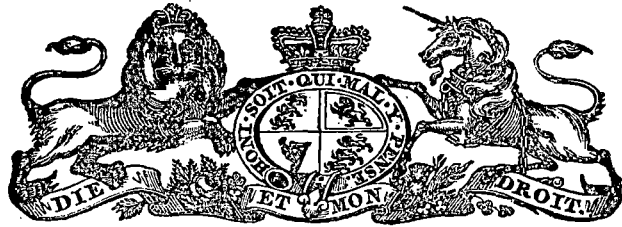


(No. 61.)



1869.

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T A S M A N I A.

LEGISLATIVE COUNCIL.

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**REPORT OF THE SALMON COMMISSIONERS.**

DATED SEPT. 2, 1869.

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Laid upon the Table by Mr. Wilson, and ordered by the Council to be printed,  
September 3, 1869.

## SALMON COMMISSION.

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SIR ROBERT OFFICER, KNT., M.H.A., *Chairman.*

M. ALLPORT, ESQ., F.L.S., F.Z.S.

W. ARCHER, ESQ., F.L.S.

J. BUCKLAND, ESQ.

THE HON. H. BUTLER, ESQ., M.H.A., F.R.C.S.

W. A. B. JAMIESON, ESQ.

CAPTAIN THE HON. W. LANGDON, M.L.C.

R. C. READ, ESQ.

J. H. WEDGE, ESQ.



## REPORT OF THE SALMON COMMISSIONERS.

To His Excellency CHARLES DU CANE, Esquire, Governor and Commander-in-Chief in and over the Island of Tasmania and its Dependencies.

MAY IT PLEASE YOUR EXCELLENCY.

THE Commissioners have much pleasure in reporting that the enterprise committed to their charge continues to progress in a very satisfactory manner.

During the months of October and September, 1867, the great body of the young Salmon and Salmon Trout, comprising nearly 6000 of the former and 900 of the latter—the produce of the Ova imported by the *Lincolnshire* in 1866—having assumed the garb of Smolts, were permitted to make their escape into the Plenty, from whence they, doubtless, soon found their way to the salt water, to which, in company with their elder brethren hatched in 1864, they have since, in all probability, paid another visit.

The Commissioners have been anxious to obtain further evidence of the presence of the Salmon in the Derwent, in confirmation of the testimony detailed in their last Report.

This object they have sought to attain by the capture of some of the fish, and by careful watching of the stream at that period of the year during which it had been found, from previous observation, that they ascend from the lower to higher waters of the River.

In the first of these aims the Commissioners have hitherto been disappointed. Although provided with a variety of nets obtained from England under the advice of the Superintendent of the Establishment, the late Mr. Ramsbøttom, which he deemed sufficient for the object in view, every attempt to use them with effect has proved abortive. They have either been rent by the strong current, or torn and entangled by the rocks and sunken timber by which the bed of the River is encumbered; and the chief result of these attempts has been to show the extreme difficulty of capturing any of the fish by such means. From Mr. Robert Ramsbottom, of Clitheroe,—one of the most skilful fishermen in England, who has always taken a deep interest in the progress of our enterprise,—the Commissioners have received instructions as to the most efficient mode of using the net in the Derwent; but the plan which he recommends is unsuited to our River in its present condition. It is probable that when the fish have become more numerous the first capture by the net will be made on their feeding grounds, in some of those numerous bays that abound between Bridgewater and Hobart Town, where the obstructions that hinder the effective use of the net in the upper waters do not exist.

Nor has the rod been more successful than the net. The dense brushwood that almost everywhere clothes the banks of the stream, added to the obstructions that exist in its bed, seriously impede this mode of capture. Some experienced anglers, after a careful inspection, have declared that until these obstructions are removed the feat of landing a fish so powerful as the Salmon will task the skill of the most expert.

But these difficulties will not deter the Commissioners from continuing their efforts to satisfy the public desire to obtain this crowning proof of the presence of the Salmon in the Derwent. There are other portions of the River where both the net and rod may be applied with more success than in those parts of the stream where they have as yet been used; and there are other modes of capture to which the Commissioners will, at the proper season, have recourse.

