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THE DECADENCE
OF THE
INDIAN PEARL FISHERIES.

ITS POSSIBLE CAUSE.

BY

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THE DECADENCE OF THE INDIAN PEARL FISHERIES.

ITS POSSIBLE CAUSE.

My object in writing this small treatise is to provoke further enquiry and to find out the real truth of what is at present, and has been for two centuries nearly, involved in mystery. The Hon'ble H. S. Thomas in his admirable report on the Pearl Fisheries in 1884, has gone deeply into the subject, but without however arriving at any satisfactory conclusion.

It may therefore be perhaps deemed presumptuous that a mere amateur like myself should re-open the question. It is one, however, of such extreme interest, and wrapped in such mystery, that I hope I may be pardoned for attempting to throw a new light on a subject which so many learned men have so far failed to solve.

Having been exiled for over three years on the island of Ramesweram, and for the greater part of the time having been the only European man on the island, I have had ample time for ruminating. The result of my cogitation is, that I believe the mystery of the disappearance of the pearl oysters from the known banks is capable of being solved by what in Australia is called "prospecting around." These fisheries which were in full swing in Marco Polo's time in 1298 A. D., were an annually recurring event, and the whole coast of Tinnevely and Madura was known the world over as "The Fishery Coast."

In those days the fisheries were of enormous value, and were seized afterwards by the Dutch and Portuguese who seem to have made large profits from them.

We have interesting accounts of the pearl fisheries in 1293 by Marco Polo; about 1563 by Caesar Frederic, a Venetian, and in 1700 by Father Martin, a Jesuit Missionary. It is interesting to observe that the *modus operandi* is practically the same in all three accounts, and remains so to this day. Marco Polo states the depth to have been from ten to twelve fathoms, whilst Caesar Frederic gives it at from fifteen to eighteen! In our own time it must be remarked that according to Captain Phipps' statement* the depths are from four to ten and a half fathoms.

The first record we have of a failure in the fishery was the one described by Father Martin in 1700, in which he states that "only a few thousands were taken on the first day by all the divers together, and a day or two afterwards not a single oyster could be found. It was supposed by many that strong currents had suddenly set in from some unknown cause, and covered the oysters with layers of sand." He further states that the results of the failure were most ruinous. The first fishery under the East India Company was in 1784, just a century ago, and this proved a failure, the cause of which is involved in mystery. Now, what we have got to discover if possible, is the why and the wherefore of the sudden stampede, if it may be so termed, of the oysters in 1700: if we succeed in this, I take it we shall come near finding out the sole cause for all the succeeding blank years. To commence, the pearl oyster's habits are migratory, that is proved beyond all question, and Mr. Thomas states "The subsequent migrations must be voluntary to escape from uncongenial surroundings."† Now, I argue that the primary cause of the disappearance of those oysters in 1700, was to get away from the uncongenial surroundings, to wit, the divers and their boats; and I further argue that had the sea around for a mile or so been properly prospected in deeper water, the runaway Pintadines would have been arrested.

* Appendix B. in the Hon'ble Mr. Thomas' Report. † Clause 27 of his Report.

The Hon'ble Mr. Thomas states "I conclude that a pearl oyster is not likely to be dislodged by the force of wave action or current, and that if it moves, it moves voluntarily."* I feel perfectly sure then that if as Martin states, there were some undercurrents, the oysters would not have remained to be choked with sand, but would have cast off their moorings, and either walked, or been borne away by the current. In this theory I am partially confirmed by Captain Campbell of the West Australian barquentine *Janet*, which was here some time ago. He is an old experienced "Pearler." I asked him "Do you believe that pearl oysters travel?" his reply was "I know it; I was anchored over a bank one night, and the next morning not a single shell could be found"; he then went on to explain the search, and the bank was found some time after, about half a mile away, as well as I can remember. This will if true corroborate my theory of the failure of 1700 being due to a stampede.

It must be conceded that if a pearl oyster is allowed to have sufficient instinct to detach itself so as to get away from one uncongenial surrounding, it ought to be able to do so when its instinct scents danger, for the bivalve is essentially of a retiring habit. It may be asked, why do not these stampedes oftener occur? I reply, that they are occurring yearly. Take for example Captain Phipps' report of the inspection of the Athombadu Par.

