After assuring us that he remembered us being there before, he said it was too windy (which it was) and too cold (which it wasn't). However, he had his way, and we went across the valley to visit the Rukjayfos, which is within a mile of the house, and which we found as wonderful and beautiful as ever. It is strange to think that it has been thundering down all the time we have been away, and will thunder away when we and all our generation are dust again. There is another Rukjayfos in Norway, much grander than this in Telemarken, and if any of our hearers have seen the latter they will understand how it is that the fos on the screen does not look like what they remember. There is a grand view of the great valley from near the fos, indeed the views anywhere hereabouts are magnificent. In this valley and in Hollingdal, which it is the upper part of, you cannot go wrong. Next day (Monday July 14th) we insisted on going to the lake. The old chap went with us, and one (the youngest) of his eleven sons whose name was Knut, or Ole, I am not sure which (but if you guess every male in the country to be one or the other, you will be right nine times out of ten). We drove up to the lake, that is to say, we took a stohl bjerra the old fellow standing behind and talking to himself. But driving is a pretence; when we had got a couple of hundred yards we got out to ease the horse up hill, and we walked the rest of the way. There is a preliminary, a very shallow lake, shown here, and then a winding but very deep stream, before you reach the lake proper, which as you see by this, is very finely situated. We found the boat all right in the shallow lake, but where were the oars? The old man ran up the hill among the alders, but no oars could he find, and it was about a quarter of an hour before he managed to drop across them. Then we embarked, the old un, the young un, and ourselves. We objected that we were too many and the old chap explained that he was going to get out at the point, where the deep water begins. He was really piloting us through the shallows having, of course, no confidence in his young son. By we neared the corner, he proposed to land, and giving the best spring he could, went plump into the lake and got out again as best he could. The lad was a better man than his father, and although the old man had said he could not row, he soon showed that he do well enough. We knew from past experience where fish were to be looked for, and set to work raking the water with small minnows trolled behind the boat. It is slow work, and we kept going up and down and across, and in and out of the bays to very little purpose, each of us getting one decent fish, and that was all. Then we walked back to dinner Ole carrying the fish.

After dinner we returned, decided to try fly, and both began to fish from a submerged level beach that suddenly went down into the deep. Almost immediately I had a missing rise from a monster, then another, and then one that I hooked, and which ran my line out with irresistible speed, until my reel was nearly emptied. A game of see-saw, in and out, was carried on for about 15 minutes, the fish never showing himself. Then Mr Austin happened to come up and offered to land the fish, which was getting pretty well done by this time. Slowly he came nearer and nearer lunging and rushing between, and we got a sight of him; oh what a monster! Then Mr Austin skilfully threaded him into the landing net and walked ashore with a thing that to my excited eyes looked like a salmon. He was a beauty as eyer I saw, indeed I never saw one so large, and in cold blood afterwards we put him down at four pounds, we cold not weigh him. We had no more sport, I hooked another, the twin to the one I got, and had one or two more great splashing rises, but the fishes' mouths were too big and the hooks too small. Mr Austin had no luck but he had it all the last time we were there. On the way back we fished the charming river that flows from the lake, catching small fish at every throw, but nothing over four or five ounces. Next morning by nine o'clock we were on our way to Bjaberg the road continuing to rise and becoming wilder at every mile passed. Under the eaves of the station at Bjaberg we counted seven swallow's nests all united in one row. How the birds went into the right house I don't know, for they say birds cannot count more than three. Here as in many other stations, where the meadows are stuffed full of beautiful flowers, we saw in the visitors room, vases of tawdry, ugly artificial flowers. I suppose we never can be satisfied with what is next to our hands. But artificial flowers! It is too bad for anything. We took the usual two hours on our journey and left again, after getting biscuits and milk half an hour later. It is a wild drive to Breistolen which we reached by two o'clock, but we had the finest of weather, as this photo may show, it is the head of a very long bare valley in which are a few tinkling cows and --- or two, but no trees. A stream runs through the valley and widens out into a small, cold, and dismal looking lake. It is one of the advantages of this Hellingdal route that you not only have the rich lower landscape but a grand view of the characteristic scenery of the high mountain district. In this respect it is superior to the Valders route, which is much more frequently travelled.

By this picture we have reached the water shed. This is Eldre V. 3720 feet above the sea. The lake empties itself from the other end flowing down past Higg to the Logne Fjord. We are about three miles from Breistolen in reaching which we descend about 400 feet. B. is said to be the highest station in Norway –3300 feet, Nystrm is 3162. We ordered dinner as soon as we arrived, (there is no telephone) from the woman who lives there, and who knows us quite well. It was a long time in coming, but it was a surprisingly good one. It was wonderful how in a remote place like this, they can provide you at so short a notice.

The fishing at B. used to be superb, but it is now ruined, it is not a bit better than I reported to you twelve months ago. It had been dynamited in river and lake by the road makers, who have all the same constructed a wonderfully clever road down to Bores Bridge near Hegg. But the fishing is gone, if not for ever, certainly for some time. We tried on the afternoon of our arrival, but getting only mites gave it up. This is the look as we commenced our drive, the mountain in the far distance is known as "Kramme" but its correct name according to the Amt Map is Kramsnaase. It is rather over 5,000 feet in height and by we reach Hegg which is six or seven miles away we appear to be little nearer to it. I will point it out again in a subsequent picture. The way to Hegg is all down hill, along the new road as far as Bores Bridge, where we have a level run of two miles. We received a profuse welcome from Knut and the rest of them, took possession of our rooms, settled the places for our knick-knacks and then turned out to fish.

If the fishing were to fail at Hegg, I fear it would be all up with Norway as far as I am concerned. But I didn't think it likely to fail for Knut knows its value to him, and will look after it.

Now, I know Hegg very well, I was there before its present proprietor was born, and have been nearly every year since. I cannot ask you to listen to a paper about it or about the fishing that you have heard about many a time. But if you will, I can show you something of the place, and very hurriedly. I shall take you down the water and up the water on this the north and that the south side. Then we can take a cariole drive to the fishing near Maristuen, and by that time I have no doubt we shall all have seen and heard enough of Hegg and Norway for one year, and shall be glad to dismiss it to the darkest place I know viz.- the pages of the Magazine."

The humours of the ribble at Horton.

J. H. Lea

"Our fishing ground, or water, on the upper reaches of the Ribble is the healthiest, perhaps in England, and possibly the most delightful and complete as a change from weary work, but what is known as "a good fly water" is known to the keeper, or someone who lives there, but is seldom found by this weary wretch who is bound to go by a certain train, or not at all, and to return by another, certain particular train.

After heavy rains in Manchester and in the district we laid our plans and fixed on Friday July 26th 1902, taking the 4-40 p.m. which on a Friday goes on to Horton, though on other days it stops at Settle. The telegram was "water very low, no sign of rain" and on arrival we found the river bed itself so empty of water that it was more like a rough road than a river. Our friend Kenyon, we heard had gone on to the Tarn, having journeyed by the 1-26 p.m. train from Manchester the same day. Hunt, on special request by letter, had made up two casts and as we drove merrily down from the little Inn towards Helwith Bridge, our driver, and new land lord, Cook in place of Wight departed, said the casts were waiting at the Hotel for us, but the light was already beginning to fade, so we decided not to go back for them. Fishing was almost hopeless the pools being like a clear mirror, and the stream being reduced to a trickle.

After fishing up stream from below Helwith Bridge, and getting my tackle mixed with moss and weeds, again and again, I returned to the Inn, finding our friend Costobadie was still on the river, and that our friend Kenyon, had not returned from the Tarn. I went along the road as far as Horton Beck and like Rip Van Wincle endeavoured to awaken the echoes. It was a treat to shout as loud as you could, without disturbing anyone, but the echoes alone responded.

Our friend C. was still down the river, and out of call—but surely—could not—be making a basket. The Beck did not run at all, not even a trickle, there were shallow little pools, here and there and with ordinary boots it was easy to walk across. On my return to the Inn our friend Kenyon brought down the house by producing a Rainbow Trout of two pounds and a Brown trout of 1 ³/₄ pounds which he had caught at the Tarn on a Bracken block and our friend Costobadie had caught two small trout in the river. I alas was fishless and felt miserable, with a dull reflected joy in the history of other's catches. I had however seen a transparent blue winged fly on the river and I thought I would turn the knowledge of this to some account the following day and I treasured the thought of him.

During the night a storm arose, which furiously beat on the strong stone built house, and torrents of rain made the road like a river.

The air was so nice, and cool, and fresh that my window remained open all night. I slept soundly and well, thinking neither of telephones, nor letters nor even of fish. My friend's room was rather flooded near the door, but the air was healthy and fresh—so I proposed to open his bedroom window—a little more—to give him the benefit of a good strong Yorkshire breeze—but he objected.

After a good, but rather late breakfast at which we found the two trout that C. had caught most excellent, we decided to try the river starting near Horton Beck.

I found the Beck a great contrast to the dry stones of the night before; the little lane leading across the ford was flooded for many yards, and there was a torrent dancing along the centre of the Beck itself. The Beck is as its name implies a little bit of a stream or Yorkshire stony brook, and naturally enough with waders on, one walks through it without a thought, but before I got near the middle, I found I had a great weight of water up to the knees, and I put my legs wider apart to steady myself, the next step took me a bit deeper, and about halfway across, where I stood fairly steadily the water was heavy, and swift, boiling, and dancing, and rather too pressing for comfort. I decided, however, to cross, and so going a little deeper and moving an inch at a time, I got across, and followed the Beck down to the river. Below the Beck was a thick heavy stream, so I crossed the little bridge and fished the shallows above, but to no purpose. I then went below the Beck and tried several flies and far lower down where the river forms a rapid at one side, I saw some fish rising at about 25 yards off, but neither blue dun nor black gnat, nor red spinner had any charms for them.

My friend C. who had fished the lower reaches without a single rise now came up and said "Oh! lets go up to the Tarn, the fish will never take in a water arising like this". The Tarn was too far, and it is not a good plan when fishing to start one thing and then go on to another, yet after discussion in which I was overruled we decided to return to he Inn and get the landlord to drive us to the Tarn. On arrival at the Inn we learned that the landlord was out, a long way off, no one knew exactly where, so as the weather was improving we discussed the position again and decided to walk to the Bridge, and fish up the river to the Tarn, fish it, and then fish the river back, until the trap met us and took us to the Inn.

When we reached the Bridge we found the water above it, bright, low and clear, and the keeper, with two other experts, decided that it was too low for fly, and recommended the river below the Bridge. My friend however was bent on the Tarn, so thither he went, while I went below, and before I had been there five minutes, the rain came down in torrents.

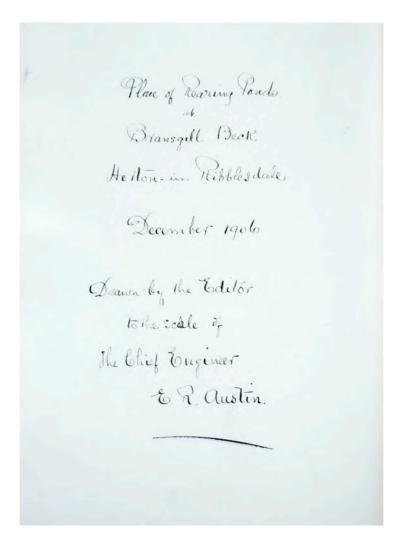
I had a good cape with optional sleeves and the rain troubled me not at all, but the big drops splashed on to my cap, and seemed to come through. I am told that my fishing coat qualifies me for the Museum of Living Antiquities, but it keeps out the wet, and jibes trouble me not. There are some charming eddies below the Bridge on the village side of the river, and on the first I got a small fish of about eight inches, and returned him to the river, five minutes afterwards I was standing in a rage of water, but between two large rocks, there was a quiet still bit of water, and I got a blue merlin neatly into it, and the same instant I had a good fish which danced out of the boiling water into my landing net. A little lower down there is a sort of miniature weir with deep water below and there I got, on my first dropper, a good fish, which played well. Just below this is a lovely bit of river, partly raging torrent, and partly smooth little pools, far from the bank. Oh! the delight of a bright river like this, and the throw of a taper line, on a light rod, when the fish are in the right mood. In two pools, I got nothing, possibly I had too much line out, or possibly the fish saw the line first, instead of the fly, but in the third pool the fly fell beautifully, just in the still, behind the boiling water, and at once a good fish had it, and gave me some careful steering to bring him to the side. I found he had taken my second dropper. Four fish in about fifteen minutes, the first small, the other three weighing together over a pound and possibly 1½ pounds. These fish are possibly the quickest and merriest in play and the sweetest to eat; to take them red-handed in the quieter bits of a roaring stream, is sweet and pleasant, not that it was what everyone would have called a pleasant day. The Keeper who came along was gratified to hear that I had had a fish on each of the three flies, Blue Merlin, Dark Mackerel and Snipe and orange which he had put on a hair cast for me.

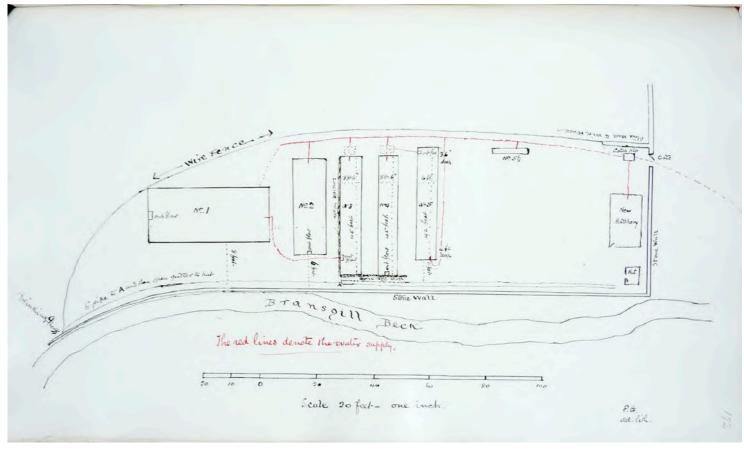
He was to some extent protected against the weather, for he had on his ordinary strong coat, also a mackintosh, also a large umbrella, which he said he used when the weather was what he called "plotchy". The large "plotches" of rain were falling by the hundred, and as each touched the umbrella it broke through, in fine cascades, and Hunt the keeper, as a Water Study, say Neptune in his element like an ornamental centre to a fountain, a dream of fine spray--- with the river round him, where the rain fell and splashed like bullets, would fetch the Gods.

Presently the river rose and fly fishing seemed almost hopeless. The Beck, which I came to, again, was now looking like the mane of an angry lion, as it tossed, and roared into the river. I tried the lower river, and hooked and lost two fish and returned to the Inn in good time for dinner. Kenyon had been down the river and creeled nine fish with a big trout fly, while Costobadie had hooked and missed the biggest fish in the Tarn; this brought up our total for Friday night and Saturday to 18 good fat trout the largest two pounds and the smallest about a third of a pound.

I had to say goodbye to the cosy Inn and the history of the day's doings to catch an early train. As I crossed the Bridge on my way to the Station, I saw the river which three hours before had been said to be too low for fishing, turned into an angry, furious, raging torrent, which would have taken an elephant off his feet if he had tried to ford it. Down below as the train freewheeled down the hill, I saw the bank where I had quite recently fished, underwater, and the meadows below that were turned into a lake.

Surely none can complain of a want of light and shade in this river, and whatever kind of water an angler may prefer, he will at sometime, if he happens to be there find it at Horton-in-Ribblesdale."





The salmonidae of North America.

By Percy Glass

"I well remember when Mr Chamberlain in the seventies founded the National Liberal Federation under the management of the late Mr Schnadhorst, with what suspicion was it regarded by the old Moderate Liberals and how they protested against the Americanising of British Political Life. Since that time many things have happened and political machinery is not the only importation from America which has come to stay. In the sporting world of anglers, too, American Fishes, have as it were, taken root in this country—Salmo Irideus and Salveninius Fantanalis, the one a trout the other a char though known in America as the "Brook Trout" or "Eastern Brook Trout", it being the nearest approach to our Salmo Fario, or indeed to any trout to be found upon the Atlantic side of that Continent. Salmo Fario has now been introduced into American waters, but whether on the East or West of the country, any Salmo Fario they possess has been introduced from Europe. There are plenty of trout on the Pacific side, but to that we shall come in due course. Our hatching of Rainbow Trout, (Salmo Irideus) at Horton in Ribblesdale, with our subsequent experience of this fish in our waters led me to make enquiries in other quarters, and to endeavour to ascertain what was known of the life history of this somewhat enigmatical member of the Salmon Family.

In the summer of last year (1902) I met at Inverness Mr Samuel T. Black, President of the State Normal School, San Diego, California who was good enough to give me an introduction to Professor Jordan, President of the Stanford Leland Junior University, California, and an eminent Ichthyologist. Dr. David Stan Jordan was good enough to respond by giving me some very interesting information upon several matters.

I also discovered—through his secretary--that he is in collaboration with Dr Evermann, Ichthyologist to the U. S. A. Fish and Fisheries Commission --- had just published a book entitled "American Game and Food Fishes." Of which I promptly obtained a copy. Through the kindness of Dr Jordan, I also received from Dr Evermann a number of most interesting Reports by various specialists, upon different phases of the Salmon and Trout question, which had been prepared for and published by the U. S. A. Fish Commission.

The receipt of all this wealth of information upon a subject of such great interest to the British Naturalist Angler—made me feel that it was my duty towards my fellow members of the Manchester Anglers' Association to put them (as far as possible in a paper of this description) in possession of at least some idea of the Salmonidae of America.

From the papers I have mentioned, there is a mass of information of almost wonderful nature upon the Fisheries of America and Alaska, but here and now we must be content to confine our attention more particularly to the Natural History branch of the Subject. I remember once reading a very trenchant criticism upon the higher Education in this country—at our Universities—in fact, and the writer made much of the too important place held by "Classics". He stated that out of fifty Undergraduates you could not find one who could put his finger on the map of America within a thousand miles of Chicago, a city with over a million inhabitants. Altho' some of you are "Varsity" men I do not wish to attribute to you any such geographical ignorance, but still think we shall the better follow the line of investigation tonight, by clear views of locality, so I will put on the screen a sketch map from the North Sea to the Pacific Ocean 1. Salmonidae are found only in the North Temperate and Arctic regions—and North of the 40th parallel they are found everywhere where suitable waters exist. On this sketch Map the 40th parallel may be represented by a line drawn from North of San Francisco through the centre of Spain, cutting of practically the whole of the Mediterranean Sea. This map is copied from one used by Professor W. Boyd Dawkins, (who I am sorry to say is unable to be present tonight) to illustrate a Lecture which he delivered before the members of the Manchester Geographical Society and which appears in the journal of the Society. Though Salmonidae are sometimes found south, they are nearly always found north of this line 2. This map is also taken from one by Pro. Boyd Dawkins and illustrates the fishing and spawning grounds of the Pacific Salmon, as also the habitat of the Pacific Trout which will shortly come under our notice. 3. a glance at a map of the River Drainage System of North America shows that the great range of the Rocky Mountains with its associated ranges from the North to the South is substantially the divide between the no trout East and the prolific trout West. This Map is from Professor Russell's "River Development of North America." 3. I think there can be little doubt that the cause of this divide is surface or geographical. There are trout found in some of the clear mountain streams on the eastern slopes of this Great Mountain System, but they have probably come over from the head waters of the watershed on the Western side.

It may be of interest to remember that this great chain of mountains from the North to South on the Western or Pacific side of America dividing the drainage into the Atlantic and Pacific Oceans, has frequently a base breadth of a thousand miles, and that the whole Continent West of this range is a vast depression or Valley running from the Great lakes right down to the Gulf of Mexico. In geological and geographical

parlance these two great divisions may be termed "ancient and Modern". **4.** This diagram (for which we are indebted to Prof. Dawkins) a cross section of the Continent will clearly illustrate the point.

Reverting to the Southern geographical limit of the Salmonidae—trout have been successfully planted in Tasmania, which lies in between 40 and 50 degrees South. 5. The Government advertise the Great Lake (90 miles in circ) on their letter cards, as the Fisherman's Paradise as you will see by this photo. of a letter card which I recently received from my sister in Tasmania 6. This is a photograph from a Tasmanian illustrated paper, but altho' Salmo fario has here grown to 17 ½ pounds in weight, he has changed his nature—grown coarse and sluggish and does not compare with our smaller but gamier trout.

Dr Jordan is of the opinion that the trout of America originated in Asia, extended south to the upper waters of the Columbia River, thence to the Yellowstone and Missouri (on the Eastern side of the Rockies) via Two Ocean Pass, southward to the Platte and Arkansas, to the Rio Grande and the Colorado—then across the Sierras to Kern River, and thence Northward again, passing from stream to stream, to the Fraser river, where as new species, they would meet the original species Kamloops (Game and Food Fishes page 175).

