

## EXPLOITATION OF FALSE-TREVALLY RESOURCES IN UTTARA KANNADA WATERS\*

B. NEELAKANTAN AND N. KUSUMA

*Department of Postgraduate Studies and Research in Marine Biology,  
Karnataka University, Kodibag, Karwar-581 303*

### ABSTRACT

The false-trevally *Lactarius lactarius* supports a sustenance fishery at many localities in and around Karwar along the coast of Uttara Kannada District of Karnataka. Although an important food fish, very little information is available on its biology and fishery.

The present paper deals with the resource characteristics of *L. lactarius*. The landings in the district during 1985-86 and 1986-87 were 865.1 and 943.8 tonnes respectively contributing Rs. 4,550,190 and 7,499,940 in money value to the annual fisheries income of the district in the concerned years. The fishery is contributed by the 0-year and 1-year (1+) groups at the centres from which samples were taken; with the former being the mainstay of the fishery.

### INTRODUCTION

UTTARA KANNADA District having a coastline of about 144 km between Majali and Bhatkal is richly endowed with living marine resources. Fishing industries, offering both employment and export potential, have been gaining importance here recently. Fishing is confined to five coastal taluks viz. Karwar, Ankola Kumta, Honnavar and Bhatkal. The important fisheries of this area are those of oilsardine, mackerel, catfishes, sciaenids, false-trevally, penaeid prawns, etc. The fishing season usually commences in the middle of September and lasts until middle of May (Kusuma *et al.*, 1985).

The false-trevally *Lactarius lactarius* is widely distributed in Indian waters and is locally familiar as 'Saundale' or 'Adabanagu.'

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The distribution of the species contributing to the fishery along the Indian Coast is almost continuous. Available records show that the false-trevally forms a substantial fishery at different places in the states of Andhra Pradesh and Tamil Nadu along the east coast and in Karnataka, Goa and Gujarat along the west coast of India (Neelakantan, 1981). A fishery of small magnitude exists in the States of West Bengal, Orissa, Kerala and Maharashtra.

### DATA BASE

The catches of false-trevally at various landing centres between Majali and Bhatkal have been examined. The fishing data of Karnataka Coast (Anon., 1982, 1983, 1986; MPEDA, 1982) and information available from the Department of Fisheries, Government of Karnataka on Uttara Kannada Coast are utilised for analysis.

## ALL INDIA LANDINGS OF FALSE-TREVALLY

The annual average false-trevally landings during 1969-1984 were of the order of 9,764 tonnes forming 0.75% of the total marine fish of the country. The highest all India false-trevally catch during the period was registered in 1983. Landings in 1976 were also considerably good. However, wide fluctuations were noticed in the years prior to 1973 and between 1977 and 1982 (Table 1).

TABLE 1. Contribution of *L. lactarius* in the total landings of marine fish in India during 1969-1984

Year	<i>Lactarius</i> landings (tonnes)	Total landings (tonnes)	Percentage of <i>Lactarius</i> in total landings
1969	4,545	9,13,630	0.50
1970	4,697	10,85,607	0.43
1971	5,313	11,61,389	0.46
1972	7,479	9,80,049	0.77
1973	13,912	12,20,240	1.14
1974	8,913	12,17,797	0.73
1975	11,848	14,22,693	0.83
1976	12,045	13,52,855	0.89
1977	10,961	12,58,782	0.87
1978	7,896	14,03,607	0.56
1979	4,574	13,88,380	0.32
1980	7,415	12,49,837	0.60
1981	8,211	13,78,457	0.60
1982	13,872	14,20,624	1.00
1983	20,023	15,48,475	1.30
1984	14,521	16,30,678	0.90
Total	1,56,225	2,06,34,098	0.75
Average	9,764		

## STATEWISE FALSE-TREVALLY CATCHES

Though the false-trevally landings are recorded in all the maritime States of India, the average magnitude during 1969-'84 differs from State to State (Fig. 1). Only 23.33% of total false-trevally landings came from the east coast while the balance of 76.66% was produced on the west coast. Among the

States, Gujarat landed the highest (37.40%) followed by Kerala (18.23%). Out of the total false-trevally landings, Karnataka was accounted for 7.23%.