1881. Large quantities of oysters of one year age, with sooram in some places, and covered with weeds.

1882. No oysters; sooram in some places.

1884. Large quantities of oysters of two years age, with dead small ones.

It is very strange that in 1882 the large number of oysters that were there twelve months previously should have so entirely vanished, and that two years subsequently they, or others, should have re-appeared. We are told

* Clause 20 of his Report.

that sooram does not do much damage to oysters of a year old, so that it was not the sooram that destroyed them. I hold that some natural cause, lack of food, or the inconvenient neighbourhood of some enemy caused the whole body to march off, and probably they will be found by going out into deeper water.

To effectually prospect deep water of course bespeaks the aid of a diving apparatus, and an experienced European diver. The Hon'ble Mr. Thomas attempted to explore beyond twelve fathoms but not very successfully unfortunately. Now here is where I hope to win again. *It is a known fact that in the Persian Gulf, the largest and finest pearl oysters are found in the deeper water; if so there, why not here?* It has never so far as I am aware been tried. Deep water is not so subject to currents, and the oysters can rest in peace, at all events without much fear of their enemy, man. As far as I can understand, the Government has been working on the same old lines, year after year, and in the same old places which have been down in the charts for the last forty-five years, and the oysters have been dodging them about for the last twenty-five years, sometimes here, sometimes there, and sometimes nowhere at all, until they have finally settled down on the Tholayiram Par, where being under the eye of Captain Phipps there is no fear of their being molested until wanted. Lots of reasons have been put forward to account for the decadence of the fishery, none of which can, I venture to think, have much to hold on to. Skates or rays may be very fond of a meal of *Avicula meleagrina fucata*, but I take it that that is no newly developed taste on their part, and that their forbears were just as fond of the bivalve in Marco Polo's time, and all the succeeding years until 1700, as they are now. Sand is another bugbear held out, and Mr. Thomas (Clause 54) has satisfactorily proved this to be a fallacy. I go further (and was verbally corroborated by Captain Campbell) in saying

that pearl oysters *sometimes bury themselves* to escape an enemy. It is a bold assertion I admit, especially as Dr. Kelaart holds on to the destructiveness of the sand. If, however, some bivalves are able to bury themselves, I do not see why others should not. I myself have often witnessed the common bivalves *Donax trunculus* and *Donax denticulatus*, which are also gasteropods, bury themselves in the sand; and until it is *proved* that oysters cannot do the same, I shall hold the opinion that they can and do, and that that is one reason for their temporary disappearance from a bank. The laws of nature are immutable, and nothing will ever make me believe that a few Skates, and an occasional disturbance of the bottom of the sea are going to exterminate the oysters, and so to capsize the arrangements which God Almighty made at the beginning of the World, viz., for everything to increase and multiply. No, these, and other enemies of the pearl oyster were only elements in the great principle for keeping down the undue increase of this particular family. The most natural thing to suppose, is, that the molluscs have changed their feeding ground, and have sought pastures more retired, and more distant from the busy haunts of men. I hold that were the deeper seas carefully prospected by experienced European divers, such discoveries would be made *as to corroborate in their entirety the ancient reports of the fabulous riches of the "Fishery Coast."*

It will be observed that the failure in the fisheries is almost synchronous with the advent of the English to the Southern Districts. Now comes our argument, and I hope the Hon'ble Mr. Thomas will pardon me for differing with him on this one subject, and that is as to "Poaching." I have no such blind faith in the simplicity and trustworthiness of the toilers of the sea as seems to be held by most authorities. On the contrary I firmly believe that it is to their duplicity and cunning that we are indebted for so many blank years. It must be remem-

bered that in the early ages when the fisheries were the monopoly of the Pandyas Kings, or the Sethupathis, or whatever dynasty held sway at the time, no man durst call his soul his own; and we may feel pretty sure that any one caught poaching would have been made a severe example of, by some refined mode of torture. By the fear of this the fisheries flourished exceedingly. The oysters were left in peace all the year round, probably being only examined occasionally as to their fitness for being fished. When, however, the autocratic rule of the ancient kings was changed for the milder Government of the Western nations, the fear of death and torture was not before the eyes of the simple fishermen, and *from that period dates the commencement of the decadence of the fisheries.* I hold that they are, and ever have been poached, and shamefully poached, from the time our rule commenced, and that it is owing to their constant molestation by the fishermen of the coast villages, that they are so constantly on the move. I will not allow that they are being exterminated, or even dying off in greater proportion than any other denizen of the deep, but when a bank of oysters begins to understand that big stone anchors are dropped down into their midst every day, and that men come down and remove some of their number several times each day, they realise that it is time to slip their cables and sheer off to some other spot. The natural instinct of self-preservation would alone induce that course.