The idea of the trout on the Eastern side of the Rockies having come over from the other side, sounds rather tall, but Prof. Jordan referring to the Yellowstone Trout (Salmo Lewisi) which is found not only in the Snake river basin in the West, but also in the head waters of the Missouri on the East side of the Rockies—says these fish "these fish certainly came into the Missouri basin by way of Two Ocean Pass from Pacific into Atlantic drainage. One of the present writers has caught them in the very act of going over." (G. F. F.179)

But what is possible today—was much more possible, in ages long by, before the last great uplift of the mountains, and before the rivers, from the glaciers retreating north, had reduced the great central continental valley to its present level. The head waters of the two water sheds would then have been more evenly adjacent and the valleys less deeply excavated, and isolated than they are now.

Professor Russell in his book on River Development says that the whole region (many thousands of square miles) through which the Colorado runs, has been in comparatively recent times, raised some 4,000 feet, while on what we may term the Atlantic side, in the case of the Mississippi—for a thousand miles from its mouth no hard rock appears in its bed, and which flows over an alluvial deposit from a hundred to two hundred feet deep at that distance from its mouth—and increasing in depth as it gets southward. (Riv. Dev. Page 267)

I have already said that there are no native trout in any of the rivers flowing into the Atlantic, and that this was in my opinion to be accounted for by surface of geographical reasons. I have not anywhere seen the matter discussed, but it is a most interesting subject for investigation. I will illustrate my meaning.

There are trout in the clear head waters of the Missouri; but you know that this river has a pet name. "The Great Muddy", an American writer says that " a really fastidious trout or bass, dropped into the Missouri, would hang himself in despair-on a fishhook."

With regard to the age of the Salmonidae, Prof. Jordan says "The family is of comparatively recent evolution, none of them occurring as fossils unless it be in the recent deposits". It consists of two well marked sub families, the Coregonise (White fishes and Lake Herrings) and Salmonidae (Salmons, trouts and Chars)."

I--- Genus Coregonus Artedi -- of which there are seven species in America.

The Common Whitefish (coregonus clupeiformis) being the most important. It is found in the largest quantities in Lake Erie, and ranges in weight from 1½ to six pounds, and has been known to reach twelve pounds, but the general run is from four to five pounds in weight. White fish reach maturity in the third or fourth year, and will deposit from 10,000 to 75,000 eggs—about1/8th of an inch, 36,000 to fluid quart, or 10,000 for each pound of body weight. In 1897/8 the U. S. fisheries Commission hatched and 88,488,000 white fish and in 1898/9—152,755,000. In '97 the catch in the U. S. was 8,000,000 pounds and in the British Provinces more than double that weight.

- 7. Common whitefish specimen nineteen inches long from Detroit River Michigan.
- **8.** Mountain Whitefish (coregonus Williamsoni Cis Montanus-Jordan---from a specimen eleven inches long from Horse Thief Springs Creek Montana. Also shows Williams white fish—a young specimen three inches long from little Blackfeet river. --- shows parr marks.
 - II---Genus Argyrosomus Agassing—Lake Herrings or Ciscoes.

There are twelve species of this genus, but I only illustrate one.

9. The Black Fin—A. Nigripinnis-Gill from a nearly ripe male 16 ½ inches long—caught in Lake Michigan, in 90 fathoms of water. When the ice breaks up between Feb. and April, and during the warmer months 100 to 110 fathoms is the minimum depth of which this fish is caught.

These illustrations of the white fish are taken from a report on the White fish of America by Dr. Evermann, and Smith (No 323). Although in America there is about a score of well defined species, in Great Britain we have no Lake Herrings and but three or four of the White fishes, and only one of any importance—9a the Pollan or Porvan of Lough Neagh and Loch Derg in Ireland—(Coregonus Pollan.)

We also have the Gwniad (C. Clepiodis) Lakes Bala, Ullswater and Hawes water.

Vendace (C. Vandesius) Loch Maben Dumfries.

Poven (Loch Lomond) is only a variation of Gwyniad.

In regard to this it is of interest to remember that in the "Natural History of British Isles" by Frank Buckland, on page 326 under the heading of Pollan, he quotes in extenso from a paper read by Dr Simpson before a meeting of this Association in March 1879, comparing or contrasting the Pollan and the Grayling. Mr Robert Burn has been good enough to bring tonight the original specimens (in spirits), which were exhibited by the Dr 24 years ago.

We now come to the salmon of North America. On the East or Atlantic side they have the same salmon (Salmo Salar) as we have in Europe, and its range extends from Labrador in the North to the Delaware in the south, which in the opinion of Dr Kendall is its southern limit. On this side of the Continent there are also two species of land locked salmon. This is one of them 11 Sebago Salmon (Salmo Sebago) which takes its name from Sebago Lake it very nearly resembles the sea going variety and run on the average about ten pounds though they have been taken at the weir up to 23 pounds in weight, it lives in the deep waters of the lake, but ascends the streams for spawning purposes. The other species is Salmo Ouananiche and is found in lakes north of Sebago. With the exception of the Chars, which we shall consider later, this exhausts the list of Salmonidae of the Eastern States.

The Pacific Salmon—Genus Oncorhyncus-Sucilly – will probably be a stranger to most of you. There are five members of this genus, and in commercial parlance this is the most valuable fish, or at any rate, fresh water fish in the world. Thirteen million dollars (£2,600,000) represents the minimum annual value of the Salmon fisheries to the U. S. A. (G. F. F. p. 149)

One proof of the value of the Pacific Salmon, is the wealth of official literature extant, accumulated at enormous expense by the very highest exploration, research, and experiment that the U. S. F. C. could procure. It is a literature to revel in, but for our purpose tonight I depend, in the main, upon the writings of Dr Jordan.

Pacific Salmon "differ from all the rest of the family in the fact that the number of rays in the anal fin 12. is from fourteen to twenty while in all the Atlantic Salmon and Trout this fin contains no more than nine or ten rays. They have also an increased number of branchiostegals—an increased number of Gillrakers, and a much larger number of pyloric coeca, or glands about the stomach. They are, therefore, in strictness, not salmon at all, but something more intensely salmon, than the Salmon of Europe really is......"

"The five species, all live in the Ocean, ascend the rivers in the Spring and Summer, spawn in the fall, the young as soon as they can swim float tail first down the river, and growing rapidly as soon as they reach the ocean, and the peculiar ocean food." (Bulletin p.8) In reply to some enquiries of mine Dr Jordan wrote me a short time ago, and said "the habits of the Salmon in the Pacific are certainly very remarkable, and the fish differs much more from the Atlantic Salmon than the latter does from the ordinary trout. So far as we know all Pacific Salmon of whatever age, die after one spawning. There is no certain evidence of the continued existence of even a single specimen."

The Humpback Salmon—Oncorhyucus gorbuscha 13. is the smallest of the species and runs from three to six pounds. Now used and canned as "Negro Salmon."

The Dog Salmon Oncor. Keta atho' it reaches a weight of from ten to twelve pounds, runs late in the season, is therefore in bad condition and commercially worthless.

The Chinook Salmon (Oncor. Tschawytocha) is the most valuable of all the species. Specimens are frequently taken from 40 to 60 pounds in weight, and sometimes up to a hundred pounds, but the average on the Sacramento River is sixteen pounds and on the Columbia River 22 pounds. Many of these fish run up a thousand miles to their spawning grounds, and if the water is above 54 degrees they wait till it cools. In the lower reaches of some of the larger rivers this is an important game fish at certain seasons of the year. A four inch hook baited with sardine, trolled at the rate of four miles an hour, from 20 to 50 feet below the surface with a five pound sinker. Twenty five fish averaging 25 pounds each is regarded a good day for one line. In this connection it may be well to remind you that the lower reaches of these rivers, are drowned rivers, by a subsidence of the land, and are more like long arms of the sea, indeed Prof. Russell records that at Portland on the Colombia River, 100 miles from the ocean, there is a tide rise and fall of 32 feet and at 140 miles of six inches.

Silver Salmon—Oncor. Kisutch – is about the third in commercial value, it runs about fifteen inches long and from three to eight pounds in weight.

The Blueback Salmon or Redfish Oncor. Nerka) runs from three to seven pounds. 14.

The Little Redfish 15. – is from ten to twelve inches long and about eight ounces in weight. 16. this is a male Redfish 11¾ inches long and shows the mutilations received on the spawning grounds. Alturas Creek, Idaho. Sep. 17 1895. (Dr Evermann's Report no 318) This fearful looking spectacle is more or less characteristic of all the males of all the species, after once spawning. As the spawning time approaches they become very unclean, and doubtless long abstinence from food, reduces their healthy force, and makes them an easy prey to mould, and other diseases, and then the fighting with the other males working the redds etc., becomes the proverbial last straw. In the fall for hundreds of miles, dead and dying salmon are to be seen on the banks of the rivers, and the scavenger, birds and animals have a busy time of it. There is a mass of most wonderful information already accumulated regarding this wonderful genus, and specialists are still engaged upon further investigations in to its life history. We however now must not dwell up on it any further.

The Trout of Western America must now engage our attention.

From "Game and Food Fishes," (p.174) we learn that of these there are more than a score all closely related, and difficult to distinguish.

Three species occur-- The Cutthroat,

The Rainbow,

The Steelhead. This latter Salmo gairdneri. Is found in the coast wise streams of California and in the streams of Oregon and Washington, below the Great Shoshone Falls of the Snake River.

The Rainbow forms are chiefly confined to the streams of California and Oregon.

The Cutthroat or Clarkii series are found from Humboldt Bay northward in the coast wise streams of Northern California, Oregon, and Washington, in the Great Basin of Utah, and in all the clear streams on both sides of the Rocky Mountains, until we come to the desert lands where the washes of sand make the streams uninhabitable to any trout (Bulletin p. 17) "In the lower course of the Colombia river and in the neighbouring streams the two species Steelhead and Cut throat (Gairdneri and Clarkii.) are so entirely distinct that no one would question the validity of the two species. In the lower Snake river, and in other waters east of the Cascade Range, the two forms or species are indistinguishable, being either undifferentiated, or else inextricably mixed."(G&F. F. 174)

You will appreciate these remarks better when presently you have seen types of both species on the screen.

The closing words in the para. just cited leads me to ask whether in the state of nature, there is cross breeding among the salmonidiae to any considerable extent. I believe there is. I have several times fished a small loch in Dumfriesshire, which was artificially stocked a good many years ago—upon the top of the original occupants (Sal. Fario). There is a good breeding burn feeding the loch, while egress is debarred by a very excellently constructed weir. It was stocked with Rainbow, Levenensis and fontanalis of eight to ten inches in length, so they had equal chances.

On three different days, with the fly I caught and creeled, 15, 15½, and 16½ brace of trout, and as I carefully returned all small fish my average on each day was half a pound (and in passing, note it ye scoffers, all caught on that beastly little rod of Glasse's , that no fellow could fish with.) I never anywhere saw a prettier lot of fish, of every conceivable marking and colour, and iridescence, but it was quite impossible for me, or the keeper, a very intelligent man, and a keen naturalist, to pick out any special fish, and say that this is this, that or the other species. He thought, and I think that they were as Prof. Jordan puts it "inextricably mixed up." I have just read the passage to my wife who was with me, and she observes that she remembers the incident very distinctly.

The Cutthroat (Salmo Clarkii—Richardson) 17. is known variously as the cutthroat, the blackspotted, the Colombia River Trout, and many other local names. It is regarded by the best American ichthyologists as the parent from which all others of the series have been derived (F.& G. F.) All of this species spawn in the spring or early summer. Those in the steams, seek the shallow near the shore, or upon the bars, in many cases they ascend tributary steams. (F.&G.F. 176) In the lakes they are trolled for "with the spoon or phantom minnow, but they rise readily to the artificial fly, the grasshopper, or a bunch of salmon eggs." This latter method is referred to so often in his book, that in a letter to Dr Jordan, I pointed out to him, the horror which a British Sportsman regarded the use of Salmon ova as a bait in trout fishing. He replied "there is as yet no occasion for a law against it on this coast, at any of the canneries, salmon eggs can be had in abundance, and are used with the other refuse formulating oil." "We have gone on this coast on the principle that salmon should be hatched rather than protected. How this theory will work out we shall see later." I may add that

after careful perusal of many different investigations, and reports, it appears to me that before long they will arrive at the conclusion, that if the present enormous salmon harvest on the Pacific coast, or even an approximation to it, is to be maintained, protection as well as liberal hatching will have to be resorted to. I must now, almost quote Dr Jordan against himself for he says in a discourse to which I have already alluded "Dr Gilbert and myself published in 1880 in the Report of the U. S. Census Bureau the following observation..... a well ordered salmon hatchery is the only means by which the destruction of the salmon fisheries of the Columbia can be prevented." Since this was written "the over fishing has gone on steadily...while the catch has steadily fallen off (1892). Just as the forests are wantonly and thoughtlessly destroyed, by early settlers and by lumbermen, just so the fisheries will go under the hands of the canners."

Commander Moser in his report on the Salmon and fishings of Alaska (1902) says on page 284 "It is believed that through the rapacity and greed of fishermen, the Salmon fisheries of the North Western Coast of the U. S. are rapidly declining. Other fields are now being sought in order that these also may pay tribute, and soon they will enter the exterminating process." In the Fishing Gazette R. B. Marston Feb. 28th 1903, quotes as follows from the New York fishing Gazette "Secretary Shaw U. S. A. Treasury says "under regulations of two years ago 120 million salmon fry will be liberated in Alaska this year (1903) and 26 million in Colombia River and its tributaries."

But all this is a diversion and we must return the cutthroat. Dr Jordan in the discourse I have alluded to (Bulletin p.18) says "in size it varies from a fingerling in the South, to 25 or 30 pounds in some of the Lakes in the North, but everywhere, every specimen always retains more or less distinct traces of the same mark, a deep crimson, or scarlet blotch on the half concealed membrane between the two branches of the lower jaw. It has smaller scales than any other known species of trout, though larger than that of charrs. Excepting the red blotch and the presence of black spots somewhere, all other details of coloration are extremely variable. As we go eastward, the spots tend to bunch themselves more and more on the tail, so that in Eastern Colorado, on the Rio Grande, and the Platte most specimens taken, are spotted almost entirely on the tail."

Lake Tahoe Trout—S. henshawi Gill and Gordan 18. runs from three to six pounds in weight, but is not confined exclusively to the Lake or lakes.

Utah Trout (s. virginalis) Girard 19. runs from eight to twelve pounds and is found in all suitable streams and lakes of the Great river Basin.

Rio Grande Trout (s. spilurus) Cope 20. runs from 24 to 30 inches in length, is very gamy, but rapidly disappearing before the irrigation of Colorado and new Mexico.

Colorado River Trout (s. pleuriticus) Cope 21. is abundant in many clear mountain streams, is a game fish, and reaches a good size.

Waha Lake Trout (s. bouvieri) Bendire 22. is known only in this small mountain lake which has no outlet, usually they are six to seven inches long but have been taken to three pounds.

Green back Trout (s. stormias) Cope 23. is known only from the head waters of the Platte, and Arkansas rivers, it is a small black spotted trout not often exceeding one pound in weight.

The Yellow fin Trout (s. macdonaldi) Jordan and Evermann is only known from the Twin Lakes Colorado, it runs from eight to nine pounds, rises promptly to the fly and is a good fighter. 24.

There are still a few other species but I think you have now been fairly introduced to the Cut throat family. The Steelhead Family I shall now introduce to your notice.

The Steelhead Trout (S. gairdneri) Richardson is the type of the Second of three great families of Pacific Trout and is more or less common in all the shorter coastal streams, from Southern California right North to Alaska. It is more or less anadromous, being migratory like salmon. The spawning season is from early April to October or November according to the northern or southern lie of the coast.

"Of 4179 Steelheads examined during the last week of Sept. and the first half of Oct. At the Dalles Oregon, 1531 were males and 2648 were females, 476 males and 900 females were developed and probably would have spawned in from four to six weeks the remaining 2803, apparently would not have spawned till next spring." He is a large and important food fish, sea run fish run from two to twenty five pounds, averaging about twelve pounds, but in streams where it is resident, does not usually exceed five or six pounds. Unlike the Pacific Salmon, he does not die after spawning. Great quantities are taken in the Columbia river and in many of the rivers all the way North to Alaska. It is both packed in ice and sold fresh, and is also caned. He is a great game fish, in the bays, sounds and river mouths, but not so gamy in fresh water, unless resident. It is propagated by the U. S. F. C. and has been introduced into Lake Superior, and its tributary waters, where large catches have been made. This fish is the nearest approach, in America, on either coast to our trout or sea trout (s. trutta). The Steelhead gets its name from the colour of its head, and the hardness of the bones in its skull as compared with the bones of the (Quirinat) salmon. It is caught in great abundance at the

mouth of the Colombia, and other rivers, at the time of the salmon run, and is, of course caught at the same time and in the same traps and nets.

There are three other members of this family, but not of sufficient importance to illustrate, but a passing reference to one of them may be of interest.

The Blueback Trout of Cresent Lake s. Beardslei, was brought to the notice of anglers and ichthyologists by Admiral Beardslee. The lake is in Washington county and is 700 feet above sea level. "The Blueback lives in deep water and is caught by trolling at a depth of from 30 feet to 50 feet. They fight well till brought near the surface when they fire up. When landed they are generally puffed up with air, a condition following their quick transference from considerable depths to the surface". Four caught by the Admiral weighed 6. 11. 11½. 11½ pounds. One taken by Miss Beardslee measured 29½ inches, and weighed ten pounds, while another caught by Mr B. Lewis and forwarded to the Stanford University was 32 inches long and weighed fourteen pounds.

The Rainbow is the last of this interesting trinity! 26. 27. "Salmo Irideus; the typical rainbow is found only in the small brooks of the Coast Ranges in California. It is the nearest approach in America to our S. fario. It was named forty years ago by Dr W. P. Gibbons of Alameda, the name rainbow is simply a translation of the latin name and in default of any better Dr Jordan thinks it likely to last. From South to North of its range it varies from a fingerling to a six pounder, but in most streams it rarely exceeds two to three pounds. The head, back and upper fins are sprinkled with round black spots, very variable in number. It has large scales, small mouth, and a plump body. The color is bluish, the sides silvery, usually with a red lateral band, and marked with reddish, and dusky blotches. The young, as in all trout, are crossed by dark bands, always a mark of immaturity. In specimens taken from the sea this species like most other trout is bright, silvery and sometimes immaculate." (Bulletin p. 16) Although not anadromous it moves about in rivers and frequently enters the sea. I wrote to Dr Jordan about this characteristic and he was good enough to write and say:- "It is certainly the tendency of all rainbow trout to run down to the sea if they can. The variety or form which we call "Shasta" is prevented from getting to the sea by geographical reasons. Its spawning grounds are in the McCloud Sacramento and Pitt Rivers about Mount Shasta, at a distance of over three hundred miles from the ocean, the Sacramento growing more and more sluggish and finally muddy and unsuitable for trout. When the same fish is brought in to the seaward streams, I have no doubt that it will run in to the sea, and in time perhaps to the same extent that the form called gairdneri does. Of the different rainbow trout the Shasta form is the largest, and handsomest in color, and as the first hatchery was placed on the McCloud river, at Baird, this form became known to the fish culturist. The name "Rainbow Trout" was given at Professor Baird's suggestion as the name for the species called s. irideus by the early writers, the types of which came from a little stream running into San Francisco Bay."

The McCloud River Rainbow Trout (s. Shastra) Jordan is the commercially known "Rainbow" with which we in this country are familiar. "In some of the cold mountain streams of Colorado their average is six to eight ounces in certain lakes in the same state where the water is moderately warm, and food plentiful, they reach from 25 to 28 inches in length and from 12 to 13 pounds in weight. The average native is however from two to nine pounds.

The average growth of the rainbow under favourable artificial circumstances is, one year old ¾ to 1 ounce, --- 2 years 8 to 10 ounces—3 years one to two pounds—4 years 2 to 3 pounds. Like all other fishes they continue to grow, at least until eight or ten years of age, the rate diminishing with age. In water at 60 degrees with plenty of food, fish one or two years old, will double their size several times in a single season; while in the water at 40 degrees, with limited food, the growth is very slow indeed. The rainbow will live in water with a comparatively high temperature if it is plentiful, and running with a strong current; but in sluggish water even when the temperature is considerably lower they will not do well.

It is often found in streams where the temperature is from 75 to 85 degrees especially where there is some shade. In its native streams the temperature varies from 38 degrees in winter to about 70 degrees in summer. For hatchery purposes spring water of 42 to 58 degrees is best. The spawning season in California is from early Feb. to May. In Virginia November to early Feb.

The males are good breeders at two years, but the females rarely produce eggs before the third season. The maximum number of eggs for a three year old is 800, and in a six year old 3,000 eggs.

