M.R.O. 1—77,006—8-6-37.

(1) Number of pages_____

(2) Date of repair_____

(3) Initials of the Referencer_____

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No. 1478 Press Mis.

Dated 25-10-1872.

Not to be folded or roughly handled

1478

Proceedings of the Madras Government, Revenue Department,
25th October 1872.

Read again the following Proceedings of Government :—

11th Sep. 1867,	No.	2,140.
27th May 1868,	,,	1,468.
12th Aug. ,,	,,	2,151.
4th Feb. 1869,	,,	306.
30th April ,,	,,	1,185.
25th June ,,	,,	1,812.
19th Nov. ,,	,,	2,989.

Read also the following :—

No. 223. Proceedings of the Board of Revenue, dated 18th December 1869, No. 9,290.

Read the following Proceedings of the Madras Government, dated 19th November 1869, No. 2,989, Revenue Department.

ABSTRACT.—*River fisheries in Madras Presidency.*—Board of Revenue requested to give effect to the orders of Government relative to the protective measures suggested by Dr. Day.

IN the above Proceedings the Government instruct the Board to carry out the orders previously conveyed in Government Order, 25th June 1869, No. 1,812, regarding the preservation of fish. In their order of the 25th June the Government, while adhering to their opinions in favour of Dr. Day's protective measures, permitted the Board, in some respects, to modify the rules proposed by that officer.

2. Under this authority the Board propose to distinguish between the fisheries in salt-water creeks and those in inland tanks and streams, with a view to retaining the leases of the former in the hands of the resident fishermen, instead of allowing them to be rented out to strangers.

3. The Board are of opinion that it is necessary to some extent to modify the proposals of Dr. Day in respect to the restriction in the case of nets having meshes of less than a certain circumference, as from the reports since received from the different Collectors the Board have reason to fear that Dr. Day's propositions, if carried out in their integrity, would result in a large sacrifice of property amongst the fishing population; in fact, that it would amount to the confiscation of nearly the whole net property of the country, and would entail much hardship and suffering on some of the poorest classes of the people.

Godavery District.	Malabar.
Kistna.	Vizagapatam.
Salem.	Kurnool.

4. The Board beg to submit letters on this point from the Collectors of the districts noted in the margin.

5. The Board cannot admit the correctness of Dr. Day's assertion in paragraph 40 that fishing nets only last a year. At least the Board would recommend that Dr. Day's proposal be so far modified as to substitute three inches for four as the limit for the size of a net's mesh, and to exempt casting nets and prawn nets altogether from the restriction.

6. At the same time they submit, for the approval of Government, a set of Draft Instructions which they propose to issue to Collectors on the subject.

7. *Draft Instructions, paragraphs* 1, 2, *and* 3.—With reference to paragraphs 1, 2, and 3 of these instructions, the Board entertain some doubts whether the sanction

of a legal enactment may not be necessary to empower the Government to issue orders which greatly interfere with the exercise of practices, which long custom may have converted into communal rights maintainable by civil action.

8. *Paragraph* 3.—The Board have already stated their reasons for the modified proposals in this rule.

9. *Paragraphs* 4, 5, *and* 6.—The provisions in these paragraphs may be enforced without hesitation.

10. *Paragraph* 7.—The numbers of months included in the close season, for irrigation channels, seem unnecessarily great, but probably the experience of a few seasons may enable them to be reduced.

11. *Paragraph* 8.—The Board have suggested in this paragraph a scale of rewards for the destruction of vermin ; but having in view the swarms of alligators and otters which infest some of the waters of the West Coast, they fear that the cost involved in the issue of rewards for their destruction may be excessive.

12. *Paragraph* 9.—This is proposed as an experimental measure which cannot do much harm.

13. The Board would also draw the attention of the Government to the letter from the Collector of Malabar, who deprecates the introduction of the orders into his district as unnecessary and likely to be highly unpopular, and would beg to suggest that the application of these rules either to Malabar or South Canara should be suspended.

14. The experimental fish-passes or ladders hitherto constructed having failed in their object, the Board suggest that instructions should be issued in the Public Works Department to the Executive Engineers in charge of the larger anicuts to give the subject their attention and to submit plans of any simple contrivances that may suggest themselves to them as likely to succeed.

No. 224. Proceedings of the Board of Revenue, dated 21st March 1870, No. 1,961.

Read again letters from the Collectors of Madura and South Arcot, dated 18th December 1869 and 6th January 1870, respectively, recorded in Board's Proceedings, 18th February 1870, No. 1,131.

Read also the following letter from the Acting Collector of Tinnevelly, to the Acting Secretary to the Board of Revenue, dated 22nd February 1870, No. 80.

May 28th, 1869, No. 3,823.
2nd and 20th Aug. 1869, Nos. 5,610 and 6,242

I HAVE the honour to reply to the Board's Proceedings as per margin, and to forward answers to the questions put to me by Dr. Day.

2. In regard to Dr. Day's proposal to let by auction all pieces of water of a sufficient size for fishery, I may mention that in Tinnevelly all Government tanks are rented out, some by the year, some on a longer lease, and that a considerable revenue is derived from renting the fishery of these tanks.

3. The only spot where the river Tambrapurni is fished is at its mouth where it empties itself into the sea close to the large back-water near Pinnacoil ; here

below the
upper ar
destru

numbers of fish are caught about the time the river is first in fresh, the latter end of June and July. Many of these are the "Ooluvay," and are probably the Sable mentioned by Dr. Day. These enter the river at its outlet, and are caught in the pools as the river subsides, it being in fresh only for a few days at a time. These "Ooluvay" are generally found fat and full of roe ; this is greatly prized. Several other kinds are taken, a list of which, with the Tamil names, is given in the margin. The supply of fish has not decreased of late years, but in some it is more plentiful than in others.

anj ivay	உழுவை.
li	வாளை.
eval	வெவால்.
Kendi	கெண்டை.
Kelathoo	கெளத்து.
Sallicandi	கல்லிகெண்டை.
Pavoo	பாவு.
Korali	கொரளி.
Pathan	பத்தன்.
Velangoo	வலாங்கு.
Govi	கோவை.
Sali	சாளை.
Vallachi	வெளிச்சி.

4. As regards Dr. Day's proposal to let out the right of fishing in *the river and back-waters on the coast* by public auction, I am against this for the reason that it would give the renter a certain power over a poor class who now earn their living as fishers of these creeks and back-waters. As a rule, these fishermen are a very miserable lot of people, and excessively poor ; the way in which they now work is by a system of advances from their "Chummatties or headmen, a few of whom reside in each village, and supply nets, lines, boats, etc., for the use of which a certain share (one-third) of all fish caught is taken by the "Chummatty," who, in time of he carcity, makes advances in money or grain which are re-paid in fish, at a contract ri e agreed on between the fisherman and his "Chummatty." The effect of giving ne ta one person the right of fishing the mouths of the Tambrapurni and Vipar and No. creeks and back-waters along the coast would be certain injury to these poor ordin ermen, who, with their forefathers, have been accustomed to gain their living year. n these waters from time immemorial.

No. 5. As far as protection of fish in tanks, rivers, and estuaries is required, priv institute a close season (to vary in different districts) of two months in e bac h yea , during which all fishing should be prohibited. In Tinnevelly the best o. 9. e for this will probably be in June and July, for the rivers and back-waters cuts hen it is noticed fish full of roe are entering the mouth of river) and from by me y used to 15th October to the 15th December for tanks.

6. The indiscriminate and unfair way of taking fish at the various an en the water gets low should be entirely prohibited, and no net f. 3,756. owed within two hundred yards of any anicut. Fish-ladders shou e Acting ected at each anicut. pril 1870,

7. The meshes of the casting nets used in the Tinnevelly tanks ar rs are of various sizes, from two to four inches in circumference. February 18 r, large numbers of fish resembling small Dace and cubed "Valla vers by the se 7t. These fish at three or four inches have attained their full grow fisl verch affected by the natives who salt numbers. If the use of a m on fish and nerhes is prohibited, it would entail great hardship on a large class these fish as well as prawns. I think with a close mouth it y to restrict the mesh of the ordinary casting net used for th

[n]t to issue

Mullet, and Prawn. What I *would put down* entirely is the use of basket[s] custom traps whereby large numbers of fish are taken in a most unfair and destruc[tive] the manner.

8. From inquiries made I am unable to say that poisoning is practised [to] secure fish, and water in Tinnevelly is too valuable to admit of a tank being [al]e emptied for the sake of the fish.

9. I now come to the question mooted in paragraph 3 of Government Order dated 25th June 1869, No. 1,821, and beg to record my decided opinion that any interference with sea-fishing is quite uncalled for. Sea-fishing is the daily employment of a large number of the inhabitants living on the sea coast. Any restriction, therefore, would affect a number of persons who have no other means of earning a livelihood. These men have certain contracts to supply fish with headmen of the Paravar (fisher) caste (distinct from the Chummatties). Fish are dried in the sun, salted, and all those not sent in inland for consumption are exported to Ceylon. The supply of fish is large and not decreasing, and while such is the case surely Government interference is unnecessary, and the employment upon which so large a number of people are engaged should not be restricted.

10. Owing to a mistake the set of questions propounded by Dr. Day to be answered by the *Collector* were circulated to the *Tahsildars*, instead of the questions to be answered by them. I shall forward them in a few days, but am unwilling longer to delay this report.

ENCLOSURE No. 1.

Answers to Dr. Day's Questions by the Collector of Tinnevelly.

No. 1.—No river fishery is let.

No. 2.—The receipts from tank fisheries for the last five years are as follow :—

Fasli 1274 (1864-65)	...	...	...	...	12,775
,, 1275 (1865-66)	...	...	...	...	13,645
,, 1276 (1866-67)	...	...	...	...	11,076
,, 1277 (1867-68)	...	...	...	...	13,402
,, 1278 (1868-69)	...	...	...	...	13,494

No. 3.—Government do not possess the right of letting the fisheries in Zemindaris.

No. 4.—As stated in my answer to No. 1, no river is let; all tanks worth taking are let.

No. 5.—Board's Standing Circular Order No. 7,927 of the 4th December 1862 [pro]hibiting May [let]ting out of streams and reservoirs which have not hitherto been rented.

2nd and 6.—Yes, (1) because net fishing fouls the water when it becomes low; ([2]) [be]cause in tanks the water is so shallow they are not worth taking up.

7.—In Tinnevelly the fishery in tanks is leased for terms of three, five, and [sev]en years, back-

2. [Ref]erence to the yield. A good fishery is let for five or eight years; an indifferent [one] for [In the sufficien[cy] are rent[ed] [Vall]achi" are

8.—Only a financial one. The fact being that a fishery let for a term of years [is] [wor]th; they revenue [is] [ge]nerally than one let only a year. The renter in a term takes the good years to [fi]sh under [ad]vantage.

3. —As no river fisheries are let in Tinnevelly there is no means of ascertaining who catch it empties have affected the number of fish in the river. I believe, however, that fish will not be when Acting Collector of Trichinopoly that "Sable" fish do not get up the Vallachi, do before the anicuts were built. In my report I have recommended

below the anicuts when the river gets low. I have seen very large numbers of fish below the upper anicut, and when the water was low thousands could have been taken with a net and the destruction consequently very great.

No. 10.—Yes. I should imagine so from the difficulty they have in getting passed the anicut wall in their return from the sea.

No. 11.—Yes. I have seen numbers trying to get over the upper anicut wall and apparently failed in their attempt.

No. 12.—If the fish can neither ascend on account of the anicut or return to the sea on account of the shallowness of the river, they are generally caught in the pools as these dry up.

No. 13.—It is "all fish which comes to a native fisherman's net;" he would consider it a most unwise proceeding to return the small fry on which he makes a good and *immediate* profit.

No. 14.—Yes.

No. 15.—Yes. It would cause great dissatisfaction. The small "Vallachi" like little Dace, Mullet, and Prawns would never be caught in a five-inch mesh. I am much more in favour of a close or fence-time, say two months, to vary in different districts, during which time no fishing of any kind should be allowed; all snares, baskets, and traps must be forbidden.

Short Fishing Act would be necessary.

No. 16.—Nothing could, of course, be done with leases which have yet some time to run. The renters would be entitled to use any mesh to the end of the lease. Compensation might perhaps be offered.

No. 17.—I am opposed to a uniform mesh for the reasons given in answer 15.

No. 18.—By all means prohibit all *netting* in these localities where the fish congregate in such numbers.

No. 19.—No, but no doubt they do; the high price of salt prohibits their using it in the quantities necessary to cure the quantities of fish cured on the coast.

No. 20.—It is illegal to gather this spontaneous or earth-salt, and therefore illegal to use it in fish curing.

No. 21.—It answers very well to cure fish, but is inferior for other uses.

No. 22.—I cannot say.

No. 23.—This salted fish is much affected by the "Paravar" caste on the coast. I never tasted it. The smell was quite enough.

No. 24.—The upper classes certainly would, but the lower are, I fancy, well satisfied with the article they now obtain. It has one great recommendation in their eyes; it is very cheap.

No. 25.—We have no data by which to answer this question.

No. 26.—By reducing the monopoly price of salt.

No. 27.—There are good markets throughout the district and well supplied.

(Signed) C. T. LONGLEY,
Acting Collector.

TINNEVELLY,
22nd February 1870.

SUBMITTED to Government in continuation of Board's Proceedings dated 18th December 1869, No. 9,290.

No. 225. Proceedings of the Board of Revenue, dated 2nd June 1870, No. 3,756.

Read the following letter from the Acting Collector of Tinnevelly, to the Acting Secretary to the Board of Revenue, dated Trichendur, 25th April 1870, No. 169.

As promised in the concluding paragraph of my report dated 22nd February 1870, No. 80, I have the honour to forward herewith copies of answers by the several Tahsildars in the district to the questions put by Dr. Day on fish and fishery.

ENCLOSURE No. 1.

Answers to Dr. Day's Queries by the Tahsildar of Tinnevelly Taluq.

1.—River fisheries are not rented in this taluq.

2.—The average annual proceeds is Rs. 1,741-11-7⅕.

3.—The number of tanks is 267.

4.—The number of unlet tanks in Government villages is eight. This excludes the tanks in Inam, Kattuguttagai, and Zemin villages to which Government have no right. The eight tanks were excavated recently ; they continue to be assessed as before for the area occupied by the tanks.

5.—No.

6.—In 113 villages fishermen live. The average number of houses is about five in each.

7.—The number of fishermen in each village is about ten.

8.—They have also other callings.

9.—This is not a maritime taluq.

10.—We have no back-water in the taluq. Savalakarars and Paravars are engaged in fishing

11.—Paravars and Savalakarars in general.

12.—Paravars in general, besides a few of the Mussulmans and Shanars.

13.—No.

14.—No contractors here.

15.—Three Annas per diem for each fisherman.

16.—Nil.

17.—No.

18.—No.

19.—Yes, more could be sold.

20.—Chatryas, Ghovysias, Gentoos, and all Sudras, such as Smiths, Oilmongers, Maravars Koravars, Potters, Dhobies, Barbers, as well as Pullers, Pariahs, and Mussulmans, except Brahmins and Bhuvysias and Danavysias, including Saiva, Vellalas, and Moodelliars.

21.—Fresh of course.

22.—One lakh thirty-three thousand eight hundred and sixty-eight, or 75 per cent. of the population of the taluq.

23.—Increased of late.

24.—There is a slight increase.

25.—Yes, they are increasing.

26.—Nil, as there is no sea by us.

27.—*Vide* above answer.

28.—Increased.

29.—When water is scarce small fishes are caught, as otherwise they will die by the effect of the sun and be devoured by the birds of the air.

30.—Each fisherman has two nets, the mesh of one is of the size of a dholl and of the other 2½ inches in circumference.

31.—*Vide* Answer 9.

32.—March and April.

33.—No.

34.—Not obtained, because fresh-water fishes are dried but not salted.

35 to 38—Are not applicable to this taluq.

39.—No, the salt-fish imported from Travancore is preferred to our coast supply.

40.—Certainly.

41.—Yes, at the towns of Tinnevelly and Palamcottah and Pettah, a suburb of the former. More could be sold at Melapalayam and other important villages.

42.—All fish-eaters do eat also salt-fish.

43.—The salting of fish cannot be increased in this taluq.

Proceedings of the Madras Government, Revenue Department,
25th October 1872.

44.—No fish are salted in this taluq, but dried if any should remain after sale.

45.—No salt-fish is imported.

46.—This is unknown in this taluq.

47.—No.

48.—Yes, fresh-water fish is dried and preserved, but not to any large extent.

49.—No.

50.—No.

51.—Used as manure in a few cases.

52.—This is allowed to putrify for three or four days in a pot and then buried round the root of fruit-trees, as grapes, oranges, etc., and then red earth is thrown over. This is done by a very few persons.

53 and 54.—Not applicable to this taluq.

55.—Yes, fish are used as a cure for the murrain of cattle and as charms for "Kalipu."

56.—Veral, Valai, and Uluvai grow to the size as below—

	Circumference.	Length.
Veral (விரால்)	3 inches.	1 foot.
Valai (வாலை)	10 do.	2 feet.
Oluvai (உளுவை)	2 do.	5 inches.

Our fishermen are ignorant of the time the fishes breed. I am informed by a friend of mine that in Kartigai or rainy season the river fishes breed.

57.—(*a*) Casting nets, (*b*) angling, (*c*) placing what is called thuri (தூரி) or kachalay (கச்சாலை) for very small fishes ; this is used by the non-professional classes.

58.—Earth-worm called "Nakilapuchi," and rice-paste are the principal baits employed by anglers in this taluq. Small Kendai (கெண்டை) fish for catching Veral, and the entrails of fowls (கோளிக்குடல்) for eels are also used as baits.

59.—No, sometimes in the standing water of channels kodikalli shrub (கள்ளி) or kakkavalli (காக்கவால்லி) seed-paste is thrown in the water ; but this is done clandestinely, and there will be few purchasers for such unwholesome fish.

60.—Yes, it is done sometimes where water is not needed for man, beast, or agricultural pursuits.

61.—No crocodiles or otters exist in this taluq.

(Signed) CHINNATUMBY,
Acting Tahsildar.

TINNEVELLY,
3rd March 1870.

ENCLOSURE No. 2.

Answers to Dr. Day's Queries by the Tahsildar of Sattur Taluq.

1.—There is no river fishery in this taluq.

2.—Receipts from tank fisheries for the last five years are given below :—

Faslis.	RS.	A.	P.
1274	95	3	7
1275	103	1	7
1276	93	3	7
1277	101	7	7
1278	121	13	7
	514	13	11

3.—The tanks in which the fishing is let are 65.

4.—[illegible].

5.—[illegible].

6.—There are 43 fishing villages in this taluq.

7.—The following are the number of occupants in each :—

1. Nenmaru 7	15. Thittamkulam	30. Kariseri ... ...
2. Onaipatti 12	16. Mudukalangulam ... 7	31. Senkundrapuram... 10
3. Kosukundu 3	17. Pandavarmangalam. 4	32. Olinganaikenpatti .. 4
4. Mettupatti 8	18. Attakondan	33. Sinnaperali ... ...
5. Vembur 5	19. Nalattampudur	34. Periaperali 2
6. Moottoolapuram ... 8	20. Vembakottai... ... 10	35. Alagappa Naiken-
7. Moodithalai Nagala-	21. Anmarainadu ... 8	kulam ... ...
puram... 4	22. Nedukulam 5	36. Ayenreddipatti ... ...
8. Sindiwanpatti	23. Mettumalei 5	37. Virudupatti... ... 30
9. Kusavankulam ... 1	24. Anupankulam ... 5	38. Misalur... 9
10. Keelamadi	25. Anayur... 5	39. Puliankulam ... ...
11. Ayen Melamadai	26. Sivakasi... 10	40. Satramreddipatti... 8
12. Sirukulam 3	27. Siturasapuram ... 7	41. Ondipuli Naikanur. 4
13. Avelnattam 4	28. Thiruthangal ... 5	42. Kangarakottai ... 5
14. Iluppaiurani	29. Amattur... 5	43. Sattrapatti ... ...

8.—Besides employing their time in fishing most of them also engage themselves in cultivating lands, distilling and selling liquor under Arrack renters.

9.—None in this taluq.

10.—None.

11.—Savalakarars, Shanars, and Paravars.

12.—None here.

13.—No.

14.—Generally one-fourth share will be allowed to the fishers by contractors.

15.—Four Annas per diem.

16.—No.

17.—The local markets are not properly supplied at present.

18.—No.

19.—If more fish be taken a great quantity will be exhausted in the local market and very little will be available for exportation.

20.—With the exception of Brahmins and the higher classes of Sudras, all other caste-people eat fish.

21.—They generally prefer it fresh.

22.—One hundred thousand inhabitants.

23.—The amount of the rents has greatly diminished of late years, the aggregate rent for Faslis 1270, 1271, 1272, and 1273 alone exceed the rents of the next five years by Rs. 177-6-5; the reason for this large decrease seems to be want of proper rain and the consequent failure of water in recent years.

24.—From the reasons specified above it will be clear that there has been a decrease in the supply of fishes also.

25.—The population increasing on the whole; the fish-eating population being more advanced by having become more industrious and having better understood the arts of gaining, and the state of society becoming more civilized, there is surely an increase of fish-eating population.

26 and 27.—There is no sea coast in this taluq.

28.—Fishery having increased of late years surely there is a greater supply of nets, and the reason of this increase of fishery is the increase of fish-catching population.

29.—Small fishes are caught in a small quantity for persons who cannot afford for the larger.

30.—From one to one-eighth of an inch.

31.—There is no sea coast here.

32.—January, February, and March.

33 to 38.—Fishes are not salted here, nor do the people seem to know it.

39.—The salt-fish now obtained in this taluq from the coasts of Tuticorin and Vypar are not considered to be so good as the people desire to have.

40.—Yes.

Proceedings of the Madras Government, Revenue Department,
25th October 1872.

41.—There are no good markets here, but more fish can be sold if supplied.

42.—All classes of people who eat fish will also eat salt-fish.

43 to 45.—Fishes of this place are not capable of being salted.

46.—No.

47.—No.

48.—Yes, but they will not last more than a month.

49.—No.

50.—No.

51.—They are also used as medicine for cattle in cases of sore leg.

52.—The fishes are not used as manure here.

53 and 54.—No such practice is adopted here.

55.—Yes, for medicine only.

56.—The following are the most useful kinds of fish in this taluq :—

Kalir (கெளிர்), 1 inch size; Ayri (அயரா), ½ inch size; Velangu (விலாங்கு), 5 inch size; Veral (விரால்), 7 inch size; Vellachi (வெளிச்சி), 2 inch size; Ara (ஆரா), 1 inch size; Kendi (கெண்டை), 1 inch size. These fishes breed in November and December.

57.—The fishes are generally caught by means of nets, hooks, and catchals, and for larger fishes in deep water, bows and arrows will be used. It appears that the practice of tobacco as poison prevails here to a small extent.

