

**WEST AFRICAN FISHERIES,
WITH PARTICULAR
REFERENCE TO THE GOLD
COAST COLONY**

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West African Fisheries, with Particular Reference to the Gold Coast Colony by C. A. Moloney

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C. A. MOLONEY

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WITH PARTICULAR
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International Fisheries Exhibition

LONDON, 1883

WEST AFRICAN FISHERIES

WITH PARTICULAR REFERENCE TO

14 !

THE GOLD COAST COLONY

See *connected* *by*
CAPTAIN C. A. MOLONEY, C.M.G.

"Bait the hook well; this fish will bite."

"It is lawful for you to fish in the sea, and to eat what ye shall catch,
as a provision for you and for those who travel."

LONDON

WILLIAM CLOWES AND SONS, LIMITED

13 CHARING CROSS, S.W.

1883

International Fisheries Exhibition,

LONDON, 1883.

*Exchange
Writ. of Chicago
5-26-30*

CONFERENCE ON 24TH OCTOBER, 1883.

ON WEST AFRICAN FISHERIES, WITH
PARTICULAR REFERENCE TO THE
GOLD COAST COLONY.

IN explanation of my acceptance of the invitation of the Executive Committee of the International Fisheries Exhibition to write a Paper on "West African Fisheries, with particular reference to the Gold Coast Colony," I must ask to be allowed to preface what follows by an acknowledgment of the fact that whatever knowledge of the subject I may possess is confined mostly to the breakfast and dinner table; and I am doubtful whether in my shallowness or taste I am an exception.

When I ventured to undertake this Paper, it naturally first occurred to look about for information, and to thus endeavour to reap a harvest on the brains of others; but to my inquiry of unscientific and worldly friends as to what they knew of the fish fauna, the invariable answer I received was—"At present, my dear fellow, cod is in season," or some like communication. "As regards that awful place West Africa, comparatively nothing has been written, for the general belief is that even fish won't live there."

Now, on the contrary, much has been written. The fauna literature applicable to West Africa is extensive, although scattered, and I am, in consequence of limited

time, and of appreciation for the patience of my kind listeners, unable to carry out an original intention to refer in detail to it; yet I may hurriedly allude, as convenient references for any future enthusiastic disciples, to—

The 'Geographical Distribution of the Zoological Record.'

Günther's 'Catalogue of Fishes.'

Günther's 'Study of Fishes.'

Dr. Savage's 'Study of the Ichthyological Fauna of the Ogooué' (in Gaboon), 1880.

Dr. Rochebrune's 'Fish Fauna of the Senegambia,' 1883.

To our shame, zoological work and its record are making headway in other Possessions than our own. Look to the admirable works just quoted of Doctors Savage and Rochebrune. They have but recently come into my hands, so that time, even if space did so, will not admit of my taking advantage of them.

Of the zoological division of the earth's surface as proposed by Mr. Sclater, the Ethiopian region stands forth as including Africa south of Sahara, Madagascar, and the Mascarene Islands, also southern Arabia.

Then again as to the fauna of fresh-water fishes, Dr. Günther has proposed the division into zones, among which stands the equatorial zone, noted by the development of Siluridæ, and characterised as far as the African region is concerned by the presence also of *Dipnoi* and *Polypteridæ*, *Chromides* and *Characinidæ*, being numerous, with *Mormyridæ* present and *Cobitidæ* absent.

This authority has further divided the equatorial zone into four regions, one being described as African, with which we have now more to do than with any other, but which cannot according to him well be treated as to its fish fauna as absolutely distinct; for there "exists, for instance, a great affinity between the Indian and African

regions ; seventeen out of the twenty-six families or groups found in the former are represented by one or more species in Africa, and many of the African species are not even generically different from the Indian," and as the majority of these groups have many more representatives in India than in Africa, it has been assumed "that the African species have been derived from the Indian" stock, but even to such an assumption there are exceptions.

The African fresh-water region comprises, according to Dr. Günther's arrangement, the whole of the African continent south of the Atlas and the Sahara, but for the purpose of this Paper, in which I treat of the marine fauna as well, I would dwell generally on the western coast line of that Continent lying between 30° N. lat. and 35° S. lat., for within such latitudes lie not only the coast line and adjacent waters, but also the Canaries, Cape Verde Islands, Fernando Po, Princes Island, St. Thomas and Annobon, to which I would like to make a brief reference.

I am, apart from interest, the more induced to so act as "the difference between the tropical and southern parts of Africa consists simply in the gradual disappearance of specifically tropical forms, whilst *Siluroids*, *Cyprinoids*, and even *Labyrinthici*," which are peculiar to the warmer latitudes "penetrate to its southern coast"; thus "no new form entering to impart to South Africa a character distinct from the central portion of its Continent."