There is no comparison in the rainbow in its native Californian mountain streams, and those introduced into eastern waters, where the warmer temperature has enervated them, and where they have grown large fat and sluggish. Successful plants of it have been made by the U.S.F.C. in Michigan, Missouri, Arkansas, and many other parts of America. (G.&F.F.)

You will see this trout in this country, referred to as an enigma—and after all the careful observation, and investigation by experts in America for many years, this species is there, in some respects—an enigma too

Drawing again from Prof. Jordan I will in his words tell of at least one of these enigmas (Bulletin p.17) "It is not at all unlikely that the Steelhead is simply a rainbow trout, which has descended into the sea, and which has grown larger, and coarser, and acquired somewhat different form and habits, in account of its food and surroundings. If this be true, the very young Steelheads would not be distinguishable from the young rainbow trout, and I do not know a single structural character of any kind by which the two may be srparated... The evidence so far is conflicting, but if the two are the same, the name of S. iridius must drop from our lists, because the Steelhead was first introduced into science, and the name s. gairdineri is the oldest."

In his letter to me Dr Jordan says "It is certainly true that we are now witnessing the creation of species of trout. Those on the Pacific coast show all sorts of differentiation, from those that are clearly distinct, to the slightest tangible variations. We have had, for instance, in Purissima Creek, near the University, just in the making. At the mouth of the Creek the stream now fall vertically over a high cliff, presenting an obstruction over which the trout cannot pass, and those above the fall, are being slowly differentiated from those below, which pass into the sea."

It appears to me that these and other facts, which we cannot now stay to examine—shed a wonderful light upon the question of the origin of salmon, and strengthen in my view, that he is nothing more nor less than a descendent of S. fario, or possibly, of the original form from which they have both descended.

The Charrs—Genus Salvelinus – Richardson bring this wonderful catalogue to a close. The scales of the charrs are smaller than in any other salmonidae. In Food and Game fishes nine American species are described, but a few of the principal species will be sufficient here and now.

The Great Lake Trouts—Genus cristivomer of which there are only two species, are only large coarse charrs—I illustrate one.

The Great Lake or Mackinaw Trout c. namaycush—it is found in most of the Great Lakes, and ranges from 15 to 125 pounds in weight averaging probably from 15 to 20 pounds. In 1894 the Goot hatcheries planted11,000,000 fry. Gill nets, steam tugs, and five or six miles of netting is the method of fishing and one haul will vary from a thousand pounds to four or five tons. A 24 pound fish produced 14,943,000 ova 29. 30. 31. 32.

The Eastern Brook Trout (Salvelinus Fontanalis) the coloured plate is from a live female in spawning condition 7,5/8 long 14 months old artificially hatched at Wytheville Va. From egg taken from domesticated fish in Massachusetts. The size varies from a few ounces to several pounds.

It is the trout of the Eastern States of America.

The Dolly Varden Trout (Sal. Pakei) 33. is the charr of the west, it reaches a length of from two to three feet and a weight of five to twelve pounds. It is one of the best known, and gamy fishes of America, and does not vary much from Salvelinus Fontanalis. "In Oregon it is called the Bull Trout. In California it had for a long time no distinctive name. A landlady of some hotel in the U. S. Fish hatchery at Baird, on the McCloud river, at the time of the Dolly Varden craze, noting the gaudy colors of this charr—proposed to call it the Dolly Varden Trout. This name coming to the ears of Prof. Baird, the U. S. Fish Commissioner, pleased his fancy, and he directed me, who then had the classification of the trout in the Smithsonian Institute in hand, to continue for this species the common name of Dolly Varden Trout and so in the books at least Dolly Varden Trout it is to this day. (Bulletin Jordan No 4 p.8)

Commander Moses of the U.S.A. Ship "Albatross" in his report in 1902 upon the Salmon fisheries of Alaska—referring to one of the salmon hatcheries there says "an individual of this species only $2\frac{1}{2}$ inches in length which once found its way into the nursery pond, had twelve tiny fry in its maw when captured."

Oquassa or Bluebacked Trout (Sal. Oquassa) is the smallest and one of the handsomest of the charrs, and runs from four to six pounds. 34.

Sunapee Trout or American Saibling (Sal. Aureolus) has only been known since 1888 and generally runs about ten pounds in weight.

To Dr John D. Quackenbos we are largely indebted for what we know of this fish. He says "As the October pairing time approaches, it become illuminated with the flashes of maturing passion, the steel green mantle of the back and shoulders now seems to dissolve into a veil of amethyst, through which the daffodil spots of midsummer gleam out in points of flame, while below the lateral line all is dazzling orange. The fins catch the hue of adjacent parts, and pectoral, ventral, anal, and lower lobe of caudal are marked with a lustrous white band." The Dr. thinks that the reason why this fish has for a hundred years escaped alike of visiting

and resident anglers, persistent poachers and alert scientist is because of its habit of remaining almost constantly in deep water.

"The most exhilarating amusement is to be had with this charr, after the first hot days of June, in trailing from a sail boat with a green-heart Tarpon rod, 300 feet of copper wire of the smallest calibre, on a heavy Tarpon reel, and attached to this a six foot braided leader with a Buell's spinner or a live minnow. The weight of the wire sinks the bait to the requisite depth. When the sail boat is running across the wind at the maximum of her speed, the sensation experienced by the strike of a four or five pound fish bankrupts description."

Altho' not strictly included in our subject—the Grayling of America—we will briefly notice. In external character and habits it closely resembles the salmonidiae, but differs noticeably in the structure of its skeleton.

Three species closely related have been noted in N. America.

Michigan Grayling- (Thymallus tricolor) 36.

Montana Grayling – (T. Montanus) 37. runs from half to one pound in weight. Artificial propagation was begun in 1898 and in 1899 5,300,000 eggs were taken and 4,567,000 fry planted. 2,000 to 4,000 ova per fish. Artic Grayling (T. Signifer) 38. runs about eighteen inches in length.

39. This is our grayling and the view on the screen is copied from the frontispiece of "The Book of the Grayling" by T. E. Pritt. It is an October fish from the Yore at Clifton Castle, and was drawn at the river side from the living fish by Mr Pritt—with the exception of the dorsal fin, which was traced from the actual fin.

You will agree with me that the story of the Salmon Family on the Pacific slopes and shores is romantic enough to justify the time we have devoted to it tonight, and I trust you have not been wearied by the introduction "

(Illustrated with Slides)

An irish trouting

J. H. Lea.

Having secured a berth by wire, I had a very comfortable sleep, and awakened when the attentive steward announced we were entering Belfast Lough.

The beautiful colours of sea, and hills, and woods, and sky in the early morning, with the fresh sweet breeze, well meet the description of "The Emerald Isle."

I find a well appointed car, for a drive round the town and suburbs of Belfast, for none of the shops are open, and I have an hour or more before the early train. The handsome buildings speak of the industry of the inhabitants, and the trees and shrubs in the gardens outside the town, are evidence of their excellent taste. I found that instead of wishing the carman the "top of the morning," I should have wished him the top of the night, as he was on duty all night and was going to bed as soon as he had finished driving me; he said he would never be able to remember all the tales I told him.

I had a good breakfast at the Railway Station, and in course of time the train started. My fellow travellers were mostly of the farming and trading classes and altercations were frequent. One man said it was the ordinary train, while another in a shrill voice said "ah nothin' o' the sort, nothin' at all o' the sort," the first man was equally positive, and an interchange of views or sticks, seemed imminent, when the shrill voice man said "shure have you seen my pictur, its real illegant?" and with that he pulled out a fine design, for the side of a flour bag, with his name on it, the first man said it was "real fine", and peace was restored.

On reaching the "Abercorn Arms" at Newton Stewart, I had a good lunch, the sun was scorching, yet I expressed an intention of having a look at the river. I was very politely informed that, I might as well fish in the road, under the scorching hot sun in the middle of the day, but sure I might look at the river, and they would find me someone who knew the likely places, and I could fish them when it got cooler. They found me Jimmy, who was at once a philosopher, a keen sportsman, and quite indefatigable. He was apparently about sixty years of age, or more, his garments about twenty years younger. His full beard had weathered many a storm, and he looked as if woods, hills, and streams had long ago yielded up their secrets to him. To be shure said he we should do as well at the river as anywhere else, though likely we should get nothing until there was more breeze, and less sun, so I put on my waders and to the River Mourne we went. I found it deep, and lumpy wading, but there was a little breeze, and a few flies on the water. I put on a cast which had been made for me, by a fly dresser at Omagh, the nearest junction. The cast was very fine, and did not taper at all, and I used a light spliced Greenheart. I had three or four rises at long distances, but missed the fish, one of them took off my tail fly with a rush. March Brown was the favourite but I failed to creel.

I found out later for that part of the river a rather heavy long rod, with stout line, and very tapered cast, were necessary, as the best fish were near rocks in the centre of the stream, where there was a strong current, and was too deep to wade. Next day we walked a distance up a tributary called the Glenelly and fished down. It is a sparkling, beautiful, stream and mixed with a little Coloraine Whisky, is most excellent drinking. The fish rise very readily to the fly, but they are not large as a rule. At the edge of a cascade, or towards the end of a rapid, one may be sure of a fish or two, but they are lively in the extreme, and sport is to the watchful and not to the sleepy. One fat fish, of a golden yellow, took my fly (Partridge and orange medium) jumped a yard out of the water, and flicked away my fly with his tail, before I had wit enough to lower the point of my rod. I wanted him to try the trick again when I was more alert, but alas! I never saw him again. I marked the place, it is the junction of a tributary with the Glenelly. I shall keep on being sorry about that fish until I get his brother or cousin, which I hope to do when I next visit the river. All along, I got a fish. Just here and there, and when it became too dark to fish any longer—I had creeled fourteen fish and had a very pleasant day. I was a bit late for dinner, having to walk back several Irish miles, in my brogues and waders. I was very careful to begin with to enquire about the hours for meals. Breakfast was "whenever your honour likes" and dinner "whenever your honour pleases." I never, however, excepting on Sunday, dined earlier than 7 p.m., nor later than half an hour after midnight, that late repast was at Beleek, of which more anon. As there were plenty of Irish cars, and good strong horses at the "Abercorn", I thought they might save me a bit of walking, and enable me to take a fresh river every day. So soon after breakfast we flew along the road, at a merry pace, up and down hill, the road was jolty; the jolts are better for the liver than any horse exercise, and if you are not jolted off, the process of digestion seems complete in about twenty minutes. We stopped at the Plumb Bridge and went, possibly, a mile above it to fish down. This is indeed an ideal stream, mostly about knee deep, with a firm bed, composed of white and brown white crystals or pebbles bright and clear, with rocks every few yards, and behind nearly every rock a fish, but owing to the clearness of the stream, and brightness of the sun one had to throw a very long and fine line. Every time a cloud obscured the sun, I hid behind one rock and threw just behind another, and almost every

time I got a fish. Jimmy looked on with keen delight, and helped me in landing the fish. Across a rapid I saw a deep foaming eddy—I threw lightly over it—the fly scarcely touched the water before a beautiful trout hooked himself firmly. The rapid would have swept him away if I had tried to bring him across to where Jimmy stood, so I called, or rather shrieked, for the net and Jimmy reached towards me as I let out more line to get to him. Having secured the net I played my fish till I got back again, and having stemmed the rapid I secured the finest catch of the morning, a fish as beautiful as a char and weighing about half a pound. In fifty yards of stream I got about eight fish. We then held a council of war and decided 1- to wet the fish -2 to have a good smoke 3 to give the fish a rest. 4 to fish that bit all over again. Soon the fish began rising again, and the care with which I threw a long line, behind every stone, keeping my nose nearly in the water to be out of sight, must have struck J. with admiration, for he said I was fishing "Grand", but all I managed to catch was a lofty tree, some twenty feet above the river. The case looked hopeless, but I told jimmy that I had caught about a score of trout on that cast, and could not afford to lose it. After some large woodman's operations occupying a considerable period Jimmy emerged from the forest, bearing on his shoulder a big tree, with a double forked branch, one fork being shorter than the other, and with many off shoots. Jimmy laid the precious article down by the side of the river and took of his boots and stockings and rolled his trousers above his knees. The river was a little deep for him but he got across in time. We then fixed the forked end on to the bough, just above the cast and twisted round and round until the bough was broken, and the cast fell with it into the river. The implement for cutting down the tree was a pen knife, like a small pruning knife. The blade had been made specially for Jimmy, out of an old file, by a boy apprenticed to a cutter, and it had an edge like a razor.

Jimmy showed it me with great pride and said if you just had a good knife you were right for anything. He also said the know-ledge and experience were of greater value than physical power. I acknowledged that he had been very clever in showing me how to get the cast. Also that his knowledge of the bed of the streams, deciding when I could safely wade, and of the haunts of the fish, were little short of marvellous. The river is called the Doan and just where it flows into the Glenelly there are beautiful woods and moss covered turf. I saw several men there with four or five dogs catching rabbits so I asked if they had permission. **Permission!** Said Jimmy with scorn, "sure they don't ask permission they just take it " In the higher reaches of the Glenelly, above the Doan, I fished with a single hair, the water was so clear and shallow in parts, I got a few rather small fish, but could not hit on the right fly. The midges were just terrible. I had a tuille veil all round my head and face and neck, but they seemed to bite through it, and bit my neck and nose, even my eyelids between the lashes.

I think Jimmy was a God fearing man I never heard him use any profane language except on this occasion. I casually called to him—"Jimmy are there any midges near you", and he replied bitterly and vehemently "They're just hell." Anti mousque was just useless they seemed to like it, smoke was effective, but as Jimmy said "You could not smoke constant." Even the car driver waiting for us on the Plumb Bridge found them unbearable, and we were glad to start for home.

Another day we fished the Derg river which is some miles in the opposite direction and I got some fair sized fish in the tails of the pools.

Suddenly I heard a wild bellowing and looking round—saw Jimmy doing a flourishing chase round a bush, just as a dirty cream coloured bull, with his tail in the air, rushed to where Jimmy had been. Jimmy might have been twenty years of age instead of from 60 to 70 years—I had certainly never seen him so nimble. The bull roared terribly to find—nothing to charge, and appeared quite undecided what to do. I was in the middle of the river and at my suggestion, Jimmy threw a big stone, and very cleverly hit the bull on the head, at which he went roaring aimlessly down the field. Jimmy said it was well known to be a wicked bull and that it had taken an objection to his presence. Said he "if it had touched me I would have cut his Weisen." He told me that an infuriated bull would rush as madly across a river as he would across a road.

Owing to the hot sun and the want of rain, the rivers were very low, but one day was a soaker, from morning till night, with very few intervals of fine weather. We fished the Strule, which is darker in colour, a deep river, with some very big fish in it, but the day was very stormy and sport was not brilliant. As we returned to the Hotel dripping wet Jimmy said "shure if we could only have a drop of rain to bring up the big fish from the say, you would find the river paved wi Salmon."

Starting before lunchtime I took the train to Beleek on the Erne, which is a noble river indeed. I had written beforehand for permission to fish and found the head keeper extremely courteous. The arrangements for salmon fishing are as a rule made many months beforehand, and even for trout fishing it is better to write in good time, and arrange for a man to carry your basket and net, and an extra rod if you like to take one. The charge for salmon fishing is £4 a week—and salmon licence one pound. If you fish the lake at one side it is one pound extra, and if the other side another one pound extra, but to do this you must have arranged the

whole thing beforehand including man and boat, for fishing the river no boat is required, it is a matter of taking a salmon pool and wading by the help of a man, about up to the chest, throwing a very long line and using say, a twenty foot split cane rod and a reel to hold about 150 yards. The fish run from 8 to 25 pounds or more. I saw about twenty caught in the nets at Ballyshannon at one draw, the two biggest over thirty pounds and the smallest eight pounds—total weight of salmon for the one haul 240 to 300 pounds. These fish if allowed to leap the falls, which they probably would have done, if left until high tide, would have cheered the hearts of fishers with rod and line a few miles up river. The great current joke on the day I arrived, was the misfortune of a wealthy gentleman from the Midlands, who had landed his first salmon, the man had gaffed it lightly, the gaff had torn through the side of the fish, it was a shelving bank and the fish wallupped (sic) himself back in to the river, leaving the fisher bereft-of speech.

He had, however, quite recovered his powers of speech when I saw him, though he failed to find appropriate language to express his opinion of the man.

The large trout do not move about much in the day time, but about sunset and later, the river is alive with them. One suddenly sees a nice fat tail as broad as one's hand, and great is the effort to have a run with such a fish, yet they are shy, and must be fished very carefully, and you must keep well out of sight. It is more than ordinary sport, to find the rod nearly taken out of your hand by one of these fine game fish of this grand river. I had a very clever man who could land the fish when on the rush, and I was a little lucky. At night I think it is better to fish with gut not tapered, but a good thickness through out.

There are many ruins of farms and farm buildings, down the river we saw a large mill, many stories high, which had been abandoned many years ago, when half finished, the owner, I was told, having insufficient money to finish it. There it stands on the river bank, with the roof partly on, but no flooring, and the windows without wood work, it is a scene of desolation, and a home for birds.

A wood in which we had lunch, was like a Midsummer Nights Dream. The tall fir trees made a cool subdued light, contrasting with the intense sunlight without. The wood was gay with thousands of bright blooms of wild blue Hyacinth, and the deep pink, or red ragged robin, these with tall bracken and ferns growing in wild profusion, made a vision as of a veritable fairy land. The sun was scorching, trout fishing seemed hopeless, so we took the road to Ballyshannon and met some salmon fishers driving back to Beleek on a car; they were giving up until sunset. The car returning over took us, the driver pulling up, said he lived near Ballyshannon, and if we would get up he would give us a lift for love. At Ballyshannon we ordered tea and went to look at the falls, which are like a miniature Niagara, being the outflow of 100 miles and more of lake and river. Well up on the hill is the shed where the eight men intently watch the bay below the fall for signs of salmon coming up from the sea. We were half an hour behind the time for tea, but time seems of no value, everyone is delightfully "aisy" and casual. They were just beginning to get it ready when we returned. They gave us a profusion of dainty cakes, in many dishes, on a prettily appointed table. Many of the women are strikingly beautiful. We saw one at the corner of the main road she had deep fringed brilliant eyes, hair nearly black, teeth of ivory, and a wonderful complexion. She had all the grace and dignity of a Princess, but her dress was of the poorest description, and was trailing in the mud. The driver told me that several of the farms were not more than five acres in extent, and quite inadequate to meet the wants of father, mother and family. To be sure there was plenty of land but not round the house. I pointed out to him that the district had become very prosperous owing to the strict preservation of the fishing, he replied that poaching was not practiced now one man had been fined £5 and for a subsequent offence £10, for illegal fishing, and he said, the man had ceased to poach the river as the risk was too great.

At Beleek, the Salmon fisher has a slow dignity in his tread; he is altogether a superior person to the trout fisher, who holds him with admiration, not all together unmixed with reverence. I found the men there very pleasant, one was a retired Naval Captain, another a distinguished officer, who had often been wounded in defence of his country, both their names are well known all over the civilised world. One of them kept me up until ¼ past three in the morning, his anecdotes were so interesting. It was just on the turn whether we should wait up, and breakfast with a young salmon fisher, who had given orders for starting at 4-15 a.m., he having fished blank for three days, one big fish having just missed his fly. It was daylight, so I raised my bedroom blind, and looked upon a scene of great beauty. In the far distance the Beleek Pottery Works and the bridge, nearer were the rapids, and still nearer another bridge, and more rapids and pools right below my window, wheeling round to a torrent to the right.

The trout fisher must not use a salmon fly, nor fish the salmon pools, but he has a wide range of lovely and ideal water. I was treated with great courtesy, and had permission to use a "Dusty Miller" or a "Jock Scott", to catch a salmon and keep it on payment of 6d. per pound if I so wished. But there is more variety, and certainty in fishing for trout only, unless you can spare a week or so, I therefore confined my attentions to the trout.

On my return to Newton Stewart the faithful Jimmy and the car man from the "Abercorn" met me at the station and gave me a hearty welcome. The fish hatchery here is very handsomely appointed, but the fish are turned out too early most of the ponds being quite empty. There is ample means of breeding fry, and keeping them till two years olds, and if this were done, I think the fishing in the Mourne would be immensely improved.

We saw a man in the river gathering mussels and looking for pearls; these are of fair size and good lustre and in price from 2/- to 30/- or even more. Some men do very well at the business. On the morning of my departure I fished the Mourne just below where the Glenelly and the Strule join forces, and by noon I had creeled 15 trout on a cast of four flies, the grouse and yellow doing most of the execution, the hawthorn with blue body also accounted for a few, they were sea trout flies and I was using a double handed Greenheart of 15 or 16 feet long. The fish were all under half a pound and much too small for the size of the river.