58.—Boiled rice, bran, and worms (நாங்குணப்பூச்சி).

59.—No, except in cases pointed out in the answer to Question 57.

60.—Yes.

61.—No such creatures are in this taluq.

SATTUR, (Signed) T. SARAVANAMUTHU PILLAY,
5th March 1870. *Tahsildar.*

ENCLOSURE No. 3.

Answers to Dr. Day's Queries by the Tahsildar of Ambasamudram.

1.—River fisheries are never let in this taluq.

2.—The following is the return showing the receipts from tank fishery for five years :—

Faslis.	RS.	A.	P.
1274	1,751	8	0
1275	2,485	2	0
1276	1,816	2	0
1277	1,758	14	0
1278	2,076	6	0
	9,888	0	0

3.—Two hundred and ninety-one tanks.

4.—Two hundred and fifteen tanks.

5.—Yes, river fishery and those tanks which are hitherto unlet.

6.—Seventy-five fishing villages.

7.—A statement to this effect is herewith submitted.

8.—I do not think that they employ their whole time in fishing, but some of them have cultivation and also play at native musical instruments.

9.—No sea here.

10.—A class of people called Savalakarars and Lubbays.

11.—Here Savalakarars, Lubbays, and Paravars sell fish.

12.—Paravars and Lubbays sell salt-fish.

13.—Not from this taluq.

14.—Contractors give one-third or one-fourth of what each individual catches.

15.—Daily earnings of each individual seems to be 6 Annas.

16.—None.

17.—The local market is not fully supplied always, sometimes they get plenty and sometimes not.

18.—No.

19.—Yes.

20.—All except Vellalars, Moodelliars, Karakkattars, and Brahmins.

21.—They say they prefer fish to salt-fish.

22.—Two-thirds of the population or one lakh of souls.

23.—The rents of fisheries have of late years increased, the average income of last five years being Rs. 400 over that of previous five years.

24.—It seems they have decreased.

25.—They have neither increased nor decreased.

26.—None here.

27.—None here.

28.—Nets have increased of late years.

29.—Yes, they are taken in large quantities.

30.—Here the usual size of the mesh of the net is one inch and-a-half in circumference.

31.—It is not known here.

32.—They are taken abundantly in April and May.

33 to 38.—Fish are not salted here.

39.—They say some salted fish are good and some are not.

40.—Yes.

41.—They sell salt-fish in the several weekly markets in this taluq, namely, Ambasamudram, Pottalapoother, Shermadevi, and Rowthpori; here moderate sale is prevailing.

42.—All classes that eat fish.

43.—They say they cannot cure fresh-water fish here.

44.—No fish are salted here.

45.—No.

46.—No.

47.—No.

48.—Yes, they are dried.

49.—They do not preserve fins of fish here.

50.—No.

51.—They are not made use of any other way.

52.—They are not used as manure here.

53 and 54.—The practice of extracting oil from fish is not known here.

55.—No.

56.—Veral, (விரல்) : Velangoo, (விலாங்கு) ; Aura, (அரு); Kendi, (கெண்டை) ; Ouloovy (உளுவை) ; Kalivoo, (கெளிவு) ; Ayera, (அயிரா). No fish exceeds six inches in circumference generally. They do not seem to understand the month in which they breed.

57. They catch fish by means of nets, hooks, kachal cadamby.

58.—Boiled rice, broken pieces of unboiled rice, fowl flesh, frog flesh, and Banian fruit.

59.—No.

60.—Yes, after the cultivation is over and when water is not required.

61.—Yes, there are some crocodiles above some of the anicuts over Tambrapurni, and they destroy fish.

(Signed) GANAPATHY PILLAY,
Tahsildar.

AMBASAMUDRAM,
10*th March* 1870.

Proceedings of the Madras Government, Revenue Department, 25th October 1872.

Number of fishing Villages.	Number of Fishermen.	Number of fishing Villages.	Number of Fishermen.
Sendra Ragapooram	8	Paloor Subiansathy	20
Serumagadavy	23	Kodaganallur	11
Kalladacoorchy	17	Sovathypuram	6
Kunnur	7	Vekarasingapuram	8
Ananthasamuthram	18	Permadasem	13
Vellamcooly	8	Aulodyor	17
Kasavasmoothram	4	Pappamcolam	40
Thathrypoovanam	10	Valasmoodram	55
Giriammalpuram	2	Ambasamoodram	93
Karcoorchy	14	Sevalarcolam	77
Muthu Verappapuram	7	Ravanasmoothram	4
Arayanayagapuram	13	Papoocoody	11
Dasamanikem	4	Rengasamoothram	3
Gopalsmoodram	50	Sattoopathoo	8
Porancherry	2	Aunpoor	3
Omanallur	1		557

AMBASAMUDRAM,
10*th March* 1870.

(Signed) GANAPATHY PILLAY,
Tahsildar.

ENCLOSURE No. 4.

Answers to Dr. Day's Questions by the Tahsildar of Ottapidaram Taluq.

1.—Receipts none.

2.—Receipts from tank fisheries for the last five years are given below :—

Faslis.	RS.	A.	P.
1274	246	14	0
1275	250	12	0
1276	250	0	0
1277	248	10	0
1278	247	14	0

3.—Ninety-three.

4.—Five.

5.—Yes, only the tanks mentioned in column 4.

6.—Forty.

7.—Two hundred and thirty-four on an average of the above.

8.—No other trade for persons chiefly employed in fishing.

9.—Paravars, Mussulmans, Valiars, Shanars, and Singalies.

10.—Chiefly poor of the classes eating fish.

11.—Those mentioned in column 9 and Maravars and Pallars.

12.—Shanars, Paravars, Maravars, Mussulmans, and Pallars who are chiefly purchasing for sale.

13.—Yes, as far as Madura, Dindigul, Oothamapalayam, and Periacolam.

14.—From 4 Pies to 8 Annas for countable fish ; for non-countable (*i.e.*, very small) fish 6 to 12 Annas per thoolam, and for fish which are brought from a very long distance in the sea by Singalies, and which are of very superior quality, 4 Annas to 4 Rs. ; but the last-mentioned are not purchased in considerable quantities by contractors.

15.—Two Annas per diem per man on an average of one year, excluding costs.

16.—No.

17.—Yes.
18.—No.
19.—Perhaps.
20.—Those that are mentioned in columns 9 and 10.
21.—Fresh.
22.—Two hundred and nineteen thousand three hundred and twenty-seven.
23.—Increased.
24.—On account of plenty rain fish are increased in tanks, but the contrary at sea.
25.—Neither increased nor decreased.
26.—Seven boats, 73 vallums, and 88 catamarans.
27.—Only two vallums increased.
28.—Two nets increased.
29.—Yes, they are the fish taken in great quantity.
30.—In sizes of $\frac{1}{16}$th rupee, a dollar, and of a palm.
31.—October to January.
32.—May to August.
33.—Yes.
34.—Purchased.
35.—Not in this district.
36.—It is to be obtained in brooks at Vypar and other villages adjacent to sea.
37.—Cannot be known as it is used to no purpose.
38.—No.
39.—Yes.
40.—Yes, could be sold in abundance.
41.—Yes, there are markets and more could be sold.
42.—Every class that eat fish.
43.—Yes, could be increased if the price of salt becomes cheaper.
44.—Every kind of fish mentioned in column 56, except Nethily, Sambacoony, Thokipodi, and Panakara.
45.—Yes.
46.—Not in this district.
47.—No.
48.—Yes.
49.—Yes.
50.—Yes.
51.—Turned to no other purpose here.
52.—No.
53.—Yes, from Sura Thirookky, Vala, etc.
54.—Only from its liver.
55.—Used as charms.
56.—Seela, Vaval, Pari, Oollum, Thadoo, Valy, Ooly, Punna, Koothippu, Kulavai, Seppooli, Koduvai, Serian, Kooral, Paly, Veeral, Vilangoo, and Thuli, etc. The size of the smallest is about $\frac{3}{4}$ cubit length, 1 span width, and 4 fingers height, and of the greatest is 2 cubits length, $\frac{1}{4}$ cubit width, and 8 fingers height. The months they breed cannot be known.
57.—The modes by net, catchul, ootha, hook, theory, etc.
58.—Rice, worms, etc., employed only in hook fishing.
59.—Not in the district.
60.—Not in the taluq.
61.—No.

OTTAPIDARAM,
11th March 1870.

(Signed) NARAHARY ROW,
Tahsildar.

Proceedings of the Madras Government, Revenue Department,
25th October 1872.

ENCLOSURE No. 5.

Answers to Dr. Day's Queries by the Tahsildar of Nangunery.

1.—No receipts from this source.
2.—Tank fisheries are unlet in this taluq, but a permanent and settled tax is fixed on each tank in 154 villages ; such fixed tax amounts to Rs. 1,032-6-11 per year.
3.—Fisheries are never let in this taluq ; tanks have a settled tax affixed to them ; 313 tanks.
4.—The tanks that are unlet are 200.
5.—Thirty tanks.
6.—One hundred and ninety-seven.
7.—One lakh sixteen thousand one hundred in all.
8.—Besides fishing they employ their time in farming and other labours.
9.—Paravar, Muckuvar, and Mussulmans.
10.—Paravar, Muckuvar, Chavalakar, Maravah, Shanar, Ealuvan, Pallen, Pariah, Mussulmans, and Kathickaran.
11.—All castes mentioned in the 10th answer.
12.—Paravar, Muckuvar, Mussulmans, and Shanar.
13.—Yes.
14.—One-fourth of what is caught is given to the fishermen.
15. From 1 to 6 Annas per day.
16.—No tax imposed.
17.—In some places it is taken to a degree sufficient to supply the local markets, and in other localities to a very small degree.
18.—In some places it is taken.
19.—Yes, they could be sold.
20.—With the exception of Brahmins, Guzeraties, Comatees, and some class of Vellals and Moodellies, all castes eat fish.
21.—Fish when fresh is preferred to salt-fish ; but in the absence of the former the people have recourse to the latter.
22.—About 99,500.
23.—As the fisheries are not rented out yearly, the increase or decrease could not be ascertained.
24.—The increase or decrease will be according to the annual fall of rain.
25.—Vide answer 24.
26.—Three hundred and fifteen.
27.—Neither increased nor decreased.
28.— Do. do.
29.—Yes, taken to a certain extent.
30.—From $\frac{1}{2}$ to $2\frac{1}{2}$ inches.
31.—April to August.
32.—In rivers fish is taken when there is flood, and in tanks when there is a very small quantity of water ; that is, in rivers from the month of June to December, and in tanks from April to June.
33.—Yes.
34.—People buy salt for this purpose.
35.—The salt-earth in the inland parts is not used in curing fish ; but in the localities bordering on the sea it is used for curing fish along with salt.
36.—In places near the sea it could be obtained.
37.—It is not sold ; hence no value.
38.—No.
39.—Yes, considered good.

40.—Yes.
41.—No regular market in this taluq, but weekly fairs.
42.—Vide answer 20.
43.—No further improvement could be suggested.
44.—Only the sea fish is salted.
45.—Yes, exported.
46.—Not in this place.
47.—Yes.
48.—Yes, dried.
49.—No.
50.—Not preserved.
51.—Fresh-water fish is dried and is used as other things.
52.—Nothing of the sort here.
53.—The oil is taken from tortoise and other country fish, for which reference should be made to the Tamil answer paper.
54.—Only from its liver.
55.—That practice is not very prevalent here, but used for the diseases of cattle, etc.
56.—Fresh-water fish—Ayeri, Cusaly, Sally, Kendi, Keluthy, Uluvi, Oural, Velangu, Veraul, Auttuvauli, Pothy; the size of these is from 1 inch long, ¼ inch thick to ½ or ¾ cubit long and 4 inches thick. These breed in the months commencing from September until the water is laded out for cultivation.

Sea fish—Cuthippu, Sauvauli, Punnah, Mutty, Perungansilei, Muthulthondi, Cuttah, Seela, Vali, Pori, Vanul, Caluthu, Koorul, Kaural, Vangadi, Aumi, Thirucki, Seera, and Valah. The size of these extend from ⅛ yard long, ¾ yard thick, to 3 yards long. In sea fish will breed throughout the year.

57.—Nets and hookings. Besides these there are various means for which reference should be made to the Tamil list.
58.—Rice grits, bran, cooked rice, fruits, and worms; these for fresh-water fish. Baits are not employed in catching sea-fish.
59.—Not in this taluq.
60.—As the fisheries in this taluq are subject to a permanent tax the water of the tanks is only laded out when the cultivation does not require it.
61.—May be to a certain degree.

(Signed) RAMIENGAR,
Acting Tahsildar.

NANGUNARY,
19*th March* 1870.

ENCLOSURE No. 6.

Answers to Dr. Day's Queries by the Tahsildar of Tenkarei.

1.—There is no system of letting the river fisheries in this taluq; therefore no return can be sent.

2.—Return of yearly receipts from tank fisheries for the last five years :—

Faslis.	RS.	A.	P.
1274	4,848	4	4
1275	3,734	4	10
1276	3,578	4	10
1277	3,619	2	10
1278	2,635	2	10

3.—The fishing of 174 tanks in 54 villages of this taluq have been let.
4.—There are no tanks in this taluq in which the fisheries are unlet, saving private tanks.
5.—There are some portions of water near Pinnacoil and Kayalpatam, the fisheries of which may be let.

Proceedings of the Madras Government, Revenue Department,
25th October 1872.

6.—There are 54 fishing villages in this taluq.
7.—The number of occupants in each village are as follow :—

At Alanthalai about...	800
,, Manapaud ,, ...	2,500
,, Thalai ,, ...	1,200
,, Cooduthalai ,, ...	250
,, Cootupanai ,, ...	200
,, Pinnacoil ,, ...	300

In others the number is low.
8.—In some villages the ryots only employ their time in fishing, but in other villages they are engaged in cooly work and trade.
9.—Chiefly Paravars, Shanars, and Mussulmans fish in the sea.
10.—The castes mentioned in answer 9.
11.—Paravars, Shanars, Mussulmans, Maravars, Pallars, etc.
12.—All the castes mentioned in answer No. 11 sell salt-fish.
13.—Yes, raw fish are taken to a distance of 30 miles, but salt-fish are taken to a longer distance than this, even to foreign districts.
14.—The remuneration given by contractors to the fishermen is one-third share if large fish are caught, and half if they be small ones.
15.—The average daily earnings of each fisherman vary from 2 to 8 Annas.
16.—No.
17.—Sufficient quantity of fishes are taken to supply the local market.
18.—No.
19.—If more fishes were taken to the local markets than is required for usual consumption they will not be sold.
20.—All the castes except Brahmins and Siva Vellalas eat fish.
21.—They prefer raw fish than salted ones.
22.—I think three-quarter of the population of this taluq eat fish.
23.—The rent for fisheries is decreased of late years.
24.—Decreased.
25.—Do.
26.—About 200 fishing boats go to sea in this taluq.
27.—They have decreased of late years.
28.—The nets also have decreased.
29.—All the fishes whether small or large are taken.
30.—The usual size of nets varies from 1 to 12 inches in circumference.
31.—The best fishing months in the sea are from September to February.
32.—Do. do. do.
33.—No, a very small extent of fish only is salted.
34.—People buy salt.
35.—Salt-earth is also employed for salting fish.
36.—Salt-earth is obtained in the lands near the sea.
37.—It has no value.
38.—Sea-water is not taken to obtain salt.
39.—It is considered good, but especially people like raw fish than salted ones.
40.—Yes.
41.—There are good markets for salt-fish in Strivicuntam, Eyral, Kayalpatam, Coolasegarapatam, Talai, Manapaud, and in some other places.
42.—All the low castes eat salt-fish, occasionally those classes of people mentioned in No. 20.
43.—The salting of fish can be increased if the sale of raw fish be stopped.
44.—All the fishes can be salted.
45.—Salt-fish is exported to Ceylon and other places.

46.—No.

47.—Fish-roes are salted.

48.—Certain fishes, such as "Neththely," "Coony," and "Seanthey" are dried.

49.—The fins of large fishes are preserved.

50.—Fish maws are preserved.

51.—Fishes are not used to any other use than being eaten.

52.—Fishes are not used as manure, but damaged and salted fishes are used as manure for cocoanut trees.

53.—Oil is taken from large fishes, such as Chira and Pulal.

54.—The oil is taken only from the liver of fishes.

55.—Certain fish, Sallai, etc., are used for medicines.

56.—Names—

Sira, 5 ft. in length, 1 ft. in breadth, and 1 ft. in thickness. Valli, 1 ft. 6 in. in length, 3 in. in breadth and 1 in. in do. Seela, 1 ft. 6 in. in length, 3 in. in breadth, and 3 in. in do. Neymeansila, 3 ft. in length, 6 in. in breadth, and 3 in. in do. Munjahparei, 1 ft. 6 in. in length, 1 ft. in breadth, and 6 in. in do. Katta, 2 ft. in length, 1 ft. in breadth, and 6 in. in do.	These breed in the month of May.

57.—The means are nets of different kinds, bamboo labryithoweirs, angling, shooting, etc.

58.—Boiled rice, insects, figs, and oil-cakes are used as baits in catching fish.

59.—Rivers are not poisoned to obtain fish.

60.—Tanks are not laded out to obtain fish.

61.—Yes, large fishes and other animals eat fish and thereby a considerable quantity of them is destroyed.

(Signed) RAGAVIENGAR,
Tahsildar.

29*th March* 1870.

ENCLOSURE No. 7.

Answers to Dr. Day's Queries by the Tahsildar of Strivilliputtur.

1.—None in this taluq.

2.—Receipts from tank fisheries for the last five years are given below :—

Faslis.	RS.	
1274	1,451	These figures represent the receipts from permanent as well as yearly rented fisheries.
1275	2,713	
1276	2,180	
1277	4,811	
1278	3,772	

3.—All tanks, with the exception of those lying within the limits of Zemindaris and Inam villages are being rented, such number being 224.

4.—The tanks lying within the limits of Zemindaris and Inam villages, the fishery of which is not rented for the benefit of Government, are 50 in number.

5.—None except those that are not let at present, as referred to in answer to Query No. 4.

6.—The number of villages containing tanks for irrigation wherein fishing is prevalent during certain months of the year is hereunder noted :—

	No.
Ayen villages	103
Zemindari villages	4
Inam and Kattuguttaga villages	11
Total...	118

But there are no such villages wherein fishing is undertaken as the only profession by the occupants.

7.—There are none who pursue fishing as the only occupation throughout the year, and it is not easy to ascertain the number of those who attend to that work too as auxiliary to their other more fixed like callings. These people are not, as a rule, to be found in all the villages where there are tanks for fishing being dispersed over many of them.

8.—Vide answers to Questions 6 and 7.

9.—There is no sea in the limits of this taluq.

10.—No back-waters nor large rivers in this taluq.

11.—The selling fish is not pursued by any as a sole calling, but Shanars, Shavalakarans, Mussulmans or Lubbays, and females among Maravars and Oachers do sell fish according to circumstances.

12.—Chiefly Shanars only sell salt-fish in this taluq and sometimes Lubbays too.

13.—Not further than ten miles from the places they are obtained.

14.—One Fanam, equivalent to 3 Annas and 4 Pies per diem, in money or in kind.

15.—Vide preceding answer.

16.—None, since the abolition of the Moturpha tax.

17.—No.

18.—No.

19.—Yes.

20.—All castes except Brahmins, Vaisyas, and Sivas among Sudras eat fish.

21.—They prefer it fresh.

22.—About 100,000 out of the entire population of 150,000.

23.—Increased only, although not a marked one.

24.— Do. do.

25.—It is not easy to be ascertained, *vide* answer to Query No. 7.

26.—No sea here nor boats.

27.—None here.

28.—No sea nets here ; small nets used in tanks have increased decidedly.

29.—All fish taken here are very small, only large ones being unobtainable.

30.—There are three different kinds of nets in use here, with meshes varying from six inches to a quarter of an inch.

31.—Not known here.

32.—Generally April and May when the tanks are near to become dry, and October and November being the rainy season when they receive their supplies of water.

33.—Not here.

34.—Do.

35.—Not for salting fish, but for the preparation of saltpetre.

36.—It is collected by persons themselves who prepare saltpetre from the surface of the earth at Rajapaliem.

37.—It is not valued here.

38.—No.

39.—Yes.

40.—Yes

41.—Yes.

42.—*Vide* answer to Query No. 20.

43.—The eaters do not advocate increased salting.

44.—Sea fishes only are said to be salted ; their different kinds are as follow:—வாளை-மஞ்சப் பாறை-தேளி-தேட்டு-தெய்மீன்.

45.—None from the limits of this taluq.

46.—Not to be known here.

47.—Unknown here.

48.—Yes.

49.—Unknown here.

50.—Unknown here.
51.—To none other in the limits of this taluq.
52.—Unknown here.
53.—Do.
54.—*Vide* answer to Query No. 53.
55.—Do.
56.—The native names are given in Tamil characters—செழுத்தி-அயரை-கெண்டை வெளுச்சி-உளுவை-ஆரல்-குறவை விலாங்கு-விரால். They are of different sizes, varying from ½ to 4 inches in thickness, and from 3 inches to 2 feet in length. The "விலாங்கு" is the longest fishes to be seen here. They are supposed to breed between October and May. The largest fishes of the two last-mentioned kinds are rarely found in tanks, etc., but some could be seen in private wells where they are left and preserved.
57.—Chiefly nets and hooks.
58.—Boiled rice and certain worms and insects called தங்குளுப்பூச்சி-ஈசல்.
59.—Never.
60.—Never.
61.—No such animal found to destroy fish here.

(Signed) D. NARAYANASAWMY MOODELLIAR,
Acting Tahsildar.

ENCLOSURE N. 8.

Answers to Dr. Day's Queries by the Tahsildar of Sunkaranainarkovil.

1.—There are no receipts from the river fisheries in this taluq, the fishing in the rivers being unlet.

2.—Receipts from tank fisheries for the last five years—

Fasli.	Perpetual Rent.			Yearly.			Total.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
1274...	341	2	0	1	4	0	342	6	0
1275...	341	2	0	35	5	0	376	7	0
1276...	341	2	0	10	15	0	352	1	0
1277...	341	2	0	152	8	5	493	10	5
1278	391	2	0	38	14	5	480	0	5
	1,755	10	0	288	14	10	2,044	8	10

3.—Perpetual rented Rupees 118, yearly rented Rupees 20, total Rupees 138.
4.—There are 69 tanks in which the fishing is unlet.
5.—The fishing in the 69 tanks referred to in paragraph 4 and in the rivers might be let.
6.—Thirty-seven.
7.—There are nearly 200 fishing caste people in each village.
8.—They not only employ their time in fishing, but in attending to agricultural purposes.
9.—Paravars who fish in the sea are not in this taluq.
10.—There are no back-waters in this taluq, Savalagars and Mussulmans fish in the rivers.
11.—Shanars and Mussulmans are the chief castes who sell fish in this taluq.
12.—No castes are engaged in salting fish in this taluq.
13.—Fish is not taken any long distance for sale.

