

GROWTH RATE
IN *LACTARIUS LACTARIUS* (SCHNEIDER) AT KARWAR

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ABSTRACT

The length-frequency data of the big-jawed jumper, *Lactarius lactarius* (Schneider), collected from the trawl catches of Karwar coast during 1965-66, 1966-67 and 1967-68 season show that the species attains a length of about 90 mm in six months. The landings from grounds more than 30 meters in depth generally contained bigger individuals, while the near-shore catches were dominated by juveniles.

The big-jawed jumper, *Lactarius lactarius* (Schneider), is an esteemed table fish inhabiting the coastal waters around India. These fishes are generally caught in trawl and drift nets and the largest specimen so far recorded is 330 mm in total length from the Gulf of Mannar (Shanmughavelu 1973). Studies on the food of this fish have been made by Chidambaram and Venkataraman (1946), Devanesan and Chidambaram (1953), Chacko (1949), Venkataraman (1960) and Basheeruddin and Nayar (1961) and some aspects of its biology in the Waltair region have been investigated by Rao (1966). Growth of this fish from the west coast of India has not been studied and therefore some observations are presented here on this aspect, based on the length-frequency data of fish from the trawler catches of the Indo-Norwegian Project vessels at Karwar, an important fishing port on the west coast of India.

In all, 8894 specimens of *L. lactarius* were measured in the course of weekly trips on board the I.N.P. vessels at Karwar during 1965-66, 1966-67 and 1967-68 seasons. Trawling was undertaken by the vessels *INP-167* up to 20 meters in depth, *M1* and *M4*, between 20 and 30 meters in depth and *Karwar-1*, between 30 and 40 meters in depth (Bapat, Radhakrishnan and Kartha 1968).

During 1965-66, the mode 'A' at 145 mm in November 1965 progressed to 155 mm in January 1966 (Fig. 1). This group was traceable at 175 mm in March 1966 from a sample collected from 46-meter depth. Another mode 'B' at 95 mm of January 1966 has shifted to 125 mm in April 1966, when the trawling operations of the first season came to an end. During the next season, the mode 'C' at 155 mm in December 1966 was found at 165 mm in February 1967. A secondary mode 'D' at 115 mm in January 1967 was traceable at 145 mm in May 1967. Another mode 'E' at 75 mm in April 1967 was found at 85 mm in May 1967. During the subsequent season, the mode 'F' at 125 mm in February 1968 was found at 135 mm and 145 mm in March and May 1968 respectively. A secondary mode 'G' at 65 mm in May was observed at 115 mm by the end of August 1968, though the samples of July and August were obtained from the shore-seine, *Yendi*.

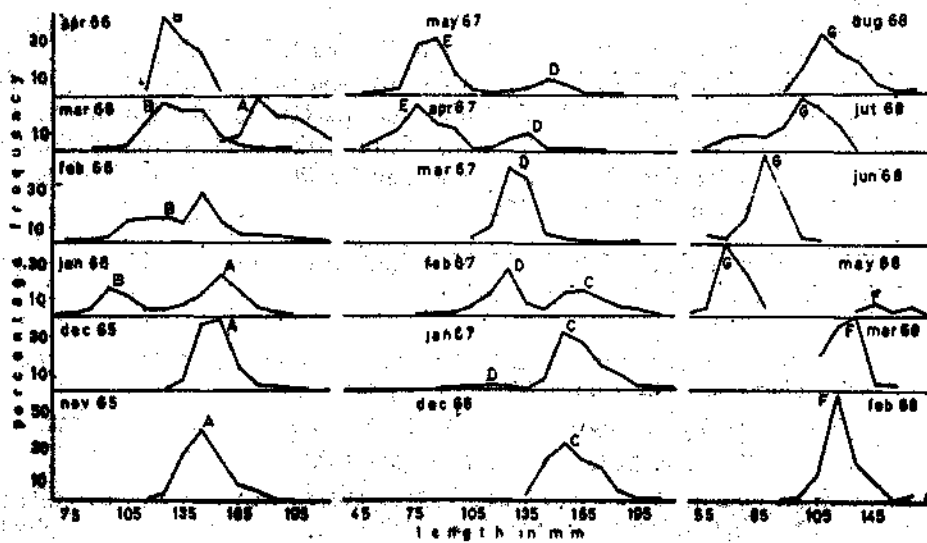


FIG. 1. Length-frequency distribution of *L. lactarius*.

The gradual increase in modal size observed during different months (Table 1) gives an indication of the growth rate of *L. lactarius* at different size intervals. It is estimated that juveniles within a modal size range of 65 to 95 mm show a growth rate of 15 mm per month, till they attain a size of about 125 mm.

TABLE 1. Progression of modal size in *L. lactarius* at Karwar.

S. No.	Month Year	Initial modal size (mm)	Month Year	Final modal size (mm)	Period (months)	Growth increment (mm)	Average growth rate (mm)
1.	January 1966	95	March 1966	125	2	30	15.00
2.	April 1967	75	May 1967	85	1	10	10.00
3.	May 1968	65	August 1968	115	3	50	16.66
Total					6	90	15.00
4.	November 1965	145	March 1966	175	4	30	7.50
5.	December 1966	155	February 1967	165	2	10	5.00
6.	January 1967	115	May 1967	145	4	30	7.50
7.	February 1968	125	May 1968	145	3	20	6.66
Total					13	90	6.92

Thereafter, the fish exhibits a lesser growth rate of 6.9 mm per month. It, therefore, appears probable that *L. lactarius* at Karwar attains a length of about 90 mm in six months, which is comparable with that recorded from the east coast (Rao 1966).

The landings from grounds more than 30 meters in depth generally contained bigger individuals of *L. lactarius* while the near-shore catches were dominated by juveniles. During March 1966, one haul made at 46-meter depth yielded fish with a modal size of 175 mm, whereas, the catches from shallower grounds (20-30-meter depth), on the same day by the same boat, were composed of fish with a modal size of 125 mm.

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