If the Salmon had seen fit to establish their spawning grounds in the more accessible parts of the River, or in any of its lower tributaries, some of their offspring in the form of Parr would, doubtless, long since have been captured; but, true to the instincts by which they are guided in all

parts of the world where they exist, they have from year to year ascended to the remote sources of the stream, where there are no human inhabitants to watch or disturb them.

But if the efforts that have been made to establish the fact of the presence of the Salmon by actual capture have hitherto failed, the Commissioners are now enabled to bring forward in its support other evidence of almost equal weight, which, added to that obtained in former years, ought, they conceive, to satisfy the minds of the most incredulous.

During the months of February, March, and April, 1868,—the season at which the fish had been seen ascending the River at various parts of its course by so many intelligent witnesses in the previous year, and when it was expected that they would again be seen moving upwards,—the River was in a condition unfavourable for making observations, having been more or less flooded and discoloured; and it had already been found that the Salmon never showed themselves near the surface of the water except when the stream was low and clear, and unruffled by the wind. Discouraged by this condition of the stream, few attempts were made to watch for the re-appearance of the Salmon, of whose existence in the River almost every one residing in its neighbourhood had already become fully persuaded.

But at the same season of the present year the River was in a condition highly favourable for observation; and many persons who had before been convinced of the existence of the Salmon from the evidence of their own eyes, and had again become anxious to obtain renewed evidence of their return, determined to watch for their appearance at that spot near the mouth of the Plenty, where the fish had so clearly exhibited themselves in 1867, which is particularly described in the Report of the Commissioners, and affords peculiar facilities for observation.

On one of the last days of January last a respectable Farmer, who was angling for the native mullet,—without, however, a thought of the Salmon,—was surprised and startled by seeing a considerable number of large fish rush past the spot where he had just cast his line.

They were subsequently seen in every variety of attitude and in the most distinct manner by many intelligent witnesses, from both banks of the River, on March 21st, 22nd, 23rd, 24th, 25th, 27th, 28th, 29th, 30th; April 2nd, 3rd. On one occasion they were seen by about twenty persons, at the same moment.

On the 4th of April the River had again become flooded, and further watching was abandoned for the season.

A portion of the evidence on which this narration is founded will be found in the Appendix to this Report, and the character and standing of the various witnesses are a sufficient guarantee of the accuracy of their testimony.

It appears to the Commissioners that the evidence thus recorded amply confirms that obtained in previous years, and beyond all reasonable doubt establishes the existence of the Salmon in the Derwent, and their return year after year to the neighbourhood of their birthplace, greatly increased in number and size.

To those persons who have repeatedly seen the fish in the most distinct manner, it must appear strange that doubts of their existence should still anywhere exist. This incredulity arises in a great measure, the Commissioners believe, from the inability of those who have not themselves had an opportunity of seeing the Salmon, to realize the extremely distinct manner in which they have exhibited themselves to those who have borne witness to their presence. One glimpse of what has been leisurely and repeatedly seen by many observers would be sufficient to convert the most incredulous from their unbelief.

It is fortunate for the correctness of the observations that have been made and recorded, that in the waters of the Upper Derwent there exists no fish larger than the Native Mullet, which rarely exceeds half a pound in weight and was never known to reach one pound.

It is true that there are Trout of a large size in the neighbouring Plenty, but none of these had passed into the larger stream in 1867, when the Salmon were first discovered; and, large as some of the Trout have become, they do not approach the dimensions of those enormous fish that have been seen in the Derwent. Although these fish have generally exhibited themselves with only the head and shoulders, a portion of the back, or the dorsal fins alone above the surface, they have yet occasionally been seen to leap completely out of the water, exhibiting their glittering sides to view, and proclaiming themselves to be true Salmon. By the most inexperienced eye alone could the dull, copper-coloured Trout be mistaken for the bright and glittering Salmon.

The Commissioners believe that the surprising increase of the Trout may fairly be received as a measure of the progress of the Salmon. The circumstances by which the latter have been surrounded since their liberation have not been less favourable than those in which the former have been placed.