Proceedings of the Madras Government, Revenue Department,
25th October 1872.

14.—The contractors in this taluq give a share to the fishermen for their remuneration during the time of fishing.
15.—The average daily earnings during the time of fishing will neither exceed 8 Annas nor fall below 4 Annas.
16.—There are no taxes on the fishermen in this taluq.
17.—No fish is taken from the fishing villages to the local markets in this taluq.
18.—No.
19.—More fish could be sold if taken.
20.—All castes except Brahmins and Sivas eat fish.
21.—They prefer it fresh.
22.—Forty-eight thousand people.
23.—The annual rent for fisheries have decreased of late years.
24.—The fish appears to have decreased of late years.
25.—The fishing population have increased.
26.—There is no fishing boats here.
27.— Do. do.
28.—Fishing nets have not increased.
29.—Small fish is taken in large quantities.
30.—The usual size of the mesh will be one inch in circumference.
31.—Not known.
32.—The best fishing months in rivers are October, November, and December, and those in the tanks February and March.
33.—No fish is salted in this taluq.
34.—Salt is not procured for salting fish.
35.—No.
36.—It is not obtained in this taluq.
37.—Not known.
38.—No.
39.—The salt-fish that is brought for sale from the sea coasts is considered good.
40.—No, as the fish is not salted here.
41.—Salt-fish will find a good market here.
42.—All castes except Brahmins and Sivas eat salt-fish.
43.—The salting of fish cannot be increased, as the practice of salting fish does not obtain here.
44.—No fish is salted here.
45.—No.
46.—No.
47.—No.
48.—Small fish taken from the tanks are dried.
9.—No.4
50.—No.
51.—It is not used for any other purpose than for eating, fresh or salted.
52.—No.
53.—Oil is not obtained from fish in this taluq.
54.—Not known.
55.—No.
56.—விரால், விலாங்கு, தேடி, உளுவை, அரல், பஞ்சலை, பொத்தி, கெழுறு, கெண்டை, அயிறை. Of these the size of the Viral and Velang are usually 8, 5, and 10 inches in circumference, and 1 or ¾ yard in length; they usually breed in the months of November, December, January, and February.
57.—Chiefly nets and hooks.
58.—No baits are used for fishing by nets.
59.—No.

60.—Fish is taken when the water in the tanks become very shallow.
61.—There are no crocodiles, otters, or other animals which destroy fish in this talook.

(Signed) A. GOVINDOO NAIDOO,
Tahsildar.

SUBMITTED to Government in continuation of Board's Proceedings dated 21st March 1870, No. 1,916.

Read again Proceedings of Government dated 27th November 1868, No. 2,982.

Read also the following :—

No. 226. Proceedings of the Board of Revenue, dated 13th July 1871, No. 2,900.

Read Report on Pisciculture in South Canara by H. S. THOMAS, Esq., Collector of South Canara, dated 7th August 1870, No. 430.

IN dealing with this important and comprehensive paper, which is primarily intended to show the results of one year's experimental pisciculture in the rivers of South Canara, towards which a grant of Rs. 3,000 was sanctioned by Government in their Order of the 27th November 1868, No. 2,982, Revenue Department, it will, the Board think, be well to notice in some detail Mr. Thomas's facts and arguments.

2. Mr. Thomas divides his observations on the fishing industries of Canara ; he treats first of fresh-water fisheries (paragraphs 6 to 109); and, secondly, of sea and estuary or back-water fisheries (paragraphs 110 to 132.)

3. The rivers of Canara take their rise in the western ghauts : the beds of these rivers are mostly rocky, and their streams rapid near their source, but the latter come under tidal influence at the rivers' mouths. Several of these rivers form extensive back-waters (estimated by Mr. Thomas at 404 square (?) miles) before they debouch into the sea along a sea-board of 120 miles.

4. Mr. Thomas has not estimated the length of the course of the more important rivers, but on the whole there must be from 1,500 to 2,000 miles of more or less perennial stream. Influenced by a monsoon of from four to six month's duration, during which 130 inches of rainfall on the coast, and possibly double that volume in the hills, the rivers and larger streams are subject to heavy floods, which for all practical purposes keep the streams open for six months in the year. During the hot weather the rivers are almost all shallow above tidal influence, and many quite dry, save where holes and deeper reaches afford shelter to the fish. The alternation between high flood in the rainy season, and scanty supply of undisturbed water in the shallows during the hot season, Mr. Thomas considers* favourable for the preservation of fish which spawn in the rivers.

* Paragraph 27.

No obstruction meets them in their ascent and the shallowness of the water in which the fry first live removes many natural enemies. No close season is required for spawning, and the fry require no protection beyond check to unreasonable destruction.

5. River fishing is, on the whole, limited to the season during which the waters are low and the current moderate, when the fish are collected in reaches and pools of moderate depth. The means most used in catching fish appear to be nets, fixed cruives adapted to the localities and size of fish to be entrapped, and poisoning.

6. In paragraph 7, *et seq.*, Mr. Thomas describes the means used for catching fish by poison in the rivers of Canara, as well as the conditions under which this system of poaching is most favourably carried on, and the localities selected for this destructive process. The means are most effective, and the pools selected being the spawning haunts of the larger fish and feeding and rearing places of both fry and fresh water fish, the practice causes unreasonable and deplorable destruction of fish in all stages of life. Mr. Thomas has properly taken measures to check the practice so far as his means admit ; and those measures he considers have been fairly successful in the protection of fish-life. He now proposes to employ a staff of Water Bailiffs and to enlist the interests of the heads of villages by small pecuniary emoluments at a cost of about Rs. 3,000 a year, in order to place an effectual check on the evil practice and otherwise aid in the conservancy of fish and protection of spawning and rearing grounds and pools.

	RS.
5 Head Water Bailiffs (one in each taluq) on 8 Rs. per mensem	480
25 Water Bailiffs, at 7 Rs. each per mensem	2,100
50 Heads of villages, fees at 1 Rupee per mensem each	600
	3,180

Paragraph 10 and Appendix C.

7. Mr. Thomas devotes several paragraphs (16 to 19) to discussing the deleterious effect of letting the refuse of coffee-pulping into the rivers, and would, with good reason, place the operation under regulation. Apparently it is not indispensable to the industry to discharge the refuse of coffee-pulpers into the rivers, and several sections of Mr. Thomas's proposed Fisheries' Bill aim at preventing pollution of this and other kinds.

8. In the Draft Act which Mr. Thomas has submitted it is proposed to make the wilful poisoning of water for the purpose of killing fish highly penal and punishable with increasing stringency for each recurring offence. But it is further proposed to make penal the mere *possession* of poisonous substances as well as permitting any solid or liquid substances to flow into, or putting any such substances into any waters containing fish, so as to cause the waters to stupify or kill the fish. The Board infer that these "substances" are meant to include especially existing nuisances and deleterious substances, such as the refuse of coffee-pulpers and the like, which at present are discharged into streams.

Even with the modifications proposed in the 6th to the 10th paragraphs of the Draft Bill the Board do not think that any such provisions would pass through the Legislative Council.

9. In paragraphs 14 and 15 Mr. Thomas points out that the larger rivers of Canara take their rise in Coorg and Mysore where the pernicious practice of poisoning the rivers for the purpose of catching fish is generally pursued. Rules for conservancy would be of little use unless carried out in those provinces as well as in British territory.

10. In paragraphs 20 to 32 Mr. Thomas treats of the spawning of river-fishes, noticing the natural advantages which the fry enjoy during the first season for attaining fair size in the rivers of Canara. But he draws attention to the exceedingly destructive practice of placing closely woven cruives in the openings of weirs and dams across the rivers and streams in which fish of all ages and kinds are indiscriminately caught. Mr. Thomas deprecates the use of all such fixed engines in rivers, and it appears that he has already discouraged or entirely interdicted the use of closely twined cruives in the South Canara rivers (paragraph 63). He considers that by forbidding the use of cruives of which the bamboo shreds are less than the breadth of a finger apart (paragraph 63), good effects have already been achieved, and in the draft Act the use of such traps is entirely forbidden and the breach of the rule forbidding their use is made highly penal.

It is not stated how the summary prohibition of the use of these devices was considered, or made compatible with the prescriptive rights of the people in these fisheries. It is clear that however well intended it may have been, and however likely eventually to benefit those who were interdicted from using these customary means of procuring fish, the prohibition could not be legally enforced without legislative enactment.

11. The diversion of river and stream-water by temporary dams and weirs into rice-flats carries innumerable fry into the rice-fields which are thereby converted into extensive nurseries and feeding grounds of fry, and would prove of great importance to fish-life were the fry not trapped in vast numbers by close-woven cruives placed in the irrigation channels or in the "drops" by which the waste water passes from one field and level to another in the course of irrigation.

Paragraphs 33 to 39.

12. Mr. Thomas argues (paragraphs 42 to 49) that, notwithstanding private rights and interests, the fry must be protected in the rice-fields by requiring farmers to put up gratings at the channel head to prevent the entrance of fry from the main stream, or by interdicting fishing in the water standing on the fields, or the use of cruives or other devices to prevent their transit through the rice-flats into the river again ; and he would require the owners to maintain an open passage to enable the fry, after passing on the flood of the irrigating stream over their fields, to rejoin the river by means of the waste water discharged at the extremity of the channel or from the lowest field. With this view the term "inland waters" is, in the draft Act submitted, defined as including irrigated fields, and the same penalties are proposed for killing fish in private fields, as in the case of erecting weirs and using cruives in public rivers. The conditions of property in Canara preclude the adoption of the latter suggestion, save on payment of heavy compensation.

13. The remarks contained in paragraph 50 do not specially apply to Canara. The proposed alteration of the level of tank-sluices would cause serious detriment by silting up tank-beds which are partially scoured by the low level of the sluice.

14. In paragraphs 51 and 52 Mr. Thomas shows the important advantage which deep pools and shallow reaches between the dams afford for breeding and rearing purposes during the season of low water in the rivers, and he gives several interesting examples of their utility in protecting fish and affording them resting

Proceedings of the Madras Government, Revenue Department,
25th October 1872.

ground. He proposes to select in each river certain pools and reaches, to be carefully protected from all fishing as stock reserves. These he would mark off and place under special conservancy. The estimate shown in paragraph 37 of these Proceedings will cover all expenses.

15. The fixed devices for trapping fish, which are described in paragraphs 63 to 72, are all constructed on the same principle. They are baskets of split bamboo adapted to local circumstance and the habits of the fish, and so constructed that fish once in them cannot get out again. They are placed in openings in temporary river-weirs, or in breaches in the banks of rice-fields, etc., etc., and take indiscriminately all fish not small enough to pass between the bamboos. Mr. Thomas would interdict the use of such cruives altogether, and allow the use of the net only ; or if allowed at all, he would restrict the use of cruives very much, permitting their use under special license only.

16. So far as the west coast rivers are concerned no close season is required, as under ordinary circumstances the monsoon floods secure from four to seven months open in all rivers and streams.

Paragraph 73.

17. In paragraphs 75 to 80 Mr. Thomas clearly shows that the proposals now before Government in respect to the size of mesh to be allowed in nets require modification. The minimum proposed in the draft instructions submitted to Government with the Board's Proceedings dated 18th December 1869, No. 9,290, is three inches in circumference. Mr. Thomas shows that a large proportion of fresh-water fish can never be taken with a four-inch mesh net, the minimum suggested by Dr. Day. If the minimum of four inches be adopted this quantity of fish will be, without any compensating advantage, entirely lost to the fish-eating population ; further the natural balance amongst the fishy tribes will be disturbed, by killing only large fish, while the smaller kinds, which largely predominate, are allowed by artificial protection to increase to an extent that must eventually cause certain kinds to disappear altogether. Mr. Thomas recommends that the minimum regulation size of mesh should be two inches ; and he would stipulate that the immature fish of twelve kinds named, which he thinks might be caught in net of this mesh, should be required by law to be returned to the water when caught. The draft Act enacts penalties for possessing, etc., immature fish, and provides that the Government shall declare what size of fish of the various kinds shall be deemed immature under this restriction.

18. The spawning time of many kinds of fish has been fairly ascertained. It varies considerably, and in some cases the fish spawn more than once a year.

Paragraphs 81 to 85.

It appears that the smaller kinds generally spawn between May and July ; while the larger sorts spawn between September and January, but chiefly in December and January. All kinds appear to be naturally prolific ; and suitable food, both vegetable, and insect, small fish, etc, etc., is everywhere abundant. But fish and fry have many enemies, and for the destruction of the most formidable, otters and crocodiles Mr. Thomas proposes to offer rewards.

Paragraphs 86 to 88.

	Rs.	A.	P.
For Otters, each	3	0	0
,, Crocodiles, each. ...	3	0	0
Eggs, each	0	2	0

19. Besides conserving indigenous fishes Mr. Thomas would endeavour to introduce other valuable kinds not found in Canara waters, such as the Hilsa and Gourami, and he would extend the range of the *Chanos argenteous*, a fish about which he furnishes some interesting details.

Paragaphs 100 to 103.

This somewhat costly branch of pisciculture will deserve at some future time that attention which it can scarcely justify at present.

20. From paragraphs 110 to 132 Mr. Thomas treats of sea and estuary or tidal back-water fisheries which, as he observes, are far more valuable than river fisheries. The coast fisheries produce an important article of inland commerce in salt-fish, but the trade, as is justly observed, is much hampered by the salt monopoly. The cost of salt is so heavy a charge that the fish are but half cured, or more frequently merely smeared with salt-mud. The commodity does not keep and too often proves an unwholesome, half-putrid article of food. Home-cured fish fails to compete on the coast with the salt-fish which is well cured with untaxed salt, and imported free of duty from Arabia Gulf. Mr. Thomas goes so far as to propose an Import-duty on foreign s... est of the home-cured, unwholesome article.

21. Mr. Thomas appears to believe that the bulk of sea... along the shores, or in the tidal estuaries, or if in rivers, then within tidal in... ?. Here any unreasonable destruction of fry is effected mainly by small meshed nets. He would prohibit the use of nets of less mesh than three inches in circumference and require the immature fish of some 6 or 8 kinds (named) to be returned, when netted, into the water. But he does not think that restrictions need to be so much pressed as in the case of rivers.

22. Though assiduously netted with stake nets, etc., the mid-water is always left open for the passage of shipping and boats ; an open period is not, therefore, required as in England. But the low tidal marshes and swamps into which the fry run in shoals, for protection and food, must be conserved, and fishing with cruives and other contrivances interdicted. Mr. Thomas would place shrimp-fishing under serious restriction ; he proposes a tax of Rupees 24 per shrimp net, with a view to preserve what he considers more valuable as an important article of food for sea-water fish than as a luxury for the consumption of man.

23. Mr. Thomas would raise public revenue from the fisheries, and he argues that all the reasons which justify a land-tax are equally cogent, if not more so in respect to taxing the produce of both fresh and salt-waters, and those who earn their living by appropriating the produce of those waters. But "under all the circumstances" which are considered in paragraph 134, Mr. Thomas thinks "it may be advisable to make the taxation light and tentative at first." Mr. Thomas would apparently allow the renters to whom all sea and river fisheries are to be leased, to collect taxes, on the scale shown in the 139th paragraph of his report, from the fishermen. In fact, to allow middlemen, on payment of such fixed sum as they consider may allow of a profit, to have the sole right of collecting from every fisherman certain taxes to be sanctioned by law. He apparently wou... so at once everywhere, and has put provisions with this object into the ...antagid do... out following Mr. Thomas through some details of administration, exempt...ce, with... ...on, and ...raft Act. ...Cr.

24. As regards the manner of carrying out the measure it will suffi...

composition, which he would provide, to say that he deprecates both the direct State management of this source of taxation as costly and ineffectual, and the farming out of fisheries in the usual way as detrimental to the interests of the poorer fishing classes. He would fix by schedule a scale* of tax on the various kinds of nets and other appliances (including angling-rods) used by fishermen. In other words, he would revive the old Moturpha. Higher rates are proposed for nets used in salt-water fisheries and more moderate ones for river-fishing. Mr. Thomas proposes to farm out to the highest bidder at auction the collection of the tax in limited local districts to be fixed according to circumstances (by Maganies* in Canara). He would protect the revenue by heavy penalties and fines for unauthorized fishing and poaching, and would encourage informers by rewards. Mr. Thomas thinks that Rupees 5,000 would at once be realized in South Canara, and he believes that conservancy and pisciculture would in the long run become self-supporting.

* See paragraph 139.

* Groups of villages united for facility of revenue administration.

25. Lastly, Mr. Thomas earnestly recommends the constitution of a separate Fisheries Department under the general administration of the Board of Revenue, with an Inspector-General of Fisheries at its head to manage this important branch of national industry and public revenue ; and he urges that all income derived under this head should be left in the hands of the local Government, and not carried to the general revenues of the Empire.

Paragraph 156.

26. The Board have carefully examined Dr. Day's report dated 4th February 1869, No. 306, (Proceedings of Madras Government dated 30th April 1869) with reference to the fresh-water fisheries in the Cauvery, Coleroon, Palar, Kistna, and Godavery rivers, and the sea coast and fresh-water fisheries on the Orissa coast. Dr. Day's attention was chiefly directed to the evil effects of permanent works in obstructing the ascent and descent of sea and other fishes in the large rivers, and to the means of overcoming them. This condition does not present itself in Canara ; but Dr. Day likewise attributes the alleged general decrease of fish to the fact "that the fry are taken in excessive numbers owing to the minuteness of the mesh of the nets employed in rivers" (paragraphs 18 and 19), and to indiscriminate fishing (paragraph 24) by various appliances and devices which he describes (paragraph 25). These are much the same as those in use on the west coast so far as Mr. Thomas describes them, and are so constructed as to take immature and adult fish indiscriminately. Dr. Day likewise deprecates "fence months" for reasons similar to those of Mr. Thomas, save in respect to irrigation channels by which young fry return to the sea, during the months from October to February, after being spawned in the higher fresh waters.

27. In paragraph 37 of his letter Dr. Day strongly advocates the adoption of a general system of annually renting out to the highest bidder all waters of sufficient size for fishing, which are not navigated by sea-going vessels, and are above the point where navigation ceases. He endeavours to show that this would be in consonance with ancient native custom in parts of the country (irrigation works and tank-banks were in some parts maintained from the proceeds of fish-

eries), and that fishery rents constitute a reasonable source of income of Governments, public communities, and private proprietors of waters in other countries. He considers renting the least expensive means of effecting that conservancy and check on indiscriminate fishing which the general well-being of the country and of the industry itself now renders necessary. Dr. Day is not apprehensive of oppression on the part of renters, because the fisher-castes have a monopoly of the labour, and can enforce their own terms or desert the industry to the ruin of the renter, and because the races whose livelihood depends on fisheries may themselves rent the fisheries in which they are interested. This, it may be observed in passing, would be the case if the farms are small and within the reach and means of local fisher-castes and headmen to undertake. These people could always afford to give higher rents than persons who have their profits to make out of industries in which they can take no active part (paragraph 40).

28. Dr. Day recommends that four inches in circumference be the minimum size of mesh admitted in water farmed out by Government. He advises that the draining of tanks and poisoning of streams be strictly prohibited and that rewards be given for killing creatures that feed on fish.

Crocodiles each from 1 to 5 Rs. according to size.
Eggs, 4 Annas.
Otters each 4 Annas.

29. On the whole, the two officers are in accord with each other. Both ascribe much evil to the destruction of immature fish by small-meshed nets and cruives and by poisoning and other appliances now in use; and they would intervene to regulate these things by law. They would facilitate in other ways the ascent and descent of fish in the rivers, describing the means to be adopted which are based on considerations of the practice of the localities and nature of the obstructions which the two officers had specially before them. Both would encourage the destruction of crocodiles and otters, etc., by rewards; neither would advocate "fence months" in general, and both recommend, on conservancy and fiscal grounds, that public revenue should be raised from fisheries. Dr. Day would farm out all fisheries to the highest bidder. Mr. Thomas would fix a tax on all fishing implements and boats, and farm out its collection. Both foresee that legislation is requisite to carry out their suggestions.

30. Mr. Thomas would constitute a department of fisheries. Dr. Day has not given an opinion on this point.

31. In reviewing Dr. Day's report, which was generally approved by the Government of Madras (Proceedings of Madras Government dated 30th April 1869, No. 1,185) the Board proposed to subject salt-water and estuary fisheries (within tidal reach) to different treatment from rivers and tank fisheries. The latter they suggested might be farmed out; the former they considered should be made over to the classes who are in the habit of fishing them, on a small royalty, subject to such rules as might be necessary for due conservancy, instead of being rented out to strangers. The Board [illegible] that the minimum size of mesh should be three inches in circumference [illegible] as recommended by Dr. Day), casting nets and prawn nets excepted, [illegible] they would not interfere.

Board's Proceedings of 28th May 1869, No. 3,823.

The Government sanctioned the modifications proposed by the Board, (Government Order, 25th June 1869, No. 1,812,) and a draft of instructions was submitted* for the orders of Govern-

Proceedings, dated 18th December No. 9,290.

r giving effect to the new system so far related to "tidal estuaries of able extent and inland tanks and streams, which, as a rule, retain water ut the year in sufficient quantity to keep up a constant supply of fish, the property of Government," and it was added "it is not intended ere, with the usual practice of catching fish in small tanks which do not ater throughout the year, not with any rivers but those possessing a supply of water," a reservation being made in respect to the channels back-waters from the Godavery and Kistna anicuts. The Board pointed he property in nets, etc., which would be rendered useless by interdicting small meshed nets, was very much larger than Dr. Day supposed and ably a legal enactment would be necessary to enable Government to ders which greatly interfere with practices which long custom may have into communal rights maintainable by civil action."

No orders have been passed on the Board's Proceedings and Draft Rules o in the preceding paragraph.

The Board cannot but view with reluctance the necessity for State interith what are at present free industries, and deprecate the conversion of intended alike in the interests of the people and of the Government, for vancy of an important element of food, into a means of raising revenues neral purposes of the State; but they think that they cannot now but d Government to prepare a Draft Act drawn in accordance with the provisions of the Land Acquisition Act X. of 1870 to enable them ke the conservancy of all waters to which its provision may be extended provision for inviting and deciding counter-claims and rights by the r Courts, and for compensating the owners of such rights or easere such rights are interfered with or resumed. The amended draft igation and Drainage Bill for Northern India contains some useful s, and might with advantage be referred to in drawing up the proposed he event of such an Act as is suggested being enforced it would be o provide for the conservancy and regulation of fisheries in Zemindaris.

The Board think that the Act should contain, among other things, pro- the following effect:—

That sea fisheries, as well as all tanks and streams which are not perennial, e.