As I returned to the Hotel, the sun was blazing and further fishing useless. I saw on the road a very poor, shaky, blear-eyed old man, with his mouth open and his tongue out, evidently very infirm and quite incapable of earning anything. I had noticed him in the village going from shop to shop, missing one here and there, as a bee misses a flower, and I asked Jimmy what the man was after. He replied that he knew well where to go, that he got a penny from nearly every shop at which he called. I replied that in England he would be locked up for begging. Jimmy fired up and said "shure the people wouldn't let him be locked up, they will see he doesn't want". He told me the man had been a hard working man, a respectable labourer, who was now past work, but that the small sums given to him amounted to as much as his wages used to be and the people were proud to look after him. My wire was too late to secure more than a sofa in the saloon for the return boat, and it happening to be a small one, and holiday time, it was excessively full and the ventilation insufficient. As I looked at my sofa now and then, I found various articles of luggage encroaching upon it, until there was only a length of two feet left for me to sleep on; it was no time for hesitation so I ruthlessly swept the articles, hats, bonnets and umbrellas off leaving me a good six feet and I put my big double handed rod along the length to mark the distance. I at length retired to my sofa and lights were extinguished, I however, found the air hot and stifling, so I decided to get a breath of fresh air on deck. The floor of the saloon was covered with sleepers, and the exercise of a little judgement was called for to avoid stepping on an upturned face in the dark. They reminded me of Gilray's picture of crocodiles on the Nile, you could not go a step without treading on one. I found a vacant sofa in the Smoking Saloon and despite smoke and conversation I was soon asleep. I awakened to find some one fast asleep with his head on my feet. The head was rather heavy, but I made vow, that he should not be disturbed for twenty minutes or so. In about half an hour the longing to move my feet was quite irresistible and I let his head down, however he was far too sleepy to want to fight or even to know what had happened, or who had done it.

I returned in splendid health, as brown as a berry, and with the recollection of a grand holiday of ten days during which I had caught on the fly 77 trout the largest just under two pounds and the length of two wine bottles. The native Irishman, rich or poor is a born gentleman and it is worth your while to study his character, take to heart his good qualities, and mind not to tread on the tail of his coat.

When Jorrocks asked Jame Pigg from canny Newcastle whether the people there were civil, Pigg replied "they are civil to you if you are civil to them." Born with courtesy and the warmest of warm hearts the question is far deeper than mere civility, and to the Irishman whose good will you have gained, there is nothing he can give that is too good for you."

Some sea trout fishing in Norway.

J. A. Hutton

One of the greatest of Norway's charms is that there is much of that beautiful country, which so far has escaped what we are pleased to call civilisation. Altho' some of the more famous sights are over run with Tourists and Mid Night Summers who carry noise and vulgarity where ever they go, there are many lovely spots more or less secluded, and where huge hotels with German waiters are not to be found.

If you will take the local steamer from Bergen up to the Northern Fjords and disembark at the entrance to one of the side fjords, which branch off from the main channel, you are certain to find peace and quietness in the midst of lovely scenery, and if you are lucky, a glorious rushing little river full of salmon and sea trout waiting to be caught. By chance, last year, I heard of such a spot, and when the steamer had deposited us on the pier with our belongings and we saw her steaming away to Bergen we felt that at last we had shaken the trammels of civilisation off our backs. Our gillie and good friend Halston Muri had joined us further up the main fjord, and I must say one word as to his numerous good qualities. Fully six feet tall and although over sixty years of age, he was nimble as a goat and always ready and active and apparently could do everything from reknotting a cast or tying on a fly, to cobbling ones shoes. His English was excellent, for every season during the last forty years he had acted as gillie to English fishermen. Though like many of his countrymen he had the usual idea that an Englishman's pocket is lined with gold, at the same time he was most ready to appreciate any little kindness, and the first to protest if one over paid him. Half the joy of going to Norway is the pleasure of meeting men, simple and honest, as God intended them to be, and not always on the look out for the best way of spoiling the Egyptians. After half an hours negotiation with some worthy old gentleman a boat was procured and our luggage was soon arranged between the seats and we set out on our two hours row up to the head of the Fjord.

To those who only know Norway from the deck of a steamer I can offer no better advice, than to take a rowing boat as a change. I am not going to expatiate on the magnificence of Norway's Fjords, but of one thing you can be sure, and that is, that their stern and almost overwhelming grandeur can never be fully appreciated until you pass through them in a small boat, and that one could almost wish that steamers and chattering tourists had never been invented.

The dear old gentleman who rowed our boat, kept up a continuous murmur of conversation among themselves, resting every now and again on their oars, when the conversation became particularly interesting, but we had now left civilisation behind; time was no longer of consequence, and we did not regret the slowness of our progress. In the toil and hurry of daily life I often think of that peaceful journey, and look forward to its possible recurrence. Now and again something particularly amusing would be told, and then the grand father of the lot would burst into the most delightful cackle of laughter one can imagine. Halfway down the Fjord we were startled by the sound of a gun shot the echo of which was taken up again and again by the mountains around, and a small boat with a huge German flag astern, darted out from behind a rock. A smile immediately spread over the faces of our crew and we were informed that this was the mad German Doctor who had come for the shooting. Mad he possibly was, but a jollier, kinder natured fellow, as we found out afterwards, one could not wish to meet, and he had evidently found his way to the hearts of the natives. I have heard Englishmen talk bad German, and I have heard Germans talk bad French, but neither before nor since have ever heard anything equal the continuous flow of shocking Norwegian, which our German friend could produce. How he ever managed to make himself understood I never could make out, but not once did I ever hear him hesitate for a word; if he did not know the right Norwegian word, and the German expression did not fit, what did it matter if he shoved in an English word instead.

The shot we heard was at a seal which he had missed; he tried to excuse himself by saying that our boat had frightened it, a statement that was received with general mirth by our crew. The Doctor had evidently become the licensed buffoon of the neighbourhood and had only to open his mouth for general laughter to begin. We promised to pay him a visit as soon as we had settled down and after continued our progress along the placid waters of the Fjord. On turning a corner a big round boulder and a smaller one close by astonished us by suddenly plunging in to the water, and after a minute or so came up the heads of two seals about fifty yards from us, a mother and her child, and it was delightful to see the old lady carefully edging her little one away from track. We felt glad we had got there before the Doctor. After two hours we now reached the end of our journey, and rejoiced that no steamer would call for a week that there was no road except for a few miles up to a Cul de sac, that there was no hotel and consequently no tourists, and that we should have this delightful spot to ourselves for a few days. The only sign of civilisation was the telephone, which by the way is much better organised in Norway than in this country, for there is not a single town big or little, and hardly a single village however small, from which you cannot telephone to any part of

Norway from Christiana to the North Cape. Our village could boast of a church, a shop, the school, two or three small houses and one good farm, our destination. Farmer Stromme was down on the shore ready to meet us with a sturdy little pony and a sled on which to carry our luggage. After remunerating our old gentlemen, with whom we had struck up a close friendship, we followed our primitive luggage cart up to the farm along the merest apology for a road. I must confess that it was with a certain amount of trepidation that I approached the farm. Stopping at Norwegian Hotels is comfortable enough, once you have got accustomed to the shortness of the beds, and to hearing the conversations of ones neighbours in the adjoining rooms through the thin wooden partitions, but I was very doubtful as to what accommodation we might find at a farm house. Never have I been so pleasantly surprised. Our dining room was a delightfully large airy room, with pitch pine walls and ceiling, and clean white curtains; the sitting room was nearly as large, opening on to a verandah, with a glorious view where one could sit lazily bathing oneself in the afternoon sunshine and the bedrooms were better than anything we had seen in Norway. Mrs Stromme was a most delightful hard working woman, and we took to her at once, when she met us at the door step supported by her two daughters, with friendly hands outstretched in greeting.

"Wilkommen, Wilkommen," and then followed a torrent of Norwegian, most difficult to understand, except that she was delighted to see us. Halsten was, of course, our old friend, and I think that the fact that we came to the farm under his wing ensured us that welcome. Tea was ordered and while it was being prepared, rods were got out, and casts put in water to soak, and Halsten and I were soon in the mysteries of fly books—Alas! the river had run low, the water was very clear and most of my flies were far too large, and those that were small enough were on eyed hooks. You can hardly imagine anything more contemptuous than Halsten's opinion of metal eyes; nothing would satisfy him but a gut loop for a salmon or sea trout fly. We argued the old argument again and again and finally I relieved his mind by telling him I would make a fly the next day with a real gut loop. After tea, over which we hurried, for the evening, the best time of the day, was drawing on, we set out for the river. First a few hundred yards betwixt fields of waving barley, then across a most rickety looking bridge, over a small river just where it emerged from a charming little lake, and on which we halted a few moments to admire the glorious view, and also to look at a few fine sea trout lying in the shallows just above where the stream commenced, and then on again, for this was not our fishing, our path led us over a little promontory covered with birch trees, down to an arm of the Fjord, which we crossed in a small boat. On the other side we landed on a meadow, occasionally covered by the sea, but now the nursery for numerous young oyster catchers, gulls, and sea-snipe, whose anxious mothers flew around scolding us for our intrusion. A few hundred yards further brought us to the Bridge Pool, the pool of the river. I cannot imagine a more ideal pool for sea trout, about a hundred yards long and fifty yards wide, with gently gliding waters and yet rapid enough to work the fly well, and almost every inch of it was fishable and fish holding. Best of all, it could be fished from either bank and from the bridge too, and no wading was required. The worst of most Salmon and Sea Trout fishing is that you have to wade so deep to reach your fish. But let us get to work. The cast was now properly soaked and a small Jock Scott knotted on and we were ready. Is there anything like that first cast over a good pool you have never fished before and which you know is full of fish? It is a feeling in which hope and anxiety and nervousness are all combined and it is hard to say what predominates. After a preliminary false cast or two to get out the line and to accustom oneself to the 14 foot rod which has not been used for several years, at last one could get to work, and before the fly had been in the water half a minute an unmistakable boil, but alas, too much apprenticeship to ordinary trout fishing is the bane of him who would catch a salmon or sea trout. I had struck too soon. Another cast and almost immediately another boil and this time I was in to him. Like an arrow shot from a bow he was away across the pool in less time than it takes to write it down, and then out came a bar of silver almost a yard long and my heart began to beat rapidly. Then a hurried reeling in, only to be followed by another mad rush and another mighty leap, which had to be promptly met by dropping the rod point, and oh the joy when the top is again raised to feel that delicious tugging. Up and down the pool and again and again out of the water, went that fish and I grew more and more anxious lest the comparatively tiny hook should break its hold. Then a steady boring down the tail of the pool and then came the question, can we keep him in it? For below there was a nasty tumbling broken rapid of 200 yards or more. Everything was tried, but in vain, down he meant to go, and down he went. I had to follow as fast as I could running with a rapid scamper over a small plank bridge crossing a small side stream, and at last he floated up in the quiet waters of the sea and the net was soon under him and I had caught my first Norwegian Sea Trout a fine fellow of 4 ½ pounds. He was just fresh from the sea with the sea lice on him and you can imagine the self satisfied complacency with which I admired his still heaving sides.

The Coup de Grace was soon administered and then followed the pipe of peace. Halsten, however, would allow no idling and I was soon back at the head of the pool at work again, and after one or two rises

badly missed, was soon fast into another fish, this time a lively little grilse of three pounds, which we managed to kill in the pool. I have noticed and I believe it generally true that sea trout when hooked make down stream and salmon generally try to make upwards. I won't say how many fish I rose that evening or how many I hooked and lost. There are some fishing days when one cannot do right, and I am afraid my friend Halsten was getting a poor opinion of my fishing capabilities. Still fishing with number 6 hooks, one is apt to lose many fish. Another time I will take a good supply of small double hooks with me, for in Norway it is almost impossible to buy anything in the way of really good fishing tackle. We started fishing at 6-30 and at 8-30 I had got six grilse and sea trout and was tired out and suggested to Halsten he should fish. "Won't the Missie fish Sir?" "I am afraid she can hardly manage the rod" was my answer. "But she can fish quite well from the bridge" and so she soon started letting out a dozen yards of line and slowly walking across worked the fly over the pool and when she reached the end of the bridge let out a few yards more and walked back again. It was a delightfully easy way of fishing and most effective for in a very short time, she was fast in a good fish, as lively and as strong as the first one we got. As soon as possible she came off the bridge and got on more even terms with him, but it was not long before she had to race down the bank and follow him down to the sea, where the delighted Halsten netted him, another fish of 4 ½ pounds. My wife is not a keen fisher woman as a rule but her blood was up and it was not until half past ten that she allowed us to go home with a bag of nine grilse and sea trout weighing twenty seven pounds of which three were her share. Half past ten sounds very late, but in Norway during June and July from nine to eleven is the most delightful time of the day, and of course in clear water the best fishing time, for when the sun is shining you only frighten the fish and spoil your waters by fishing in day time. It was rather a tired procession but a very happy one, which turned in to the Farm at eleven o'clock, and after supper we were all ready for bed as we had been since six that morning. I don't suppose anyone can appreciate the joys of a holiday like a hard worked business man. To turn out for a bath in a charming lake close by the house then back to breakfast which is leisurely enjoyed, then out of doors in to the sun shine and light one's pipe free from the thoughts of newspapers, price of cotton, or catching trains. How often I envy the inhabitants of those happy countries where time is no object, and where every one leisurely does what he wants to do and where he wants to do it. Once you have realised its no good hurrying in Norway you will get on better with the inhabitants and really enjoy your holiday. But of all the joys give me the after breakfast pipe smoked in peace, especially in the midst of the glorious scenery of that Northern Land. As the sky was cloudless and the sun hot and fishing out of the question, we decided to look up the Doctor, and taking a boat up the lake we landed at the little village at the other end. We were told he was out fishing and walking up the river we eventually discovered him perched in a most dangerous looking place on top of a small crag on the other side of the river, working his fly in the steam below. Apparently casting with a fly rod was beyond him and as the fish lay on the further side this was his only way of getting over them. I don't think he had succeeded in catching a salmon, nor did it look as if he were likely to do so. On seeing us he scrambled down and joined us at the bridge lower down accompanied by his faithful Henchman, Jakob. Poor Jakob! his was no easy job. Like many strangers the doctor could not sleep well in Norway, and often he would rouse Jakob at five a.m. to go fishing even though they might not have gone to bed before twelve or one o'clock the night before, tired out after a long tramp over the mountains or the glacier, on the look out for a bear or an elk. As long as we were there Jakob was sent down the lake every morning—with a bouquet of some sorts, a string of very small trout and on one occasion half a kid, for fresh meat was a delicacy. One could not but be grateful for these kind attentions, all the same, one's gratitude was a little tinged with pity for this hard worked henchman. It is curious how so many Germans have but little consideration for their inferiors, but I must say this for the Doctor, that I don't suppose he ever noticed how hard worked the poor fellow was—at any rate I know he paid him well. Poor Jakob, I am afraid he must have been worn to a shadow before the Season was over. As the Doctor had run out of provisions we suggested that he should come back with us to dinner, and it was decided that we should troll down the lake, the fishing of which he had rented. Trolling is not to my mind very amusing, but on a hot day in the midst of lovely scenery it is better than not fishing at all.

I got one sea trout of four pounds and lost two others, but the Doctor got a very nice fish close on six pounds. His excitement was most amusing as it was the first good fish he had ever caught. Needless to say he took a long time playing it and when at last it was landed, he wanted us to back with him to celebrate the capture with a bottle of champagne. It took a great deal to persuade him that it would be far better to go on and have dinner. The Doctor was a most desperate troller after that, for hardly a day passed on which he did not scrape the lake with a minnow, round and round and across it, several times a day and so spoilt his own fishing, for there is no doubt in crystal clear waters in a small lake you can frighten the fish by too much trolling. In the evening we went across to our own waters and returned with nine grilse and sea trout weighing twenty one pounds and we sent the Doctor home thoroughly pleased with himself and half a dozen

flies, as he had lost all his own. After seeing the results of efforts with a fly, in future he was going to devote himself to fly fishing.

The next day we went off to our own lake to troll, with not much success, two good fish of 4 ½ pounds each, and the evening was spent on the river, which was fished from top to bottom. Two fish I had great difficulty in landing for they managed to get the line several times round their bodies so that one had absolutely no control over them. The best fish was a grilse of five pounds fresh from the sea and he took it in to his head to go down where I could not follow him, but Halsten took the rod and jumped up to his middle into the water and took the fish down past the most difficult place. It would weary you if I gave you an account of each day's fishing. The weather was glorious but unfortunately the river got lower and lower and the water clearer every day and the fish came shorter and shorter both at fly and minnow. I had to use a fine cast and the smallest of hooks, with the consequence that many fish were lost. Unfortunately too I was rather late for the bigger fish for the largest sea trout were already up, and the grilse of the sea trout were beginning to run, but I ended up on the Saturday evening with a fine sea trout of six pounds, the largest one I caught, on a bright claret hackle fly of my own making. The best day I had for numbers was the first day nine fish weighing 27 pounds, but on one evening I had a better average viz., five weighing twenty pounds. When the bigger sea trout are running they should average over five pounds as I learnt from a young Scotchman, who had fished the river a fortnight earlier. After all, sport is all a matter of comparison and if you fish with a light rod, light tackle and small flies a three pound average is good enough, especially when accompanied by brilliant weather and glorious surroundings. No doubt we could have caught more and larger fish if we had given more time to trolling, but who would troll when able to catch fish with the fly.

We were none of us sorry when Sunday had come and we could have a day of rest. To our surprise after breakfast we saw a number of boats heading up the fjord, and making enquiries learnt that service was only held once a month and this was the day. Sunday in out of the way places in Norway is the social event of the month, and boat load after boat load kept arriving both by the lake and from the hamlets scattered along the shores of the Fjord. They collected into little groups around the Church, hours before service began and all events of the past month, and all the gossip and scandal of the neighbourhood were eagerly discussed. We ourselves were objects of considerable interest and many of the farmers came to thank us for the fish we had given them, for we could not possibly eat all that we were catching. Amongst others were the dear old gentlemen who had rowed us down the Fjord, and most delighted were we all to meet again and have a "crack" outside the Church. We were rather late going in and we were shown into a place of honour by the clerk, in the chancel. This was a compliment we could well have foregone for it made it difficult for us to leave before the service was over without giving offence. We managed to stand an hour of prayers and singing, and also a sermon an hour long, but when Halsten told us the service would probably last another hour patience was exhausted, and seeing others make a move we slipped out as quietly as we could. All the same it was an experience I would willingly repeat, for no one could help being impressed by the devoutness of the congregation, mostly old men and women with faces seamed and lined with the toil of years. I am afraid many of the best of Norway's youths have to emigrate for the country is too poor to support them all. Some of them do find their way back again, but you can hardly come across a single family in Norway, which has not parted for ever with some of its nearest and dearest. Halsten, himself, had two daughters married living in Pittsburgh and most amusing was the account he gave us of a surprise visit he once paid them in America. It was really a rather brave undertaking for a simple countryman, and I can well imagine his feelings when he stepped out of the train at that far away American City, expected by no one and met by no one. By the merest chance almost the first person he met was a fellow country man from his own village who had emigrated to the States years before.

Despite the length of the service and the difficulty of following the words, it was not without some small excitement. As the church was overcrowded several women and children had to sit on the chancel steps and on the kneeling cushions round the Communion Table. Poor little round faced things, it was rather hard to have boots and stockings on and to sit still so long in a stuffy church, instead of rushing about bare legged playing hide and seek among the trees or dabbling in the shallow waters warmed by the sun. Sundry bottles of milk and small cakes were surreptitiously produced as the only means of keeping them quiet. Not the least interesting was a young mother with her child, which had been brought for baptismal service later on. It was carried in a sort of portable cradle or box, which was entirely swathed in a long woollen wrapper, and looked as if it contained a small mummy child. Well, a child of a few weeks old cannot last two hours without some nourishment, and many were the unwrappings, first of the outer cradle coverings, and then of the swaddling clothes before the poor little thing, which was loudly protesting against such treatment, was brought to light, then a loud sucking and peace.

Monday morning broke dark and cloudy, driving rain and mist nearly down to the sea. My bath in the lake was got through soon as possible, and when I got back to dress I told Marie not to hurry with breakfast. However I filled up the time with making a couple of flies and as this morning the sun was hidden behind dark rolling clouds we made straight for the river, and with one of those flies before eleven o'clock I managed to catch five sea trout weighing fourteen pounds. Curiously enough that is all we did and afterwards I did not get a single rise, or a run at the minnow when we took to trolling on the lake in despair. I have often noticed when the mist lies low on the hillside sea trout are bad to move. I think Marie was the only one who rejoiced for we had supper that night at nine o'clock. This meal up to now had been a moveable feast 9-30, ten and once as late as twelve. She was a wonderful cook, for no matter what time we returned in quarter of an hour, or less than it took us to take our boots off and wash, a steaming hot supper was ready.