## FALSE-TREVALLY FISHERY IN THE UTTARA KANNADA DISTRICT

The particulars of total marine fish production, annual false-trevally catch and its percentage composition in Uttara Kannada during 1969-1987 are presented in Table 2 and Fig. 2. It is clear from the Table and the Figure that 1974-'75, 1975-'76 and 1976-'77 were lean years for the fishery. The 1983-'84 season had a record catch of the species. A significant feature observed in the fishery off this coast was that after a steady yield in early seventies and with a declining trend thereafter, it revived to the same level in 1977. The average catch for Uttara Kannada during the 18 year period is of the order of 539.55 t, constituting 1.40% of the total marine fish landings of the district.

*Seasonal distribution*

Table 3 and Fig. 3 show the monthwise landings of the fish in Uttara Kannada during 1986-'87. The peak of the landings (152.8 t) was attained during March followed by the catch (142.4 t) in December. A meagre catch of 10.6 t recorded in June was the poorest of the season. The above average catch (78.65 t) recorded during April and December 1986 and January to March 1987 indicated the abundance of the fish in the fishing grounds during these months.

*Methods of fishing*

The types of boats and nets that are extensively used in the fishery at Karwar and other fishing centres in the Uttara Kannada District are detailed below.

*Boats*: They can be classified into canoes of the dug-out and plank-built types and modern crafts such as Pablo boats and large

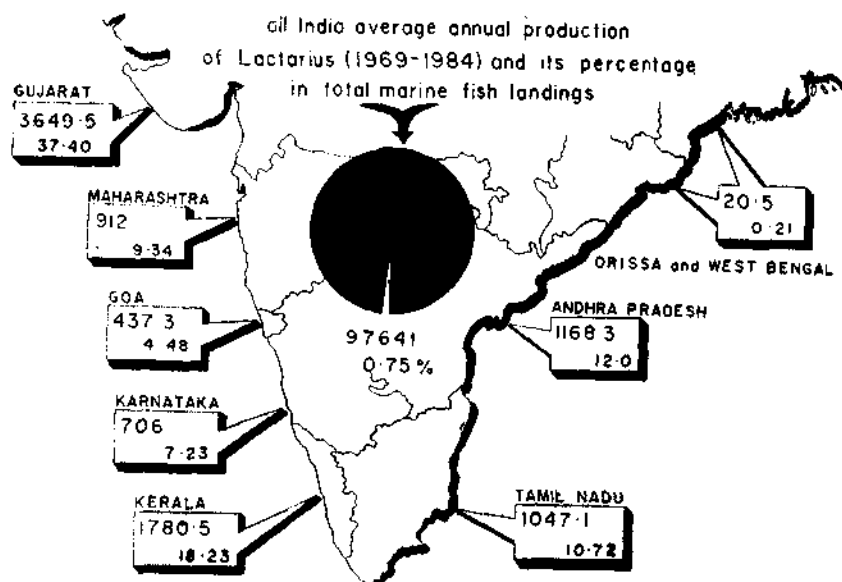


Fig. 1. Statewise average annual landings (in tonnes) and percentage contributions of *Lactarius lactarius* (1969-1984).

TABLE 2 *Lactarius* landings in Uttara Kannada

Year	Total landings (tonnes)	Value (Rs.)	<i>Lactarius</i> landings (tonnes)	%	Value (Rs.)
1969-70	48,398	2,59,63,218	300	0.62	1,50,000
1970-71	60,720	2,35,82,230	331	0.55	1,65,000
1971-72	56,100	2,56,38,060	351	0.63	1,40,400
1972-73	13,361	78,75,397	307	1.88	1,57,600
1973-74	21,165	2,35,15,564	198	0.94	1,61,760
1974-75	14,408	1,67,91,000	64	0.44	1,07,700
1975-76	30,618	3,35,74,343	99	0.32	1,28,700
1976-77	21,591	2,61,57,262	100	0.46	1,16,240
1977-78	49,291	4,89,68,865	468	0.95	3,16,712
1978-79	30,942	3,80,89,605	460	1.49	3,41,700
1979-80	46,147	6,18,78,802	496	1.07	6,72,270
1980-81	34,258	5,49,91,125	582	1.70	12,32,270
1981-82	35,872	7,92,50,786	722	2.01	19,90,465
1982-83	27,996	9,58,28,160	953	3.40	35,47,100
1983-84	35,381	11,35,63,590	1,495	4.22	60,96,420
1984-85	39,437	13,57,48,820	978	2.50	38,03,610
1985-86	76,839	21,61,55,830	865	1.13	45,50,190
1986-87	47,719	17,18,00,490	943	1.20	74,99,940