The chief object of the Salmon in periodically seeking the salt water is to obtain the food with which it abounds and which they cannot find in the fresh stream. The Derwent from a short distance below New Norfolk (where it becomes brackish) to Hobart Town, a distance of 25 miles, abounds or rather swarms with the young of a great variety of fish which, ascending from the deeper water, make this part of the River their breeding grounds.

Within this limit, and the numerous fine bays which it comprehends, the Salmon have, no doubt, found abundance of suitable food; and many years may elapse before they have occasion to descend into the deeper water below Hobart Town, much less to pass from the Estuary into the open sea, where they might be exposed to dangers from which they are exempt in the quiet waters within.

Within the limits to which they have hitherto probably confined themselves they will have encountered few enemies capable of inflicting injury on a fish so powerful and rapid in its movements as the Salmon.

The Brown Trout have continued to prosper without interruption. Those detained in the Ponds for the purposes of propagation have been abundantly fertile, enabling the Commissioners to furnish supplies of ova and young fish for various localities in this Colony, as well as for Victoria, and the Provinces of Canterbury, Otago, Southland, and Nelson in New Zealand, in all of which this valuable fish has now been firmly established.

The small artificial Rivulet attached to the Trout Pond at the Plenty is at this moment studded with the nests of these fish throughout its whole course, containing many thousand Ova deposited during the months of June and July last. From these stores other localities in this and the neighbouring Colonies will continue to be supplied.

The Ova despatched to the various Provinces of New Zealand during two successive seasons—although in most instances unavoidably conveyed by circuitous routes—have reached their destination with trifling loss; and in one instance 800 Ova taken from the Ponds at the Plenty produced in Otago 750 living fish.

This successful transport is due in a great measure to the zeal and attention of those gentlemen who have come to Tasmania from New Zealand for the express purpose of taking the supplies in charge and conveying them to their respective Provinces. The conveyance, both of the Ova and young fish furnished for the Acclimatisation Society of Victoria, has been equally successful.

During the two last seasons, the Commissioners have adopted what they believe will generally be regarded as an improvement in the culture of the Trout. All artificial manipulations have been abandoned, and the fish have been permitted and encouraged to form their nests and to deposit and fructify their Ova in their own natural way. When the Ova have been required for distribution they have simply been taken from under their gravelly covering, as the eggs of a fowl are gathered from the nest. Treated in this manner, almost every Ovum has proved fertile, while under the artificial mode of fecundation, however carefully the operation may have been performed, considerable numbers were always found to be barren and unproductive.

In the Plenty there are now four generations of the Trout, and they must henceforth go on increasing at a ratio which is beyond calculation.

During the months of June and July last, at every suitable spot for a distance of several miles along the course of the stream, several, often many pairs of fish of all sizes, were to be seen, at all hours of the day, busily engaged in forming their nests and depositing their spawn. Some of these fish have attained a large size. One captured in 1867 was accurately measured and weighed before being returned to the water, and was found to be  $9\frac{1}{2}$  lbs. in weight and  $26\frac{1}{2}$  inches in length. Others approaching the same dimensions have since been caught and returned to the stream.

Besides Victoria, the Provinces of Otago, Canterbury, Nelson, and Southland, in New Zealand, where the Trout has been successfully introduced by means of Ova and young fish transmitted from the Ponds at the Plenty, the fish have been established in the following streams in this Colony:—

South Esk.  
North Esk.  
St. Patrick.  
North West Bay River.  
Ouse.  
Clyde.  
Lachlan Rivulet.

Dry Creek.  
Dee River.  
Bagdad Rivulet.  
Sorell Rivulet.  
Jones's River.  
Brown's River.  
O'Brien's Creek.

This list will be increased during the present season ; but the Commissioners do not deem it expedient to introduce the Trout into some of the most important Rivers of the Colony,—such as the Huon, the Mersey, the Forth, and the Gordon,—until the Salmon, for which they are admirably adapted, has first been firmly established in their waters.

Having thus briefly narrated the progress of the Salmon and Trout, the Commissioners have peculiar satisfaction in reporting the result of their efforts to rear a third species of the Salmon family—the Sea Trout, *Salmo Trutta*, a fish little inferior in value to the *Salmo Salar*.