It was very disappointing the next morning, our last day, to find the rain coming down harder than ever, and the clouds almost resting on the sea. When we got down to the river we found it nearly in full flood, and for the first and only time the Bridge Pool was drawn blank. The Bank Pool was fished without result, the Snow Pool the same, one or two chance casts were made in likely looking water without stirring a fish. When we had fished down every inch of the New Pool without a rise it looked as if even hope was hopeless. On reaching the lake we found a strong wind blowing and a fairly heavy sea on, but we had not been trolling five minutes before we got a fresh run sea trout of three pounds. "They are not stopping in the river today Sir, but running straight up the lake," said Halsten, and after the fish was landed I soon had both rods at work again. We had not gone twenty yards when there was another run, I handed over the second rod over to Halsten to reel up while I played the fish, finding it was only a small one I began to pull the line through the rings to save time. "Be quick Sir there is a fish on the other rod and a large one." Halsten shouted and as soon as I got in the smaller fish which was less than a pound I took the other rod from him, and at that very moment off the fish went with a run of fifty yards, a salmon sure enough. After reeling in he made another and a longer run and I began to tremble least there should not be enough line. Halsten pulled after him as fast as he could against the waves and wind, and when we got most of the line back on to the reel we saw him turn over with a great flap of his tail which to my excited imagination looked at least a yard across and then one more run and down he went to the bottom of the lake. I kept a steady strain on him for fully quarter of an hour, but for all practical purposes I might have been hooked to a rock, for there he sulked and there he seemed likely to remain. One more run and back came the line in my face. When I reeled up I found not only had the small spoon gone, but the trace and thirty yards of the running line as well. What had happened I cannot tell. I thought the line had been cut on a sunken rock, but Halsten was sure I had held him too hard "you should never hold a salmon sir when he runs they are so strong they will break anything." "I am sure I did not hold him too hard Halsten. —"I wish I had never given you the rod Sir." "Well hang it all Halsten you did give me the rod and let that be an end of it." We rowed in to the bank to put on another minnow on the shortened line, and I am afraid the poor old boy was very much upset. Honestly I did not mind so much, though it was annoying to lose the first and only salmon we had seen, but I never mind losing a fish on the troll so much as I do on the fly. It is always hard to say what is the size of a fish one loses, but this was certainly a big fellow, probably between 20 and 30 pounds. We were rather sad and silent after this misfortune.

Working slowly up the lake again we got a sea trout of 4 ½ pounds we now reached a bit of water which so far I had fished without much success. In its centre the lake narrows, and in the narrows is a fine bit of casting water about a hundred yards long where the stream from the upper lake runs in to the lower. It has, of course, to be fished from the boat. Putting on a fair sized "Blue Doctor" I began casting, no easy matter, standing up with a strong wind blowing, and the boat rocking about. I had hardly made three casts when up he came, and on raising the point that delicious thrill! I was in to him, a salmon again, and away he went. After a long struggle we got him to the surface, and then came the question how to land him. If you want to get hold of a salmon, leave the gaff behind, and that was what we had done. The net was large but still not too large and Halsten was doubtful whether it could be managed.

"Never mind Halsten if you do miss him, you will have done your best," said I and drawing the fish up to the boat, I brought him where Halsten had the net ready, and in a second he was kicking about in the bottom of the boat a fair fish of eleven pounds, but ought to have been more. The thoughts of our previous disaster were not so keen as before. After a rest and a pipe, I suggested to Halsten we should try the stream again as we had not disturbed it much. That was the worst of this bit of water, you only had your one chance down it, for in working down you spoilt the water with the boat. However we started again at the head of the stream, and about ten yards below where we had risen the first fish there was a large splash at the fly, but luckily I had not touched him. "You are working the fly too quickly Sir and pulling it right away from them

when they come." This was probably true enough, but it is not any easy matter to fish well, standing up in a small boat, tossing in large waves, with a big wind blowing. However we started again at the head of the stream and I got Halsten to hold the boat nearer the middle so that I could let the fly dwell a little longer in the rougher water in the centre. Just when the fly came working slowly round over the sunken rock, where the fish had shown before, up he came, and this time I struck more slowly and was in to him. Away he went like a steam engine, though it must have been several weeks since he left the sea, and we were after him as fast as possible. After several rushes during which he never showed himself, he settled down in the sulks at the bottom of the lake and this time Halsten had to tell me to hold him harder, for after losing the first fish I was afraid of holding this one too hard. At last we got him up and this time there was no question, the net was of no use. There was nothing for it but to land and tail him somewhere. That is no easy matter in Norwegian Lakes for as a rule the banks are more like the sides of houses going straight down into deep water.

Eventually we persuaded him to follow us in to a small sandy bay, but we soon had to clear out again in to deep water for it was full of weeds. We had to go down the lake fully half a mile before we could find a suitable spot, and every now and again the fish would make another run to be followed by lashing out when we got him to the surface again. A salmon on light tackle and a small rod has to be treated with respect, at last we reached a suitable spot and Halsten explained exactly what he wanted us to do. As soon as we got in the shallow water the fish began lashing out again, which made one very anxious with such a short line out. As soon as he was quiet Halsten gently ran the boat into the bank and jumped in to the water. I swung the rod round bringing the fish to shore and before he had time to begin lashing out again Halsten had his knife into him behind the shoulder and ran him up on to the shingle as neat a piece of work as one could wish to see. It was a good fish although up a little time. We guessed him at twenty pounds, but on weighing him afterwards seventeen was all he pulled. And now the loss of the first fish was quite forgotten. It was great luck getting two salmon when none were expected for June is the month for salmon fishing, and I had only come for the sea trout. It was a fine ending to a fishing holiday. Our total catch in the nine days was 57 sea trout, grilse and Bull Trout weighing 150 pounds and two salmon. But time and tide wait for no man and we had to get back, have dinner, pack up our traps, and catch the steamer, so hauling the boat up well away from the water we set off for the farm, and rounding the corner met my wife, who had for the first time not accompanied us, and had missed all the fun. "What a pity she was not there Halsten." "Perhaps we would not have caught them if she had been" was his dry rejoinder.

On reaching the farm Marie soon had the dinner ready and then came our bill and I confess I was most curious to see what would be the total. Of course we had taken a fair supply of provisions including nearly everything down to bread and all they supplied us with were bed and lodging, potatoes, milk and eggs and of course attendance. For nine days for my Wife, Self and Halsten the total charges were thirty two Krone or about 1/4 (nearly 7p) per day for each of us, and every thing was beautifully done and spotlessly clean, with an unlimited supply of Bilberries, Cloudberries and all sorts of other berries thrown in, accompanied by the most delightful friendliness one could wish for. It was all I could do to persuade Marie to accept some reward for her excellent cooking.

Our luggage was again placed on the sled and the rough sturdy little pony was put into the shafts, and away it went bumping and thumping over the rough stony path, in places no path at all, down to the pier, accompanied by Farmer Stromme and Halsten, who was delighted when we told him that we did not want the salmon and he could do what he liked with them.

Wise man, he sold the salmon to some one on the steamer, but took a grilse home to his wife. It is always sad saying farewell, but more especially so in Norway, or at any rate in those parts where they are still unspoilt. It is not a case there—often waiters having taken the change and the landlords the rest, but it is good bye from friend to friend, and I can picture them now as I saw them, standing on the pier, as the steamer moved off Farmer Stromme and his wife, Marie, and the little girl and many other good friends, not forgetting the Doctor, waving their handkerchiefs and calling out "Farvel" and again "Farvel"."

SPORTS and SPORTSMEN

R. Godby, Feb. 1905

"I must apologise with commencing my paper with an anecdote but "the bearings of it lays" as Mr Jack Bunsby used to say "in the application of it."

A great many years ago I used occasionally to attend the evening service at a Church situate in a small country town no matter where. The Curate was a young fellow possibly in his 77th or 78th year, still labouring on in the hope of that promotion, which I believe never came to him either from the East or west, or any other point of the compass. He always carried with him on going to and returning from the Church an old battered lantern which had possibly grown up with him. But the bearing of the anecdote is this, that he invariably commenced his sermon, after giving out his text, as follows- "In opening up this important subject let us consider these two particulars—First (it might be) His Mercy and secondly (we will say) His long suffering. He then invoked a blessing upon the discourse, and by the time had reached the end of that, a deep sleep had stolen over a large proportion of his congregation, a sleep as that which the poet Cowper describes when speaking of the old three-decker form of reading desk and pulpit combined, he says you may remember—

"Sweet sleep enjoys the Curate in his desk
"The tedious Rector drawling o'er his head
"And sweet the Clerk below."

The "application on" the anecdote is obvious. First—the Sport, and secondly the sportsman, to be followed probably sooner or later, according to the vigour of your respective contributions, by that profound slumber which is so invigorating to yourselves, but, in the case of some Anglers present whom I will forbear to name, is so distracting to your neighbours.

Now in speaking of Sport I am proposing to deal principally with that particular form of Sport which comes under the head of "Diversions of the Field", such as hunting, shooting, fishing, fowling, and so forth and I do not intend to monopolize the evening by inflicting upon you a long paper which has not even the advantage of auxiliary lime-light views, but rather to furnish a few pegs whereupon may be hung a discussion which, we may reasonably hope, be of much greater value to the Association than anything to be found within the four corners of the paper itself.

Does Sport act favourably or unfavourably upon man?

Does it tend to make him callous and indifferent to the pain that is involved in the exercise of his sport?

Is he right in indulging in a Sport that inflicts pain on the creatures whose lives he is taking?

Does it tend to make a man selfish as regards his fellow sportsmen and fellow men?

Such and other points, which may be elicited when the period for discussion arises are in my mind when submitting this paper to you tonight.

About the Antiquity of Sport there is no question. Nimrod was a mighty hunter "before the Lord". What the meaning of that extension of the predicate is, I do not know. Whether it means that his sportsmanship had the stamp of Devine approval, I cannot say. There may be some Hebrew Scholar among us who can enlighten us. At a later period of Biblical History we find another reference to Sport when David taunts Saul with coming out to seek a flea—as when one does hunt a partridge among the mountains. How the partridge was hunted we do not gather, but some light may be thrown upon the passage by comparing it with the way in which Japanese catch the Wild Duck in the dusk of the evening when they are flying in from the sea, they arm themselves with nets, after the style of a La Crosse net and take up their position on the ridge of a hill somewhat after the mode in which we occupy the butts in grouse driving. The Ducks come skimming just over the ridge and there is keen competition amongst the Sportsmen as to who will net the greatest number. But to return to the Antiquity of Sport.

Man in the first instance was developed into a Sportsman from necessity. As to the wild carnivorous animals it was a question of he or they. It was Hobson's choice. If he didn't kill them they would kill him, so having no breach loader, or smokeless powder he had to call to his aid all the guile and subtlety that he possessed that he whereby might ensnare his prey. No doubt there were bolder spirits among them who with a knobbed stick rushed in upon the Mastodon and the Mammoth.

These were the mighty hunters, and the bags they made in those early days must have been very big in point of size, if not in point of number. We make a find occasionally of those early bags, in the caves of the rocks where the heaps of fossil bones lie scattered, and we sometimes discover with them the

Sportsman's Game Book, consisting of rude sketches, which he has traced upon the walls during his after dinner pipe. His name has not come down to us, but we hail him as a brother. Man appears at a very early period of his history to have discovered that he was admirably cut out to be a carnivorous animal. I don't know whether Darwin draws attention any where to this point of distinction between Men and Monkeys. I may possibly be exposing my ignorance in suggesting there is a distinction but I am not aware that any of the Monkey tribe are, beyond an occasional insect diet, carnivorous in their habits. It would be interesting to know under what conditions the first rump steak was cooked, but we are not here this evening to discuss cookery. The Second step then in the development of sport was to provide for the larder. Having himself escaped the larder of the wild animals mans next ambition was to have a larder of his own, and thus we have in a small compass the origin of Sport.

It is beyond the scope of this paper to trace the evolution of Sport though it would be a fascinating subject particularly that branch of it dealing with training by man of the animals and birds to assist him in his sport, from the terrier to the hunting cheetah, not forgetting the hawk and the cormorant. Of all forms of Sport at present enjoyed that of big game hunting must I suppose be entitled to take the first place. The element of personal danger must necessarily enhance the keenness of the hunter. A slight inaccuracy of aim arising from nervousness or want of skill may in a twinkling alter the relative positions of the two parties. Our officers who have been in India will tell you that there is no sport in the world that can compare with pig sticking and from the enthusiastic description of the sport that some of my old school fellows (some of them now on the retired list) I an quite prepared to believe it, because an additional element of interest comes in namely the cleverness of your horse who is as keen in the pursuit as his rider. I remember now the refrain of the pig sticking song which for all I know may still be current. I heard it sung with the greatest gusto by one of those men who had stuck many pigs during his residence in India. The chorus ran—

"Then pledge the Boar the Mighty Boar Fill high the cup for me And here's to all who fear no fall And the next great Boar we see."

The threatened extermination of the big game is a subject that has been dealt with by many writers, and various suggestions have been made for making a provision against such a probability. Within our own memory we have seen the American Bison nearly wiped out and the extinction of many of the large animals is imminent. I think we shall all be agreed in hoping that something may be done to avert such a catastrophe. Fortunately big game hunting is a form of Sport that requires more time and money than most of us find convenient to expend, and we have to fall back on the rare occasion of the escape of a menagerie bred wolf before we can find any copy for the newspapers, of our exploits in this direction. And even then we are even sometimes baulked by the perversity of the animal itself which prefers decapitation by an express train to the pitiless fusillade of some 200 men who have gone out against it in battle array. Who knows but that the wolf we recently read of in the North of England seeing what an immanent source of danger each of these men was to the other 199 preferred rather to die a suicide than to have upon his soul the blood of man by whom he had been fed and cared for. If I may digress for a moment—the recent wolf incident brought to my mind an account that was told me years ago by a friend who had been out in Mauritius of a stag hunt in which he had taken part and out of which he fortunately escaped alive. The Frenchman takes his sport in a more theatrical form than the colder blooded inhabitants of our island. A meeting of Stag hounds or fox hounds is no doubt a pretty sight, though we have never got beyond a little pink to enliven the scene, but "La Chasse" as indulged in by our lively neighbours is "a thing of beauty"--- and if you escape with life and limb "a joy for ever". There were no dogs in the "Chasse" of which my friend told me. A Magnificent Programme gave the first intimation of the impending event. Then in due course came the meet. Solomon would have made no show among the Chasseurs gathered together on that occasion. It was if a rainbow had settled upon the scene. There was trumpeting enough not only to have demolished the Walls of Jericho, but also to have rebuilt them. The embracing that took place was almost pathetic. My friend had been invited to bring his rifle—he felt quite shocked at his own meagre appearance in this parterre of beauty. However after a magnificent banquet, and other preliminaries, the chasse moved on. Places were assigned to each Sportsman, the deer were to be driven by them, and they were to shoot them—or to try to do so. In process of time the deer appeared and the shooting began—the excitement of the Chasseurs knew no bounds, they capered about gesticulating wildly, and shooting still more so. The bullets began to whistle about my friends head, and he very soon discovered that it was no place for him. He was only a civilian, and had never before been under fire. Shortly afterwards he left the Mauritius for a less dangerous climate and I am happy to say he is still alive to tell the tale.

But to come home once more to our experiences of Sport, of Fox hunting I cannot speak from any personal experience. I have been told by some fox hunters that there is nothing that an old dog fox so thoroughly enjoys as a good run—Well—I am very glad to hear it—it is not at all impossible. I have known people in my own experience who are never really happy unless they have a grievance—a sort of human fox I suppose. But what about fox hunting on the question of whether it tends to make men selfish who participate in the sport? Fox hunters complain very much about the amount of barbed wire that the farmer erects in his farm. I have friends amongst both parties, the followers of hounds, and the tenant farmers, and after hearing both sides of the question—I confess—my sympathy is on the side of the farmer. The followers of some of our noted packs are men who have no local interest in the land over which they hunt. There is no common bond between them and the local farmers. Their horses come in from all sides by special trainsthey ride in squadrons over the young wheat, break down gates and fences, and-depart. "Oh! but" the hunting man says we buy the farmers corn and hay and are his best customers. That argument numbers of riding men, hors, possibly, had something in it many years ago when the followers of the hounds comprised only the neighbouring gentry and farmers. But all this has changed. The farmer has his living to get. He finds that barbed wire makes a cheap and efficient fence. Is he to sacrifice his own living merely for the pleasure of other people? I believe at the present moment many Masters of hounds are resigning their posts because of the e dealers for example with an eye to business, and others having no local interest, who swarm at the Meets and are under no control.

My theory is—If you wish to enjoy sport you must be ready and willing to pay for it. It would be a great pity if such an excellent old sport as fox hunting undoubtedly is should be doomed to extinction by the selfishness of those who follow it. And this matter of fox hunting touches, with the needle, the question whether the Sport has tended to make the Sportsman selfish.

Which is the cause—and which the effect?

The hunting of the Red Deer on the wilds of Exmoor is somewhat more free from the farmers difficulty, but it touches another side of the question. We may look on the fox rather as vermin. He would certainly require to be shot or trapped if he were not hunted for sport, otherwise poultry keeping would become even less profitable than it is said to be, but the death of a grand old stag, when he seeks his last refuge in some lonely pool, and stands at bay, waiting, if he only knew it, for the huntsman to come and cut his throat—must awaken some tender chord in the heart of the keenest sportsman. There is one fine old sport which I have always craved to see, but have not seen. I mean hawking. It is still indulged in here and there, but seems to have fallen upon evil days. Possibly as the land became divided up into smaller and still smaller estates and hedgerows increased and multiplied, it became difficult, except upon the moorland to follow the flight of the birds, but it always appeals to me as having been a very fascinating sport.

Coursing is another form of sport which is very enjoyable when you take it quietly and apart from all the noise of the betting ring which so mars the pleasure of a coursing meeting such as the Waterloo cup. We may pass next to shooting. It is only within comparatively recent years that the system of driving birds up to the sportsman's gun has come into fashion. The old days in the stubble fields such as Dickens so humorously describes are passing away. Under the mowing and reaping machines the stubbles are not what they used to be in the days of the sickle and reaping hook, and after a few days the birds grow wild. With breech loaders and smokeless powder the pace is quicker than the days of the muzzle loader when the line halted for the man who had fired to re-load and the birds are more bustled in consequence. In order therefore to make a bag, driving has to be resorted to. It is like everything else—There is less leisure about it than formerly—I suppose it has to move with the times. But probably most sportsmen will say that there is no shooting they enjoy more than shooting at driven game. If we loose some of the picturesqueness of the older style of shooting we have a corresponding gain in the swift flight which needs a quick eye and a steady hand to ensure success.

But when all is said one has a pleasant recollection of the former days when we took things more quietly, and the girls drove out in the phaeton with the luncheon to some shady spot, and after luncheon we sat and smoked our pipes and chatted—more regardless of the time than we now are. I dare say many of us could tell plenty of anecdotes of shooting days. One occurs to me if I may digress to tell it.

I was a guest on one First of September at a house in Staffordshire where we had many a pleasant day. Mine host (who used to join us after lunch) had three or four grown up sons who were all keen sportsmen and good shots. One of them had seen an advertisement in "The Field" newspaper by a man who wanted to sell two young pointers, warranted not gun shy and could be tried for a week on approval. He sent for the dogs and on the evening of August 31st we had adjourned to the kennels to admire them. We were a large party on the First. I think there were no less than eight of us, (sadly too many, but boys will be boys). We took the young dogs of course and with them a steady old pointer who had had two or three years

experience. The first field that we went into happened to be a rough grass field and almost directly the old dog came to a point. Hands went up and the young dogs backed the stance in admirable style. Then got up such a covey or cluster of coveys as I have rarely seen right along the line. Every man had two barrels, and away went the young dogs as hard as their legs could carry them. One of them was subsequently recovered some miles away in emaciated condition and the other—was never heard of. They had evidently not been trained to platoon firing.

Of grouse shooting I cannot speak with much experience but we number among our Anglers one member in whose company I have enjoyed some pleasant days, and nothing gave me greater pleasure when we used to draw the numbers of our butts than to find myself in the next butt to him and (when the opportunity allowed) to watch him as he brought down his birds. To one who is not accustomed to the business there is no more deceptive bird to shoot than a quickly rising pheasant – it looks so large—and so simple, but I confess to having missed a good many, and I believe I am not the only man who has discovered that it is not so simple as it looks. Even now I would back myself to kill a snipe than a rising pheasant.

