

## 161.—THE FISHERIES OF MALTA.

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[Dispatch No. 142 to the State Department.]

The governor of Malta, in a communication relative to the Maltese fisheries, transmits a report on fish-culture, made by a board appointed by the government to report on the fishing regulations of Malta, and also a report made by Professor Gulia on the same subject. These reports I herewith transmit. The governor expresses the hope that Professor Baird will find in the reports inclosed sufficient information to enable him to afford to the fish board and the Maltese people information on the culture and preservation of the fish of Malta, which will be of interest and value to all concerned here. The fish question is a very serious one, as year by year the supply has been falling off and the prices increasing, until now the poorer classes of Maltese can seldom afford to indulge in the food that ought to be cheapest and best in these markets.

The nature and character of the currents and bottoms of the bays and coasts of the Maltese Islands are, I believe, well explained in Lieut.-Commander Henry H. Gorrings's book, entitled "Coasts and Islands of the Mediterranean Sea," Vol. III, published at the Government Printing Office, Washington, in 1879. The portion of the volume that treats on Malta begins at page 83.

UNITED STATES CONSULATE,  
Malta, August 23, 1885.

## REPORT ON THE FISHING REGULATIONS OF MALTA.

The complaints made generally by the several fishermen, principally owners of ground seines ("tartanoni"), in regard to the regulations published on November 14, 1873, seemed to apply especially to the paragraphs following each of the articles 1, 2, and 6, prescribing certain additional limits to that kind of fishery from April to July, inclusive; and also to the interdiction of certain nets, which will be specified hereafter, and which, as they asserted, caused no injury to the bottom of the sea and captured no fish before maturity; whereas, on the other hand, the use had been conceded of certain instruments which they said were highly objectionable because of their disturbing the bottom of the sea and capturing multitudes of young fish and driving them away from our ports.

Having thus determined the nature of the complaint, our next duty was that of considering attentively the regulations, for the purpose of

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\* See also page 400 of this volume.

ascertaining whether the above-stated complaints were well grounded, and, if so, to suggest what, in our opinion, would reconcile the interests of all parties, and whether any measure could be adopted in furtherance of the very laudable object principally kept in view in framing the regulations, namely, the increase of this important article of food.

With regard to the restriction to fishing in certain localities from April to July, inclusive, we beg to state that, keeping in view the object of the regulations (namely, that of preventing the capture of fish before their development is attained), inquiries were made in certain disinterested quarters as to whether, in the localities referred to, fish were ever captured as stated, inasmuch as the fishermen themselves maintained that young fish do not seek any great depth of water. From these inquiries we learn that practical men support our views, namely, that during the above period young fish from shallow waters retire to deeper ones in order to repair to a cooler temperature; and that, moreover, it was the presence of young fish in these and similar localities which attracted in considerable numbers to our ports and all around our coasts schools of migratory fishes, such as mackerel ("pizzintun"), pelamid ("palamit"), and germon ("alonga"), which used to visit our seas in great numbers, but which now are of unusual occurrence in these waters.

The lessening in numbers, moreover, of the non-migratory fishes (namely, those that are hatched, grow, and fix their abode in our ports or along the coasts of these islands), such as the wrasse, the sea-bream, the gray mullet and red mullet, the bass ("spnott"), and other fishes which are in esteem for the table with us, is daily becoming more evident.

Under the circumstances, we are compelled not only to admit the reasonableness of the restriction in question, but also to express our hope that in course of time these nets will be entirely prohibited. Indeed, nothing short of such a measure, which we understand was lately carried out in Sicily, will succeed in putting a stop to the immoderate and incessant capture of fish, which capture is so detrimental to the interests of all parties. Still, the extreme poverty of the seiners, who are above forty in number, and their ignorance of any other trade, induce us, on the other hand, to hope that they may be allowed to use their nets as prescribed in articles 1, 2, and 6, without subjecting them to the additional restriction contained in the paragraphs following each of those three articles; on condition that their instruments be at once seized on their infringing any of the articles referring to ground seines in the regulations, and, moreover, that the license be granted only to them personally, so as not to increase their number, by which measure the Government will be enabled, when in course of time their number is extinct, to prohibit these nets altogether in the principal harbors.

With regard to the second complaint, relative to the prohibition of certain nets technically called "ghazel tal sardin," "ghazel tal lacci," and "terriha tal xilep," we beg to state that as their use is limited to

certain seasons for the capture of migratory fish, and considering both the largeness of their meshes, which does not admit of young fish being captured, and the circumstance of their hanging down curtain-like through only half the depth of the water in certain localities, or even when reaching the bottom their causing no injury to the spawn that might possibly be found at the bottom of the sea, we are of opinion that their use can be allowed without prejudice to the multiplication of fishes.