Among the Ova imported by the *Lincolnshire* in 1866 were several thousand Ova of the Sea Trout, for which the Colony is indebted to Mr. James Youl's thoughtful concern for its interests. From these Ova about one thousand young fish were successfully reared ; which, after remaining in the Ponds from June, 1866, to October, 1867, having then generally become Smolts, were set at liberty and allowed to escape into the Plenty, from whence, in company of nearly six thousand of their migratory congeners the *Salmo Salar*, liberated at the same time, they no doubt in due season found their way to the salt water.

A few pairs of these valuable fish, however, were detained in captivity by the Commissioners, and placed in a small Pond formed for their reception, in which it was hoped that they would live and multiply their numbers without visiting the salt water. This hope was founded on their knowledge of the fact that the Sea Trout lived and attained a considerable size in some large lakes in Norway, Sweden, and the Hebrides,—having no communication with the sea. They had not then before them, nor have they since heard of, any instance where this fish had ever been successfully reared from generation to generation confined in a small artificial Pond. The experiment thus undertaken has proved successful.

In the month of April last it was discovered that some of the fish were gravid with spawn, and on the 25th of June the first pair began to form their nests and to deposit and fructify their Ova in the small rill attached to their Pond. Other pairs soon began the same operation, and the process was completed about the end of July,—resulting in the production of several thousand healthy Ova, from which a considerable number of young fish will soon be forthcoming.

Although there can be little doubt that the large body of Sea Trout that were set at large in 1867 have continued to thrive, and will this year have multiplied their numbers, it is satisfactory to the Commissioners to know that they now possess the means of rapidly promoting their increase, and at no distant date furnishing supplies for other localities.

In the month of September last the Commissioners were called on to report the death of Mr. W. Ramsbottom, the excellent Superintendent of the Salmon-breeding Establishment, who had discharged the duties of that office from the commencement of the undertaking with much zeal and ability. The Commissioners have already, on more than one occasion, borne testimony to the value of Mr. Ramsbottom's services ; but they cannot omit the present opportunity of again expressing their sense of this lamented gentleman's great merit, and the loss which they and the enterprise in which they are engaged have sustained in his death. The Commissioners have not hitherto considered it necessary to recommend the filling up of the vacancy thus arising.

The management of the Ponds, and the whole process of fish-rearing, are now well understood by the Commissioners ; and by the untiring attentions of Mr. Robert Cartwright Read of Redlands, one of their number, on whose estate the Ponds are situated, aided by Mr. John Stannard, who was trained as his assistant by the late Mr. Ramsbottom, and has displayed great aptitude for the duties he has to perform, the establishment has been conducted with undiminished efficiency.

It is evident, however, that at no distant date, when the undertaking has become more developed, further assistance will be required, and it will probably soon become necessary to obtain the services of a practical Fisherman from England in addition to a Superintendent.

2nd September, 1869.

ROBERT OFFICER, *Chairman*.  
MORTON ALLPORT.  
J. BUCKLAND.  
H. BUTLER.  
W. A. B. JAMIESON.  
W. LANGDON.  
ROB. CAR READ.

## APPENDIX.

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*27th March, 1869.*

As this afternoon appeared very favourable for salmon-watching, I rode up and took my stand on the old look-out log near the mouth of the Plenty. We began at five. The evening was calm, and the water like a lake, without a ripple. At 5:30, I, Mr. Fulton, and Mr. Stannard distinctly saw a fish leap out of the water towards the bank: it looked to be about three feet long, the thickness of a man's thigh, and rivalled silver-plate in its brightness. Mr. Read had his head turned aside at the moment, but saw the commotion in the water; and we watched the eddy for three minutes as it gradually approached us, forty yards from where the Salmon leapt. It appeared to me long for its girth, and may have been a spent-fish.

At 5:35 all saw a rise: the fish did not show itself. At 5:43 we all saw a great commotion, and either the fin or tail of the Salmon. At 5:45 all saw one rise. At 6 two-rises close together. There were two others which none of us claimed, being at too great a distance, and we were not certain, as at this time there were puffs of wind; and when that is the case, it is a difficult matter to decide: indeed it is quite essential that the water be smooth.

(Signed) JNO. A. MOORE.