I should like to hear other shooters views on this, as I may learn from them where I go wrong. I am curious to know if others have experienced the same difficulty. I do not like to read of these huge battues of pheasants, these hot corners where the shooter has one or sometimes two men reloading his guns, and he stands there like some animated Maxim, (Machine gun) blazing away until the dead are numbered by the thousand. Give me rather a trusty friend, and still trustier dog, and let us light our pipes, (taking care if we value our teeth to hold them on the left side of our mouths) and beat the hedgerows and dingles, and reedy spots with one man to carry our mixed bag. That is in my own opinion (and I give it in all becoming modesty for what it may be worth) the most pleasant form of shooting that I know. A hare two or three brace of pheasants, a few partridges, fifteen to twenty rabbits, and a few wood pigeons is a fair sample of such a bag as I have in my mind's eye on a crisp October day. But may I ask any sportsman present whether he has not at some time or times during his sport felt some little pulls at the strings of his heart respecting the pain and suffering he inflicting during the hours which are so full of enjoyment to himself. Even the best shot cannot always kill his quarry dead. We sometimes tinker our hares and rabbits, and we see our birds go away with one leg drooping—and—they crawl away—to die. I believe there are many men who have renounced the pleasure of shooting because of this feeling. I have frequently thought over this matter, and I still go on shooting, but I never see a rabbit or bird go away with a broken leg without lamenting that I should not have killed it dead.

Does the fact that I still go on shooting show that my nature is getting brutalised? I am not conscious of any thirst for blood but I don't think I could find the same pleasure in shooting at clay pigeons. or glass balls, or hats, or half pennies tossed in the air, nor do I suppose that any of you could desire a mechanical fish weighing five of six pounds that would rush out and seize your hook, and plunge about in the maddest fashion for a couple of hours, you would derive a thousandth part of the enjoyment that five minutes with a half pound live trout would afford you. The question of skill does not enter into it. A movable target made in shape and feathered in exact imitation of a bird might be worked by means of strings in so ingenious and eccentric a manner as to require far greater skill to hit it than to hit any living bird that flies. but it would not satisfy us like the real article. There is something quite beyond the question of skill involved. Neither can you explain it by saying that it is the enjoyment of the exercise, of the scenery and the comradeship of pleasant friends that you get when your quarry is the living thing. Because if your mechanical beasts and birds were so arranged (the expense of such arrangements would be undoubtedly great) that they started out of grass or swooped out of hedgerows, or trees at unexpected points would you with the same exercise, and scenery and comradeship thrown in find any enjoyment in a days sport under such conditions. Is not the secret of it then that the killing instinct in our sport is something in our nature that we still share in common with our humbler animal relations. We are more bloodthirsty than we are conscious of. The better side of our nature rebels against the infliction of unnecessary pain but the old instinct is too strong for us, and as sportsmen we lead a kind of double life. Most sportsmen will say "and a very enjoyable life it is especially when the weather is favourable, and your liver is not out of order". So far I have said nothing of Angling except with regard to that hypothetical mechanical fish, which doesn't count.

Among such Veterans in the Art as go to form this Association any words of mine would fall as a sounding brass or a tinkling symbol. I could of course tell angling yarns, but they would at once be capped and recapped until we should all be lost in amazement, each man in the innermost recesses of heart doubting the truth of every other mans story. We understand each other thoroughly without the necessity of telling the story that we have in mind. More over there are already three volumes of Anglers experiences published by this association wherein he who wants may read. But this may be said in favour of our favourite—that it probably inflicts less suffering on the quarry than any other form of sport.

I <u>could</u> tell some stories (but I won't open the flood gates) in proof of this. In the next place it is a sport that you can have a longer innings at (if I may use a cricketing expression.)

A man may grow to old to ride to hounds, or to beat the stubble, but I never yet met the man who was to old to go--a—angling. Thirdly it compares very favourably with other sports in the question of expense, and opens a wider door to lovers of sport than hunting or shooting. Of course if you want a salmon river you must pay for it, but thousands of our hard working populations to whom this world in the matter of recreation is not all beer and skittles, can at the cost of a few shillings a year enjoy many hours of that healthy contemplation that old Isaac of blessed memory so much extolled. Fourthly (I am surpassing my old Parson friend) it tends more than any other sport that I know to that good camaraderie and fellowship between man and man that is so really helpful in this world. And Last I have the great pleasure in testifying that I have met with less selfishness in Sport among Anglers than I have experienced or heard of among sportsmen of other kinds. There is sometimes just a slight tendency on the part of Anglers when narrating their experiences to a little extravagance in colour, but some of our greatest Artists have been known by their depth and richness of their colouring and there is no doubt that in Anglers the artistic temperament is strongly developed.

Before concluding my paper I must add a few words on what some may consider the seamy side of sport, but I think that a paper on sport would be deficient without mention of our friend the Poacher. Now I think it is only fair to my audience before proceeding further to say that an earlier period of my life I was brought before the Magistrates for poaching. Possibly some of you may be aware of the fact, though I think it cannot be very widely known, otherwise I should probably not have so long enjoyed the position that I am so proud of, viz that of an Honorary Member of your Association.

But there, --the truth is out—and I feel much relieved. I was not convicted. My youth and ingenuous cast of countenance possibly saved me, I should probably not have raked up this history of a mis-spent youth except as an explanation of my rather sympathetic attitude towards the poacher. You must remember in your sport, that he as well as you is endowed with the killing instinct, but you have money in your pocket and he has none. His soul yearns for sport, it quickens his pulse as it does yours when he sees the game afoot. He can't operate in the daytime or the beaks will cop him, as they did me, or if he does operate in the daytime it must be furtively, by stealth and in silence. Hence the wire, and the net, and the noose, and the mute lurcher. If you give that man the choice he would rather go out with you, with a £3 licence in his pocket and a hammerless breach loader of the latest pattern, and enjoy a good luncheon after his mornings shoot. But into that Paradise there is no entry for him. Still he feels that he must have some sport. Do not misunderstand me I have no sympathy with the murdering miscreant who shoots the keeper from behind the hedge, or clubs him to death with the butt of his gun, but I do honestly believe that the majority of men who go poaching are moved to do so not from the love of gain, but from that sporting instinct which is so deep rooted in all of us who love sport. It is many years since I read that book of Kingsley's called "Yeast" but I think he had a sneaking sympathy with our poaching confreres.

And now you will be relieved to hear I have got to the end of my very disjointed paper. We all know a good sportsman when we come in contact with him. He may not be the best of riders, or of shots, or extremely skilful with his rod though his proficiency in these matters adds to the charm, but if he is worthy of his title as a Sportsman he must be keen, and vigorous, he must be unselfish, and thoughtful of others, always ready to assist with a helping hand, and useful advice, and last he must be in the best and completest sense of the word a *Gentleman*."

"ABOUT TWO SWISS RIVERS AND THEIR TROUT.

P. W. Kessler March 1905

A son in exile learning foreign tongues and habits formed the excuse for choosing Switzerland for our annual holiday. Neuchatel was our destination, a pretty little town situated at the foot of the Jura range of mountains, and on the lake bearing its name.

In my own younger days I had spent a pleasant year there, acquiring a knowledge of French, but I was at school, and had not therefore sufficient liberty to become acquainted with country lying behind in the mountains, a country then difficult to reach, but now, through greater railway facilities, more available for those who seek a change for rest and recreation. And in the Jura mountains such can be found. They are not yet the dumping ground for all the holiday seekers of Europe and America. The opened up parts are, no doubt, full in July and August, but in May and June you have the place practically to yourself, and to see it then with the wealth of wild flowers and colour is a revelation.

Our scheme then was to make Neuchatel our headquarters and from there to explore a part of the neighbourhood in the mountains.

I knew the streams existed and I suspected that they contained trout. A question in the "Field" brought me no response, so I turned to a native friend, who I also knew was no sportsman (at least not of the angling sort) but by the time I reached Neuchatel he was able to supply me with sufficient information for me to make a start upon. I was not making an Angling expedition pure and simple, in fact I did not know that I should find an opportunity to cast a fly at all, so I only took my rod and such flies as I had with me—on the chance. In the result I did not have much success as a fish catcher, but I saw some things that interested me and of these I will give some account. I hope I may succeed in presenting a sufficiently pleasing picture of that corner of the world to my fellow members to induce some of them to make a journey that way themselves, resulting, as I should hope in an alleviation of our Hon. Sec's troubles for one night, at least in some future years.

My first necessity was to find some one who could tell me something, and the friend of whom I have spoken indicated to me a Monsieur Savoie Petitpieue, who I found kept a shop with an adjunct, in which he dealt with fishing necessaries for lake and river. Among them English made artificial flies and other tackle. He is said there to be the greatest authority in Switzerland on fish and fishing. I found him very willing to give him such information as I sought. He told me that in the immediate vicinity, the Areuse was the best river, though not up to the standard of many of our own, but recommended my also trying a stream called the "Aenon" flowing into the lake higher up.

This however I did not visit. It seems to be a stream which the lake trout frequent and to hold, in consequence, larger fish than some of the other rivers. Having provided myself with the fly suitable for the water, and the season-I was now ready to see what could be done. A friend a Conseiller d'Etat suggested that he would like to take a day off, and proposed that he should accompany me on an exploring expedition to the Areuse up the Val de Travers. He undertook to obtain my fishing license—he also arranged to have the gendarme in charge of the river to meet us. So one morning we made an early start by train for the village of Travers, where our gendarme met us.

The Val de Travers, I may mention, is where the asphalte comes from, (as nuts do from Brazil). The gendarme conducted to the river. On arriving at the bridge I found quite a merry rise going on, of which a native on the bank was taking advantage, but by the time I got to the water and fixed up, the chance had gone. At least I could only get one or two curious fish to come and look at me, and the luck of the native seemed also to depart. He had been using a small black fly, with which I was not provided.

I did not try much further fishing that day. The weather turned out glorious, bright and sunny, useless for serious angling. Our programme included a long walk down river, through the gorges till we arrived at an opening where were two hotels and a cottage or two, the whole called Champ de Moulin. An inspection of the hotels decided us to spend a few days in one of them, and a day or two later found us installed in the Hotel de la Truite at a charge of four swiss francs a day for bed, morning coffee (an egg thrown in for my wife) and two square meals, but no bath. This little Inn (as it really is) is somewhat of a curiosity in its way. It is kept by a family who have doubtless been farmers in the past for they own a fair amount of land. The Sister manages the Hotel proper. Two brothers attend to the outside work. One is the gardener, the other the fisherman, when more important matters do not interfere. The wife of one of the brothers is the cook, and their daughter helps in the house. There is only one real servant. In the evening when the work is done the family assembles with any guests that may be in the dining room and join in

whatever may be going on. On holidays, fine Sundays especially, large numbers of people from the neighbouring towns and villages, make a dinner or supper at this hotel the object of their days out a walk up or down the gorges, and fresh trout at the end of it being the great attraction. We spent three days there and I tried my luck with my rod on the very promising looking bit of water, but conditions were all against me bright hot sunny weather and I took nothing worth keeping. I was not energetic enough to get up at five in the morning. One day we took the train up the valley to a place called Motier, and on arrival found our gendarme friend at the station. He willingly consented to escort us to the communal fish hatchery, which however was empty the alevins to the number of nearly 200,000 having been planted in the river a week or two previously. From there guided by our friend we proceeded to the river and started on our way down. I tried many a likely looking (place) but one or two small fish were all I succeeded in moving and taking, and they had to go back. I had noticed that not one other fisherman was to be seen, and my friend drew my attention to this. It was not a day for taking fish, lower down I found a few rods at work but doing no good. Having spent three pleasant days in that region we bade goodbye to our hosts at the "Truite", returned to Neuchatel and cast about for our next move. We decided upon Ballaigues near Villarbe on the direct line from France via Pontarlier to Lausanne the attraction being the River Arve which was represented to hold quantities of trout. And it does, but Ballaigues is not the place to fish it from. As a health restorer that place is first rate, but it stands upon the mountain side, and to get to the river you must either go two or three miles towards Villarbe, or down to the gorges, to return from which meant a very stiff 35 minutes climb. I had my try down in the gorges, and further up river, but luck and the conditions did not favour me—and as I said just now 4 or 5 a.m. was not my fancy. We went one day to the Lac de Jung (Jong), and I wish we had spent a few days there. It is a most beautiful spot and I rather think the lake may be worth trying. There are, I believe, also streams holding trout, but I was not there long enough to properly investigate. Having so far related my own doings and movements I will now turn to what I observed and learnt in matters which will I hope interest you, as they certainly did me.

In the first place you will have noticed from what I have already said, that the Swiss have quite a keen eye on their fish supply. Their legislation in regard to it is of an entirely democratic nature. Firstly in order to be entitled to fish for trout you must have a license from the Canton. The cost of these licenses varies from 5 swiss francs per annum for rod fishing in the rivers to 30 or 50 francs for trolling for larger trout in the lakes. I leave out netting on the lakes which is also provided for. Each Canton has its own regulations. In Neuchatel my license covered the one river only; in Vaud I could have fished any river in the canton. Then there is a right of way on both banks of the rivers, but you must not damage crops to get there.

Where impediments along the banks prevent a continuous walk, parts of a river may be shut off during the earlier part of the year before the crops are cut. The Regulations as to how fish may be taken are very precise. Rod and line only, but the bait may be anything except a minnow artificial or natural. At the same time in the Canton of Vaud they were last year allowing the use of a minnow as a trial. Among minor matters waders are not allowed at least not in Neuchatel and I saw none any where. At one time or for a time they were permitted, but the poorer men raised such an outcry that this gave an advantage to their richer brethrens, that the permission has been withdrawn. Fishing at night is prohibited and fish measuring less than 18cm. (about 7") are not to be taken. The law says they may not be sold or served at inns, but I suspect a good many find their way into the private parlours of the angler. All these regulations are printed on the back of the licence. I have spoken of the hatchery at Motier. This is run by the community for the benefit of the community. It is situated in communal buildings along side the lockup and is in charge of the river keeper a gendarme of the Canton as I have already indicated. The custom there is to put the fish into the river when quite young at the end of May, when I was there the hatchery was empty. The establishment appeared excellently managed. This system of turning out the trout at so early an age I found was criticized by my friends at Champ du Moulin on the ground that it gave them so little chance—that later in the year would be better—say at spawning time when the larger fish would be off feed. I don't know how that may be but it seemed to me that it would be better to wait a full year. In any case there are plenty of fish, whether due to stocking, or natural breeding, or both.

The fish at Motier are put into the upper part of the river. The gorges are not stocked at all, or have not been hither to depending on natural reproduction. There is I believe another hatchery lower down at Bondey but this I did not see. There is a communal hatchery on the Orbe at Villorbe, and a large private establishment higher up doing a business supplying trout. I did not go over either of these places however. In the middle of the town of Villorbe there is a sanctuary where no fish may be taken. It is by a bridge and from it you may see scores of fine trout enjoying life in their own way. In the course of the streams various places are barred with the object of affording sanctuary. My Vaud licence mentions these places particularly.

The expenses of these hatcheries, and of the river watching are no doubt met by the proceeds of the licences. On the Areuse from 600 to 800 licences are taken out annually. Undoubtedly the river is very heavily fished. A number of licence holders make their living out of what they catch. I was told of one man who earned some 3,000 swiss francs in one year. Then all the Inns and hotels along the valley made a speciality of fresh trout. Each and every one of them will have somebody engaged to keep them supplied, whilst the fish caught are kept alive in what are called "Viviers" until wanted. These "Viviers" are large boxes let into the river, or placed to allow the water from a spring to run through them. When trout is called for the required supply is taken and a dish of absolutely fresh killed fish is placed before you. My friend at Champ du Moulin kept two "Viviers" supplied with spring water. When I was shown them I remarked that there must be enough fish to last the whole season, many of them were fine big fellows a pound or more in weight. I was told there were barely enough for two Sundays. I then realised that a fine Sunday meant perhaps the serving of 200 trout dinners. It may be said that practically everybody living near the river fishes, some for amusement, more for a living and all have their "Viviers" in some form or other—and after all it is at the auspicious moment that good baskets are taken, and what is not wanted for the day can by this means be kept for the time of dearth.

All "Viviers" have to be emptied three days after the close of the season [a similar practice obtains in at least some parts of Austria as described to me by an Austrian gentleman **E.D.**]

The method of fishing interested me. The rod used, practically by every body, is a long bamboo in one piece. The average length is about 17 or 18 feet, and the straighter the better, tho' few if any attain perfection in that respect. A few are furnished with reels, a larger number have their spare line wrapped over two small window cord hooks set about six inches apart, others have the line simply fast to the end of their rod. The working of the first, and the last of these systems requires no explanation, but the window cord arrangement may be new to some of you as it was to me its primary object is simply to let out or take in line according to the water one wants to cover, but the gentleman at Travers, whom I spoke of early on, and who at times was throwing most beautifully, a very long line, seemed to play his fish with the hand, wrapping up the line as he gradually brought his fish to the side. The line and cast used are distinctly stout, for our class of angling for trout, and they do not seem to mind much how the fly takes the water. The rods are certainly admirably suited for their purpose—they are very light and give a great command over the line, so that both casting over bushes and fishing with trees directly behind you, is comparatively easy.

The lure used is various. I saw the fly, worm, the natural stone fly, and caddis in use, according to circumstances.

In the case of the artificial fly—only one—presumably the right one—is used. A landing net is hardly known. A small fish, say up to half a pound, is in the can before it knows where it is. A larger one, no doubt, requires more management. In using the word can I should explain, that as the fish have to be kept alive, the fishing basket takes the shape of a water can, made so as to fit the body when slung from a strap over the shoulders, like our own baskets. After a good days sport considering that his can must be full of water from the time his first fish is caught it must be admitted that the angler has worked for his living.

As regards flies—the Professional Angler makes his own, and others that I saw had certainly not the finish we are familiar with in this country. On the Orbe a professional friend showed me one fly which he had made on the spur of the moment, a rise was on but he could raise nothing—he managed to get a natural off the water and with no tool but his knife, from what materials he had, he made the best imitation he could, to his own supreme satisfaction in the way of results. That the profession of angling has its reward may be judged from the fact that so far as I could learn the market value of fresh trout was from 2 to 2.50 swiss francs per pound. In one case I had three francs mentioned, but I rather fancy that gentleman thought I would want to take back with me some evidence of my prowess, in which case he was disappointed.

Now as to the Rivers themselves. In a general way they may be said to resemble our own Ribble at Horton. The rock formation is similar—limestone. In fact this chain of mountains gives a name to the formation the "Jurrasic." I believe "Oolitic" is the more scientific name. Much the same vagaries display themselves there in connection with the streams as occurs in Ribblesdale. I was not shown or told of any "pots", but I saw the source of the Orbe, and I believe the Areuse has a similar birth. The Orbe issues from a hole in the rocks, and all around the main issue are similar smaller streamlets, all breaking out of cracks in the rocks. The main stream is said to be the outlet for the Lac de Joung (?Joux). the streamlets may come from the same source or they may be the independent draining of the watershed immediately above. The Lac de Jong (?Joux) at any rate has no visible exit, and is supposed to discharge itself through cracks below the surface. A great volume of water, in any case, comes somewhere from above. A large part of it has been intercepted and made use of as motive power for driving a large electrical works situated in the valley. The line of this power is illuminated at night by electric light, which when first seen as one climbs the mountain

side makes one wonder what the illuminations are for. In confirmation of what I have said of the Orbe being the outflow of the Lac de Jong (?Joux), I may say that the stream flowing into the lake at its upper end is also called the Orbe. At Noitaigue on the Areuse I saw another small stream issuing from the rocks in exactly the same way as the Orbe. In other ways these rivers resemble the Ribble, a good deal of high bank—paucity of vegetable life, and then the gorges, something like, though on a larger scale, the gorge between Helwith Bridge and settle. The rise is rapid when the rain comes, the fall is slower than with us, less drainage presumably. These gorges if properly studied, would form matter for a paper to themselves. As was said to me, they provide a vast amount of capital for the Country. The water power is enormous and it has already been largely drawn upon.

In this part of Switzerland, which except for watch making was not industrial, the development of electricity has caused cheap power to be sought, and they find it at their doors. In the gorges of the Areuse there is however another use found for this power and it is in the shape of a powerful pump, driven by the water of the river, which pumps water from some big mass in the mountain to the town of La Chaud de Fonds, some 2,000 feet above. I was told so far that this is the biggest thing of the kind. And now with a few general observations I will bring this inartistic relation of facts and observations to a close.

I would certainly recommend any Angler going to Switzerland for a holiday to provide himself with his rod and line for I quite believe in many a nook and corner a pleasant day, by some wild mountain stream, may be passed at his favourite sport. In the districts I have been describing, a knowledge of the language, if not essential, is distinctly an advantage, for you are out of the beaten track and polyglot waiters are not to be found in the inns. I have a suspicion that on the two rivers I have described, the dry fly fisherman would be the most successful. The natives usually use but one fly, and so far as I could make out, only use the fly at all when they see the fish rising. I heard two stories of foreigners doing wonders, one on the Areuse, the other on the Orbe. The first was an Englishman, the other a Frenchman from the North of France. They both did the same thing in getting a native to show them the water, and then said they would require no further help.