In the ordinary course of my duty I have sometimes to inspect the coast as far as Valinookum point, nearly forty miles South-west of Paumben; during my tours of inspection, I have observed that there seems to be far more of wealth in some of the coast villages than can be accounted for by the small amount of trade carried on by them, and I attribute part of this wealth to the poaching habits of the natives. The Hon'ble Mr. Thomas objects that ten thousand oysters cannot be smuggled

away, but I would beg to point out that the contents of those ten thousand oysters would go into any ordinary snuff box. Of course I do not mean it to be understood that wholesale poaching goes on, on any organized scale, but fishermen in twos and threes to wile away the time waiting for the fish to bite, do undoubtedly indulge in a few handfuls of oysters, and it is this constant harrying and worrying, I maintain, that causes the oysters to shift their quarters. Individuals will not give up their chance of present gain, although illicit, for a problematical general scramble; it is the case of the bird in the hand. Mutukuruppan and Kallymuttu are two fishermen, brothers, they start out after their cold rice, ostentatiously get their lines ready in their canoe, and paddle away to their fishing ground; there they drop their stone anchor; presently one observes that it is warm, and he would like a bathe; over the side he goes, down by his mooring rope to see what the bottom is like, he brings up a handful of oysters and gives them to Thamby; then Thamby thinks he would like a bathe, and he goes down also and brings up a fist full. When they are tired they get back into the canoe and open their spoils, taking out what pearls they can find, and pitching the shells back into the sea. This sort of thing goes on day after day, and year after year up and down the whole coast, and this will partially account for the dead shells so often found on the banks. Is it to be wondered at that oysters take alarm at this constant invasion of their domain, and naturally seek some other place of rest? I know that there is truth in this little picture that I have drawn, because natives have told me that such things do go on.

I am borne out in all my statements of the probable stampede and its cause by Dr. Kelaart in his Report to the Ceylon Government, dated 24th September, 1857, of which I give extracts:—

(1st.) The pearl oyster is more tenacious of life than any bivalve mollusc I know, &c.

(2nd.) It has locomotive powers beyond any idea which can be formed from any former observations.

(4th.) That the pearl oyster will move about in search of food if the locality in which it is originally placed is not rich in its natural supplies.

(6th.) That if the water is agitated to an inordinate degree, the oyster will leave its old mooring and seek another.

Dr. Kelaart also bears me out in the theory that I have formed to account for the dead shells. In his report of March 1858 he says "I have also gone through many of the parts of this year's banks, and found, *wherever the divers had been there were many dead shells*, and only a few dead shells were found from those parts that have not been yet fished." Here then we have it proved by a clever and learned expert that oysters are endowed with sufficient instinct to know when they are in danger either from natural enemies, or failure in their commissariat, and are ready at the slightest notice to slip their cables and make tracks for some other port. Have we not just reason then to suppose that the circumstances under which the pearl oysters existed, having so materially altered for the worse under the benign rule of the English, the oysters instead of diminishing in numbers as is supposed by some, are simply exercising the instinct of self-preservation, and trying all they know to keep out of the way? And I must say that they are pretty successful.

It does not of course come within my province to presume to offer any advice to Government, but I cannot help thinking that if the existence of the pearl oyster is to be ameliorated, the suggestions offered by the Hon'ble Mr. Thomas, if acted upon, would go a great way towards attaining the desired end: these are contained in his summary of suggestions, and are numbered, 1, 7, 12, 19, 20, 23, and 24.

Dr. Kelaart waxes almost pathetic in his report to his Government, which is deserving of the most serious attention as being the work of an eminent scientist. He

says: "If Government desires to have a steady and not precarious revenue from pearl-oyster fisheries, let good laws protect the beds already known, and those that are now forming, and let means be adopted to secure their increase and growth."

Protection is exactly what they require, so that they may be allowed to rest and grow in peace on the ground which they first select, instead of being harried about from place to place, until they are finally driven into deep water and lost.