That, as regards rivers and tidal estuaries, it shall be declared lawful for nt to levy a tax on fisheries in such waters either in the form of rent or implements of fishery, as proposed by Mr. Thomas in the 139th para- is report; the collection of the said fees to be either kept directly under ment of Government or farmed out.

That the poisoning of waters for the purpose of catching fish, and the f waters by the refuse of coffee-pulpers and other deleterious works, be under heavy penalties.

(4.) That the minimum size of the meshes of nets permitted to be used be defined by law, and that immature fish captured are to be returned to the water under penalty.

(5.) That the interruption by dams and traps of the entire way of public rivers and the use of cruives and the like devices be prohibited in rivers declared to be taken under Government conservancy.

(6.) That no interference is intended or is to be permitted with the existing rights of the people in regard to catching and retaining fish in their own fields, minor channels and ponds, but that it shall be lawful for the officers entrusted by law with the conservancy of fisheries to insert gratings in the head of any channel leading to such fields.

36. With regard to (2) the Board would not rent out fisheries in places where there is a fishing population, but would, at all events in the case of large rivers, and tidal estuaries, enforce taxation by means of fees for license to use nets, boats, and other implements of fishing as proposed by Mr. Thomas in the 139th paragraph of his report; a moderate scale of fees, however, being adopted. The substitution of such a license-tax (somewhat similar to the old Moturpha tax) for a system of rents will probably not be pecuniarily an advantage, but the Board think it preferable as more usual, less likely to be unacceptable, and far more advantageous for conservancy purposes. Under the renting system lessees are only too likely to sacrifice the interests of the fisheries to their own immediate gain. In places not hitherto fished by a regular class of fishermen there would not perhaps be so much objection to the renting system.

With regard to (4) the size of the mesh, Mr. Thomas proposes a minimum of two inches in circumference for fresh-water, and three inches for tidal-water fisheries. The Board would recommend the minimum being limited as proposed in the case of all nets, with the exception of casting nets and prawn nets which should not be interfered with. Rod and line-angling ought also to be [illegible].

The description (5) and size of "immature fish" to be determined and notified by Government.

37. A separate Fisheries Department should, the Board think, be constituted at once under the Board. They would appoint two Inspectors of Fisheries on Rupees 800 each with travelling allowances, and would divide the Presidency between them; their pay would amount to about Rupees 1,000 per month or 24,000 a year. They might have a Native Assistant in each district, who should be under the Collector's general control, at (Rupees 50 + 25 travelling allowance) Rupees 75 each per mensem, say Rupees 18,000 a year: 25,000 would cover subordinate agency, such as Water Bailiffs, etc. The total cost may be estimated at Rupees 70,000.

	Rs.
2 Inspectors of Fisheries at, say Rs. 1,000 per month	24,000
20 Assistants at Rs. 75 each a month	18,000
Subordinate Agency, say	25,000
Total...	67,000

38. The Board suggest that all the rents derived from fisheries should for the present constitute a fund for the protection and improvement of this industry.

These now amount on the average of five years as per statement in the margin to Rupees 80,000* with a steady upward tendency.

	Rs.
* 1866-67	69,681
1867-68	76,631
1868-69	83,847
1869-70	82,184
1870-71	85,023
Average...	79,469

39. It is needless to add that the existing fund is quite equal to any demand upon it, and it must be borne in mind that practically nothing is credited under this head in the statements for the seven districts noted marginally, and in several districts the whole subject is inadequately attended to. The Board think that with care a large prospective income may be relied on from this source, while the taxes and licenses may be kept so low as to be anything but oppressive.

Vizagapatam, Godavery, Nellore, Cuddapah, Kurnool, Canara, and Malabar.

No. 227. Proceedings of the Board of Revenue, dated 27th July 1871, No. 3,131.

Read the following letter from J. A. C. BOSWELL, Esq., Officiating Collector of the Kistna District, to the Acting Secretary to the Board of Revenue, dated Masulipatam, 20th April 1871, No. 1,182:—

In continuation of my letter dated 10th November 1869, No. 333, regarding fisheries, I have the honour to submit, herewith, for the sanction of the Board, a list of the fisheries which I propose to advertise for sale from Fasli 1281.

2. The list in question includes the Kistna river and anicut channels and locks in the Delta as well as the salt creeks which are not navigable by sea-going vessels, as also the tanks and swamps.

3. In the upland taluqs of Guntoor, Narsarowpeta, Vinukonda, Nandigama, and Palnad there are many irrigation and other tanks as well as hill streams in which the fishing has never yet been rented out, though the Wudders and other fishermen catch fish for sale and for their own use. In these taluqs there are no salt-water fisheries.

4. In the Bunder Taluq applications have been received from some fishermen and others for renting the swamps and salt-water creeks from Nos. 1 to 4 in the list for two, three, and four years. As some of these have always been rented hitherto I have directed the Tahsildar of Bunder Taluq to put them up to auction and knock them down to the highest bidder. No. 5 includes the swamps, canals, and water-courses around the town of Masulipatam. The fishermen and Besta caste people, who are the residents of Masulipatam town, have been for a long time in the habit of catching fish in those places and gaining their livelihood by selling the same. They formerly paid to Government moturpha-tax on this calling. Since the moturpha was abolished in 1856 they have paid nothing to Government. These people object to the sale of these swamps. Translations of their petitions are sent herewith for the information of the Board. These people, as well as the fishermen along the sea coast, have no other means of livelihood except fishing in the backwaters and swamps. I propose to sell all fisheries that are to be leased out for one year as a tentative measure. If the rents realized are

large enough they may be continued; if insignificantly small they need not b sold in future.

5. The Kollair lake fishery in Gudivada Taluq has already been rented ou for five years. The rents are now credited to District Road Fund under Loca Funds.

6. In Bapatla and Repalli Taluqs applications have been received fo renting the fisheries in certain tanks and channels; but they have not been dispose of for fear of collision with the Public Works Department, who have been leasin out certain fisheries and crediting the proceeds, I believe, to Irrigation withou consulting me. Before any further steps are taken it should be distinctly decide by what Department the several fisheries are to be leased out and to what head the proceeds are to be credited.

7. All the small fisheries in tanks, salt creeks, and swamps used to be rented out by the Revenue Department before the sundry small farms and licenses were abolished under the orders of Government. After the anicut channels were constructed the Officers of the Department of Public Works appear to have gradually commenced a practice of leasing out the fisheries in the river and channels, and more lately some also of those in tanks which received their supplies from th anicut channels; but this appears to have been without any communication wit the Revenue authorities.

8. To prevent clashing between the two Departments I beg to suggest t all fisheries in tanks, swamps, and salt-water creeks and hill streams should leased out by the Collector, and that the Officers of the Department of Public W should be directed to furnish yearly to the Collector a list of the places in w the fisheries may be leased out by their Department in the Kistna river as we in irrigation channels and locks in the Delta. Thereafter the Collector, in co munication with the Tahsildars, make arrangements to have these fisheries, a approved of by the Department of Public Works, put up to auction and sold, an the proceeds, I beg to suggest, should be credited to Local Funds.

9. In conclusion, I beg to forward, herewith, translation of replies of Tahsi dars to the questions put to them in regard to salt water-fisheries.

P. S.—I have just received a communication from the Superintending Eng neer stating that no fisheries are now leased out by his Department; that personall he knows nothing of any fisheries whatever; and that he has forbidden the Officer of the Department of Public Works from interfering in them till he receives th instructions of Government on the subject.

Enclosure No. 1.—List of Fisheries proposed to be advertised for sale.

Enclosures Nos. 2 and 3.—Translations of Petitions presented to the Collector.

Enclosure No. 4.

Replies by the Tahsildar of Narsarowpeta Taluq to the Queries (relating to Fish) set up in Takeed 137, *dated* 1*st November* 1869, *of the District Collector.*

1.—There were no receipts as there was no trading.
2.—No.

3.—No.
4.—There are 101 places in this taluq.
5.—Tanks—(1) Narsarowpeta, (2) Vipperla, (3) Sautamshula, (4) Koppadam, (5) Konduru, and (6) Yelchuru.
Parts of the nullah called Ogeru—(7) Purushottampatam and (8) Pasumarru.
6.—(1) Purushottampatam, (2) Narsarowpeta, (3) Murikipudi, and (4) Naderu.
7.—Names of the villages—

	No. of population.		No. of population.
Purushottampatam...	4,164	Murikipudi	1,158
Narsarowpeta	3,361	Narendla	2,999

8.—Some of these catch fish in February and March, and in other months they live by cooly and agricultural labour.
9.—There is no sea in this taluq. In seas Palles and Uppara people catch fish, who, however, do not exist in this taluq.
10.—Such kind of people are not here.
11.—Mutarasulu, Mussulmans, Besta caste, Sudras, and Pariahs.
12.—None.
13.—No one goes beyond the limits of the taluq for sale.
14.—There were no fish contracts in this taluq hitherto.
15.—Fish are scarcely sold in this taluq and consequently the earnings of fishermen cannot be ascertained.
16.—No, never.
17.—No.
18.—No.
19.—Yes, fish will sell if brought for sale; but they are not.
20.—All castes except Brahmins, Komaties, Kamsalies, and Linga Buljees.
21.—Both are equally preferable.
22.—In Purushottampata, twenty men; Narsarowpeta, one man; Murikipudi, three men; Narendla, ten men.
23.—There were no rents at any time.
24.—In years 1865-66-67 the fish decreased owing to the failure of rain; but in this Fasli fish are abundant owing to good falls of rain.
25.—Yes; they decreased, some emigrating to villages on the Kistna channels and others betaking to agriculture.
26.—No.
27.—Not known.
28.—Nets have decreased considerably.
29.—Yes; small fish taken to great extent as large fish can seldom be caught.
30.—The usual size of the mesh of the net differs in many parts. Some of them are of half-Anna size, some of quarter-Anna, some of Pie, and some even less than this.
31.—Not known.
32.—In February and March.
33.—No, not at all.
34.—As fish are not salted here it is not known which kind of salt is required for that operation. Merchants bring salt here and sell for domestic consumption, etc.
35.—No.
36.—Not known.
37.— Do.
38.— Do. as in this taluq salting fish is never tried.
39.— Do.
40.— Do.

41.—There are no markets in which fish are sold. People take fish to different villages and sell them there for corn or ready cash.

42.—All castes that eat fresh fish eat salt-fish.

43.—No one here can salt fish.

44.—Meva, Magachapa, Gorakachapa are salted in other parts of this country.

45.—No.

46.—No.

47.—No.

48.—Yes, they are dried.

49.—Yes.

50.—They remove *maws* (ఱొప్పలు) from fish.

51.—To no other use than for eating.

52.—No ; they are not used as manure for crops.

53.—None in this taluq.

54.—They extract oil from fat of fish, but not in this taluq.

55.—No.

56.—There are Valaga Jalla, Royya, Pariga, Bocha, Korramenu, Mattagudisa, Usakadondulu, and Ingilayalu. There are no people here who know of the breeding months of those fish.

57.—Nets, etc.

58.—Earth-worms, mutton, mole crickets.

59.—By a certain flour called "Garanakka."

60.—Yes ; they are baled out.

61.—There are no crocodiles, etc., in this taluq.

(Signed) P. T. RAGHAVACHARY,
Acting Tahsildar

(True Translation.)

NIZAMPATAM,
17*th June* 1871.

(Signed) J. A. C. BOSWELL,
Officiating Collector

ENCLOSURE No. 5.

Bapatla Taluq, Kistna District.

ANSWERS to Questions sent from the Huzur as to Fisheries. The said answers have been prepared on the information obtained from fishermen, Uppalavallu of Pilot profession, and Bestavallu.

1.—No rivers in this taluq.

2.—As the fisheries in tanks were not leased out last year no revenue was collected.

3.—As there are no tanks in this taluq leased out for fishery no number is given.

4.—An account showing the number of tanks in which the fishery is not leased out is appended to this.

5.—The fish that are caught in the three salt creeks or salt-water rivers, the Ramperu near Chinna Ganjam, the Muttadirevu of Ganapavaram, and the Upputeru of Perali, and in the sea might be rented out. The small fish found in the fresh waters of the Kistna canals of Kunderu-vada and tank canals are also of use to people and consequently they may also be included in the leases if thought expedient. It was stated in the information hitherto submitted that people after having obtained permission from the Department of Public Works catch fish near the calin-gulahs of Kistna canals and sell them.

6.—According to the other list hereto annexed there are thirty-seven villages.

7.—The number of inhabitants in each of such villages is entered in the said list.

8.—It is known that Tulis, about forty-eight in number, spend their time in fishing in the sea near such places as Chinna Ida near Nayanivalle, Danerevu Kalava, west of Motapulli Port, and at the time that they don't fish they repair their nets, and that there are some people of other

castes who, though living by other occupation, occasionally catch fish and make something thereby.

9.—In this taluq there are people of three castes called Tulis, fishermen that drive rafts, and Uppalapuvallu.

10.—Bestavallu, Fishermen, by fish ; Yerukalavallu (Hunters), Salevallu (Weavers), and Mallalu (Pariahs), and other low people by fish-baskets.

11.—Tulis, Fishermen, Uppalapuvallu, and Bestas sell them to Mussulmans, etc., who purchase from them for retail dealing and sell them to people.

12.—It is known that those of four castes, Fishermen, Uppalapuvallu, Bestas, and Tulis prepare salt-fish.

13.—It appears that those who purchase fish from the people of the said castes that fish along the sea-shore carry them to a great distance for sale.

14.—As there is no leasing out of fisheries no rates of leasing out are fixed.

15.—They say that each of those who fish in the sea might on average get Annas 8 a day.

16.—It appears that there used to be a tax in former times ; no tax is levied now.

17.—A considerable quantity of fish, it appears, is carried into the bazaars of Nayanipalli, Chirila, Jandrapeta, and Vetapallem.

18.—They say that such a quantity only is carried as is likely to meet with a ready sale.

19.—As these are small villages no sale is effected as in towns if the fish are brought in large quantities.

20.—They say that people of Sudra caste, Mussulmans, Pariahs, and Chucklers eat fish.

21.—They say that fresh fish, that is, the raw fish, only that are caught the same day are excellent, and those that are stored for use are salt-fish.

22.—It appears that many people of the castes mentioned in the twentieth paragraph eat fish.

23.—Fishery leases never existed hitherto, it appears.

24.—They say that fish were very plentiful in former years, and no such abundance exists of late on account of the scarcity of rain.

25.—The people that fish are as usual, it appears.

26.—Within the frontiers of this taluq it appears Tulis go to sea on solitary boats and fishermen use rafts.

27.—No Tulis, it appears, were to be found ten years ago ; they have come of late and at present are fishing in the sea and use boats, boats consequently have become more numerous than in past years.

28.—For the same reasons nets, too, have become more numerous.

29.—It is known that a small quantity of small fish are also caught by means of nets.

30.—For preparing salt-fish Tulis with their nets go to sea in boats. The following is the description of their nets :—The holes of the first ones are one cubit broad, those of the next ones are gradually of smaller dimensions, and the last nets are made of hemp of a kind of hempen sack-cloth. It is known that the holes of those made of hemp and carried into the sea on rafts are five inches broad, those that are made of thread are called Gedavalalu and have the holes of one inch, some called small nets have half-inch holes, and those of the nets that are used in fishing in tanks and canals have meshes of one inch or half inch.

31.—They say that in the months of November and December fish are caught in small quantities, and afterwards in the months of January, February, and March they are caught in large quantities.

32.—It appears that it is the months of November, December, January, February, and March.

33.—It has come to our knowledge that much of the fish caught in the sea are salted.

34.—They purchase salt for sale from those that sell it.

35.—It appears that they do not use chowdu or saline earth instead of salt.

36.—Chowdu is obtained from the swamps that are watered by the sea tide.

37.—They say that as there is no means of converting chowdu in swamps into salt the price of chowdu cannot be fixed.

38.—Those that prepare salt-fish, they say, buy salt from the merchants, who purchase it at salt-pans and bring it for sale. They use such salt for fish, but they do not take sea-water and make salt from it.

39.—By the present process of preparing salt-fish the fish remain long without putrefaction, consequently it is good they say.

40.—Though they do not increase the price, they are unaware, they say, of a better process of preparing salt-fish than the present one.

41.—Fishermen say salt-fish is rather dear.

42.—Many persons of the castes mentioned in the twentieth paragraph eat fish.

43.—They inform that as those who prepare salt-fish and sell it get profit their trade is thriving well, and there is no means of increasing further.

44.—Pilots and fishermen say that they salt all the fish caught in the sea, and of them Pandu fish are the best, and the next best are Moyya fish, and the next Magu fish.

45.—Salt-fish are not exported from the taluq by sea, but they take them for sale to inland towns such as Guntoor.

46.—They say that they are unacquainted with the process of smoking and pickling fish.

47.—They pickle fish-roe.

48.—As soon as they catch fish they cut them asunder with a knife, remove the entrails from within, wash them in sea-water, put in them unground salt for the day, and expose them to the sun. By the melting of the salt the fish will become dry, and then they put in them the next day ground salt again and expose them to the sun; on the third day, too, they put a little quantity of ground salt and lay them out in the sun; and on the fourth day they expose them to the sun and store them till they are sold.

49.—Sora fish (sharks), they say, have large fins; they will cut them (fins) and dry them, but don't pickle them. Jonangi people come from the south and purchase them at a dear rate; if they don't come there will be none to buy them and consequently putrefy. Other fish, too, have small fins, but they will eat and throw them away, and don't pickle and store them.

50.—They inform that they dry and sell off the roe of Pandu fish, large ones among Magu fish; but they won't pickle and store them. The roe are their stomachs, it appears; net-makers will eat such roe, but don't pickle them.

51.—They inform that fish caught on the same day are dressed and eaten, and those that are intended to be stored will be pickled; small ones will be made dried fish. Except this they won't be used for any other purpose.

52.—The fishermen say that the use is known of fish for manuring. If the beds of the lemon, orange, and citron trees are dug to the roots and if fish are placed in them with earth on they will be much strengthened and become fruitful.

53.—They say that oil may be extracted from the livers of sharks, and no oil can be obtained from the hearts of other fish.

54.—They say that oil cannot be extracted from the whole of the fish, and it can be obtained only from the liver.

55.—It appears that fish-oil is used for rheumatic pains, Sora piyyi (shark's dung), that is, somethings of fish that are driven ashore, is used for pains in the ear and to apply to the eyes of

Proceedings of the Madras Government, Revenue Department, 25th October 1872.

cattle when they are affected; and the maw of the fish is dried and prepared, and that isinglass is used under the name of fish-glue for repairing boxes.

56.—Fish found in fresh or good water—

	Their length.		Their length.
1. Mattagudise	...1 span.	5. Korramanulu...	...1 cubit.
2. Valaga ...	...1 yard or half yard.	6. Malugulu ...	...1 yard or 1½ yards.
3. Bommedeya	...1 span.	7. Pakkelu ...	...2 inches.
4. Jallalu ...	...½ ,,	8. Gandelu ...	...1 span.

Fish found in salt water—

1. Pandu	...1 yard.	6. Royyalu (Prawns)	...2 inches.
1. Magalu ...	...¾ ,,	7. Kakisal	...½ inch.
3. Moyyalu ...	...½ ,,	8. Kisagarakulu	...2 inches.
4. Gorakalu ...	...1 span.	9. Pasikalu ...	...1 inch.
5. Devatunalikelu	...1 ,,	10. Aritikayalu ...	...3 or 4 inches.

The fishermen, etc., say that such is the size of the large ones, and at the time when the nets are spread small fish as well as large ones are caught, and the time is unknown when the young ones will be produced. Some say that in the fresh water they will be produced very much from the commencement of October.

57.—The fish are caught by spreading drag-nets and hand-nets, by placing fish-baskets, by fish-snares, fishing-stakes, and by angling.

58.—They say they use earth-worms for bait when they catch fish in good water by angling, and in the sea by using prawns and fish flesh for bait.

59.—They don't mix poison, they say.

60.—It is known that when there is a small amount of water in tanks and canals they take it out by water-baskets and then catch fish.

61.—There are no crocodiles in this taluq. What water-cats are is not known. Large fish eat small ones, so they say.

(True Translation.)

(Signed) J. A. C. BOSWELL,
Officiating Collector.

Account showing the number of Tanks in Villages having no fishery leases, Taluq Bapatla, Kistna District.

1 Uupputurus irrigating tank. 1 Komalla tank of Chebrolu. 1 Irrigating tank of Vadlamudi.	These tanks are rain-fed, but not supplied by the Kistna Canal.	
2 Chebrolu— 1 Nella tank. 1 Yerra do.	1 Irrigating tank of Bapatla.	
1 Kommamuru tank.	1 Mandagondapati tank.	These are dependent on the Kistna water.
1 Nanduru do.	1 Karamcheda do.	
1 Ulla do.	2 Ganapavaram tanks— 1 Urremmapati tank.	
2 Karlapalem tanks— 1 Vaddi Samudram tank. 1 Tumwa Grumam do.	1 Gudnie do.	
	15 Total.	

There are also some tanks, etc., from which villagers obtain water, and it appears that no fish are caught in them. Fishery leases have not hitherto been fixed for any kind of tanks.

Detailed account of fishing Villages and the number of their inhabitants who have the habit of eating fish, such as Sudras, Mussulmans, etc., Taluq of Bapatla, Kistna District.

	Villages.	Approximate number of such inhabitants.
1.	Bapatla	7,000
2.	Betapudi	200
3.	Karlapalem	1,400
4.	Ganapavaram ...	1,000
5.	Perali	1,000
6.	Cherukuru	1,500
7.	Santaravuru	1,000
8.	Caremchedu	800
9.	Chinna Ganjam ...	2,000
10.	Peda Ganjam ...	1,000
11.	Kadakuduru	*200*
12.	Natupalli	3,000
13.	Arumpatla	1,000
14.	Velapalem	2,000
15.	Ipurpallem	3,000
16.	*Perali*	*1,500*
17.	Chirala	*4,000*
18.	Pandillapalli	2,000
19.	Gandipudi	200
20.	Mandakondapadu ...	200
21.	Upputuru	3,000
22.	Kottimarla	400
23.	Garikapudi	800
24.	Returu	400
25.	Appapuram	400
26.	Chebrolu	2,000
27.	Jagarlamudi	800
28.	Ademuvva	500
29.	Nanduru	1,000
30.	Chundurupalli	130
31.	Marrepudi	300
32.	Ituru	100
33.	Vulla	500
34.	Jupudi	300
35.	Kommamuru	1,000
36.	Mannama	200
37.	Doppalapudi	600
	Total ...	46,430

When the water in canal subsides many of the Sudras go, catch fish by means of fish-baskets, and bring them for their own use. Those that catch fish and sell them, it appears, are only the following:—Uppalapuvallu of Pilot profession, Fishermen, Tulis who pilot boats, and Bestas that fish by means of nets.