The Englishman produced astonishment by starting with a butterfly net, and catching specimens of the flies upon the water.

But when he came home with his creel full day after day it was allowed he knew something. I have no doubt he was a dry fly man, and found more than one rise on during the day. The Frenchman I am not so sure about, but the native who told me the story, was piqued at so summarily put aside, and thought he would show the stranger that he did not know everything yet. So he too started fishing not far off. However when the stranger had quickly landed two or three fish to his nothing, he thought he had better put his rod aside and become an audience. He acknowledged himself beaten for the first time in his life, as he told me.

Living in these unfrequented parts of the world is not dear, especially out of Tourist season, and two or three weeks holiday spent there, in spite of the railway journey, would probably not cost more than a similar holiday spent at some English watering place, or other holiday resort.

And though I have confined myself in this paper to a consideration of the Angling point of view only—this beautiful country resents many other ways of deriving recreation, re-cuperation and health for us poor town birds, with its pure air, magnificent scenery and the excursions thro' and over pine clad mountains. Let some of you go and try it some fine day and then make your report."

RECENT THEORIES CONCERNING SALMON SALAR REVIEWED

Percy Glass

Oct. 1905.

"In the early part of this year (16 Jan. 1904 (sic) there appeared in "Country Life" an article entitled "a New Theory of Salmon Migration" by Mr Horace G. Hutchinson. The idea was suggested to him by Sir Spencer Walpole who for many years was associated with the late Frank Buckland as an Inspector of Salmon Fisheries for England and Scotland. Put shortly the theory assumes that the migration of birds dates back to the time, before the depression now occupied by the North Sea, was filled in with water, and that the birds at that time migrated over dry land—that the birds now migrate because of the inherited instinct. The writer draws an analogy between this bird migration, and the migration of Salmon, and assumes the primary cause in both cases to be the same viz "inherited instinct."

In support of his theory Mr Hutchinson lays down among others the following propositions—in some cases however in very guarded or qualified terms.

- 1. "The Salmon begin by being a fresh water fish purely."
- 2. "As they grew bigger and required more food" they found the small streams inadequate to supply their needs and fell down to "bigger water in search of wider feeding grounds,"
- 3. That in early days these bigger feeding grounds were the lower reaches of the river, and that Salmon today feed still on the same grounds, but owing to subsidence, they are far out at sea.
- 4. "One of the facts that strikes us as most obviously remarkable in regard to the anadromous fishes is their faculty of finding their way back to their natural streams..... On the supposition that the fish, immediately on reaching the sea, because as it were lost in the vast space, a wanderer without sign posts, only going whither the search for food led him, it was difficult indeed to conceive by what mysterious gift or chance he was enabled to return to the river whence he had come; but on the supposition that he holds to the ancient ways of his ancestors, guided along them as the birds are guided they cease to bear the appearance of being due to fortuitous or supernatural agency."

The article evoked a number of interesting contributions—to two only will I refer. Mr G. A. Boulenger (Jan 30 04) sharply controverts several of Mr Hutchinson's propositions, his article contains much matter of interest, but he falls into the common fault of many controversialists—he dogmatises—he starts with premises which he has not proved and calmly proceeds with "therefore". His article has for its object the denial of the proposition that the Salmon began by being a "fresh water fish purely," and he deals with the question upon "zoo-geographical, and paelaeontological lines. He says "the Clupeids, which from the evolutionary point of view, must be regarded as the ancestors of the Salmon, can be traced back to the cretaceous seas, in which they were already represented by forms more or less closely allied to our herrings (Clupea)Of some 200 clupeids known to live at the present day, 90% are exclusively salt water forms. With the possible exception of two species from the Eocene from N. America no fossil fresh water forms are known. Not a single large family of fishes can be said to be exclusively marine, or fresh water, exceptions always occurring; but in most cases it is easy to ascertain, either from the past or present distribution, and better from both, whether this or that mode of life has been more recently taken to. Now having satisfied ourselves that the direct ancestors of Salmonids were Marine [the underlining is mine P.G.] it is important to note that some of the forms of clupeids that persist at the present behave exactly like our salmon and trout.... In the case of fresh water groups of fishes it is well known that their distribution depends in their centre of origin, from which they have spread in every direction. Take the example of the pike, a strictly fresh water family, traced back to the lower Miocene. The common pike extends right across Europe, Asia, and N. America. Thus showing that a remote period, when the configuration of the extreme North permitted a passage from the Old World into the New the fish availed itself of rivers to spread over the whole realm offering suitable climatic conditions--- No such thing is observable in the present distribution of the Salmonids [again the italics are mine P.G.]

Here follows two sketch maps – the one to illustrate the distribution of the pike and the other the distribution of the Salmon, though for some unaccountable reason, it is assumed on the latter, that the distribution of Salmo Salar represents the distribution of all Salmon ignoring all together the Pacific Salmon. To this point I shall presently return.

Mr E, Kay Robinson (Country Life 13th Feb. 1904) followed in due course with an able article reviewing the whole controversy. He says "there can be little doubt that Mr G. A. Boulenger is correct in the facts upon which he bases his criticism of Mr Horace Hutchinson's New theory of the migration of Salmon. The original ancestors, not only of the Salmon, but of all fish were marine. But it by no means follows from

this, that the Secondary Ancestors of the Salmon could not have adopted the habit of ascending rivers to spawn at a date early enough to imbue their descendents of today with the instincts attributed to them."

Having couched a lance with one of Mr Hutchinson's criticisers, Mr Robinson turns his attention to Mr Hutchinson himself—he says—"all the inherited instinct which birds need to perform their annual travel of migration—is an impulse to fly in season—in Autumn when the wind blows cold, and in Spring when it blows warm. It is the same impulse which puts the fish off their feed, and drives the insects to hiding, or contrariwise, makes the fish ravenously bold, and brings out the insects in swarms, and the same instinct which makes the human being think he will stay indoors while the northeaster blows, or tempts him abroad, bulging with the joy of life, when the air of spring is balmy of the soft South West...... The currents of the water correspond exactly in the case of fishes, to the winds of the air where birds are concerned."

I have now as briefly and clearly as possible presented the range and character of the discussion in "Country Life". I do not propose in this paper to deal controversially with what seems to me mistakes in theory or in fact, but in an orderly way to go over the ground in the light of the latest exact knowledge which investigation, research, and experiment have placed at our disposal. I must however make one exception to this general plan, and that in the case of the article contributed by Mr Boulenger. He brings geological evidence to show that the "geological" ancestors of the Salmon, can be traced back to cretaceous seas, and calmly proceeds "having satisfied ourselves that the <u>direct ancestors</u> of the Salmonoids were marine." In levening between our Salmon and his Cretaceous geological ancestor, is a considerable period, represented geographically by the Eocene, Miocene, Pliocene and the Pleistocene, so that it is a case of poetic license to call a fossil of the Cretaceous period the direct ancestor of the Salmon.

I agree with Mr Robinson that Mr Boulenger has proved too much. In my opinion all fish must in the ultimate be traced back to a marine origin, though I have not been able to find any date, or even theory, as to the precise period in the history of our globe, when the water of the great seas first assumed their marine or saline character.

In his comparison between the pike and salmon distribution it appears to me that Mr Boulenger is seriously at fault. He produces a sketch map of the world distribution of the Pike to illustrate his proposition that pike originally ramified East and West from some point in Asia, a proposition which on the face of it seems not only reasonable, but tenable.

Mr Boulenger then proceeds, "No such thing is observable in the present distribution of salmonids" – and to illustrate this remarkable proposition produces a sketch map of the two shores of the Atlantic Ocean, giving apparently the home of origin, about the centre of the N. Atlantic Ocean, in water 2,000 fathoms (4,000 yards) deep, from which point the salmon spread 1,500 miles across the ocean East and West, till they found fresh water to spawn in, in N. America on the one hand, and Europe on the other????

Truly a marvellous production of the imagination, but not science. I reproduce on the following page a rough reproduction of this sketch map.

You will observe that while the <u>argument</u> of Mr Boulenger deals with Salmonoids his <u>map</u> refers only to Salmo Salar, the Atlantic Salmon, ignoring the Pacific Salmon—by far the most important branch of the family both from the point of physiological development—richness in variety—vastness of numbers, and commercial value. Why Mr Boulanger should for the purposes of his argument include the pike of North America and exclude the Salmon of north America I cannot see, but if you follow the same plan with the salmon, as he has done with the pike, instead of finding the origin of the Salmon family uncongenially in the centre of the North Atlantic Ocean we shall find it near the original home of the pike probably somewhere in central and northern Asia, in fresh water instead of salt water.

From the sketch map on the preceding page it is easy to see that while in both the Atlantic and Pacific Oceans, while the 40^{th} parallel is the Southern most point reached by the salmon family—their Northern limit is fixed by ice of the Arctic Seas.

Having thus disposed of my controversial bone—I should like to lay down this preliminary proposition viz that any satisfactory account, or theory of the life history of Salmon must include all ascertained data both of Atlantic and Pacific species. That the knowledge of either to be complete, requires a consideration of the data of the other.

Speaking in geological parlance the salmon is a young thing. At present we do not possess any fossil Salmon. This does not prove that in those far off times, when those forms of which we do possess fossils lived, that in those times no salmon lived—it is however strong presumptive evidence, and is generally accepted as a proof of the comparative modernity of the salmon. In "Game and Food Fishes of America" Jordan and Everman page 116 occurs the following passage, "The Salmonidae are of comparatively recent evolution, none of them occurring as fossils, unless it be in recent deposits. The instability of the specific

forms, and the absence of well defined specific characters may in part be attributed to their recent origin as Dr Gunther has suggested,"

Practically our knowledge of the Salmonidae depends upon what we can learn from the living fish, its habits, physiology, its distribution, the cause, or causes of its distribution, and differentiation, or development. It is a remarkable fact that that though this family of fishes has been known so long, not only as a sporting fish, but as one of high commercial value, the Salmon proper has had more fairy tales told and written about him and less really known about him by the sporting public, than any other fish found in fresh water.

The reason for this lack of knowledge is not because the knowledge is non existent, for there has already been a wealth of investigation and an extensive accumulation of data. But the data is detached, different branches of the subject have been taken up at different times by different men, and often with different objects in view. The British are very inadequately informed of the American, and the American of the British investigations. On the balance it seems to me that we are the losers, there having been such a wealth of matter accumulated as the result of long and patient investigations by American Ichthyologists under the auspices of the Fishery Commission of the U. S. America.

Nevertheless when we are able approximately to systematise what is already known we are still only in the early introductory stages of the enquiry into the Life History of the Salmon. I cannot pretend to do more than to give a rough outline of what is known, for I have neither the time or opportunity to acquaint myself with the many contributions to our store of knowledge on both sides of the Atlantic.

In the first place, for reasons that will presently appear, I propose to give attention to Salmonidae of Western America that is the Pacific slope of North America. The Eastern slope that is the portion of which the river system drains into the Atlantic has no indigenous trout and really only one Salmon, the same as our own, Salmo Salar, on the western side of the continent are found more than a score of trout, all closely related and difficult to distinguish. Drs Jordan and Everman have in their book, already referred to provisionally classed these into three distinct series—

The "Cutthroat" S. Clarkii

The "Rainbow" S. Iridius

The "Steelhead" S. Gairdneri

14 species described

4 " "

6 " "

Most of these illustrated on the screen on a previous paper. For our present purpose I omit all notice of Chars.

The "Cutthroat" until quite recently was known as "Mykiss" and was so named about the middle of the 18th centaury by the Russian observer—Steller—who first discovered it. The true Salmo Mykiss is allied to Salmo Salar and has never been taken out of Kamchatka, see (Game and Food Fisheries pp179).

The cutthroat "is the most widely distributed of all the American Trout, being found throughout Alaska, in all the streams of Washington and Oregon, in the N. W. of California, throughout the rivers of the great basin of Utah and in all the streams on both sides of the Rocky Mountains, until we come to the dessert lands, where the washes of sand made the streams uninhabitable to any trout, and then extending its range Southward in the mountains as far South as Chihuahua, the southernmost point reached by any trout in any country. It is subject to very great variations according to the character of the water, to the food it receives, and to various other less known circumstances. It is however in all this region substantially the same fish. In some places it reaches the weight of 25 to 30 pounds. In the southern most limit of its range it never becomes more than a fingerling. The largest known specimens have been taken in Lake Tahoe, and in the salt water about Puget Sound. As in the case of all trout entering salt water these sea run individuals are more silvery and less spotted than those found in Mountain Streams and Lakes. The presence of salt water in all fishes destroys the black spots and markings, which are found in fresh water, replacing them by a uniform silvery hue. The trout of Utah Lake are more silvery than those that inhabit the surrounding streams." "Salmon and Trout" Jordan pp 17 et seq.

The Steelhead, Salmo Gairdnerii—named after Dr Gairdner of Astoria "In the lower course of the Columbia and in the neighbouring streams the steelhead are entirely distinct from the cutthroat series, while in the Lower Snake River, and in other waters east of the Cascade Range, the two forms of species are indistinguishable being either undifferentiated or else inextricably mixed." (G.F. F. 190) the steelhead is more or less anadromous and migrating like the salmon. It runs from 2 to 20 pounds in weight, where it remains in fresh water it rarely exceeds 5 or 6 pounds. It is an important food fish.

The Rainbow—Salmo Irideus—"are distinguished from the steelhead by their larger scales, and generally by their smaller size, and bright coloration, from the cutthroat series they differ in their large scales brighter coloration, and usually on the absence of red on the throat."(G.F.F. 195)

On the subject of the Rainbow Professor Jordan wrote me as follows:-- "it is certainly the tendency of all Rainbow trout to run down to the sea if they can. The variety or form which we call "Shasta" is prevented from getting to the sea by geographical reasons. Its spawning grounds are in the McCloud, Sacramento and Pitt rivers about Mount Shasta, at a distance of some 300 miles from the ocean, the Sacramento river growing more and more sluggish, and finally muddy and unsuitable for trout. When the same fish is brought into the seaward streams, I have no doubt that it will run into the sea, and in time perhaps to the same extent that gairdneri (the steelhead) does. It is certainly true that we are now witnessing the creation of species of trout. We have had for instance in Purissima Creek near the University (Stanford Leland Junior) a species just in the making. At the mouth of the creek the stream now falls vertically over a high cliff, presenting an obstruction over which the trout cannot pass, and those above the fall are being slowly differentiated from those below, which pass into the sea."

Contrasting or comparing the Steelhead and the Rainbow in his "Salmon and Trout" from which I have already quoted Professor Jordan says—"it is not at all unlikely that the Steelhead is simply a Rainbow Trout which has descended to the sea, grown larger, coarser and acquired different form and habits on account of its food and surroundings. If this be true the very young Steelheads would not be distinguishable from the young Rainbow trout, and I do not know a single structural character of any kind by which the two may be separated. It is one of the unsettled problems—whether Rainbow Trout placed in the ocean, or the river mouth and allowed to feed on the rich food which the Salmon gets, would not in time develop into a Steelhead, if the two be the same. Then Salmo Irideus must drop from our lists because the Steelhead was first introduced to Science and the Salmo Gairdneri is the oldest."

Now in regard to the whole of these three great species of American Trout several conclusions may be reasonably adduced:--

- 1. All American trout have the tendency more or less developed, where not prevented by geographical obstructions, to go down to the sea.
- 2. The sea running trout as a rule are larger, and better fed than those of the same species which are confined to fresh water.
- 3. Sea going trout loose their brightness, and spots and become silvery like the salmon.
- 4. Differentiation and development of species are at this time in active process.
- 5. These several conclusions point to the proposition that the Pacifist Salmon Oncorhynchus in its varied forms, is the outcome from a remote period, of the same process of development now to be observed among the trouts of the Pacific Slopes and shores.
- 6. That the sea running Pacific Salmon has been evolved in recent geological period from the fresh water trout
- 7. That this theory provides the only natural and complete solution to the question "why do Salmon spawn in freshwater?"
- 8. That these same conclusions apply equally to the Salmo Salar and the trouts of Atlantic waters.

Turning now from the consideration of the evolution of species, let us consider the question of the origin—the original home—of the fish or fishes from which these American trout and Salmon have descended.

For a clear understanding of this branch of the subject, some knowledge is required of recent changes, recent that is in geological parlance, though there is little room for doubt that even at the present day changes are proceeding, in the surface of the globe in that quarter. To this end I cannot do better than cite a short passage from "The Voyage of the Beagle" by Chas. Darwin—he says on p. 129 Harmsworth-

"When America and especially North America, possessed the elephants, mastodons, horse and hollow horned ruminants, it was much more closely related in its zoological characters to the temperate parts of Europe and Asia than it is now. As the remains of these genera are found on both sides of the Behring's Straits, and on the plains of Siberia, we are led to look to the North Western sides of North America as the former point of communication between the Old and the so called New World. And as so many species, both living and extinct of these same genera inhabit and have inhabited the Old World, it seems most probable the t the North American elephants, mastodons, horse and hollow horned ruminants migrated on land since submerged near Behring's Straits, from Siberia into North America, and thence on land since submerged, in the West Indies, into South America, where for a time they mingled with the forms characteristic of that southern continent, and have since become extinct." A glance on the sketch map will give a clear conception of this description.

The two most eminent Ichthyologists Proffs. Jordan and Everman in their book already quoted from, say on page 175 "it seems not improbable that the American Trout originated in Asia, and extended its range

southwards."—and then give the probable route being substantially that given for the range of the cutthroat as shown in the diagram.

May it not be that the ancestors of Salmo Mykiss which is allied to S. Salar and found only in Kanchaka. May it not be that the ancestors of Salmo Mykiss are the common ancestors of the Atlantic Salmonidae on the one side and of the Pacific Salmonidae on the other? At present our information of the mainly ice bound coast of Siberia on the Arctic Ocean and of the equally ice bound coast of British North America adjacent to the Arctic Ocean, is very scant, but as (since this paper was written in the year 1906 the North West Passage has been accomplished by private venture) time goes on we may live in the hope that these inhospitable regions may in response to persevering observation give up some of its secret story of the earth movements which have been at the bottom of the distribution of this interesting family of the Salmonids.

I have taken up so much time in the consideration of the ancestry of King Salmon, and I have dealt so fully with him in a previous paper that my references to him now must be brief, though I must not omit all reference to him as several interesting items have since been brought to light. I refer especially to two articles in "The Popular Science Monthly" for Nov. and Dec. 1903 by President David Starr Jordan—reprints of which he has been good enough to send me. On the question of "The Parent Stream theory of Return of Salmon, President Jordan sums up the evidence as follows:- "The general conclusion, apparently warranted by the facts at hand, is that the Pacific Salmon for the most part, do not go to a great distance from the stream in which they are hatched, that most of them return to the streams of the same region, a majority to the parent stream, but that there is no evidence that they choose the parental spawning grounds in preference to any other, and none that they will prefer an undesirable stream to a favourable one for the reason that they happen to have been "hatched in the former"." With a few citations from the December article on "Salmon and Salmon Streams of Alaska" I must close.

The Quinnat or King Salmon, runs in the large rivers especially those having glacial or snow fed tributaries, and runs to the head quarters of the streams. In the Yukon some individuals run each year to Lake Bennett 2,250 miles from the sea. The King Salmon is unknown in Japan there being no ice fed rivers. The Red Salmon runs a long distance—in the Yukon 1800 miles. It always spawns in small streams which run into the head of a lake. It runs in any streams which does not have a tributary a lake with available spawning grounds in the streams at its head. The lake may be a few rods, or hundreds of miles from the sea, but the lake is always present in every stream in which Red Salmon run. It runs in a few lakes in the North of Japan.

The Silver Salmon runs late, ascends the stream for a short distance only, it is not far from its spawning time, its flesh is deteriorated and consequently, altho' a fine food fish has not much economic value. It is common in the rivers of Japan.

The Hump Backed Salmon exists in millions it swarms everywhere in waters near the sea, breeding in lakes, brooks, swamps and brackish estuaries—anywhere a little fresh water is found. It rarely runs in large rivers and in Alaska these fish from three to six pounds may be bought for a cent apiece. Not found in Japan, where it is replaced by an allied species the Masu.

The Dog Salmon runs late and for a very short distance. It is the Sake of Japan and is both salted and frozen. The relative food value may be expressed--Quinmat 5, Red Salmon 4, Silver Salmon 3. Humpback 2. Dog Salmon 1. The canned product has at the present time approximately the same relation of values, except that the aggregate value of the Red Salmon now considerably exceeds that of the Quinmat."

MAINLY ABOUT HORTON.

P. Burn Novv. 1905

"In these days when the halfpenny news paper is a power in the land and the opinions held and expressed by a penny-a-liner are perused by all sorts and conditions of men and women, there is some ground for the fear that we read too much. But in many cases the result is good and in my own case a love of literature dealing with fresh air pursuits has resulted in the perusal of the three published volumes of "Anglers Evenings"—by one who is not a fisherman.

