

# Marine Fisheries Information Service



Technical and  
Extension Series

**Central Marine Fisheries Research Institute**  
(Indian Council of Agricultural Research)  
Post Box No. 1603, Cochin - 682 018  
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# On the occurrence of juveniles of striped bonito *Sarda orientalis* (Temminck and Schlegel, 1842) along Chennai coast

H.M. Kasim, S. Mohan, S.Rajapackiam and S.Rajan

Madras Research Centre of C.M.F.R.I, Chennai

Tuna being a major migratory pelagic fishery resource in tropical and subtropical regions of the world's seas, their movements are controlled mainly by ever changing oceanic environment. They are exploited mainly by hooks & line, mechanised gillnets and trawlnets in India and are rarely caught in other gears with small mesh size operated by traditional crafts.

Usually adults of *Euthynnus affinis*, *Auxis thazard*, *Katsuwonus pelamis*, *Thunnus albacares* and *T. tonggol* are landed by mechanised gillnet, hooks & line and trawl net and the juveniles of striped bonito *Sarda orientalis* are caught rarely by indigenous gears operated by fiber-glass boats and kattumarams. The occurrence of young-ones of *S.orientalis* were observed for the first time in the landings of indigenous gillnets with small mesh size such are Kavalavalai (20mm),

Pannuvalai (25mm), Thattakavalavalai (30mm), Kolavalai (10mm), and Edavalai (20-60mm) operated along the Chennai coast. When these indigenous gears are observed to land fishes shown in Table 1, the juveniles of *S. orientalis* were also landed during August-October, 2006 at Arangankuppam, Kasimedu on the northern side of Chennai, Chinnaneelankarai and Chinnandikuppan along the southern side of Chennai as shown in Table 2.

Juveniles of *S.orientalis*, locally called as Vellrasura in Tamil, occurred from second week of August 2006 to second week of October 2006. An estimated total catch of 54.9 t were landed during August (2.9 t), September (41.6 t) and October (10.3 t) 2006 respectively. Arangankuppam and Kasimedu alone landed 47.3 t (86.2%) where different types of gears were operated. Whereas, at Chinnandikuppan

Table 1. Name of different indigenous gears, which landed the juveniles of *S.orientalis* along with other catches

Name of Gears	Type of Gears	Main fishery
Kavalavalai	Gillnet	Lesser sardines, Thryssa, Mackerel, Caranx,
Pannuvalai	"	Goat fish, Caranx, Cypselurus sp.,
Thattakavalavalai		Cynoglassus, Oil sardines, Mullet and
Kolavalai		Juveniles of <i>S. orientalis</i>
Nakkuvalai		
Edavalai	Bag net	

Table 2. Catch (Kg) and catch rate (Kg) of juveniles of *S. orientalis* landed by various gears at different fishing villages

Centre	Gear '06	Aug. '06	Sep. '06	Oct. (Kg)	Total (Kg)	CPUE	%
Arankankuppam	Edavalai	-	1245	-	1245	8.7	0.6
	Kolavalai	720	16022	-	16742	28.4	59.3
	Pannuvalai	-	2300	260	2560	7.3	35.1
	Thattakavalavalai	-	-	7180	7180	55.2	71.5
Kasimedu	Pannuvalai	160	8011	822	8993	6.0	45.3
	Kavalavalai	-	835	-	835	0.7	1.0
	Kolavalai	-	2820	-	2820	10.7	21.0
	Edavalai	-	478	-	478	3.5	0.2
	Thattakavalavalai	88	4294	2083	6465	9.6	41.5
Chinnaneelankarai	Pannuvalai	240	3500	-	3740	9.7	28.3
Chinnandikuppam	Pannuvalai	1716	2145	-	3861	7.8	55.7
	Total	2924	41650	10345	54919		

Table 3. Month-wise estimated size distribution of *S.orientalis* landed by Pannuvalai at Kasimedu

Size range (mm)	Aug. 06	Sep. 06	Oct. 06	Total (%)
110-119	1111	-	-	1111
120-129	3333	-	-	3333
130-139	889	-	-	889
140-149	222	-	-	222
150-159	-	25842	-	25842
160-169	-	34456	648	35104
170-179	-	43070	1620	44690
180-189	-	21535	3888	25423
190-199	-	4307	1944	6251
200-209	-	-	972	972
210-219	-	-	648	648
Sample nos.	50	30	30	110

and Chinnaneelankarai only pannuvalai were operated and an estimated 7.6 t of juveniles of *S. orientalis* were landed. A few juveniles of *E.affinis* were also observed to occur along with *S. orientalis*.

The size of juveniles of *S. orientalis* landed by pannuvalai at Kasimedu varied between 110 and 219

mm as shown in Table 3 and the weight ranged from 15 to 110g. The size observed at 110-149 mm in August progressed to 150-199 mm in September and then further progressed to 160-219 mm in October. The stomachs of most of the fishes were observed to be empty.



Juveniles of *S.orientalis*

The *S. orientalis* catches were sold at the rate of Rs 30-40 per kg in the landing center and when the catch was heavy, the fishermen transported the catch

to Kasimedu landing center to realize better return. Most of the catches were consumed locally.