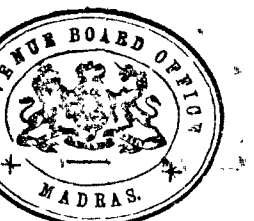
From the foregoing pages I hope it will be seen that the conclusions I have arrived at concerning the decadence of the Pearl Fisheries in India, are that neither rays, skates, nor currents, nor any other natural enemy than mankind, can be held responsible for the disappearance of the bivalves from the banks.

That the circumstances under which the fisheries were carried on in ancient days having greatly changed since the advent of the English, which conferred absolute liberty on the people, the oysters being frightened from their accustomed haunts by the depredations of the coast fishermen, are continually shifting their camps, and are finally driven into deep water, where if properly prospected for, they will in all probability be found.

Cause.—Poaching.

Effect.—Departure for safer haunts in the deep sea.

J. P. JAMES.



Proceedings of the Board of Revenue
(Land Revenue).

Dated 17 October 1887.

Excess No. 3839, Miscellaneous.

Re H. S. Thomas Esquire F.R.S., F.L.S.

Read the following letter from J. P. James Esq.
Post Office, Pamban, No 313 dated
26 September 1887.

I have the honor to
inform you that I am forwarding for
your inspection per banyan post a
box of oyster shells, all of which
were found on the Poona channel
and Shundigalle bays, with the
exception of the four large single shells
these last I picked up on the beach
about half a mile east of Shundigalle
point, some six weeks ago.

J. P. James

They appeared to be quite fresh at the time and were very little broken; the oysters were probably brought in in a seine, and being opened and the contents taken out, the shells were thrown down. From careful personal enquiries I am more and more confirmed in my opinion that until the Ramnad Zamindar authorities are prohibited from issuing fishing licences of any sort, it would be hopeless to attempt to protect the pearl oysters at this end of the Gulf. The Ramnad Zamindar has leased the ^{coastal} fisheries for five years at Rs 2400 per annum. If Government has no power to prevent this, it would pay to take the fishery over at that rental, and under proper supervision it would probably become quite as profitable as at Tuticorin, and the oysters would

would be allowed a rest, as divers would only be permitted in certain places. I feel sure too the divers would much prefer working under Government as they would then be certain of an equitable division of profits. During the North East monsoon quantities of bay for Shonis came over here, ostensibly to catch sea fish, but I have been informed that they have bottom nets with which they go out into eight and ten fathoms of water, outside the islands and drag for anything they can find.

These men should be prohibited from coming over to this coast at all. If I could have a steam launch placed at my disposal I would very soon clear the

the sea of these marauders, and would be able to go out and prospect for the Pearl banks which I am morally convinced exist on the south side of this island. The chank contractor himself, and several divers I have spoken to all agree that no bottom fishing should be allowed outside three fathoms.

Read also printed pamphlet on the decadence of the Indian Pearl Fisheries by the same officer.

Dated 29. August and received 12. October 1887.

Resolution.

These papers will be forwarded to the collector of

Gunnelly

Gunnelly for remarks, his special attention being invited to the question of habitual poaching.

Of the shells sent to the Board for inspection the 4 large single shells were those of mature Avicula fucata, the others were young and belonged to the same genus, but not to the pearl bearing species fucata.

How the four unpaired shells of mature Avicula fucata came where they were found is not proved; it does not seem safe therefore to draw any conclusions from their presence there. They may equally have come from the somewhat

recent

recent Ceylon fisheries

(True copy and extract)

Ministry
of Agriculture

To The Collector of Linnemully
with 3 copies of the
pamphlet.

The Revenue Secretary to
Government with one
copy of the do -

M^r J. P. James.

See

20/11/88
14.7.99
27/10/88

Revenue 1887. *De Pt.*
Board of Revenue.
MADRAS.

ROSEY
(Land Revenue).

No. 8424.

GOVERNMENT

The Secretary to
Government.

19 OCT 87
REVENUE DEPARTMENT

W/10

18 Oct. 1887. *incd*
Proceedings, dated 17th October 1887.
No. 3839. Misc.

Subject.

Forwarding to the
Collector of Simeon
for remarks, letter and
a pamphlet received
from the Port Officer
Pamban, relating to
the Oyster shells found
in the Poona Channel
for

Record
15/10