(Signed) V. VENKATROW,
Tahsildar.

(True Translation.)

(Signed) J. A. C. BOSWELL,
Officiating Collector.

ENCLOSURE No. 6.

WITH reference to the Officiating Collector's Takeed, No. 329, dated 1st November 1869, the Tahsildar of Bunder Taluq reports as follows :—

1.—The amount of tax collected on salt-water fisheries, viz., Upputuru at Lakshmipuram, Ituru swamp at Pedapatnam, and salt creeks is Rs. 1,253-9-5 within the last five years.

2.—The tax collected on fresh-water fisheries in tanks and Vadalu amounts to Rs. 497 within the last five years.

3.—The tanks leased out are eight in number.

4.—The tanks and canals not leased out are about 100.

5.—There are some places which might be leased out for fisheries.

6.—There are about twenty villages where fisheries might be carried on.

7.—There are about 10,000 people in those twenty villages.

8.—They not only fish in the proper time for fishing, but also cultivate their lands and carry burdens from one place to another.

9.—Fishermen fish in the sea.

10.—Fishermen, Mutrachulu, Bestalu, Pariahs, Toddy-drawers, Vaddelu, and Telagalu fish in the salt-water creeks and rivers.

11.—Fishermen, Mutrachulu, Bestalu, and Vaddies sell fish.

12.—Fishermen and Vaddelu salt fish.

13.—Fishermen, Mutrachulu, and Vaddelu take the fish to the neighbouring places and bazaars and sell them. The Vaddelu not only buy salt-fish (dry fish) from the fishermen and carry them to a great distance and sell them there, but also buy fresh fish and salt them and carry them to a great distance and sell them there.

14.—No coolies are employed in catching the fish, but the renters lease out the fishing to the fishermen and so these become sub-renters.

15.—They can earn Annas 2 a day in catching fish.

16.—They are not taxed.

17.—Fish are brought in considerable quantities every day to the town; but they are not caught in such numbers as to supply to villages every day, only on fixed days when fairs will take place generally.

18. Fish are at times abundantly caught and will remain unsold the first day.

19.—If the fishes so caught are not sold on the same day they will be sold after the two following days by drying them in the sun. If it is a rainy day and if they become putrid they will be destroyed.

20.—Telagalu, Velamalu, Mutrachulu, Vaddelu, Bestalu, Toddy-drawers, Mahomedans, Washermen, Barbers, Pariahs, Cobblers, Shepherds, Aravalu, and Devangulu eat fish.

21.—The large fish which are caught in the sea, salted, and dried in the sun are very good, while the small ones are not so tasty if they are salted and dried in the sun.

22.—There are about 2,000 men who catch fish.

23.—The leasing out of fisheries is not declining in comparison with previous years.

24.—It does not appear that the fishes are increasing in number.

25.—Those who employ their time in fishing are now less in number since the cyclone washed them away.

26.—There are about twenty fisher-boats that go out to sea to catch fish.

27.—The fisher-boats are less in number now compared with previous years.

28.—Nets are less in number.

29.—Small fishes are also caught.

30.—Their sizes are between ¼ and 10 inches.

31.—The usual period of time for sea-fishing is from December to March.

32.—The best months for fresh-water fishing are December, January, February, and March.

33.—In this taluq the fishermen do not salt the fish to any great extent.

34.—They buy salt in the bazaar.

35.—Earth-salt is not used in salting large fish.

36.—It is procured in the saline swamps.

37.—It is not procurable in the bazaars, only in the saline swamps.

38.—The fishermen do not use sea-water in making salt for salting the fish.

39.—The quality of the salted fish is very excellent.

40.—The manufacture of salting the fish is always the same. It is not more agreeable to the taste when it is dear.

41.—There are no promising markets in the taluq except those which exist at present, and the demand of fish is not great.

42.—The abovementioned class of people eat salted fish.

43.—It is easy to salt the fish abundantly in the hot season. The fishermen cut the belly of the fish and take off the entrails, and then cut the fish into pieces and salt them and dry them in the sun for seven days.

44.—The Pondugoppa, Mova, Goraku, and Magu fishes are salted chiefly.

45.—It is sent to Hyderabad and other countries for sale.

46.—The drying of fish by smoke is not practised in this taluq.

47.—Though small fish are not salted yet they are dried in the heat of the sun.
48.—Fish are dried in the heat of the sun.
49.—The fins of the large ones are severed while those of the small ones are thrown away.
50.—The entrails of large fishes are cleared out while those of the small ones are left.
51.—Fishes are not only used for food but they are also used for making oil.
52.—Fishes are not used for manure.
53.—The Peddacharalu, Elayi, Ravel, and Tura fishes are used for obtaining oil.
54.—The oil is not procured from the whole fish but only from the fat of it.
55.—The Goraka stones, which are obtained from the Goraka fish, are used for medicine. The oil of Sura fish is used for curing rheumatic pains. The fin of the Elam fish is used for a charm for the cattle when they are attacked with murrain.
56.—The Sura, Teki, Elam, Magu, Goraka, Maguram, Churva, Akiraya, Aritikayi, Kalagam, Billa, Naluka, and Pandugoppa fishes are in season from November to February. Their length is one yard and their diameter is half a yard.
57.—Fish are caught by the following different means, viz., long nets, drag-nets, fishing-rods, casting-nets, etc., etc., etc.
58.—Fish caught with hooks angling are Royyalu, Ramalu, Moppalu, and Yerralu.
59.—There is no practice of poisoning the waters in the rivers, etc., for fishing in this taluq.
60.—There is no practice of pumping out water with pumps for catching the fish.
61.—Crocodiles, Soralu, Elamlu, and Suralu devour the fish.

(True Translation.)

(Signed) J. A. C. BOSWELL,
Officiating Collector.

ENCLOSURE No. 7.

Statement showing the Fisheries of Repalli Taluq, prepared in accordance with the Takeed No. 449 *of* 1869, *Fasli* 1269-70.

1.—There has been no such renting in this taluq.
2.—There has been no such renting.
3.—No tanks have been rented.
4.—Thirteen, as shown in the appended list. These are capable of being rented. Tanks useful to the people, etc., in the hot season, and those in which water does not stand always, are not included in this.
5.—A list showing the number of such fisheries is appended to this.
6.—Ninety-nine, as exhibited in the list sent herewith. Villages near the respective canals are also included.
7.—Population 100,451 (according to Census) in the villages named in the above list.
8.—Fishing is the chief occupation of Palla people (fishermen); they are also engaged in loading or unloading ships at places where there is exportation and importation. When there is no work of this kind their time is taken up in fishing and in salting the fish. Their females sell these fishes, going from village to village.
9.—Even the Palla people, but no one else. Besta people also find work in fishing, but as a rule they don't fish in the sea. There are very few Besta people in this taluq.
10.—Except Palla, Mutrachulu, and Besta people no one fishes in the salt-waters.
11.—Palla, Mutrachulu, Besta and Vadde people, Toddy-drawers, Mussulmans, etc.
12.—Vadde people, Toddy-drawers, and Mussulmans, etc., salt fish; they buy from fishermen.
13.—They are brought for sale to places which are forty or fifty miles away, such as Masulipatam, Guntoor, etc. People of Patala buy fish in large quantities in Nizampatam and Kottapalem and send them to Hyderabad.
14.—As there are no contracts no rate is fixed. People buy fish from fishermen.

Proceedings of the Madras Government, Revenue Department,
25th October 1872.

15.—Fishermen get much profit in towns. In places where fresh fish cannot be sold as much profit as is realized by selling the salted fish cannot be expected by selling fresh fish alone. Each salted fish weighs quarter of an Indian Maund or 10 Seers. This is sold at 2 Rs. a Maund. Fishermen say that such a fish, when fresh, is sold only for 4 Annas. At times a day's profit varies from 5 to 10 Rs., and on some occasions there is no profit at all.
16.—No separate tax is imposed for fishing; they are taxed upon their income in general.
17.—A sufficient supply is never obtained. Large fishes are not sold in this taluq. Ten or twelve baskets of small fish are brought for sale once a week for poor people.
18.—Fishes here obtained are generally sold at other places, but not in this taluq.
19.—Dried fishes are sent to Bunder and Guntoor for sale. There is not much demand for fresh fishes in this taluq.
20.—All except the Brahmins, the Vysyas (Komaties), and the Kamasalies (Goldsmiths, Carpenters, etc.)
21.—To keep them as they are.
22.—About 600.
23.—There were never any rents in this taluq.
24.———
25.—Fishermen inform that as there is not much trade of this kind now the number is less than before, but this statement is unsupported by any proof.
26.—In Nizampatam, Kottapalem, Lakinanidippa, a hamlet of Sivarulanka, Ganjanapaliem, Mosalagunta, etc. The number of canoes, kattudonalu, and rafts is 695.
27.—Fishermen inform that they are decreasing in numbers.
28.— Do. do. do.
29.—Both small and large fishes are caught by the net.
30.—It varies from the size of the ring-finger to that of the span between the thumb and the forefinger.
31.—They catch sea-fish that can be salted during the months of January, February, and March.
32.—During December and January, when there is but a little quantity of water left, they catch in large quantities. They commence catching them from August.
33.—A much less quantity of salted fish is used than fresh fishes.
34.—The salt sold at Kotars is obtained by purchase.
35.—Not used hereabouts.
36.—Cannot be got here.
37.—It is not sold here.
38.—No.
39.—People say that fish salted at Nizampatam are good.
40.—No one here knows how to prepare such fish.
41.—There are no markets; but merchants buy fish from fishermen, get them salted, and take them for sale to such towns as Hyderabad, etc.
42.—All eat openly except Brahmins, Vysyas (Komaties), and Kamasalies (Goldsmiths, Carpenters, etc.)
43.—People here do not know how to prepare salt-fish of better quality than that they have been hitherto preparing.
44.—Perch, Morachapa, Magu, and Gurma. The other sorts are sold fresh after they are dried in the sun.
45.—Merchants of Bunder and Guntoor buy at Nizampatam and Kottapalem and take them for sale. These merchants also send them to Hyderabad.
46.—People here do not know how to dry them by smoke; if they knew the way they could do it.
47.—Fishes that are not a span in length each are not salted. They sell them without salting. They don't salt those fishes that can be dried in one or two days.

48.—Fresh fishes are first sold ; they dry any fishes that are left unsold.
49.—They don't take off the fins of any fishes that they dry in the sun.
50.—It is not because they are liable to decomposition if retained.
51.—No.
52.—Not used here, but in the south : fig trees and vines are manured by decayed fishes at Madras.
53.—Fishes that give oil are not procurable hereabouts.
54.— Do. do. do.
55.—People here are ignorant of such use.
56.—

Name.	Length.	Circumference.	Month.
Pandugoppa	1 yard	Manika	Pushya.
Morachapa	1 cubit or less ...	Sola	Kartika.
Magachapa	1 yard	Manika	Asvija.
Gurma	1 cubit	Sola	Do.

57.—By a fishing-hook in the sea ; by a fishing-rod in canals, etc.
58.—Earth-worms and bits of flesh are used as baits for catching fish in fresh water.
59.—There is not such a practice here.
60.—No ; they generally fish when the water is low.
61.—Crocodiles are not to be found in the sea.

List of Villages referred to in Questions 4, 5, 6, *and* 7.

(*a*). Number of tanks not rented, referred to in Question 4—

1 In Repalli. Not the irrigation tank used by the people, but Bandicheruvu.
1 Chandole.
1 Rodupagu.
1 Wundivada Jamdulu.
1 Kuchinapudi.
1 Emanichervugudalu.
1 Veravaligangavolu.
1 Kytepalli.
1 Nalluru.
1 Wuppudi.
1 Aravapalle.
1 Kamarlezugadda.
1 Alluru.
1 Buddam.

13

Fisheries that are fit to be rented, alluded to in Question 5—

Thirteen tanks referred in Question 4 as per list (*a*).
6 Kistna channels.
1 Karakattakalva.

Their Locks.

1 Revantunipadu.
1 Vellaturu.
1 Kolluru.
1 Penumudi.
1 Nizampatam Canal.
1 Totavalli Madugu, known by the name of Allur Canal, branching from Karakatla Canal, including the lock near the bridge of Bhatteprole.
1 Nallavada.
1 Tumbadra.

6

Salt-water canals, including creeks, bars, and estuaries—

1 Lankavamdebba, a hamlet of Potumeraka, Mellagunta, etc.

Proceedings of the Madras Government, Revenue Department, 25th October 1872.

Locks.

1 Duggirala.
1 Tenali.
1 Kuchipudi.
1 Yinturu.
1 Pittalavanipalem.

5

1 Kuchinapudi Canal branching from Karakatla Canal.
1 Nizampatam.
1 Mundredudindikottapalem.
1 Uppukalava.
1 Nanguvadirevu.
1 Muttadiveru.
1 Palarevu.

7

26 Grand Total.

Villages which contain fisheries, referred in Question 6—

Thirteen villages named with reference to Question 4 as per list (*a*).

Villages lying near the Nizampatam Canal—

1 Revantunipadu.
1 Moramvari.
1 Tummapudi.
1 Duggirala.
1 Nandivellu.
1 Chintalapudi.
1 Kavalli.
1 Gudivada.
1 Kathevaram.
1 Tenali.
1 Pinapadu.
1 Chinavarmi.
1 Chinadavuru.
1 Pedadavuru.
1 Manduru.
1 Alapadu.
1 Revapudi.
1 Kuchipudi.
1 Amartaluru.
1 Turumella.
1 Mopparru.
1 Richiparru.
1 Tunturu.
1 Chandavolu.
1 Alluru.
1 Veeravalli.
1 Gokarnawattam.

27

Villages having salt water—

1 Lunkavanidibba, hamlet of Potumeraka, Mellagunta, etc.
1 Nizampatam.
1 Mundedu (including Kottapalem).
1 Uppukalava.
1 Nanjuvadirevu.
1 Muttadirevu.
1 Palerevu.

7

Villages lying near the Karakata Canal—

1 Pedakonduru.
1 Vallabhapuram.
1 Munnangi.
1 Redavarru.
1 Kollepara.
1 Annavaram.
1 Ipuru.
1 Chilmuru.
1 Kolluru.
1 Donepudi.
1 Vellaturu.
1 Pedapulivarru.
1 Gorepudi.
1 Voleru.
1 Rudravaram.
1 Ravianantavaram.
1 Penumudy.
1 Nalluru.
1 Chatragadda.
1 Kamarazugadda.
1 Visseswaram.
1 Kitepalle.
1 Potumerka.

23

Villages adjacent to the Kuchinapudi Canal—

1 Adavapalli.	1 Allaparru.
1 Vuppudi.	1 Vallapalli.
1 China Anantavaram.	—
1 Isukapalli.	6

Villages lying near Totavalle, known by the name of Alluri Canal—

1 Bhattiprolu.	1 Rajavolu.
1 Reruvaram.	—
1 Ayilavaram.	7
1 Peddavaram.	1 Arepalli.
1 Kanagala.	1 Siripudi.
1 Tatapalle.	—
	2

Villages watered by Toombudra—

1 Kolkaluru.	1 Nidubrolu.
1 Gudivada.	1 Kanakurru.
1 Angalakuduru.	1 Chintalapudi.
1 Yedlapalle.	1 Malakuduru.
1 Virivoru.	1 Yinjoli.
1 Chunduru.	—
1 Moduhuru.	13
1 Aluru.	—
	99 Grand Total of Villages.

(True Translation.)

(Signed) J. A. C. BOSWELL,
Officiating Collector.

ENCLOSURE No. 8.

Replies from the Tahsildar of Gudivada Taluq to questions put by Dr. Day in regard to the Sea and Fresh-water Fisheries.

1.—No fees have been realized from the renting of the rivers fisheries, as the rivers Kistna and Godavery are not connected with the villages of this taluq.

2.—In this taluq there is the Kollair Lake belonging to Bhitarazhalli Parganah. A tax has been imposed since a long time for catching fish in the above lake. A tax has been collected from the renting of fish in that lake since five Faslies, as below specified :—

Faslies.	Amount of rent. RS.
1274	4,920
1275	4,920
1276	4,920
1277	4,920
1278	4,920
Total...	24,600

From Fasli 1279 to Fasli 1281 it is given for a rent of Rs. 4,601 per Fasli.

3.—There exists no custom of renting out other tanks except the above-said Kollair.

4.—Excepting Kollair there are—

Tanks and wells	59
Kistna anicut channels	16
Branch channels	275
Total...	350

Proceedings of the Madras Government, Revenue Department,
25th October 1872.

5.—In the Kistna anicut channels there will be a great number of fish during the water-flowing days ; but I am given to understand that the catching of fish in the above channels and near calingulahs and sluices is leased out by the Department of Public Works. Details are not known. Moreover, Upputeru, which rises in Kollair and flows into the sea, lies on the borders of this and Godavery Districts. Though the Upputeru is under the Godavery District the fishermen or Pallakaries of the villages* situated close to Upputeru are without any tax whatever catching fish and carrying on their business.

* 1. Konnangi
2. Mattigunta.
3. Pedalanka.
4. Buttapudi.
5. Kalduidi.

Before there were Mavula and moturpha taxes, but subsequently they were abolished.

6 and 7.—Name of villages—

		No. of population.
Belonging to this taluq.	1. Chintapadu ...	... 20
	2. Kalakurru ...	... 23
	3. Koppadu ...	... 44
	4. Shriparru ...	... 20
	5. Penunaka ...	... 8
	6. Nutstsunully ...	... 7
	7. Pedda Regumalle	... 49
	8. Gudipaka Lanka	... 20
	9. Prattikolla Lanka	... 16
	10. Chellunnapadu ...	... 40
	11. Agadallanka ...	... 20
	12. Nandamillipadu...	... 10
	13. Chinnamillipadu...	... 10
Belonging to this taluq.	14. Kottadu ...	... 20
	15. Panchikalamarru	... 4
	16. Gamallapadu ...	... 9
	17. Nangivaka ...	... 14
		369
Belonging to Godavery District.	18. Vaddigudem ...	... 22
	19 Gandiapdu ...	... 19
	20. Mulki Mahomedpuram	... 30
	21. Tamalapalle ..	... 19
	22. Amadalapalle ..	... 5
		95

Though the villages from Nos. 18 to 22 appertain to Godavery District they are included in this list because the villagers catch fish agreeing to pay to the renter of Bhitarzhilli Parganah privately some tax in the Kollair Lake.

8.—Their time is entirely occupied in catching fish and in drying them.

9.—It is known that Pulle caste people catch fish in the sea.

10.—In Upputeru, in which there is salt water, Pulle and Besta caste people only catch fish ; in Kollair only Wudder people.

11.—Mahomedans, Bestas, Pallikaries, Wudders, and Pariahs sell.

12.—Palle and Wudder people.

13.—Fish-traders resort here from other taluqs and buy fish of Kollair and take them to a great distance and sell them there. Fishes in Upputeru are also used in this manner. Pallikaries, etc., carry the fish to the villages of the Godavery District, where there are fairs, and dispose of them there.

14.—The renters of Kollair privately rent* out to the fish-catchers on condition of paying some tax, consequently every one catches fish for his own use, but not for hire.

	RS.
Higher rate for one year... ...	18
Lower do. do.	3

15.—Class—

	Given for a day for catching fish in Kollair. RS. A. P.	Given for a day for catching fish in Upputeru. RS. A. P.
1st Class	0 3 0	0 4 0
2nd ,, ...	0 2 6	0 3 0
3rd ,, ...	0 2 0	0 2 0
4th ,, ...	0 1 4	....

According to the above rates every one gains according to his bodily strength.

16.—Those that catch fish in Kollair rent from Government. They pay the fixed tax and catch fish. To those that catch fish at Upputeru no other tax has been fixed after the abolition of moturpha and Mavulapannu.

17.—In this taluq there exist no markets as in towns. The fish are carried to the towns of Bunder and Ellore and to some other distant villages.

18.—They catch only as much as can be sold.

19.—Although a greater quantity of fish is caught it can be sold when there is great demand for them.

20.—All castes except Brahmins and Komaties eat fish.

21.—Good-water fish are not put into salt; salt-fish are put in salt.

22.—The average number of men that catch fish in the Kollair is 424; number of men that salt fish 210.

23.—In this taluq there is no fish-rent in other places except Kollair. The amount realized from fish-rent is now greater than before. The amount fixed on fish-rent from this year is smaller as the sluices of Kottada Calingulah are opened and the water in Kollair is very low.

24.—On an average there is only one general rate without any increase or decrease. Fish-renters say that the quantity of fish is now smaller, there being not much water in the Kollair.

25.— Do. do. do.

26.—There are no large boats, and there is no sea in this taluq. In Kollair 400, in Upputeru 110, total 510. It is said that Palmyra Dhonies are also going.

27.—There is neither increase nor decrease, and they are in the same state.

28.— Do. do. do.

29.—Small fish which may be dried, sold, and also caught.

30.—On average, including both large and small, they are of two square inches.

31.—In Upputeru proper time for fishing is from October to January.

32.—In Kollair from March to June.

33.—Fish are salted in large quantities.

34.—They buy.

35.—Earth-salt is not used. It is known that it is used in places adjacent to sea.

36.—Good salt is obtained by going to Bantupalli Salt Kotaur and getting it therefrom, and also by buying from the traders who bring salt from the above Kotaur for retail sale.

37.—Price in the Kotaur and in villages 1 Anna per lb. weighing Rs. 80.

38.—I am given to understand that sea-water is not used.

39.—It is said that it is of good quality.

40.—Although the price is great salt is generally procurable here. It is said that there is no means for making salt-fish without salt.

41.—In this taluq there are no suitable bazaars for sale. If they are carried to the towns of Bunder and Ellore they are sold there; otherwise merchants come here from the above towns, buy fish, and take them for sale.

42.—All castes except Brahmins and Banians eat salt-fish.

43.—It is said that salt-fish is generally made by cutting the fish, removing the maws, and stuffing it with salt and exposing it to dry.

44.—1. Pindu Goppa Chapa.
2. Goraka Chapa.
3. Mava Chapa.
4. Valaga.
5. Bocha.
6. Kurramanu Chapa.
7. Sora Chapa.
8. Mosu Chapa.
9. Eugiloyi.
10. Mulugumanu.

45.—Merchants send them to Hyderabad and other places.

46.—No other fish but Royyas are dried by smoke.

47.—No.

48.—All fish are dried.

49.—They are dried with fins.

50.—They are dried taking out their upper part.

51.—They are not used for any other purpose.

52.—The upper part of Royya fish is used for manuring paddy-fields.

Proceedings of the Madras Government, Revenue Department, 25th October 1872.

53.—Oil is generally taken out from Bocha Chapa, Valaga Chapa, Mosu Chapa, Badusu Parigalu, and others caught in the Kollair Lake.

54.—Oil is taken out from fat and flesh.