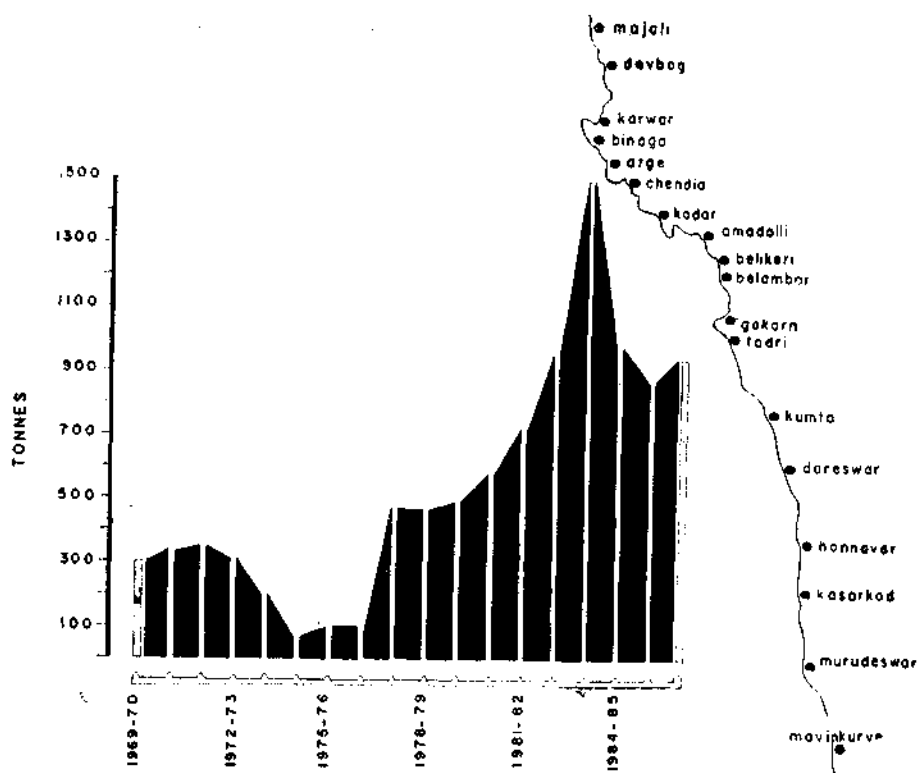


Fig. 2. *Lactarius* landings during 1969-1987 and landing centres along the Uttara Kannada Coast.

TABLE 3. *Monthwise landings of total fish and Lactarius landings in Uttara Kannada waters*

Month	Total landings (tonnes)	Value (Rs.)	Lactarius landings (tonnes)	Value (Rs.)
April, 1986	6,195.4	1,84,66,300	110.1	8,15,770
May	5,018.5	1,57,48,910	125.1	10,13,930
June	668.8	28,68,180	10.6	60,730
July	739.1	42,87,400	39.7	3,62,900
August	1,943.0	76,73,570	49.3	4,23,040
September	4,396.3	1,19,39,430	22.1	1,56,040
October	6,881.7	2,06,56,590	21.1	1,61,680
November	6,190.6	2,19,24,530	52.1	3,02,700
December	4,115.8	1,41,13,050	142.4	10,65,100
January, 1987	4,327.4	2,28,09,080	97.6	9,41,150
February	3,533.0	1,60,69,800	120.9	9,65,000
March	3,709.6	1,52,43,650	152.8	12,31,900
Total	47,719.6	17,18,00,490	943.8	74,99,940