The last complaint refers to the objectionable use of the trawl-net ("gangamo"), as it disturbs the bottom of the sea; to the use of the net known generally under the name of "mendila" on account of its small meshes; and to certain oval-shaped rush traps technically called "nassi tal mulett," or "nassi tal ghalf," whose meshes being very small, and baited as they usually are with biscuit-dust and rancid cheese, and laid in shallow water and at the mouths of sewers, attract and capture great numbers of fishes, some of which are only half an inch long. The havoc made being so evident, we do not hesitate to recommend their total prohibition and that a severe penalty be inflicted in case of their use.

This complaint refers also to the trammel-net ("parit") being allowed to be cast in any locality within the harbors. As it is generally admitted that these nets frighten and drive away the fish from our ports, we recommend that they be prohibited altogether inside the Great Harbor and Marsamuscetto and opposite the entrance to these places to the distance of half a mile, and that their use, together with that of the net called "tond tal plamti" in other localities; be granted by an annual license subject to such restrictions as may be deemed proper.

In order to further one of the most important objects of the regulations in preventing the capture of young fish, we recommend that an article be added, visiting with a severe penalty any one found in possession of such fish (commonly called "torbia"), and authorizing their seizure on discovery. In order to facilitate the execution of such a regulation, we append hereto a list of the non-migratory fishes with the respective length under which the fish are to be regarded as "young."

*List of fishes considered young when less than the length respectively specified.*

Kind.	Length.	Kind.	Length.
	<i>Inches.</i>		<i>Inches.</i>
Sea-perch ("burkax")	3	Red mullet	3
Bass ("spuott")	5	All sea-breems, such as the bogue ("vopa"), the common sea-bream ("sparlu"), and the gilt-head	3
Comber ("sirrau")	3	Gray mullet ("mulett")	4
Dusky perch ("cerna")	5	Wrasse ("tird")	3
Stone-bass ("dott")	5	Rainbow-wrasse ("ghirasa")	3
Dentex ("dentici")	4		
Mendole or cackerel ("xurraf")	3		

## REPORT FROM DR. G. GULIA.

Mr. S. Cachia Zammit states that by permitting the use of the trawl-net called "gangamo" and the casting-net called "terriha" in certain localities, and by extending the area of the seines ("tartanoni"), he has reason to believe that several fishermen would not be satisfied. He may be right, for fishermen are seldom satisfied with what is granted them, especially when they are induced to believe that all restrictions in fishing are vexatious and useless, and that all the machinery of capture should be allowed without any limitation of time and space.

Since the publication of the fishing regulations, some ten years ago, the use of the "parit," then an unlawful net, was granted them outside and inside the harbors, even on prohibited areas, with very slight restrictions. The use of the net called "mendila" was also conceded on this area to procure shrimps for bait. Shrimping is now carried on in Marsascale and in Marsascirocco chiefly by women. The surface nets called "gbazel tal lacci," and some kind of rush nets ("drajen"), were also granted. Fishermen here now asked for the "gangamo," and with the view of furnishing them with more shrimps I have recommended, not without some degree of hesitation, that its use may be granted in certain localities, for the number of anglers having lately increased, the supply of shrimps, which constitute the chief bait for the anglers, became insufficient. This fact induced me to advise the government to grant licenses for the use of the "gangamo" or beam-trawl net, which has always been an unlawful net, even, I believe, in the time of the Grand Masters.

Speaking on the various implements of fishing, Mr. Holdsworth, secretary to the royal sea-fisheries, in a very interesting work on fishing (London, 1874), writes: "It is well known that the beam-trawl net (gangamo) is a ponderous instrument which hashes the fish that it captures and destroys a large number that it does not capture." All this is well known to our fishermen. I could not, therefore, recommend to the governor the use of such an instrument without restriction. Notwithstanding that the fishing regulations are now reduced to very slight restrictions, I would not be surprised if after the new licenses other petitions should be presented to the governor for further concessions, namely, the use of "tartanoni," "terriha," and "gangamo" in all localities. But by allowing the use of these nets there would surely follow a decline, perhaps a complete destruction of most of the non-migratory fishes.

Some supply of fresh or brackish water which empties into the sea seems to be of importance to the health and growth of some sorts of marine creatures. Such bottoms, which are always muddy, are covered by a seaweed called *Phucagrortis major* ("harira"), and is more or less supplied with eels, gray mullets, prawns, shrimps and other crustaceans, and mollusks, besides other marine productions suitable for

the wants of the younger fishes, especially in the sheltered bays of Misida, Marsascala, and Marsascirocco, where the *Phucagrorthis* occupies a large area. These bottoms are called "ghejun" by the Maltese. To these grounds most of the gray mullets run up to deposit their spawn, and when hatched the young fish remain several months on the same bottoms to attain their full growth, and on these grounds the gobies ("imzazen") build up their nests.