55.—They are used for medicine, etc.

56.—Name of fish—

	Size of fish in Upputeru.		Size of fish in Kollair.	
	Inches.	Inches.	Inches.	Inches.
1. Paudu, large fish ..	54 length.	36 breadth.	... length.	... breadth.
2. Meva fish	27 ,,	14 ,,	... ,,	... ,,
3. Sora fish	36 ,,	18 ,,	... ,,	... ,,
4. Valga fish	36 ,,	14 ,,	36 ,,	14 ,,
5. Korra menu ...	27 ,,	9 ,,	27 ,,	9 ,,
6. Bocha fish	18 ,,	9 ,,	18 ,,	9 ,,
7. Mosu fish	9 ,,	4 ,,	9 ,,	4 ,,
8. Matta Gidsa ...	6 ,,	2 ,,	6 ,,	2 ,,
9. Yinga Paya ...	7 ,,	1 ,,	7 ,,	1 ,,
10. Bommidaya ...	7 ,,	1 ,,	7 ,,	1 ,,
11. Melgu menu ...	7 ,,	½ ,,	1 ,,	½ ,,
12. Chidu Parigalu ...	1 ,,	1 ,,	... ,,	... ,,
13. Royyas	4 ,,	1½ ,,	... ,,	... ,,
14. Ramulu	6 ,,			

In Kollair fish are born in July and August. In Upputeru, they being born in the sea, proper time is not known.

57.—In Kollair they are caught by fishing-stakes, fishing-baskets, fishing-rods, and other snares; in Upputeru, by long nets and casting-nets.

58.—Prawns, earth-worms, and small fish are used as bait.

59.—Yes.

60.—Cross-dams are put and water is baled by *gudas*.

(Signed) K. ANNAJI ROW,
Acting Tahsildar.

(True Translation.)

(Signed) J. A. C. BOSWELL,
Officiating Collector.

NIZAMPATAM,
17th June 1871.

—

ENCLOSURE No. 9.

Replies given by the Tahsildar of Sattenapally Taluq to the Queries (relating to Fish) set up in Takeed No. 58, dated 1st November 1869, of the Officiating Collector, Kistna District.

1.—There were no receipts from the river fisheries for last five years.

2.—Nor were there any from tank fisheries.

3.—There were no such tanks in this taluq as were let out for rent.

4.—There are thirty-seven tanks in this taluq whose fisheries were never let and which are in good order.

5.—No such fisheries exist.

6.—Six villages.

7.—

Number of Population.	Names of Villages.
4	Krosur.
4	Amaravati.
10	Dharanikota.
10	Sattenapalli.
10	Nevalipuli.
4	Kota Nemati Puri.

8.—During some time in the year they live by fishing, during the rest they live by other trades.

9.—Palle (fisher-caste) and Tulivandlu are generally fishing in seas.

10.—Tulivandlu and Pulles fish in backwaters and salt-water rivers; Mussulmans and Mutarasees, in the Kistna river and lakes.

11.—Mussulmans, Pariahs, Fishermen (Palle), and Toddy-drawers (Gamala) sell fish.

12.—Palle and Tulivandlu generally, and Toddy-drawers very seldom, salt fish.

13.—They are taken for a long distance for sale.

14.—Contractors pay to each man 4 Annas per day.

15.—Each earns 2 Annas a day.

16.—No tax on this trade is collected in this taluq.

17.—There are no towns in this taluq, and fish are brought to markets to a small extent.

18.—They do get sale.

20.—All castes eat fish save Brahmins, Komaties, and Goldsmiths (Kamsalies).

21.—They say the salted fish is preferred.

22.—There are about 20,000 people that eat fish in this taluq.

23.—There were no fish-rents in this taluq either before or now.

24.—The fish appear to have decreased now owing to the scantiness of rains.

25.—Not decreased.

26.— } There being no sea in this taluq answers to these two questions are not known.
27.— }

28.—Nets have not decreased.

29.—They are never taken so in this taluq.

30.—The usual size of the mesh of the net varies in different parts; its lowest size is $\frac{1}{10}$th of an inch, while its highest is an inch.

31.—*Vide* reply to Questions 26 and 27.

32.—January, February, and October.

33.—Nothing of that sort exists in this taluq.

34.—It can be got in markets.

35.—It is not made in this taluq.

36.—It is not known in this taluq.

37.—*Vide* reply to Questions 26 and 27.

38.—It is not taken.

39.—By some it is considered good.

40.—Yes.

41.—More can be sold.

42.—All castes save those mentioned above (Brahmins, Komaties, and Kamsalies).

43.—There is no salting of fish in this taluq.

44.—Pandu Menu, Kachela-Goraka, Goraka-Magu, and Royya.

45.—Yes. It is exported.

46.—None know of this method in this taluq.

47.—No.

48.—Yes.

49.—They are preserved but not dried.

50.—They are dried but not preserved.

51.—To no other use.

52.—They are used as manure to vineyards.

53.—They (people) obtain oil from a sort of fish called Tavvadam.

54.—Only from the liver but not from the whole body.

55.—They state that the gall of fish is used as medicine.

56.—The size of Chadu Chapa is 2 inches long and 1 inch long.

Do.	of Valaga,	2 yards ,,	and 1½	feet broad.
Do.	of Bocha,	2 ,, ,,	and 1½	,, ,,
Do.	of Jalla,	1 ,, ,,	and 1	,, ,,
Do.	of Royya,	1 foot ,,	and ½	,, ,,
Do.	of Bommidam,	1 yard ,,	and 3	,, ,,
Do.	of Korra Menu,	1 ,, ,,	and 3	inches ,,
Do.	of Malagu Menu,	1 ,, ,,	and 1	,, ,,
Do.	of Badisela,	1 span ,,	and 1	,, ,,
Do.	of Matta Gudiselu,	,, ,,	and 1	,, ,,

These fish breed in October. The roe is matured in Chilla Karta.

57.—Nets, hooks, a kind of basket snare called Ota, and snare called "Mavu."

58.—Mutton, boiled rice, and flour.

59.—It is not known.

60.—Yes. They are baled out.

61.—They do destroy.

(Signed) P. VENKATRAMANAYYA,
Tahsildar.

(True Translation.)

(Signed) J. A. C. BOSWELL,
Officiating Collector.

NIZAMPATAM,
17th June 1871.

—

ENCLOSURE No. 10.

Replies of the Tahsildar of Palnad Taluq to the Queries regarding the River Fisheries, etc.

1.—There being no rents receipts are nil.

2.— Do. do. do.

3.—Tanks are not leased out.

4.—There are 100 tanks.

5.—Yes.

6.—Sixty-four villages.

7.—The number of occupants in the above villages is 62,000.

8.—They do not employ their time in fishing; they employ it in agriculture and cooly work.

9.—Fishermen.

10.—Fishermen, Bestavallu, Mutarachulu, Mussulmans, Washermen, Voddervallu, Weavers, Yanadies, Pariah men, Yarakalavallu, and other castes.

11.—Fishermen, Bestavallu, Mutarachulu, Mussulmans, and Vaddies.

12.—Fishermen, Vaddies, and Mussulmans.

13.—Not in this taluq.

14.—As there are no contractors in this taluq who give remuneration to fishermen for catching fish the rate is not known.

15.—Not known.

16.—No.

17.—No.

18.—No.

19.—No.

20.—All castes eat except Brahmins, Komaties, Goldsmiths, and Linga Balijalu.

21.—As by allowing fish to remain in water they keep it clear it is desirable they should be improved.

22.—There is no population which earns its livelihood by catching fish.

23.—There are no rents here.
24.—Neither increased nor decreased.
25.— Do. do.
26.—Not known.
27.— Do.
28.— Do.
29.—Yes. Taken.
30.—The size of the meshes is of the size from a Pie to a half-Anna piece.
31.—April and May.
32.— Do.
33.—No.
34.—No.
35.—No.
36.—No.
37.—Not known.
38.—There is no sea here.
39.—Fish is not salted here.
40.—Not known.
41.—No markets, no sale.
42.—The castes mentioned in reply to No. 20 eat.
43.—There are no fish-curers here.
44.—Pundu Goppa, Magu Goraka, Chunduva, Punjaram, and other fishes.
45.—Fish are not exported from this taluq.
46.—No.
47.—No.
48.—Fish is scarcely ever dried.
49.—Yes.
50.—The maw is kept, entrails removed.
51.—Except for eating fish are not used for any other purpose.
52.—No.
53.—Not in this taluq.
54.— Do.
55.—No.
56.—In October the following fish breed :—

Valaga, Bocha, Julla, Gunda, Korra Menu, Malugu Menu, Esakadondu, Chadu Pariga, Mutta Gudisa, Badesa Bommedaye, and other species. Of these the Valaga, Korra Menu, and Bocha grow to the length of about one yard, while the other species grow to the length of half a yard Their circumference varies from half a yard to one inch.

57.—Fish are caught by means of nets, fishing-rods, fishing-baskets, and other wicker snares.

58.—Rats, frogs, earth-worms, small fish, and prawns are used as bait.
59.—No.
60.—Yes, water is baled out.
61.—Yes.

(Signed) M. VENKATAREDDI NAIDOO,
Tahsildar.

(True Translation.)

(Signed) J. A. C. BOSWELL,
Officiating Collector.

Proceedings of the Madras Government, Revenue Department,
25th October 1872.

ENCLOSURE No. 11.

Replies of the Tahsildar of Bezwada to the Queries regarding Fisheries.

1.—No revenue has been realized during the past five years from river fisheries. The practice of renting out the privilege of fishing in the river Kistna, in the Bezwada Taluq, was put a stop to under an order from the Head Assistant Collector, No. 19, dated 8th January 1863; for this reason no collections have been made during the past year. It is ascertained that the privilege of fishing near the anicut and calingulahs is rented out by the Department of Public Works, the particulars of which have to be ascertained from that Department.

2.—During the past Fasli (1278) a revenue of Rs. 15 was realized from the rent of tank fisheries.

3.—The number of tanks rented out for fishing during the last year was two.

4.—The number of tanks which have been unlet in the last year for fishing is thirty-six.

5.—The fisheries which are worth renting out in this taluq are the river Kistna and the Budamer.

6.—There are no villages in this taluq of which the fisheries are usually rented out. Applications having been received in the last year for leasing out the tanks in Kottur and Tadepalli they have been accepted.

7.—As there are no villages the tanks of which are usually rented out for fishing the number of people is not entered. Those that were rented out in the last year were—

Kottur, with a population of 347.
Taddepalli, do. 520.

8.—Mataraz caste people of Kondapalli rented the tanks of the said two villages for fishing. The villagers have not rented them. The chief occupation of the villagers is agriculture. The renters of fisheries also carry on other trades.

9.—Palle caste people fish in the sea. It is not known whether any of the people of other castes in this country are in the habit of fishing in the sea. It can only be known by inquiring of the people of the coast.

10.—The Palles, Mutraches, Bestas (people of these castes), catch fish with nets in the swamps and rivers of salt-water. In the Kolleru and the Godavery, Waddies and Jalars also catch fish with nets.

11.—The people of the above castes, Pariahs, and Telagas also sell fish.

12.—Fish is not salted here. As no fish fit for salting is procurable in the Kistna District it is not cured.

13.—The fish taken in the Kistna water is not taken for sale to any great distance.

14.—The renters give one-half of the fish taken to the catchers and take the remaining half for themselves. They do not pay any hire besides.

15.—The takers of fish in these parts are known to earn on an average a daily income of Annas 4.

16.—No tax is imposed on the catchers of fish.

17.—Fish are not caught in sufficient quantities to supply the bazaars in this village and Kondapalli.

18.—Fish are not caught in greater quantities than can be sold.

19.—Fish are not caught in greater quantities than are required.

20.—Except the Brahmins, Komaties, Linga Balijis, and Kamsalies, people of all other castes eat fish.

21.—It is ascertained that people prefer fresh to salted fish.

22.—The number of people engaged in fishing here is about fifty.

23.—It has been ascertained that the amounts of rent of fisheries has fallen lower this year than those of the last year, except that of the one at the calingulah of Komatigunta.

24.—It is reported by the fishermen that the quantity of fish is smaller this year.

25.—The number of people engaged in fishing is greater than formerly.

26.—The people here do not know how many boats are sent to the sea for fishing.
27.—This has to be ascertained from people resorting to sea.
28.—The people engaged in fishing say that the number of nets is gradually decreasing.
29.—The people here catch small fish.
30.—The meshes of a large net are four fingers wide, and that of a small one is capable of admitting one finger.
31.—The people here do not know the principal months when fishing is carried on at sea.
32.—The people say that great quantities of fish are caught in the running streams in the months of August, September, October, and November.
33.—There is no practice of salting fish here. It is ascertained that large quantities of fish are salted on the coast.
34.—This cannot be known unless the people of the coast are interrogated.
35.—Earth-salt is not used in salting fish here.
36.—Earth fit for making salt is not procurable here.
37.—Earth-salt is not sold here, its price, therefore, is not known.
38.—Except the people of the coast others do not know whether sea-water is used in curing fish.
39.—The salted fish sold here is purchased and brought from the coast. The quality is said to be good.
40.—It has to be ascertained from inquiring of the people who prepare salt-fish.
41.—There is a place set apart in this village for the sale of fresh and salted fish. Salted fish is not sold in large quantities here.
42.—Except Brahmins, etc., as stated in paragraph 20, all other casts eat salted fish.
43.—This has to be ascertained from people who prepare salt-fish.
44.—The people here say that fishes known as Pandu Menu, Meva Chapa, Magalu, and Goraka, which are caught in the sea-water, are salted.
45.—Traders from Hyderabad and thereabouts purchase and carry there salted fish.
46.—There is no practice of drying fish by smoke here.
47.—It has been ascertained that fish measuring less than half a yard will not be salted.
48.—Small fish are dried, but not big ones.
49.—It has been ascertained that when fish are salted the fins are not removed.
50.—When fish are salted the maw is removed.
51.—Neither fresh nor salted fish are used for any other purpose than for eating.
52.—Fish are not used for manure in this country.
53.—There are no fish here from which oil is extracted.
54.—There are no fish here from which oil is extracted or which are boiled for fat.
55.—Fish are not used here for medicinal purposes or for the purposes of charms.
56.—The fish generally met with in this taluq are Bocheha, Gandu Menu, Volaga, Polasa, Peeku Dotta, Jalla, and Mosu. They grow to the length of a yard or yard and a quarter, with the thickness of a quarter of a yard. The people here report that they do not know in what months the fish spawn.
57.—Fish are caught here by means of hooks, nets, basket snares, and wicker-work snares.
58.—Earth-worms, clotted blood, rats, and lizards are fixed to the hooks as baits.
59.—Rivers are not poisoned here for catching fish.
60.—For catching fish the water in the tanks is not baled out with buckets.
61.—In this taluq crocodiles, etc., are not destroyed in large numbers.

(Signed) L. PURUSHOTTAM,
Sheristadar in charge.

(True Translation.)

(Signed) J. A. C. BOSWELL,
Officiating Collector.

ENCLOSURE No. 12.

Replies of the Guntoor Tahsildar to the Queries regarding River Fisheries.

1.—There have been no yearly receipts from river fisheries for five years.
2.—There have been no yearly receipts from tank fisheries for the last five years. There were none rented out.
3.—There are no tanks the fishing in which is let out in this taluq.
4.—The number of tanks in this taluq is seventy-one, none of which is let out for fishing.
5.—There is a tank in the Karikonda village the fishing in which might be let if the ryots agree to it.
6.—Karikonda village.
7.—In the Karikonda village there are no people who live by means of catching fish. Except at Guntoor there are no dealers in fish in the other villages.
8.—Ryots fish in the Kariconda village, but they employ themselves in agriculture also.
9.—Fishermen fish in the sea. They belong to the Sudra caste.
10.—Fishermen and Besta (Pilot) castes fish in the back-waters and rivers.
11.—Fishermen and Bestas sell fresh fish. Other castes buy dried fish and sell them in villages. All castes sell fish except Brahmins, Komaties, Goldsmiths, and Kshatrias, Brahmin Bondilies, Gujarati Brahmins, and other such castes.
12.—All other castes, except those mentioned in reply No. 11, buy fish from fishermen and Bestas and salt them both for sale and for their own use.
13.—Salt and dried fish are taken long distances for sale. Fish is taken from Nizampatam, Kottapalem, and other villages to Hyderabad or thereabouts for sale. Salt-fish is taken from Ammanamolu, Kottapatnam and other villages in the Nellore District to Cuddapah and other places for the purpose of being sold at those places.
14.—The rate of remuneration is unknown, as the fishing is not leased out in this taluq.
15.—The daily earnings of a man catching fish in the sea are about 1 Rupee, and of the men fishing in tanks are each 5 Annas. In a village where fish is scarce they derive more profit than the above.
16.—There are no taxes on the fishermen in this taluq.
17.—Small quantities of fish are now and then brought to Bapatla bazaar in this taluq, but not in sufficient quantities. Sometimes fish cannot at all be procured.
18.—Dried fish, salt fish, and fresh fish that are brought are sold without reserve.
19.—The fish brought to this taluq are sold.
20.—All castes eat fish except Brahmins, Komaties, Goldsmiths, Kshatrias, Brahmin Bondilies, Gujarati Brahmins, and such others.
21.—From the great consumption of the salted fish it is evident preference is given to the salted.
22.—The fish-catching population in this taluq is about 50 in number.
23.—The system of leasing out fisheries does not exist in this taluq.
24.—Owing to want of rains in this taluq fish are said to have decreased in number. heavy rains fall fish increase.
25.—As the tanks, etc., are not leased out the numbers carrying on their livelihood by fishing are not very great. In the sea coast taluqs there are a good many who catch fish. There is no occasion for them to come to these parts, therefore the increase or decrease of the fishing population cannot be stated.
26.—As this is not a sea coast taluq these cannot be stated.
27.— Do. do.
28.—There are nets only at Tadikonda, Guntoor, Pratur, Chirravur, and other villages.
29.—They are bought in small quantity.
30.—The meshes are from quarter of an inch to three inches in breadth; such nets are at Tadikonda, Guntoor, Chirravur, Pratur, Nutakki, and other villages bordering the Kistna.

31.—The fishing months in the sea are December and January.

32.—The fishing months in the fresh waters are October and November.

33.—Fish are salted to a great extent.

34.—Salt is bought in the salt depôts and in the bazaar. The villagers who are nearer to Kotar or depôt bring salt from it, while those who are at a distance get it from them who bring it from the salt depôts.

35.—As fish would be spoiled if earth-salt is employed earth-salt is not used. If it is used, the fish becomes black, and there would be no demand for it.

36.—In swamps of the villages near the sea coasts.

37.—I do not know.

38.— Do.

39.—The quality of the salt-fish now sold is good.

40.—The salt-fish is sold by weight. The good and bad qualities of it are not, therefore, taken into account.

41.—There is a good market for salt-fish. More might be sold.

42.—All classes eat except those mentioned in reply to Query 11.

43.—If the sale of fresh fish caught in the sea is prohibited the curing of fish would be improved. If it is not prohibited salt-fish would not be preserved in larger quantities. Fresh water fish cannot be salted.

44.—Of the fish caught in the sea the fish called Oraka, Mighu, and Pundu are fit to be salted. These are stated to be chiefly cured.

45.—Yes, they are exported.

46.—I do not know.

47.—The roes are salted.

48.—They merely dry the fish caught in fresh water. Fish caught in the sea is salted and dried. They are not merely exposed to dry.

49.—I do not know. Fins are not fit to be eaten.

50.—The fish maw and entrails are thrown away.

51.—Excepting eating and salting nothing is done with fish in this district.

52.—It is said that if fresh fish is buried in the soil of a vineyard the vine becomes more fruitful.

53.—Oil is extracted for medical purposes from the fat of Shark and Ray fish.

54.—Oil is extracted from the fat of the fish and not from any other part.

55.—Fish oil is used for medicinal purposes, but not for any other purpose.

56.—The fish are Valaga (Trichiyurus Septurus), Bocha (Roball), Korra menu (Gobins Lagocephalus), Koparaya, Malugu menu, Bommadaye, Pedda damma, Masakadamma, and Esukadondu. In the course of five years Valaga grows, if there is sufficient water, to the length of one fi[illegible] 1½ yard and 1½ feet in thickness; Bocha grows to the length of two feet and half feet in thickness; Korra menu, Koparaya, and Malugu menu, grow to the length of two feet and one foot in thickness; Peddadamma and Esukadondu grow to the length of about one foot and four inches in thickness; Masakadamma grows to the length of a span and a hand breadth in thickness. Fish breed in October and November.

57.—Fish is caught by means of nets and baskets.

58.—Blank.

59.—The practice of poisoning does not obtain in this district.

60.—Water is baled out for the purpose of catching fish.

61.—The Kistna river is infested with crocodiles and other creatures. They are not found in tanks. Crocodiles destroy fish.

(Signed) W. C. H. SHARKEY,
Tahsildar.

Proceedings of the Madras Government, Revenue Department,
25th October 1872.

ENCLOSURE No. 13.

Replies of the Vinukonda Tahsildar to the Queries regarding River Fisheries.

1.—The fisheries of this taluq were never rented out.

2.— Do. do.

3.—No.

4.—The fishing in the tanks in this taluq having never been leased out the number of tanks in which the fishing is unlet cannot be ascertained. This taluq has 55 tanks.

5.—Yes.

6.—Forty-three in number.

7.—Population 26,354.

8.—The time they spend in fishing is very limited. They engage themselves in cooly work and cultivation which occupy most of their time.

9.—This taluq does not possess any sea coast. I understand Mussulmans, Fishermen, Mutrasis, Boyees, Pariahs, Chucklers, Yeadigamen, Balijelu, and men of Wodda caste fish in the sea.

10.—All the castes above referred to fish.

11.—Mussulmans, Boyees, Fishermen, Mutrasis, Pariahs, Chucklers, Yeadiga people and Balijelu sell fish.

12.—I understand all the above castes sell salt-fish. In this taluq there are no people who salt fish.

13.—They do not take from this taluq. Salt-fish are brought into the villages of this taluq for sale from Chinna Ganjam, etc.

14.—As the fisheries of this taluq have not hitherto been leased out the rate of remuneration is not fixed. The general rate is presumed to be 4 Annas a fisherman.

15.—The practice of renting out has not hitherto been prevalent. Those who eat fish catch fish for their subsistence. They do not trade in fish, consequently the average daily earnings cannot be stated.

16.—There is no tax upon fishermen in this taluq as they do not trade in fish.

17.—No.

18.—No.

19.—I understand that many fish are not taken in this taluq. If ever they are taken they are not sold.

20.—All the castes eat fish, Brahmins, Komaties and Goldsmiths excepted.

21.—I understand they prefer eating fresh fish.

22.—About 200.

23.—As the practice of leasing out fisheries in this taluq is not practised the increase and decrease of rents cannot be given.

24.—I do not know.