wooden/steel trawlers. The dug-out canoe or 'Thoni' is the most common fishing craft found along the coast of Uttara Kannada. It is made by scooping out a single log of wood and is of varying sizes ( $6.10 \times 0.5$  to  $1.25 \times 0.45$  to  $0.7$  m). This is employed for operating shore seines, cast nets. The out-

exploration of new fishing grounds. New and streamlined designs followed thereafter like the Dan boats ( $6.6 \times 2.2 \times 1.0$  m) and Pablo boats ( $7.4 \times 2.1 \times 1.05$  m). The range of horse power of these boats is between 10 and 30. The larger ones are partially or fully decked and bear the trawling winches.

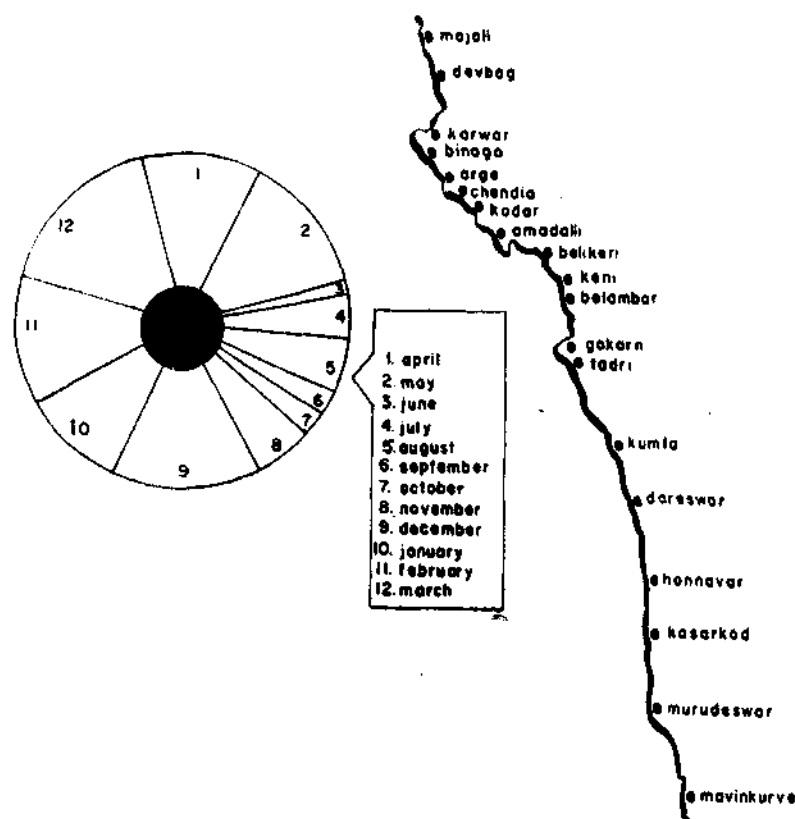


Fig. 3. Seasonal distribution of *Lactorius* in the landings of Uttara Kannada (1986-87).

rigger type plank-built canoes (7 to 14 m long, 0.9 to 3.0 m beam and 0.6 to 1.8 m draft) are essentially dug-out canoes with planks stiched along the long axis and are used while operating shore seines. Mechanisation of some conventional vessels like Machwa with necessary alteration was accomplished in 1950 for the

*Fishing gear*: No specially designed net is employed for the capture of false-trevally. They are captured along with other fishes and the most common gears that land them in the region are shore seines, cast nets and trawl nets. Centrewise usage of gears is shown in Fig. 4.

**Age composition:** The size class structure in the commercial catches (based on length frequency studies) have indicated that the commercial fishery consisted mainly of 0 and 1 + yr old fish with the preponderance of the former. Though the commercial fishery was based on 0-yr and 1-yr (1+) old fish, attainment of maturity before the completion of

are sun-dried on the beaches. During the period of abundance, they are transported to interior markets either in iced or salt cured condition.