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*27th July, 1869.*

The Assistant at the Ponds having reported to me that on the evenings of the 21st, 22nd, and 23rd March last he had seen Salmon leaping in the Derwent, in the same reach in which they had been seen during the two previous summers, on the evening of the 24th March I went down to the Derwent with Stannard, and watched; and about the same hour, between half-past six and seven, we saw fish again rise and rush about, as if chasing small fish. On the 26th (Good Friday), I again went to the Derwent, taking a neighbour, Mr. J. Thomson, with me; but the evening turned cold, and a little wind sprang up, so that no fish rose that evening that we could see. On Saturday the 27th, Dr. Moore, Mr. James Fulton, Mr. Stannard, and myself went to the Derwent to watch, and four or five fish rose, one with part of the back out of the water, and another was seen to leap nearly out of the water by Dr. Moore and Mr. Fulton. On Sunday, the 28th, Mr. Thomson, Mr. Trollope, Mr. J. T. Read, Mr. Fulton, Miss M. Terry, Miss Russell, Mr. J. R. Blyth, Masters Thomson and Terry, and myself, were all on the rocks below Mr. Sharland's hop land, at Charlemont; and two other groups were on the Redlands side of the Derwent—consisting of eight or ten people, including Stannard,—when we saw three or four fish rise—one showing his back fin only, and another showing a good portion of his back. Again, on the Monday and Tuesday, the 29th and 30th, the fish were seen. After that date there was a slight fresh, and the fish have not been seen often since.

(Signed) ROBERT C. READ.

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*Shooter's Hill, 17th August, 1869.*

The only time I have seen anything of the supposed Salmon was when talking to Sir Robert Officer. He told me he had just seen a large Salmon jump out of the water several times, and asked me to watch for a short while. Before looking for many minutes, we saw a large fish leap almost completely out of the water twice, causing a great disturbance.

(Signed) WILLM. M. BROMBY.

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*Charlie's Hope, 17th August, 1869.*

On the 11th April, whilst I and a number of others were watching the Derwent below Shooter's Hill for Salmon, I three times saw the ripple of a large fish for about thirty yards, and once there was about two feet of the back of the fish quite out of water; after which it disappeared with a splash.

(Signed) JAMES A. THOMSON.

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*Glenleith, 18th August, 1869.*

I saw eleven or twelve very large fish rise, about one hundred yards below the mouth of the Plenty, the latter end of January this year, which I believe to be Salmon, from their size. I should think they were 20 lbs. in weight each.

(Signed) CHARLES MATTHEWS.

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*Glenleith, 19th August, 1869.*

During the month of April last I saw in the Derwent on several occasions the commotion made by large fish. A close and intimate knowledge of the River (extending over a period of thirty years) enables me with confidence to assert that, until the last two seasons, no such fish were known to exist. I think I may, therefore, fairly conclude that the disturbance was caused by Salmon.

(Signed) W. A. B. JAMIESON.

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*Slateford, 20th August, 1869.*

Residing on the banks of Derwent, near the reach of the River where the Salmon have been so often seen, I have frequently gone down to watch for them. In the month of March last, on three or four different evenings, I saw several very large fish sporting at the surface of the water. One of them made as great a splash as a dog would have made jumping into the water. On one occasion my mother and sisters were with me, besides a great many other persons.

(Signed) MARTHA C. TERRY.

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*Slateford, 20th August, 1869.*

On one occasion, during March last, I was present with my daughters on the banks of the Derwent, when I saw a very large fish swimming near the surface, and making a great commotion as if a dog had been swimming across.

(Signed) ELIZABETH TERRY.

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*Salmon Ponds, 20th August, 1869.*

I saw Salmon in the Derwent, below the mouth of the Plenty, on the evenings of the 21st, 22nd, and 23rd March last; and again in company with Robert Read, Esq., and several others, on the 24th, 25th, 27th, 28th, and 29th of the same month. Of several of these fish I saw the whole back from the head to the tail, and believe that some of them were 30 or 40 lbs. in weight. One fish leaped clean out of the water, showing the whole body, which was bright and glittering.

I have been employed at the Ponds for upwards of five years, and am well acquainted with the difference between the Trout and young Salmon.