25.—Neither increased nor decreased.

26.—This cannot be stated.

27.— Do. do.

28.—As there is no trade of fish in this taluq the increase and decrease of nets cannot be stated.

29.—Yes, they are taken.

30.—Generally two inches in breadth.

31.—As this taluq has no sea coast the fishing months cannot be stated.

32.—August, September, October, March, April, and May, are said to be the best fishing months.

33.—Fish is not salted in this taluq.

34.—Fish-curers are said to purchase salt to salt fish.

35.—No.

36.—It is nowhere obtained in this taluq.

37.—Salt-earth is not sold anywhere, its value cannot be known.

38.—As this taluq is not on the sea coast it is not known whether the practice of using or not using sea-water is prevalent.

39.—The quality is not said to be good.

40.—As the system of salting fish is not practised here nobody knows anything of the improved or unimproved quality of fish.

41.—There are no good markets in this taluq.

42.—All castes eat except Brahmins, Komaties, and Goldsmiths.

43.—Fish may be salted to a greater extent when fish is brought from the sea, they are cut into pieces, salted, and then put in a pot or in salt-earth. They are said to be dried for three days. There are no fish-curers in this taluq.

44.—The chief species are said to be—(1) The Pundu Menu (the Perch or Cockup fish); (2) the Goraka Chapalu, (the Rice fish); (3) the Maga Chapalu, (the fish called Roball); (4) the Chanduva Chapalu (the black Pampflet or Pomfret). These species are salted. There are no fish-curers in this taluq.

45.—They are not exported from this taluq.

46.—No.

47.—Yes, they are salted, but not in this taluq.

48.—Yes, they are dried.

49.—Fins are said to be retained. They are taken off after purchase.

50.—They are said to be retained.

51.—It is not reported that they are used for any other purpose than eating.

52.—I understand that fish are not caught in this taluq for any other purpose than for eating.

53.—Fish oil is not extracted in this taluq.

54.—There is no practice of extracting fish oil in this taluq. It is said that the oil is extracted from fat at the places where the practice is prevalent.

55.—It is not applied so in this taluq.

56.—

No.	Names of Fish.	Length.	Breadth.	Season of Breeding.
1	Pakkachapalu (a sort of Carp or Sprat with forked bones)	½ Yard.	5 Inches.	October and November.
2	Chadupekkachapalu	2 Inches.	½ ,,	
3	Korrahmuttuchapalu, (Gobins Lagocephalus)	½ Yard.	5 ,,	
4	Buradamuttichapalu	¼ ,,	2 ,,	
5	Bonta Pukka (the Mullet fish)	5 Inches.	1 ,,	
6	Valagachapalu, (a sea fish Trichiyurus Septurs)...	1 Yard.	1 Foot.	
7	Kuntamukkuchapalu	9 Inches.	½ Inch.	
8	Maluguminuchapalu	½ Yard.	2 ,,	
9	Chundamama Badisachapalu (Sprat) ...	3 Inches.	½ ,,	
10	Kanugachapalu	8 ,,	2 ,,	
11	Bommidalachapalu (the Great Loach)... ...	9 ,,	1 ,,	
12	Ravachapalu	3 ,,	½ ,,	
13	Easkadondachapalu (White Caboose or river Whitting)	9 ,,	1 ,,	
14	Jalachapalu (river Mullet)	8 ,,	1 ,,	
15	Royachapalu (Prawns)	8 ,,	1 ,,	

57.—They catch fish by drag nets, casting nets, angling, and fishing baskets.

58.—Earth-worms, frogs, and pieces of flesh are used as bait.

59.—No.

60.—When water is very low in the tanks it is baled out for the purpose of catching fish.

61.—In this taluq there are no rivers or tanks infested with crocodiles.

(Signed) S. KRISTNA ROW,
Tahsildar.

With this letter Mr. Boswell submits a list of estuaries, tanks, and streams which he proposes to farm out from Fasli 1281 (1871-72) both in the Delta and upland taluqs of the Kistna District.

2. The system of raising revenue from fisheries is not new in the Kistna District. From Mr. Boswell's letter dated 10th November 1869, No. 333, it appears that the Collair Lake, some salt swamps in the Gudivada Taluq, a fishery in the river Kistna below the anicut at Bezwada, and tanks and back-waters elsewhere, are at present rented out, giving a total revenue of rather more than Rs. 5,500 a year.

3. Mr. Boswell proposed in the letter last quoted to extend the system of renting fisheries but gradually so as to avoid causing hardship, especially where fishing had been hitherto free and fish constituted the principal food of the poor.

4. The list submitted with his letter recorded at the head of these Proceedings provides for the extension of the system of renting fisheries on a comprehensive scale throughout the whole district. It is proposed to lease the fisheries in the Kistna river* throughout the district with all anicut-channels† and locks. Apparently all salt-water back-water creeks‡ and swamps without exception, as well as a large number of streams§ and tanks in the upland taluqs which are likewise intended to be rented subject to payment for the right of fishing. It does not appear why only one piece of water is to be leased in this manner in the whole of the Guntoor Taluq.

* In the Bezwada Taluq.

† In the Repally, Bapatla, Gudevada Taluqs.

‡ In the Bunder, Gudevada and Bapatla Taluqs.

§ In the Vinuconda and Narsaraupetta Taluqs.

5. The Board cannot accept these lists without further inquiry. The number of tanks, streams, and madagus (swamps) selected in the Vinuconda Taluq, amounting to fifty in all, seems disproportionately great: and it no where appears that the principles laid down in the Board's Proceedings dated 18th December 1869, No. 9,290, and draft rules accompanying those Proceedings, have been observed.

6. If the system of farming out fisheries in estuaries and tidal creeks is to be adopted the Board see no reason for excepting the Bunder swamps.

7. The Board resolve to return the lists now sent and to ask for a careful revision and explanation of them, with reference to their remarks. The Board desire that special provision may be made for ensuring that villagers shall, as far as possible, be allowed to retain the fishery rights of all waters within the limits of their villages.

8. These Proceedings will be submitted to Government for their information, in connection with the Board's Proceedings on Mr. Thomas's report on the

fisheries of South Canara, in which the Board have dealt more generally with the whole subject, and have expressed their views in regard to the necessity for providing a Fisheries' Act for the Presidency.

No. 228. Minute by the Honourable J. D. SIM, C.S.I.,
(Here enter 5th April 1872.)

No. 229. ORDER THEREON, 25th October 1872, No. 1,478.

Miscellaneous.

THE first seven papers above recorded relate to the inquiries which Dr. Day was deputed to institute on the subject of the injurious effects of irrigation works on river fisheries, the remedies suggested by that officer, and the measures which the Government resolved to adopt. With their Proceedings of the 18th December 1869, No. 9,290, (to which the next two Proceedings recorded are supplementary,) the Board submitted for the approval of Government draft instructions for carrying out Dr. Day's suggestions. The Government deferred passing orders thereon until the results of the experiments which Mr. Thomas was authorized in their Proceedings of the 27th November 1868 to make, should be communicated, and enable them to deal with the whole question. So far as the Government are aware no action has yet been taken generally.

2. The Board now submit with their Proceedings of the 13th July 1871, No. 2,900, Mr. Thomas's comprehensive and valuable report on the results of experimental pisciculture in the rivers of South Canara. After reviewing the contents of the pamphlet in detail, comparing Dr. Day's views with Mr. Thomas's, and summarizing the whole correspondence on the subject, the Board proceed to enunciate their proposals which are twofold and, briefly stated, are to the effect—

(1st.) That an Act be passed to provide for the conservancy and regulation of fisheries.

(2nd.) That a separate Fisheries Department be constituted at once under the Board.

3. The admirable reports of Dr. Day and Mr. H. S. Thomas and the replies of Revenue-officers to the exhaustive queries of the former furnish a sufficient fund of information to admit of preliminary measures being adopted for the conservancy and improvement of fresh-water fisheries. There cannot be a doubt that there is, and for years has been, a very wasteful destruction of fish in inland waters, and that in the largest rivers irrigation weirs have, to some extent, prevented at least one valuable species of salt-water fish (the Sable) from ascending to its spawning beds. Pisciculture has hitherto engaged so little attention that it is impossible to ascertain, with anything like certainty, how far the stock of fish has been affected by the absence of all conservancy; but in the very nature of things the absence of protection must, if suffered to continue, lead sooner or later to the ruin of the fisheries.

4. How far the Government can, by legislative and administrative measures, preserve these fisheries from the destruction which is practically impending over

them, and increase this valuable source of food-supply to large classes of the community, is a question well worthy of consideration.

5. The measures adopted must be tentative and limited at first, and be extended as practical experience is gained. The privilege of fishing has, in some cases, been taxed, but beyond this there has been no restriction on its exercise. The Government cannot now suddenly introduce stringent measures of conservancy, and altogether ignore the fact that large numbers of the poorer classes have no other occupation or mode of subsistence. They are, therefore, not prepared to sanction any general extension of the system of fishery leases, or the imposition of additional taxation on the pursuit in any form.

6. The enormous space of country with which the Government have to deal, (moreover) of itself enforces a limit to their operations at the outset, and further difficulties are caused by the immense variety of fish found in their waters, some of which are edible only when spawning, while others never attain any size but are marvellously prolific.

7. The Government resolve, therefore, to restrict their operations at first to particular localities and to afford protection to the more valuable descriptions of fish only. All rivers, tanks, and channels, which dry up every year will, for the present, be left out of consideration. Arrangements may hereafter be made for forming stock-pools in these also, but meanwhile there is scope enough in other directions.

8. With regard to restrictions on the size of the mesh of fishing nets the Government entertain considerable doubt, for even the smallest proposed, viz., 2 inches in circumference, would prevent the capture of several small kinds which are prized by the poorer classes; but in waters which have been rented to the highest bidder, and have become purely commercial speculations, there seems to be no objection to such a restriction (prawn nets excepted).

9. Both Dr. Day and Mr. Thomas deprecate fence-mouths, but some such protection must be afforded to sea-fish on their way to their spawning grounds, and to their fry on their way to the sea.

10. As regards the kinds of fish to be protected the Government are of opinion that the Sable fish claims their first attention.

11. The Sable appears to be edible only when in roe; to protect it during the whole spawning time will therefore be tantamount to prohibiting its use; but to some extent it must be protected, and for this purpose it will probably suffice to prohibit fishing during certain days (once a week or perhaps oftener) during the season. It is so prolific that this would seem sufficient to ensure enough breeding fish, provided the fry are enabled to reach the sea; and the latter object might be attained by prohibiting their capture altogether if the fish-ladders are effectual. On the Godavery apparently the Sable fish get above the anicut by the canals which communicate with the sea, and the fry reach the sea by the same means. Here probably the best method would be to prohibit all fishing while the fry are thus passing down. If any of the Kistna and Tanjore channels communicate in the same way with the sea, similar measures should be adopted. It is observed from a recent paper that the Sable fish is caught in abundance in the Toombudra and at the Soonkesala anicut in the Kurnool District.

12. With regard to purely fresh-water fish a selection of the more valuable kinds, such as the Mahseer, should similarly be made, and protective measures enforced during the spawning time. All poisoning of waters should be prohibited and punished under the Penal Code. Fishing within 100 yards of anicuts should also be prevented.

13. While trusting, in a very great measure, to administrative measures, the Government deem it requisite to have recourse to legislation to ensure their success, and are of opinion that an Act should be passed enabling them, where necessary, to prohibit the capture of certain fish, at certain times, or in certain places, either absolutely, or with reference to size; to forbid the use of nets of certain descriptions, and the construction of dams, cruives, and the like; and to employ the staff requisite for carrying out protective measures. The scale proposed in paragraph 37 of the Board's Proceedings of 13th July 1871, No. 2,900, is in excess of present requirements, and it will probably suffice to employ a few Peons, and to subsidise the village officials. The Board will be requested to prepare and submit for the consideration of Government a draft bill for the purpose.

14. The Board will, at the same time, revise the draft instructions for the guidance of Collectors which accompanied their Proceedings of the 18th December 1869, No. 9,290, so as to bring them into conformity with the views now expressed. On receipt of the draft bill and revised instructions the Government will decide what districts are to be brought under Regulation, and whether Malabar is to be treated exceptionally. Meanwhile, they resolve to defer taking general action.

15. They are prepared, however, to permit Mr. Thomas to continue his experiments in South Canara, and will provide the requisite funds on application, which should be accompanied by a statement of the manner in which it is proposed to expend the money. Stock-pools should be fenced, and carefully preserved from being netted, by staking and watching; and ryots turning off water for irrigation should be required to put up gratings to exclude fry. The poisoning of streams should be prohibited and vigorously repressed. In connection with this subject, the Commissioner of Mysore will be requested to favour the Government with his views as to the best mode of preventing the pollution of rivers by pulping coffee.

16. Mr. Thomas should bear in mind that in introducing protective measures caution and consideration are requisite at the outset to disarm opposition. For his past successful labours and his interesting account of them the thanks of Government are due.

(True Extract.)

(Signed) W. HUDLESTON,
Secretary to Government.

To the Board of Revenue.
,, H. S. Thomas, Esq.
,, Surgeon F. Day, M. D.
,, the Inspector-General, Indian Medical Department.
,, the Public Works Department.
,, the Accountant-General.

Exd. F. R. Bantleman.

MEMORANDUM.

Requested for reference the undermentioned paper on the subject of Fisheries.

The original Enclosure submitted to Govt. with Board's Proc. of 13th July 1871, No. 2900, respectfully returned.

Abstract herewith.

5 Enclosures returned to the Board's Office 19-6-73.

Revenue Board Office, 18th June 1873.

Registrar.

To The Registrar of the Govt. Office Revenue Dept.

31 RD

Appendix

The admirable reports of Dr. Day and Mr. H. S. Thomas, and the replies of our revenue officers to the exhaustive queries of the former furnish a sufficient fund of information to admit of preliminary measures being adopted for the conservancy and improvement of our fresh-water fisheries. There cannot be a doubt that there is and for years

upon generally in Mr. Lewis's communications a Legislative Act will be necessary & upon which careful consideration -

The Board will conclude be requested to prepare a draft Bill and instructions to Meetings, which will come under revision by first before they are issued, when it be decided what Districts are under regulation - Malabar is to last exceptionally -

has been a very wasteful destruction of Fish in our Inland waters, and that in our largest rivers our Irrigation weirs have prevented at least one valuable species of salt-water fish (the pable) from ascending to its spawning beds. Our Fisheries have hitherto engaged so little attention that it is impossible to ascertain with any thing like certainty how far the stock of fish has been affected by the absence of all conservancy, but in the very nature of things the want of all protection must

I presume that action can be postponed until the contemplated Act is passed.

R.S.E

I agree in the recommendation in your letter of the 4th instant to postpone the consideration of the question of the Irrigation Weirs on the Murrumbidgee River until the contemplated Act is passed.

R.S.

must, if suffered to continue, lead sooner or later to the ruin of our fisheries. It is well worthy of our consideration how far we can, by legislative and administrative measures, preserve our fisheries from the destruction which is practically impending over them and increase this valuable source of food supply to large classes of the community. Our measures must, I think, be tentative and limited at first, and be extended as we gain practical experience. The privilege of

of fishing has, in some cases, been taxed, but beyond this there has been no restriction on its exercise. We cannot suddenly introduce stringent measures of conservancy, and altogether ignore the fact that large numbers of the poorer classes have no other occupation or mode of subsistence. I do not agree with the Board that because the Govt. has not hitherto taxed the right of fishing in its waters it cannot now do so, nor do I see why a fair revenue should not

be realised from fisheries. +

I admit that we are bound to show every reasonable consideration towards those who have hitherto enjoyed free liberty of fishing and have made it their occupation, but I would not forget that these are the persons who will ultimately be most benefitted by our measures, nor would I sacrifice the interests of the community for the temporary advantage of a comparatively limited class. The enormous space of country with

+ Our predecessors did so - he did the same under the head of "Net Tax" and he now realises the 60,000 R annually from Fisheries.

which we have to deal of itself enforces a limit to our operations at the outset and further difficulties are caused by the immense variety of fishes found in our waters - some of which are edible only when spawning - while others never attain any size but are marvellously prolific.

At first therefore I would restrict our operations to particular localities and our protection to the more valuable descriptions

of fish -

Thus for the present we might leave out of consideration all rivers, tanks and channels which dry up every year - arrangements may hereafter be made for forming stock pools in these, but meanwhile there is scope enough for us in other directions. As regards other rivers, &c. I am decidedly in favor of renting out the right of fishing on suitable conditions. It is hopeless to expect that we can water our inland waters by

means

means of a paid establish-
-ment, the cost of such an
establishment would be
enormous and it would be
impossible to ensure an
honest and effective discharge
of duty. A renter on the
other hand would prevent
poaching in his own interest
and it will be easier to
check the malpractices of
a few renters than those
of an unlimited number
of fishermen. But by
renting I do not mean that
the privilege should universally
be put up to general and
public competition. Where
it has not been so rented in
the past, I would much rather
give the monopoly of the right
(angling excepted) to the head
man of the local Fishermen,
or of the village
Community

Community for a moderate
payment, on condition that
certain specified fish none
should be taken at stated
periods or under a certain
size &c. With regard to the
size of mesh I am very
doubtful, for even the
smallest proposed, viz 2
inches would prevent the
capture of several small
kinds which are prized
by many classes. I am
rather disposed to try first
whether the object sought
might not be attained by
stipulations in the leases.
But in waters which
have been rented to the
highest bidder and have
become purely commercial
speculations, I see no
objection to such a restriction
(prawn nets excepted) Both
Dr Day and Mr Thomas
deprecate

deprecate Fence-Mouths; but some such protection must be afforded to Sea-fish in their way to their spawning grounds, and to their fry on their way back to the Sea.

The leases should I think be for 3 years, so that the lessees may derive advantage from the measures of conservancy they will be instrumental in carrying out.

As regards the kinds of fish to be protected our first efforts should be directed to the Sable Fish. It seems absolutely necessary to construct some description of ladder or passage by which the mature fish may get above the lower Coleroon - and the Kistna Annicuts. By the aid of

of Dr Day's remarks, I should think the Superintending Engineers would have no difficulty in devising such passage as would answer the purpose and in no way endanger the Annicuts. Merely catching the fish below, and releasing them above the Annicut will not answer as both the parent fish and the fry must return to the Sea or perish. The Sable appears to be edible only when in roe; to protect it during the whole spawning time will therefore be tantamount to prohibiting its use; but some fish must be protected, and for this purpose it will probably suffice, to prohibit fishing during certain

certain days – once a Week or oftener during the Season. It is so prolific that this would seem sufficient to ensure enough breeding fish – provided the fry are enabled to reach the Sea. The latter object might be attained by prohibiting their capture at all but fish-passes are essential – On the Godavery it appears that the Sable fish get above the Annicut by the Canals which communicate with the Sea and that the fry reach the sea by the same means – Here probably the ?just last method would be to stop all fishing while the fry are thus passing. I am not aware whether any of the Kistna or Tanjore channels thus recur to the Sea;

if

if they do, the same course might be followed.

With regard to purely fresh-water fish, I would similarly make a selection of the more valuable kinds such as the Mahseer, and protect them during the spawning time.

All poisoning of waters should be prohibited and punished under the Penal Code.

Fishing within 100 yards of Annicuts should be stopped. While trusting in a very great measure to administrative measures, we must I think also have recourse to legislation to ensure their success. I think we should pass an Act, enabling the Govt – where necessary – to prohibit the capture of certain fish at certain times or in certain places,

Either

either absolutely or with reference to size; to prohibit the use of nets &c. of certain descriptions; to prohibit the construction of dams cruives and the like; to employ Bailiffs, Inspectors, &c. &c. &c.

Lastly, I think it desirable, indeed absolutely necessary, to procure from England a person who is thoroughly conversant with Pisci-culture in all its branches, and competent to carry the investigation which Dr. Day has made to completion and also to enquire into our Sea fisheries. These are certainly of no less importance to the country and our knowledge of them is very limited. Our Fisheries now yield upwards of Rs. 80,000 per Annum, and I think we could not do better than expend a portion of this on obtaining a competent person from England. We could well afford 1000 £ per Annum with passage to and fro for a really good man, on a 3 year engagement. I do not think we yet need Fishery Inspectors and Assistants as proposed by the Board. Some Peons may be required, and we shall have to subsidise the Village officials. Now that Dr. Thomas has returned, we may I think leave Canara to him, toning down however his very energetic proceedings. Poisoning should, as I said before, be prohibited and rigorously repressed by the Commissioner of Mysore

Inspector should be requested to favor us with his views as to preventing the pollution of rivers by pulping coffee. Ryots turning off the water of rivers for irrigation may fairly be required to put up gratings to exclude fry - indeed we might go further - but probably this will suffice for a beginning. Stock pools should be formed and carefully preserved from being netted by staking and watching

Mr Thomas should be praised for what he had done and supplied with funds.

J A Lim

5 April 1872.

Minute
By Hon J. D. Sim-
Prescultive

Circ

Secret. Dept.

S. Sept/[illegible] Sept. Rec 10
Rec. 19 Aug/72 R24 Sept. 1872

41

Revenue 1872 Dept.

No. 3432

Minute by the Honble
Mr. J. D. Inverarity

Dated 5th April 1872.

25 Oct 1872 d. 33,239

On Pisciculture

Revenue Dept.

Memo. for Orders.
on No. 27.

In their order under
date 30th April 1869 No. 1185, the
Govt. directed the Board of Revenue
to put in force, from the first of
July last, certain suggestions made
by Dr. Day for the preservation
of fish.

2. These suggestions were (1)
that all pieces of water sufficiently
large for fishing which are not
navigated by sea-going vessels
should be leased out in order to
bring the fisheries under control.
(2) That the contracts should
provide certain conditions regard-
-ing the size of the mesh used,
the periods and localities for
fishing &c. &c.

3. Dr. Day also recommended
that

fish Passes should be erected
on the Kistna and Coleroon rivers
and this proposal was in the same order referred to the
D.P.W.

4. The Board of Revenue were also directed to enquire and report upon certain remarks of Dr. Day regarding the renting of fisheries by the P.W.D. and the taxing of the fishermen at Rajahmundry and Dowlaishweram.

5. In their Proceedings dated 28th May the Board suggested certain modifications of Dr. Day's proposals, and these were to a certain extent acceded to by Govt. in their order dated 25th June 1869, No. 1812.

The

43

6. The Board however, in reply to a further reference from Govt. on the subject reported in their letter under date 23rd October 1869. No. 1697 that no detailed orders on the subject had yet been issued, and they were again directed vide G.O. 19th Nov. 1869 to issue the necessary instructions to Collectors.

7. The Board now submit in reply to this order a draft Memo: of instructions which they propose to issue to Collectors on the subject. They, at the same time, forward certain replies from Collectors to the previous Proceedings.