Since the fish is available cheaply in abundance to poorer sections of the population the catch is disposed off in three ways. The

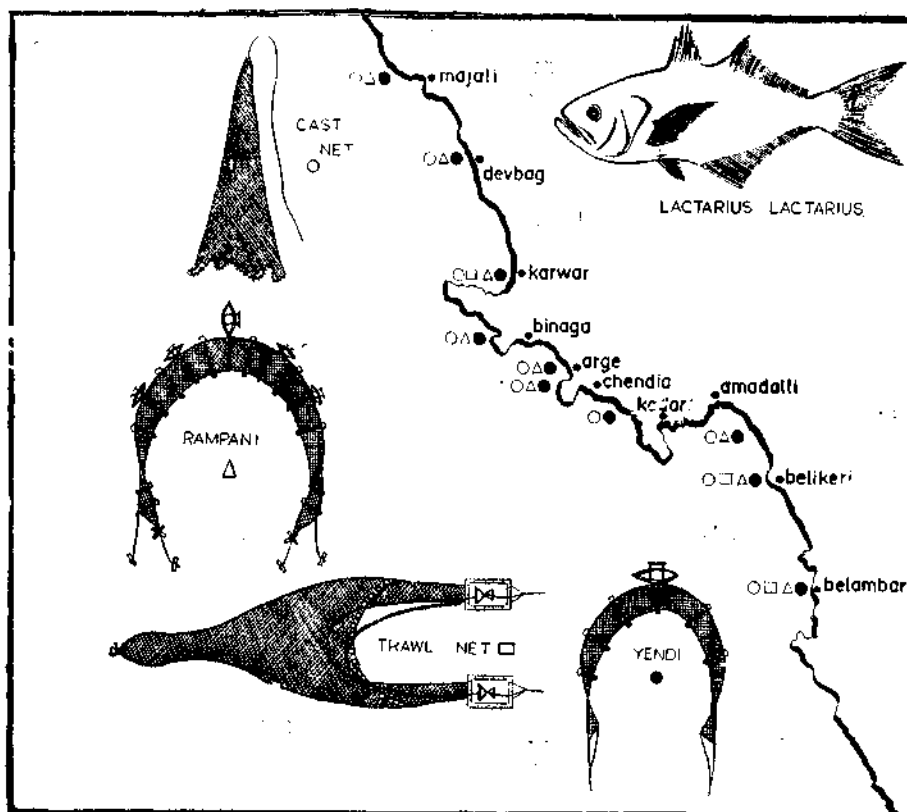


Fig. 4. The various methods of *Lactarius* fishing at different centres from Majali to Belambar.

1 yr (around 121-130 mm) and the fairly high fecundity appears to allow for necessary recruitment.

**Disposal of catch:** The false-trevally is highly esteemed as food fish. During the period of limited catch, large-sized fishes are locally consumed fresh and the small ones

landings are usually marketed fresh for local consumption or salt cured/iced for inland transport or disposed off to entrepreneurs for reduction in industry. Of these, fresh disposal for local consumption is the most popular way. The percentages of freshly marketed fish were 36.91 (170.1 t) and 25.09 (233.7 t) during 1978-79 and 1979-80 respectively. The

percentages of the fish cured/iced during 1978-79 and 1979-80 were 36.68 (168.9 t) and 36.03 (178.8 t) respectively. The rest used for reduction to fish meal and manure were 26.41% (121.7 t) in 1978-79 and 18.88% (93.7 t) in 1979-80.

*Value of the fishery* : A fifty-fold increase in the returns from the false-trevally fisheries has been registered in the district during the last eighteen years. During 1969-70, when the fish constituted only 0.62% of the total marine catch of Uttara Kannada, its landing value was Rs. 1,50,000. The corresponding figures in 1986-87 were 1.2% and Rs. 74,99,940

(Table 2). The increase in the monetary return can be traced to two spurts — the first one during 1983-84 wherein there was sudden increase in the returns by Rs. 25,49,320 and the second during 1986-87 which had a margin of about Rs. 29,49,750 over the previous year.

As judged by the magnitude of the landings and value of the fishery it supports, false-trevally occupies an important place among the Indian marine fisheries in general and those of this part of the coast in particular. It is consumed by all people and being cheap and abundant in the region and season, the common man unmistakably prefers it.

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