That they have proved interesting in no small degree is due to the merit of the Articles therein, for it is one thing to write papers for the benefit of those of the Angling Brotherhood, but quite another thing to write so as to delight those who know nothing of the craft. Yet a curious deficiency is found in those dove coloured volumes. Out of some 70 papers there are only three dealing with Horton viz "Creeper Fishing", "The Hatchery" and "A plea for the introduction of Grayling into the Ribble". Possibly the intimate acquaintance of the members with Horton may account for this. I an aware that it is akin to carrying coals to Newcastle, to venture to say anything about Horton to the "Manchester Anglers"—I therefore present my apologies at the onset. During the last twelve months interest in Japan has increased and the wonderful and extraordinary adventures, which befell Eberu Ewodu when he visited that distant country many years ago, should result in a phenomenal increase in the sale of the second volume. The climbing perch was new to me, as it may be new to others ignorant of Japan. It is to be noted that the writer of that paper started his journey from Victoria Station and booked direct to Yeddo by the Lancashire and Yorkshire Railway. As the Article is not dated, it is to be presumed that it occurred in pre Ship Canal days, but possibly he may have changed-at Salford. But one goes to Horton also from Victoria, and last August I performed the journey. Three things were responsible for the undertaking. In the first place a chance meeting with the Fishing Secretary in Charlotte Street resulted in an invitation to spend a weekend with him at Horton, secondly my struggles with some roast duck at lunch the same day caused some sensation among the other men seated at my table, and thirdly, the evening found me engrossed in a most interesting book by Leonard Merrick called "Conrad in search of his youth."

The invitation was accepted, for arrangements for a pot-hunting foray at Buxton had fallen through. And here it may be remarked that altho' pot hunting at Golf and Angling have no connexion there are at least some occasions when the material results are equal. I bring nothing home from the links in the way of trophies, it is also true that the only angling member of my family appears to experience similar misfortune when fishing at Horton. There comes into my mind a curious statement made by the late Mr T. E. Pritt that Angling and catching fish had nothing to do with each other. The roast duck which defied the impetuosity of youth recalled the excellent roast duck a la Nicholson at the Lion. But to return to Conrad—if you have read the book you will remember that at the age of 35 or so having so far experienced the many discomforts of poverty he then came into unexpected affluence. An unhappy life in uncongenial company and cheerless surroundings, now impelled him to try and renew the happy days of childhood. The most glorious fortnight of his life had been spent at a little sea side place in company with some cousins. He had the money. The cousins were all alive. He would go to that place take the identical house in which those early happy days had been passed and invite those same cousins to stay with him, and in a word renew his youth! A scheme nobly conceived, but like the gigantic conceptions of Napoleon's later campaigns—it was too magnificent. The cousins accepted. But the house which they had considered a mansion years before they said was "a pokey little hole", draughty and uncomfortable. The garden which had once been a play ground of ample dimensions they did not recognise in the little enclosure with its untidy walls and ill kept beds. The summer house was "ear wiggy", they grumbled because the beach was still the beach, and not a Promenade with a Band.

Conrad was unfortunate in his quest. But if Conrad was unsuccessful—why should my experience be like his? It is true I had not been to Horton for 13 years and that I was 11 years old when I was last there. I would go to Horton. I would wander about with old Walker, induce him to tell me how he ruled a thousand navies with a rod of iron (to say nothing of the strength of his own right arm) and relate the adventure of the missing fingers. We would put up at the "Lion" have roast duck for dinner of course and spend the evening smoking the pipe of peace in the Anglers Room, listening to the noise made by the Saturday nighters in the tap room below. We would hear all about "The Ship that never returned", and finally go to bed, having obtained information vociferated by a score of voices that there would be "Eggs for our breakfast in the morning." Alas! for my castle building, poor old Walker had joined the majority a few years ago. Many were the times he had helped me and carried me when my little legs would not. How we boys used to tease

him. How he laughed when we shouted at him the answer to the old riddle "what makes more noise than a pig under a gate?"

"By Gum" said he it ston's to reason as two pigs'll mak' more noise nor one." And he would chuckle over it all the way from the Lion to the New Inn Bridge. The "Lion" also was no more as of yore, Mrs Nicholson away to live at Studfold and a new host in her stead. At Hellifield en route all was changed, where was the little island on which we played tick 13 years ago? And if the Hon. Sec. (who was one of the party last August) and I had given each other rides upon a luggage truck it is probable that Jimmy would have upheld the glory and authority of his new official uniform and interfered. We went up to Ribblehead and walked down what was left of the Ribble. They told me it was the Ribble but the water was conspicuous by its absence. But if the water had disappeared the walls had not. There are 40 walls to the mile in Ribblesdale I am told—if double the quantity was named I should believe it. These walls are constructed from somewhat peculiar principles, if their purpose is to primarily to prevent people from climbing over them, they must be considered perfect. They do not possess the solidity of the brick walls of a more recent civilisation. Moreover they either lean away from you or lean towards you and the top stones are always loose. If these top stones do not fall on your toes as you laboriously climb up (having first cast your loose impediments before you) they provide material for the avalanche which inevitably slides with you into the bed of nettles on the other side. The Tarn at any rate had not altered in the least, the legendary sheepskin must have been an uncommonly good one. As we approached I had some misgivings, it is true, for I saw at intervals projecting from the land little platforms 15 or 16 feet long. I wondered whether some enterprising Penny Steamship Company had invaded the place and made these their places of call. Enquiry elicited information concerning the purpose for which they were erected, and I was relieved. The boat was actually the same. A new plank or two inside and a liberal application of tar outside appears to be all that is necessary.

They tell me that when this same boat arrived at Horton 25 years ago, the whole village turned (out), the school children were given a holiday, and a grand procession formed to escort it to the tarn. The majority of the inhabitants had never seen a boat before. Today your Hortonian exhibits a supreme indifference to the £1,000 motor cars which rush through the valley.

The tarn in an August evening is a charming resting place. One seems to be so far from the world—from a Manchester point of view. The only sounds came from across the valley as the trains thundered through Selside, and the occasional buss of a motor car thrown across to us by the echoing hillsides. All was peace upon that land. But on or near the water there was discontent. The sun dipped behind Ingleboro', and the famous evening rise came on. Plop! Plop! Plop! The place seemed alive with fish. We could see the widening rings everywhere. Six energetic anglers were stationed upon the stages round the tarn, like men engaged in a competition along a canal bank. They covered rise after rise with accurate and skilful casts. The man from Oldham who occupied the stage on which I sat watching the scene with an interested complacency, wielded a double handed16 foot telegraph pole with a dexterity that deserved a creel full of three pounds. If this evening rise was famous and interesting as an exhibition of piscatory gymnastics it did not appeal in this direction to the energetic six, who wanted fish to take home with them. Not a fish did they get that evening, not even a nibble or a bite, or a run, or a rise, or whatever the proper word is.

Sunday, from time immemorial, has been sent in the same way at Horton. Old Walker would have been greatly grieved had his darlings at the fish house not been visited. Since his time, however, the fish ponds have been made, so we went there first. The assiduous attention, which a bull always pays to strangers as they pass through his domain makes the visit particularly interesting. The ponds were well worth a visit, not only on account of the two year olds therein, but to hear two members engaged in a most learned discourse upon engineering topics, and speak with an easy familiarity of strains of all sorts, levels, buttresses, wind pressures and the properties of cement. Personally, having seen the fish fed, I admired the fine lights on the hills, and commented on the presence in such a secluded dale of rampant commercialism. Poor old Moughton! The lust of wealth has pocked and scarred your ancient heights, smoke rises from your very heart, and covers the countryside. It is sad indeed. A small royalty of one shilling and sixpence per ton on the mineral output, might even reconcile me to the desecration. If you go the shortest way, the distance to the Fish house is not great. It was unchanged. On my last visit the occasion being a Grand Bazaar at Douk Ghyll—the fish house was made into a side show and proved a great attraction. That it drew the crowd, was due, I pride myself in no small degree, to the services of the writer of this paper and in a lesser degree to Walker. This also was in the month of August. We filled the trays with peas, and charged a penny or two pence a head for the privilege of seeing a piscatorial establishment in full working order. Walker had charge of the Fish Tank, for he was much afraid of the visitors feeding his family with forbidden delicacies. The trays and their contents were in my charge and I discoursed (I was eleven at the time) upon the hatchery with all the confidence of superior knowledge, and countenance made cheerful by a desire to please. It is possible

that the innocent visitors may have heard things about fish culture, with which my friend the Fishing Secretary would not agree. If the wondering multitude mistook the peas for ova, on a blazing day in August, it was not **my** fault but **their** ignorance. After all what could they expect for tuppence? Personally I think they got an excellent return for their investment!

In the beck below the Hatchery there were some fine big trout which were quite friendly with Hunt. There is a rumour that they will even eat out of his hand, this may be true, but I did not see it done. In the near future Hunt may be resigning his post, taking on an engagement at the Hippodrome with his performing trout. They will disport themselves in the flooded arena, stand on their heads, turn somersaults, jump through hoops, and perform marvellous feats. One never knows. Is there not in "Anglers Evenings" an article on "The Mind of Fishes"? The Churchyard at Horton has always been a place well known to me. As children we used to climb into the Lychgate, walk along the round topped wall and otherwise amuse ourselves.

Church yards for some reason or other are always playgrounds for children. I went round the East end of the Church to call upon my old friend who used to live at the "Post Office". The old lady, however, who used to make oat cakes for us in the old way, had now alas! also joined the majority. I felt like Conrad, when I found that the friends of my childhood, were no more, Walker, Tom Iron, Downham the Joiner, all great pals years ago, now all gone. Truly there are no friends like the friends of childhood. Happy days! Passed with aknowledge (sic) of a sordid and commercial world, unaware of the struggle for wealth, in which most of us, do the best we can. Even in those days, however, I seem to remember that my weekly pence seemed few and insufficient to supply all my wants.

I read again the inscription on the tomb of David Dowbigging—which some of you may not be so well acquainted with—and may care to know.

Here rest the Remains Of the Rev. David Dowbigging B. A. Of Catherine Hall in the University of Cambridge One worthy (reader) of thy imitation. He was plain, honest and sincere, without moroseness. Sensible without arrogance And learned above those of his age. Without pedantry. He had the consistency of mind enough to be always diligent, And good humour enough to be always cheerful. He had the sensibility to love What he had the reason to refuse. But above all He had Religion enough to give him a reasonable hope Thro' the merits of his Saviour Of rising to Eternal Happiness. He died ye second day of April, one thousand Seven hundred and fifty six In the twenty third year of his age.

In Manchester we possess some striking monuments to the memory of England's greatest. Cromwell gazes sadly at the front door of an hotel, as tho' in want of liquid refreshment to wash the dirt from his lips. Gladstone with outstretched hand, directs the stranger to the Central Railway Station and the mammoth "Booking Office" called The Midland Hotel.

The Prince Consort we provide him with a canopy to shelter him from the rain.

Queen Victoria sits firmly on the Infirmary flags, watching the never ending procession of trains, but this tablet in Horton Churchyard tells us of one who, according to the inscriptions, was greater than all these great people. Many were his virtues, good habits and graces. A notable example of the truth of the proverb—"that those whom the Gods love, die young". A remarkable man this Mr Dowbigging, may the earth rest lightly upon him. Horton has changed. My first visit was made when I was three years old. Since that time many things have altered—increased postal facilities, the telegraph, additional trains per day—not forgetting the "Anglers Train" on Friday evenings—have brought Horton nearer to what we are pleased to call civilisation. The Institute with its electric light, and Billiard table by Riley who makes the championship

tables. The joiners shop with its electrically driven machinery generated by the swift flowing waters of Bransgill. The Lime Works lighted by acetyline and last but by no means least your modern Hortonian macaroni goes to Leeds to the Pantomime. Time was when one was grateful for a paper two days old, sent by a friend in town. On August Bank holiday last I read the latest score in the Lancashire and Yorkshire Cricket Match in an evening paper. George Hirst (*cricketer*) is not unknown to Ribblesdale people.

Even Politicians have been known to worry them with talk of Reciprocity, Retaliation, Preferential Tariffs, Bi-mettalism, and other kindred matters. Horton today is of the world, worldly.

Horton has changed. But still—Horton is Horton. One has only to visit Douk Ghyll, with its wonderful luxuriance of flora and fauna, or to smoke a pipe upon the rocks listening to the roar of the turbulent waters on their headlong rush towards Stainforth Force to love the district and appreciate its charms and beauties.

The many pot holes are interesting and their mysterious streams not only (to) the geologist, but the casual visitor who takes little heed of the scientific treatises which appear in various periodicals concerning such matters. As we paused on New Inn Bridge gazing up the river towards Whernside and the Cam Fells a gorgeous King-fisher shot out from beneath us and flashed upstream, a splash of glorious blue against the brown water. The air is still fresh and pure and good to breathe. The land has not yet been given over to the Jerry builder and the smoke nuisance monger.

The river is still the Ribble, a river possessing a thousand historical memories and a river which will ever remain charming in the mind of every one who has walked along its banks of fished in its waters."

TWO DAYS SALMON FISHING ON THE RIBBLE

By O. S. Wraith. Nov 1906

"Having had the good fortune to obtain permission from the lessee, for two days Salmon fishing on the private length of the Ribble of the Late Earl Cowper at Sawley, I thought it would interest the members of the M. A. A. especially those who seek after Salmon to know the capabilities of our river as regards the salmon fishing below Settle. My permit was for any two days and was granted during the last ten days of the season, which now ends on November 14th.

The fishing extends from Sawley Bridge on both sides to about opposite Sawley Lodge, and then the right bank for about 2 ½ miles, ending just above a pool historically called "Denham Wheel" (Denhams Swirl)—which pool is situated about ½ a mile above the place known as "Pudsey's Leap" (there is a pleasant little fiction connected with this leap.) The upper limit of the fishing being about two miles below Gisburn.

Those who have been to Sawley will know the beauties of the quiet little place. The few natives say that the Inn for comfort and attention is second to none—and I believe them.

Probably very few will have had the privilege of going through the woods on the right bank—if any have, in the autumn time they will have treasured up for ever in their memories the beauties of the scenery. On Sunday Nov. 5th it rained, and rained, and by night every item of my fishing kit had been seen to. Gut in soak, flies tested, minnows polished etc., and all sorts of things stowed away, that the mind might conceive, might possibly be wanted in any in these parts and is fished fly way with a fly rod. On this I soon had a run with some small fish which of course I liked to think was a salmon but soon after hauling a Chubb out with a minnow I had my doubts. Luck seemed not in my way, but looking back now I think I was fishing carefully enough and my thoughts were wandering in the direction of the emergency. I meant to leave nothing undone or unthought of. I put up two rods, fly and minnow, which meant two reels, reels add to the weight I find.

In the dark hours of the following morning through cold drizzling rain I (went) to the station, and duly arrived at Chatburn. No time was wasted, I was soon at Sawley and on the river, which was in perfect condition, there having been a flood the previous evening. I did not fish the lower pools not knowing anything about them—there are I think three fairly good ones—but hasten up the river to a very long pool, just before you come to the first wood. On this I spent a considerable time with the fly, the river however seemed to get slightly dirty, or possibly the occasional glints of sun shine showed it up more, so I on with a spoon, almost the only spinner used pool "Denham Wheel" about two miles higher up the river—with no salmon pools in between. I had often seen this pool when out with the otter hounds, and on other occasions from the other side of the river (Bolton Hall side). It is an ideal Salmon pool, a pool to dream about, a good fall, some rough and an ideal tail end, wooded on both sides, scenery unsurpassed a lovely bit of gravel to fish from, and room, on the side I was on, to get your line behind you, 20 to 30 yards walking and the pool is covered. Hidden a few yards back in a glade there is a form or garden seat which to a tired angler is a great luxury.

To this pool then I went, in wading trousers, two rods etc., etc., light hearted and overflowing with hope. Nobody had fished it or given it a thought—nearly two miles here, fully two miles back and just for one pool its not enticing. It was getting afternoon when I reached the spot, I rested and had lunch, stone ginger beer, bye the way, is very heavy to carry. I fished the pool over with the fly, black body, silver ribbing, and Durham Ranger dressing. The second time down I was into a nice fish of about 7 pounds, though not heavy it gave good sport.

It is well to keep up our reputation as anglers—for truth—this was my first salmon of the year, though I had fished for them nearly a score of days, on different rivers. It was a dull day, passing glimpses of sunshine, and occasional rain. After a time I tried a large artificial minnow and was speedily rewarded by getting into a fish of about 15 pounds. It was not quite as bright as the previous one, but very game, so much so that after 5 or 6 minutes the hook came away. The remainder of the afternoon was blank, save for a run with the minnow across the pool. With a long walk before me and a train to catch, I had to leave. I may say that there are no roads anywhere near the river in this part and you've just got to trudge it.

The next day, Tuesday, I rested, it was dull and looked like more rain and rain it did. Preparing for my second day the Wednesday, I discarded the wading trousers for stockings, intending to keep to the one pool "Denham Wheel". At 4-45 a. m. the following day I was hurriedly dressing—then breakfast—and at 5-45 a. m. I was safe in the train. I walked from Chatburn Station to Sawley and was immediately at work on the river. There had been a good deal of rain and the water was higher than on Monday. I could not conscientiously pass the long pool I had fished before, so I spent a couple of hours on it—for nothing. I

arrived at Denham Wheel about 11 a. m. the water being about 4" higher than on my previous visit. After a few casts I saw a beautiful fish splash out of the water—a few strides down—a cast over him and he took the fly. A heavy fish fresh and clean looking. It seemed to visit each hole in that pool it splashed out four times, diving in with its head to get clear. Judging after this that it was fairly hooked, I felt some relief and looked upon the result as a fair certainty. It allowed me very little rest but at the end of 25 minutes it sulked and bored and was not to be stirred. Now holding on to a game and heavy fish for half an hour, tells a bit on ones muscles, and a doubt entered my mind as to whether the fish was not really playing me. The tail of the pool becomes shallow, the water flowing over the rocks with considerable force, into a long decline of very rough water which it would be madness to attempt to wade. Now in spite of all I could do the fish got into a hole at this tail and it was there it sulked and got its "second health" as it were. Very grave doubts arose as the possibilities of what might happen dawned on me. At ten minutes to twelve, after 30 minutes play the fish came up, felt the stream, and threw its whole weight and strength into this fresh stratagem—and the worst happened. I held on all I could to prevent it going, my tackle was of the strongest, my rod a Hardy's Cane and I meant to decide the battle in the pool, but the fish meant something different, I still held it, but down the rough water it went, taking nearly all my line out. I followed it as well as I could, simply because I had to, I could see no pool below me nothing but rough.

Fortunately it halted, and rest in a little slack water behind a large boulder, evidently it was getting played out and as far as that goes, so was I. However I was still able to wade down, till reeling up, I got level, and then below him. My stockings were not much good but I gave them no heed I had no choice—my mind was made up, to stick to that fish, and my tackle, if I had to swim for it. The fish came out with something of a spurt and tried to make up a bit, but with the current of water was brought along side me, being unable to see below the surface of the water on account of the light, I had only the swirl of the fish, and its tail to guide me. I had my chance however with the gaff—and missed it! Then with a plunge it drifted round a small boulder, and I felt a tug, and it was free. I was not broken but the knot in the fly, had at last slipped and no wonder.

Of course I know that I ought not to have let it leave the pool, but it didn't seek my permission. I can but say I did my best, and gained considerable experience.

A rest, some lunch, a smoke, and a considerable wringing out of clothes, and I was at it again with the fly, after an hour of it, I changed to minnow, and in a few minutes I was into a nice bright sporting fish of some 8 or 9 pounds. This I might have lost thro' the peculiarities of a telescopic gaff, but fortunately was able to tail it, the hooks dropping out of its mouth as soon as the strain was taken off. I let the pool settle for half an hour, and again was quickly into a fish of 12 to 15 pounds. This the third fish of the day was a much tamer character, not showing itself very well—after 10 minutes it broke loose from the hooks. I reeled up and without stirring was into a nice game fish in my second cast, this was a lively one of 15 pounds and gave me an exciting battle lasting twenty minutes. Everything going right, even to the gaff.

The afternoon was going—I had a walk of an hour or an hour and a half—with two fish—and my belongings to carry, I did not wish to loose my way in the wood, in the dark, as I had done on my previous visit. And further, thinking I might get into another fish, and have to see it out, and perhaps add another fish to my load—I decided to leave.

A rather pleasant way of leaving a river a sort of patronising "I won't take any more of you, I'll leave vou there."

No matter how much string you use two salmon are hard to carry. It is astonishing how they will keep slipping out of the bag.

To bed I went that night feeling that all my failures of the year had been too well rewarded, and what further proof is needed—that the Ribble is likely before long to recover its good old reputation as a Salmon river?

The end of Volume Nine—
Amen.