Though

Though the majority of the officers consulted appear to be against the adoption of Dr. Day's proposals, the Collectors of those Districts in where the most valuable inland fisheries exist are in favour of them, and it is submitted that the Board's instructions may be approved with the following modifications:-

That though the definition of the object of the rules as given in para 1 of the instructions be allowed to remain, the stipulation, that all returns in the shape of fish rents will be expended on the preservation of fish, be struck out.

That the proposal

referred to in para 9 be abandoned.

8 The Board may also, it is submitted, be informed that the Govt do not concur with them in deeming it necessary to pass any legal enactment in order to bring the fisheries under control as they have been in many and still are so in some Districts, but that in accordance with their recommendation the proposed measures need not for the present be extended to the Districts of Malabar and South Canara

9 The Board may also be reminded that they have not yet

replied to the reference
regarding the renting
of fisheries and taxing
of fishermen by the
P. W. D. at Rajamundry
and Dowlaishweram.

Memo

River Fisheries of Madras Presidency

Proceedings of the Madras Government
Under date the

Read again following

Proceedings of Govt.

11th September 1867 — 2140.
27th May 1868 — 1468.
12 August 1868 — 2151.
12 February 1869 — 366.
4 April 1869 — 1185.
30 June 1869 — 1812.
25 November 1869 — 2987.

18 December 1869 — 2290
25 March 1870 — 1916.
2 June 1870 — 3756.

27 November 1868 — 2982.

Read Proceedings of Board of Revenue

Vol

Read again Proc: of Government

Read Proceedings of Board

13 July 1871 — 2900.
25th July 1871. 3131

The first seven

1.

papers above recorded re
= late to the enquiries whe
Dr. Day was deputed to
institute on the subject
the injurious effects of
Irrigation Works on
fisheries, the remedies
suggested by that Of
= ficer, and the measu
which the Government
resolved to adopt. The

No 1

This letter circulated
to the Presidency was not
seen the Members at
all separately -

Whether the State should
claim private rights, and either
exercise a delegate to
others, a right of property

their Proceedings of the
18th Dec.r 1869 No. 2290 (to which
the next two Proceedings
recorded are supplementary)
the Board submitted
for the approval of Govt. a
draft instructions for
carrying out Dr. Day's
suggestions. The
Government deferred
passing orders thereon
until the results of
the experiments which
Mr. Thomas was
authorized in their
Proceedings of the
27th November 1868
to make should be
communicated and
enable them to deal
with the whole question
so far as the Govt.
are

in animals which are
"ferae naturae" - i.e. a question
which, as regards cultivated
countries, has been decided
by a preponderance of
authority in the negative;
and even in England game
(including fish) is held, in a
legal sense, private property.
But the reasons which
have induced a negative
reply to that question are
of more force in respect
of countries such as those
referred to than in this
country. The most cogent
reason is that it is impossible

to overcome the general
state of superstition which
rebels against such a
monopoly, and that
unending attempts to
enforce it lead to violence,
bloodshed, and bitter
social animosities.
Looking to the character
and history of the population
of India, it is probable
that a decision of the Government
of that part of the State, if
it had been asserted
simultaneously with the
establishment of a settled
Govt. in India, might have

are aware no action has yet
been taken generally.

2. The Board now
submit with their Proceed-
-dings of the 13th July 1871 No.
2900 Mr. Thomas' compre-
-hensive and valuable report
on the results of experiment-
-al Pisciculture in the rivers
of South Canara. After
reviewing the contents of the
pamphlet in detail, compar-
-ing Dr. Day's views with
Mr. Thomas' and summ-
-arizing

has been a very wasteful
destruction of fish in
inland waters, and that
in the largest rivers
Irrigation weirs have
to a lesser extent
prevented at least one
valuable species of salt-
water fish (the Sable) from
ascending to its Spawning
beds. Pisciculture has
hitherto engaged so little
attention that it is
impossible to ascertain
with anything like
certainty how far
the Stock of fish
has

and methods of fishing.
The particular regulations
to be adopted for this purpose
would form the subject
of future careful consideration,
provided the Reports of
Insp.- Day and Norman
wd afford material.
Such remedies as appear
practicable with a view to
removal for the future
the injury done to the
fisheries by works of irrigation
might also be adopted.
I do not think that it
wd be desirable to pro-

first [illegible] and that they
shd be any further
addition thereto, or
indeed any general taxation
for such a purpose.

Herbert

Sept 20/72.

has been affected by
the absence of all
Conservancy; but in the
very nature of things,
the absence of protection
must, if suffered to
continue, lead sooner
or later to the ruin of
the Fisheries.

4. How far the Govern-
ment can, by Legislative
and administrative
measures, preserve the
fisheries from the destruc-
tion which is practically
impending over them

and increase this
valuable source of
food-supply to large
classes of the community,
is a question well
worthy of Consideration.

5. The measures
adopted must be tentative
and limited at first
and be extended as
practical experience
is gained. The privilege
of fishing has, in
some Cases, been
taxed

taxed, but beyond
this there has been
no restriction on
its exercise. The
Government Commis-
sion suddenly intro-
duce stringent measu
of Conservancy, an
altogether ignore
the fact that large
numbers of the poorer
Classes have no ot
occupation or mod

of subsistence. They are

The Government do not however concur with the Board in thinking that because they have not hitherto taxed the right of fishing in their waters it cannot now be done, nor do they see why a fair revenue should not be realised from fisheries. They admit that they are bound to show every reasonable

Transfer not prepared to sanction any extension of the system of Fishery leases or the imposition of additional taxation on the pursuit in any form.

reasonable consideration towards those who have hitherto enjoyed free liberty of fishing and have made it their occupation, but it must not be forgotten that these are the persons who will ultimately benefit most by their measures, and should the interests of the community be sacrificed for the temporary advantage of a comparatively limited class.

6. The enormous space of country with which the Govt. have to deal, moreover, of itself enforces a limit to their operations at the

outscen
outside

outside, and further difficulties are caused by the immense variety of fish found in their waters, some of which are edible only when spawning, while others never attain any size but are marvellously prolific.

7. The Govt resolve, therefore to restrict their operations at first to particular localities and to afford protection to the more valuable descriptions of fish only. All rivers, tanks and channels which dry up every year will for the present be left out of considerations

arrangements

Should not Tidal Estuaries and Creeks be included - they are not named in the minute expressly - the wording is rivers Creeks &c but I think it is intended to make the Regulations apply to Tidal Estuaries and Creeks.

Col.

I advise the returning to Govt that protection of fisheries - The Forest Officers employed on Streams from the sea will gratuitously & it will not be necessary to be remunerated by any demand on them

HB

57

arrangements may hereafter be made for forming stock-ponds in these also, but meanwhile there is scope enough in other directions.

8 As regards rivers tanks and streams having a perennial supply of water, the Govt are decidedly in favor of renting out the right of fishing on suitable conditions. It is hopeless to expect that inland waters can be watched by a paid establishment, the cost would be enormous, and it would be impossible to ensure an honest and effective discharge of duty. A renter on the other hand would prevent

poaching

poaching in his own interest, and it will be easier to check the malpractices of a few renters than those of an unlimited number of fishermen.

9 But by renting, the Govt do not mean to imply that the privilege should universally be given up to general and public competition. Where it has not been so rented in the past the monopoly of the right (Angling excepted) should in preference be given to the Headman of the local fishermen or of the village community, for a moderate payment on condition that of certain specified fish none should be taken at stated periods or under a certain size, together with any other stipulations

10 With regard to res-
= trictions on the size of the mesh
of fishing nets
the Government entertain
considerable doubt on the
point, for even the small
proposed, viz 2 Inches in
Circumference would prove
the capture of several small
Kinds which are prized by
poorer classes. The Govt
= ment are rather disposed
try first whether the object
sought might not be att
=ed by Stipulations in the
leases, but in waters wh
have been rented to the hig

bidders and have become
purely commercial speculat=
=tions, there seems to be no
objection to such a restr=
=triction (prawn nets excepted)

Both Dr. Day and
Mr. Thomas deprecate Three
Months' Close some such en=
=actment must be afforded
Sea-fish on their way
their Spawning grounds,
d to their fry on thurs=
=y to the Sea.

As regards the Kinds
fish to be protected
Government are of opinion
that

that the Cable fish claims the
first attention. It seems
absolutely necessary to construct
some description of ladders or
passage by which the mature
fish may get above the lower
Coleroon and Vistna Anicuts
Merely catching the fish below
and releasing them above the
Anicuts will not answer, as
both the parent fish and the
fry must return to the Sea
or perish. The question of
providing fish passes was
referred to the Public Works
Department for their orders,
and the funds requisite

Kistna Anicut
Coleroon Anicut

for the construction of
ladders of the description
approved at the Restinga
and Coleroon Anicuts, were
sanctioned in the marginally en-
noted Bros: in that Deptt: -

It is presumed that the work
has been carried out; a report
on the working of the experimental
fish passes should be called for in the
Deptt: Public Works.

13 The Sable appears to be
edible only when in roe,
to protect it during the whole
spawning time will therefore
be tantamount to prohibiting
its use, but to some ex-
tent it must be protected,
and for this purpose it will
probably suffice to prohibit fishing

24: April 1872 № 1055
19: Augt: 1869 № 2731

I think it be
lately done

L. D.

Js- Please see J. D.
1 Aug 87 № 1822 Rec'd
put up

during certain days of each
a week or perhaps oftener
during the season. It is so
prolific that this would
seem sufficient to ensure
enough breeding fish pro-
vided the fry are enabled
to reach the sea. The lat-
ter object might be ob-
tained by prohibiting the
capture altogether but
fish passes are essential
On the Godavery apparently
the Sable fish see above
the anicut by the Canals
which communicate with
the sea, and the fry reach
the sea by the same
means. Here probably
the best method would
be

be to prohibit all fishing while the fry are thus passing down. If any of the Khitmas and Sanjore Channels communicate in the same way with the sea, similar measures should be adopted. It is stated from a recent paper that the Sable fish is caught in abundance at the Sonkerala and Kuttur in the Kurnool district.

It appears from a letter from the Collr. Kurnool that the Sable is abundant there

14 With regard to purely freshwater fish a selection of the more valuable kinds such as the Mahseer should similarly be made, and protective measures enforced during the spawning time. All poisoning of waters should be prohibited and punished under the penal code. Fishing within 100 yards of anicuts should also be prevented.

15 The Govt. consider that the leases should be for a period of three years so that the lessee may derive advantage from the measures of conservancy which they will be instrumental in carrying out. The Board will draw up a form of lease containing such stipulations as will ensure attention being paid by the lessees to the protective measures which have been approved above.

16. While trusting in a very great measure to administrative measures, the Govt. deem it requisite to have recourse to Legislation to ensure their success, and are of opinion that

are

an act should be passed
Enabling them, where neces-
sary to prohibit the cap-
ture of certain fish, at
certain times, or in certain
places, either absolutely
or with reference to size;
to forbid the use of nets
of certain descriptions
and the construction of
dams, cruives and the like;
and to employ the staff
requisite for carrying out
protective measures.

The Board will be re-
quested to prepare and
submit for the considera-
tion of Government
a Draft Bill
for the purpose. The

1 The scale proposed
in para 3). of the
Govt. Bo. of 13 July 91
No. 2900 is in excess
of present requirements
& it is probable that
2 Employ a few Peons
& subsidise the
Village Officials

57

17 The Board will at the
same time revise the
draft instructions for the
guidance of Collectors
which accompanied the
Proceedings of the 18th Dec
89 No. 9290, so as to bring
them into conformity
with the views now ex-
pressed. On receipt of
the Draft Bill and
revised instructions
the Government will
decide what districts
are to be brought under
regulation, and whether
Malabar is to be treated
exceptionally. Mean-
while they resolve to
defer

defer taking general action:—

18. They are prepared however to permit Mr. Thomas to continue his experiments in South Canara, and will provide the requisite funds on application, which should be accompanied by a statement of the manner in which it is proposed to expend the money.

19. Stock pools should be fenced, and carefully preserved from being netted by staking and watching

watching; and Rules for turning off water for Irrigation should be required to put up gratings to exclude fry.

20. The poisoning of streams should be prohibited and vigorously repressed. In connection with this subject, the Commissioner of Mysore will be requested to favor the Govt with his views as to the best mode of preventing the pollution of rivers by pulping Coffee.

21. Mr Thomas should bear in mind that in introducing protective measures caution is requisite at the outset to disarm opposition. For his past successful labors and his interesting account of them the thanks

thanks of Govt are due.

22. Finally, the Govt think it desirable to procure from England a person who is thoroughly conversant with Pisciculture in all its branches, and competent to carry out to completion the investigation which D^r Day has commenced and to enquire into the Sea fisheries of this Coast, which are certainly of no less importance to the country than the fresh water fisheries, but even more imperfectly understood. The Secretary of State will be addressed on the subject. —

23. The scale of establishment proposed by the Board in para 37 of their Proceedings of the 13th July /71 No 2900 is in excess of present requirements: it will probably suffice to entertain a few persons and to subsidize the village officials.

The 2 Centres appear to be right to this recommendation — Islands can be placed on the list so as to be easily excluded

I think in any case the Govt. would however

AA

I am altogether opposed to this

A A.

What is the Preamble of England? It embodies Frank Buckland & others who have made the closest Study of & and to initiate & advise on all matters of controversy

The necessary funds will be furnished from local sources.

I object to this altogether

A A

We have more than enough already from Fishery Rents. 188

13th July /71 No 2900 is in excess of present requirements: it will probably suffice to entertain a few persons and to subsidize the village officials.

CdS.

No reason is given for the proposed rewards for killing Crocodiles &c.

The papers connected with this subject have been put up in three bundles according to the subjects dealt with in the papers & the Govt. Opinions could be accessed by reference to any of the other papers as to which I have any doubt — to the last record 63 of 29 July /71 3131 but as we have now accepted the Govt proposals and have merely forwarded in connexion with previous proceedings it seems to call for no remarks may be recorded here —

(6) G.O.
On Piscaultore

Circle

Keller Keep
for Council

Send appln & W-
Dew

To Govt. Smithing acct
Stg. Rs
Road Cases & Returns
Rs
Remittance from England

R.C. to Hon'ble S. 25: Sept: /72. R. 26: Sept:
19: Augt: /72 R 24: Sept: 1872.

61 37

Revenue Department.

No. 1478

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the 25th October 1872.

Read the following again the following Proceedings of Govt:—

11th Dept: 1867. No 2140.
27th May 1868. " 1468.
12th Augt 1868. " 2157
4th Feby: 1869. " 306
30th April 1869. " 1185.
25th June 1869. " 1812.
19th Nov: 1869. " 2989.

Read Pro: Bd: of Revenue

18th Dec: 1869. No 9290
21 March 1870. " 1916
2d June 1870. " 3756

Read a prior Pro: of Govt.

27th Nov: 1868, No 2982

Read Pro: Bd: of Revenue

13th July 1871, No 2900
24th July 1871, No 3131.

Read Minute by the Hon'ble
Mr J. D. Inn. 3/5 Sep.

1. The first para
papers above recorded
postate

prlate to the enquiries which Dr. Day was deputed to institute on the subject of the injurious effects of Irrigation works on river fisheries, the remedies suggested by that Officer, and the measures which the Govt resolved to adopt. With their Proceedings of the 18 Dec. 1869 No 9290 (to which the next two Proceedings recorded are supplementary) the Board submitted for the approval of Govt draft instructions for carrying out Dr Day's suggestions. The Govt deferred passing orders thereon

thereon until the results of the experiments which Mr Thomas was authorized in their Proceedings of the 27th Nov. 1865 to make should be communicated and enable them to deal with the whole question. So far as the Govt are aware no action has yet been taken generally.

2. The Board now submit with their Proceedings of the 13 July 1871 No 2900 Mr Thomas' comprehensive and valuable report on the results of Experimental Pisciculture in the rivers

of South Canara. After reviewing the contents of the Pamphlet in detail, comparing Dr Day's views with Mr Thomas' and summarizing the whole correspondence on the subject, the Board proceed to enunciate their proposals which are two-fold and briefly stated are to the effect

1st That an Act be passed to provide for the conservancy and regulation of fisheries.

2d That a separate fisheries Dept. be constituted at once under the

the Board.

3. The admirable reports of Dr Day and Mr H. J. Thomas and the replies of revenue officers to the exhaustive queries of the former furnish a sufficient fund of information to admit of preliminary measures being adopted for the conservancy and improvement of fresh water fisheries. There cannot be a doubt that there is and for years has been a very wasteful destruction of fish in inland

of South Canara. After reviewing the contents of the Pamphlet in detail, comparing Dr Day's views with Mr Thomas' and summarizing the whole correspondence on the subject, the Board proceed to enunciate their proposals which are two-fold and briefly stated are to the effect

1st That an Act be passed to provide for the conservancy and regulation of fisheries.

2d That a separate fisheries Dept: be constituted at once under the

the Board.

3. The admirable reports of Dr Day and Mr H. J. Thomas and the replies of revenue officers to the exhaustive queries of the former furnish a sufficient fund of information to admit of preliminary measures being adopted for the conservancy and improvement of fresh water fisheries. There cannot be a doubt that there is and for years has been a very wasteful destruction of fish in inland

inland waters, and that
in the largest rivers Irriga-
tion weirs have to some
extent prevented at least
one valuable species of
salt-water fish (the
sable) from ascending
to its spawning beds.
Pisciculture has hitherto
engaged so little attention
that it is impossible to
ascertain with anything
like certainty how far
the stock of fish has
been affected by the
absence of all conservancy,
but in the very nature
of things, the absence of
protection

protection must, if suffered
to continue, lead sooner
or later to the ruin of
the Fisheries.

4. How far the Govt
can, by Legislative and
administrative measures,
preserve these fisheries
from the destruction which
is practically impending
over them, and increase
this valuable source of
food-supply to large
classes of the community,
is a question well worthy
of consideration.

5. The measures
adopted must be tentative
and

and limited at first,
and be extended as
practical experience
is gained - The privilege
of fishing has, in some
cases, been taxed, but
beyond this there has
been no restriction on
its exercise. The Govt
cannot now suddenly
introduce stringent
measures of conservancy,
and altogether ignore
the fact that large
numbers of the poorer
classes have no other
occupation or mode of
subsistence. They are
therefore not prepared to

65 Quarrel 41

sanction any extension
of the system of Fishery
leases or the imposition
of additional taxation
on the pursuit in any
form.

6. The enormous
space of country with
which the Govt have to
deal, moreover, of itself
enforces a limit to their
operations at the outset,
and further difficulties
are caused by the immense
variety of fish found in
their waters, some of
which are edible only
when spawning, while
others never attain any

size

size but are marvellously prolific.

7. The Govt resolve therefore to restrict their operations at first to particular localities and to afford protection to the more valuable descriptions of fish only. All rivers, tanks and channels which dry up every year will for the present be left out of consideration. Arrangements may hereafter be made for forming stock-pools in these also, but meanwhile there is scope enough in other directions.

8. With regard to restrictions on the size of the mesh of fishing nets the Govt entertain considerable doubt, for even the smallest proposed, viz: 2 Inches in circumference would prevent the capture of several small kinds which are prized by the poorer classes; but in waters which have been rented to the highest bidder and have become purely commercial speculations there seems to be no objection to such a restriction (prawn nets excepted).

9. Both Dr Day and Mr

Mr Thomas deprecate three months, but some such protection must be afforded to sea-fish on their way to their spawning grounds, and to their fry on their way to the sea.

10. As regards the kinds of fish to be protected the Govt are of opinion that the Sable fish claimes their first attention.

11. The Sable appears to be edible only when in roe, to protect it during the whole spawning time will therefore be tantamount to prohibiting its use, but to some extent it must be protected, and for this purpose it will probably suffice to prohibit fishing during certain days (once a week or perhaps oftener) during the season. It is so prolific, that this would seem sufficient to ensure enough breeding fish, provided the fry are enabled to reach the sea - and the latter object might be attained by prohibiting their capture altogether, if the fish-ladders are effectual. On the Godavery apparently the Sable fish get above the anicuts by the canals which communicate with the sea, and the fry reach the sea by the same means. Here probably the best method would be to prohibit all fishing while the fry are thus passing over. If any of the Kistna and Tanjore channels communicate in the same way with the sea, similar measures should be adopted. It is observed from

a recent paper, that the
Sable fish is caught in
abundance in the Dountuduze at the Sonkeeala
aniket in the Kumoob District.

Pro. With regard to purely
fresh water fish, a selection
of the more valuable kinds, such
as the Mahseer, should
similarly be made, and
protective measures enforced
during the spawning time.
All poisoning of waters should
be prohibited and punished
under the penal Code. Fishing
within 100 yards of anicuts
should also be prevented.

13. While treating, in
a very first measure, to
administrative measures, the
Govt. deem it requisite to have
recourse to legislation to
ensure their success, and
are of opinion that an
Act should be passed enabling
them, where necessary, to
prohibit the capture of
certain fish, at certain
times, or in certain places,
either absolutely, or with
reference to size; to forbid
the use of nets of certain
descriptions, and the con-
struction of dams, cruives,
and the like; and to employ
the staff requisite for
carrying out protective
measures. The scale
proposed in para 37 of the
Board's Proceedings of 13th
July 1871, No 2900, is in
excess of present require-
ments, and it will probably
suffice to employ a few
Peons, and to subsidize the
village officials. The Board
will be requested to prepare
and submit for the con-
sideration of Govt, a Draft
Bill for the purpose.

14. The Board will,
at the same time, revise
the draft instructions for
the guidance of Collectors
which accompanied their
Proceedings of the 18th Dec: 1869

No 9290, so as to bring them into conformity with the views now expressed - On receipt of the Draft Bill and revised instructions, the Govt will decide what Districts are to be brought under regulation, and whether Malabar is to be treated exceptionally - Meanwhile, they resolve to defer taking general action.

15. They are prepared however to permit Mr Thomas to continue his Experiments in South Canara, and will provide the requisite funds on application, which should be accompanied by a Statement of the manner in which it is proposed to expend the money -

16 Stock pools should be fenced, and carefully preserved from being netted, by staking and watching; and Ryots turning off water for Irrigation, should be required to put up fastings to exclude fry.

17. The poisoning of streams should be prohibited and uniformly refused - In connection with this subject, the Commissioner of Mysore will be requested to favor the Govt with his views as to the best mode of preventing the pollution of rivers by pulping coffee.

18. Mr Thomas should bear in mind that, in introducing protective measures, caution and consideration are requisite at the outset to dis-arm opposition - For his past successful labors, and his interesting account of them, the thanks of Govt are due -

91 To the Board of Revenue &c
1 " H C S Thomas Esqr 130 Kro
1 " Surgeon F Day M D
6 " the Inspector General of Hospitals
21 " the Public Works Dept
6 " the Accountant General

800/10

29-19

1-0

Rec'd No. 1478

25.10.72

C. 17. Oct/72 R 25 Oct.