I am certain that the fish I saw were Salmon and not Trout, the largest of which now in the Plenty do not approach the size of those I saw in the Derwent.

(Signed) JOHN STANNARD.

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*20th August, 1869.*

Last autumn, hearing that Salmon had been seen, a party consisting of my brother, R. Read, Mr. Trollope, Mr. J. Blyth, several others, and myself, stationed ourselves on a rock in the Derwent, about a quarter of a mile below the junction of the Plenty, for the purpose of watching for them. After waiting about half an hour, we saw something rise to the surface of the water and dart along a distance of twenty yards or so, causing quite a wave. This was followed at short intervals by the same appearances three or four times; and I feel convinced that what I then saw must have been caused by a Salmon, as no other fish sufficiently large to cause such a commotion exists in that part of the Derwent.

(Signed) JOHN T. READ.

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*Falls, New Norfolk, 21st August, 1869.*

About the end of last March I, being one of a party of over twenty people, saw several large fish, apparently a yard long (under water), I think five in number. One of them drove a small fish out of water, and I saw it catch it as it returned. I did not see either of the large fish jump out. I saw the above below the River Plenty, off the banks of Redlands.

W. DAVIS.

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*Shooter's Hill, 23rd August, 1869.*

On Sunday, March 28th, hearing that some large fish had been seen leaping in the Derwent on several occasions during the preceding week, I started from the Plenty Church, after afternoon Service, in company with Mr. R. C. Read, of Redlands; Mr. J. T. Read, of Kinvarra; and several others, to watch for them. We crossed the River, and took up a position upon a reef of rocks jutting out into the Derwent, in the vicinity of Mr. Sharland's hop garden, and commanding a view of the River, from this island at the mouth of the Plenty to the bend above Shooter's Hill. I kept a good look-out, both up and down the River for



some time in vain; but at length my attention was attracted by John Stannard, who was on the opposite side of the River, to a point about 30 or 40 yards above where I was standing, where there was a great commotion in the water, evidently caused by the rush of a very large fish across the River in the direction of the southern bank. I did not see any part of the fish above water, but the ripple extended nearly to the rocks on which I was standing. It was not long before there was another rise. After a lapse of some minutes there was a third rise nearer than either of the others, but still up the River; and this time I lay down on the rocks, so as to bring my eyes as nearly to the level of water as possible, and distinctly saw the dorsal fin and part of the back of a large fish rise out of the water and then disappear with a splash, which rippled the water right up to the rocks where I was stationed. Subsequently there was a fourth rise, but I did not see the fish; and, after watching for some time longer unsuccessfully, I left.

The portion of the fish which I saw appeared to be more than a foot in length, and the entire fish must have been quite two feet; therefore it could not have been one of the native fish;—neither was it a large Trout; for I have frequently, both at home and in the Ponds here, seen Trout rise, and the rush of these fish was so different that the most casual observer could not mistake one for the other. I am, therefore, fully convinced that what I saw were some of the Salmon which have returned from the sea, and that the perfect success of the experiment is only a question of time.

(Signed) EDWARD F. TROLLOPE.

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*Hallgreen, 4th April, 1869.*

On Friday, the 2nd instant, at 5.15 p.m., Mrs. Officer and myself, standing on the north bank of the Derwent, at a spot overlooking the now celebrated reach of the River, which has long been a favourite resort of the Salmon on their return from the sea, and at a distance of about 25 yards, saw a Salmon rise to the surface with a great splash, raising wavelets that extended to both banks. After coming to the surface the fish swiftly swam towards the bank on which we stood until it reached the overhanging brushwood, under which it disappeared. In one part of its course it raised its head and shoulders for a few moments above the water, indicating a fish of very large dimensions. Several Mullet that leaped out of the water before it in terror looked like mere fry when compared with their huge pursuer. A few minutes after this fish had disappeared a second rose, at a somewhat greater distance, creating a similar commotion in the water. At this second exhibition Mr. W. Bromby, of Shooter's Hill, was present. After another brief interval a third fish rose near the same spot, disturbing the water in an equally conspicuous manner.

(Signed) ROBERT OFFICER.