

fact that eels migrate to the sea where in the course of six to eight weeks their sexual organs attain their full development when the old males as well as females die after having accomplished the reproductive act; there is no scientific ground, to the best of my knowledge, which would lend support to this assumption. What was considered as only probable by Von Siebold and Jacoby is, as it appears, assumed by Cattie to be proven.

Cattie further repeats Jacoby's suggestion, that perhaps as a consequence of an acquaintance with the experience of Günther referred to by Darwin, that in almost all fishes the male is smaller than the female, it occurred to Syrski to investigate the smaller eels. This assertion is without foundation. Syrski was led to his discovery without having had any hints from others. In his paper cited above he remarks as follows upon this point: "So I selected for my investigations the smallest eels I could possibly find, reflecting as I did so upon the fact that in many species of the animal kingdom the male is smaller than the female." Syrski writes me complaining bitterly that any one should compare this clear expression with the former and regard it the same, and that he knew nothing of the views of Günther and Darwin, with which he was moreover made acquainted only through Jacoby's paper.

Finally, as regards the distinction of the male from the female eels by external characters, those sent me from the Schleswig coast during the month of November presented such great differences in their coloration that the sender, the Royal Fish Inspector Hinkelmann, could indicate beforehand the number of each sex.

The males were distinguished by a striking bronzy metallic luster, while the females of the same size were of an almost uniform dull steel-gray color. Amongst the males a number of examples were found measuring 45 centimeters long, while Syrski found none over 43 centimeters in length. In Comacchio Jacoby was so fortunate as to find a specimen 48 centimeters long.

**OFFICIAL PAPERS RELATING TO THE PROPOSED INTERNATIONAL FISHERIES EXHIBITION AT EDINBURGH IN 1882.**

DEPARTMENT OF STATE,  
*Washington, August 1, 1881.*

SIR: I inclose herewith, for your information, a copy of a dispatch of the 15th ultimo, from the vice-consul at Leith, with the inclosures, relating to the international fisheries exhibition to be held at Edinburgh, in April next. Any remarks you may deem proper to make for the information of the vice-consul will be communicated to him.

I am, sir, your obedient servant,

ROBERT R. HITT,  
*Assistant Secretary.*

SPENCER F. BAIRD, Esq.,  
*Secretary of the Smithsonian Institution, Washington.*

No. 191.]

CONSULATE OF THE UNITED STATES,  
*Leith, Scotland, July 15, 1881.*

SIR: I have the honor to inclose two communications I have received regarding the international fisheries exhibition to be held in Edinburgh in the month of April next, and I shall be obliged by your furnishing me with the information asked for in the circular by the exhibition committee.

I have the honor to be, sir, your most obedient servant,  
A. McCASKIE,  
*United States Vice-Consul.*

The Hon. JAMES G. BLAINE,  
*Secretary of State, Washington, D. C.*

[Inclosures.]

1. Circular by Archibald Young, commissioner of Scotch salmon fisheries, dated July 7, 1881.

2. Circular by the committee of the international fisheries exhibition, Edinburgh, dated July 7, 1881.

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No. 1.

EDINBURGH, 22 ROYAL CIRCUS, *July 7, 1881.*

SIR: I beg to inclose a circular drawn up by me and approved by the joint committees of the town council, the Highland Society, and the Scottish Fisheries Improvement Association, who are making arrangements for holding an international fisheries exhibition in Edinburgh in April next.

That circular, as you will see, is intended for the heads of fisheries departments in foreign countries, and I shall be much obliged if you will kindly inform me who is at the head of the fisheries in the country which you represent, in order that I may send him one of the circulars.

I am, your obedient servant,

ARCH. YOUNG,  
*Commissioner of Scotch Fisheries.*

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No. 2.

INTERNATIONAL FISHERIES EXHIBITION,  
*Edinburgh, 22 Royal Circus, July 7, 1881.*

SIR: We have the honor to inform you that an international fisheries exhibition will be held in Edinburgh in the month of April next.

The exhibition will be open to exhibitors from all countries, and is intended to include, as far as possible, objects illustrative of or connected with the fisheries of the world, such, for example, as models, drawings, and photographs of boats used in fishing and of steam-engines adapted for fishing-boats; models of fishing-boat harbors and of fishermen's

houses; nets, lines, and fishing-tackle of all kinds both for the sea and inland waters; piscicultural apparatus; live fish in tanks; collections of stuffed fish and aquatic birds; life-saving apparatus, fog-signals, and lights for fishing-boats; fresh fish, cured and tinned fish, and preparations for preserving fish; models of fish passes and ladders and other similar objects.

We shall esteem it a favor if you will bring under the notice of those engaged in, or connected with, the fisheries in your country the fact that such an exhibition will be held therein April next; and if you will also kindly inform us whether you are likely to send us many contributions.

An answer to the above may be sent to Archibald Young, esq., commissioner of Scotch salmon fisheries, 22 Royal Circus, Edinburgh.

We have the honor to be, your obedient servants,

Sir I. R. S. MAITLAND,  
*Barrister,*

WM. SKINNER,  
*City Clerk, Edinburgh,*

F. N. MENZIES,  
*Secretary to Highland Society,*

ARCHIBALD YOUNG,  
*Advocate, Commissioner of Scotch Salmon Fisheries,  
Honorable Secretaries to International Fisheries Exhibition, Edinburgh.*

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**NOTES ON THE MACKEREL FISHERY OF 1881.**

**By CAPTAIN S. J. MARTIN.**

GLOUCESTER, MASS., *July 26, 1881.*

DEAR PROFESSOR: There appears to be a new school of mackerel on the coast. The vessels had lost the mackerel and could not find them. For a week they did not get many. The mackerel that were here were inshore, in shoal water. To use the seine, some of the vessels went offshore as far as Cash's Pound. There were plenty of mackerel ten days ago. They were driven to within 5 miles of the shore. For the last two days there have been plenty of mackerel 5 miles off Thatcher's Island. The last fish are of better quality. Three-fourths of the mackerel packed yesterday were No. 2. There were a very few large ones among them. The vessels are doing well. Yesterday there were 13 sail of vessels, with 3,500 barrels. To-day there were 11 sail, with 2,960 barrels. One vessel was out a week and caught 400 barrels. One vessel is in from Block Island with 100 barrels of large mackerel. The schooner Edward Webster is in from Block Island with 90 barrels of large mackerel. The schooner Ossipee is in from the bay of Saint Lawrence and reports no mackerel; that is good news for the fishermen. The prices of the fish are as follows: They were sold to-day at \$4 a barrel with the barrel; mackerel packed sold for \$5.50 a barrel for No. 2; \$3.50 for No. 3.