Whilst deciding not to encompass in this Paper widely spread comparisons even as far as the African region goes, extending in the north-east as to its fauna by the Isthmus of Suez into Syria, "the system of the Jordan presenting so many African types that it has to be included in a description of the African region, as well as of the Euro-Asiatic," I may say that two hundred and fifty-five species

of known fresh-water forms inhabit it, contracted into thirty-nine families or groups, of which fifteen are represented in the African, as against twelve in the Indian region. Further, the African species, as compared with the Indian, are represented in the proportion of two to five, due, it is advanced, to the greater uniformity of the physical condition of the African continent, and to the almost perfect continuity of the great river systems, which take their origin from the lakes in the centre.

"This," says Dr. Günther, "is best shown by a comparison of the fauna of the Upper Nile with that of the West African rivers. The number of species known from the Upper Nile amounts to fifty-six, and of these not less than twenty-five are absolutely identical with West African species. There is an uninterrupted continuity of the fish fauna from west to the north-east, and the species known to be common to both extremities may be reasonably assumed to inhabit also the great reservoirs of water in the centre of the continent. A greater dissimilarity is noticeable between the west and north-east fauna on the one hand and that of the Zambezi on the other; the affinity between them is merely generic; and all the fishes hitherto collected in Lake Nyassa have proved to be distinct from those of the Nile, and even from those of other parts of the system of the Zambezi."

"Africa, unlike India, does not possess either alpine ranges or outlying archipelagoes, the fresh waters of which would swell the number of its indigenous species; but at a future time, when its fauna is better known than at present, it is possible that the great difference in the number of species between this and the Indian regions may be somewhat lessened."

To give a more extended but brief comparison of the fresh-water fauna of the African, as against the other regions, I would quote that:

"The regions with which Africa (like India) has least similarity are, again, the North American and Antarctic. Its affinity with the Euro-Asiatic region consists only in having received, like

this latter, a branch of the *Cyprinoids*, the African Carps and Barbels resembling, on the whole, more Indian than Euro-Asiatic forms. Its similarity to Australia is limited to the two regions possessing *Dipnoous* and *Osteoglossoid* types. But its relations to the two other regions of the equatorial zone are near and of great interest."

And in the affinity of the fresh-water fishes, as regards Africa and South America, I must trespass on your patience by asking to be allowed to read as follows :

"The existence of so many similar forms on both sides of the Atlantic affords much support to the supposition that at a former period the distance between the present Atlantic continents was much less, and that the fishes which have diverged towards the East and West are descendants of a common stock, which had its home in a region now submerged under some intervening part of that ocean. Be this as it may, it is evident that the physical conditions of Africa and South America have remained unchanged for a considerable period, and are still sufficiently alike to preserve the identity of a number of peculiar fresh-water forms on both sides of the Atlantic. Africa and South America are, moreover, the only continents which have produced in fresh-water fishes, though in very different families, one of the most extraordinary modifications of an organ—the conversion, that is, of muscle into an apparatus creating electric force."

The lagoons, or inland waterways, that run parallel to the sea, especially on the Guinea coast, presenting, as regards their formation, such an interesting geological study, afford a grand and rich field for the study of the brackish-water fauna, among which are mentioned, so far as I may specially give, in connection with the equatorial zone, the *Raiida*, *Sciænida*, *Polynemida*, *Caranx*, *Chatoessus*, *Megalops*, and *Syngathida*.

Of lagoons I may give here the opinion of the authors of 'To the Gold Coast for Gold,' which is expressed as follows :

"The formation of these characteristic African features, which either run parallel with, or are disposed at various angles to the coast, is remarkably simple. There is no reason to assume with Lieutenant R. C. Hart that they result from secular upheaval (page 186, Gold Coast Blue Book, London, 1881). The 'powerful artillery with which the ocean assails the bulwarks of the land, here heaps up a narrow strip of high sand bank, and the toils of the smaller streams are powerless to break through it, except when swollen by the rains. They maintain their level by receiving fresh water at the head, and by percolation through the beach, while most of them are connected with the sea."

Next as to marine fishes. Of the shore-fish—term applied to the fish inhabitants of the immediate neighbourhood of land either actually raised above, or at least but little submerged below the surface of the water—of the equatorial zone, Dr. Günther states that as regards the tropical Atlantic and Indo-Pacific fauna, the differences are far less numerous and important than between the fresh-water or terrestrial fauna of continental regions. The majority of the principal types are found in both, many of the species being even identical; but the species are far more abundant in the Indo-Pacific than in the Atlantic, which is attributed to the greater extent of archipelagoes in the former. He continues—

"But for the broken and varied character of the coasts of the West Indies, the shores of the tropical Atlantic would, by their general uniformity, afford but a limited variety of conditions to the development of specific and generic forms, whilst the deep inlets of the Indian Ocean, with the varying configuration of their coasts, and the different nature of their bottoms, its long peninsulas and its archipelagoes, and the scattered islands of the tropical Pacific, render these parts of the globe the most perfect for the development of fish life."

"The boundaries of the tropical Atlantic extend zoologically a few degrees beyond the northern and southern tropics; but as