With the view of preventing these fish from being improperly destroyed, and of protecting especially spawning and immature fish, the use of the above-mentioned destructive nets was prohibited on such areas so munificently supplied with animal life. When such implements are drawn along the bottom, the *Phucagrorthis*, which is very brittle, is broken in fragments, which by their decomposition give off gases inimical to animal life; stones are removed under which small fish seek concealment and safety; the mud is disturbed, rendering turbid the water, which thus becomes unfit for the maintenance of animal life; a considerable number of the fish are caught and others are destroyed; the nests of gobies with their contents are disturbed; and thousands of invertebrates, which constitute the chief food of the fish, are also destroyed by these nets.

I cannot conceive how Mr. Zammit could have gone so far as to assert that he does not believe in the possibility of destroying the spawn and small fish by any existing method of fishing. He quotes authorities and facts which are not applicable in our case, for Professors G. O. Sars and A. W. Malm (1876) refer to the fisheries off the coast of Norway, where most of the esculent species in special demand (as the cod) do not deposit their spawn on the bottom, but drop it in the water at a considerable distance from the bottom.

It is also well known that the mackerel-spawn ("cavall") is specifically lighter than sea-water, and that consequently it floats on the surface like that of the cod. I attribute the fluctuation in the reproductiveness of this species, which ten years ago was caught in great shoals, and which is now seldom seen in our markets, to the facility with which its ova can be destroyed either by fish or birds. From these facts Mr. Zammit deems himself authorized to establish general rules and consider useless all fishing regulations. "There is no doubt," says Mr. Holdsworth, "that if some species spawn on the surface, others spawn at the bottom of the sea." I refer Mr. Zammit to the works of my friend Prof. A. Costa, of Naples, who has given full details of the favorite places of fishes for depositing their spawn, with the view of showing him that his conclusions are not based on scientific observation. I have never seen floating eggs in the harbors and creeks of Malta, or aquatic birds preying on them, during 26 years of careful investigations, especially in the Bay of Marsascala. I do not believe that there are any good grounds for complaining that the above-mentioned nets should

remain unlawful in the localities covered by the *Phucagrortis*. It is a prohibition that does not aggrieve fishermen, for the fisheries on these small areas are not remunerative; on the contrary it does good, for it protects the fish from being caught before maturity, and when mature they are more readily sold in the markets. I hope that Mr. Zammit will be fully convinced that the government is protecting the multiplication of our non-migrating species, on scientific and practical principles. Mr. Holdsworth remarks that "we should fish with economy, and above all we should fish in such a manner as will not wantonly waste the spawn of our best table-fishes. At present the waste of spawn is so enormous as to be incalculable, which may be said of all fishes, even of those which we least esteem for food purposes."

The "gangamo," the "terrieha," and the "tartanoni" will soon be allowed indiscriminately on bottoms called by fishermen "trix," which signifies rocky bottoms with occasional sands often covered by the *Caulinea oceanica* ("alca"), such as all the bays of San Paolo a Mare, Birzebbugia, and all other creeks and bays having such bottom. I have advised that the area for the seines should be extended all over the rocky bottom ("trix") of Marsascale, Marsascirocco, and San Giorgio. I have also suggested that licenses shall be given for the use of the "terrieha" in all localities where fisheries with the "tartanoni" can be practiced. I foresee that some amateurs, who fish both for amusement and profit, will probably push fishermen to ask the governor to make lawful the use of the "terrieha" on the areas of the *Phucagrortis*; but as I have already expressed my opinion on the subject, I do not deem it necessary to repeat that on similar bottoms the use of this net should remain prohibited.

As regards deep-sea and coast fishing, there are no restrictions whatever. I would recommend the governor to encourage as much as possible deep-sea fisheries, for in deep waters fish are obtained in large quantities and of good size. I believe that the boats and especially the implements of our fishermen are unsuited to the pursuit of the immense shoals of fishes that abound in the Mediterranean. I would, therefore, respectfully advise the governor to appoint a commission with the view of extending and improving our fisheries and fishing gear. When Sicilian fishermen, furnished with valuable machinery of capture, come to our waters, at a considerable distance from the coast, they catch great quantities of fish, and our markets are then fully supplied with the best species of the Mediterranean.

With the purpose of furnishing anglers with more bait, I would recommend the government to give special permission for fishing for marine worms and other invertebrate animals in places where such fishing has heretofore been prohibited.

JULY 14, 1884.