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Preliminary Report on Experimental Fishing with Purse Seine and Lampara Nets for Small Pelagic Fish Varieties around Sri Lanka

BY

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INTRODUCTION

The five year (1972-1976) fishery development plan envisages a target of 25,000 tons of Skipjack tuna (*Katsuwonus pelamis*, Linnaeus) and also a 20% increase in the production of small pelagic fish species from the seas around Sri Lanka. It is expected that the increase in the skipjack production can be achieved by the improvement and expansion of the pole and line method of fishing which is presently in a primitive state in Sri Lanka. The main limiting factor in the development of this method is the availability and the fishery for live bait. The live bait that is popular with the pole and line fishermen of Sri Lanka is the red bait (*Dipterygonotus leucogrammicus*, Bleeker) caught with a special kind of lift net or a scoop net. This particular species alone seems to survive the crude system of bait handling, and the availability of red bait has influenced the production of skipjack tuna by the pole and line method. In countries like Japan, Spain, France, Australia and United States where pole and line method is well established, anchovies are popularly used as live bait and are caught by purse seining, and in some cases by the lampara net too.

The commercial exploitation of small pelagic varieties in Sri Lanka is mainly by beach seines and drift nets operated from non-mechanised as well as mechanised traditional crafts. Because of the limitations of these methods, production of small pelagic varieties has not increased significantly over the years.

In view of the above situation, the Government of Sri Lanka initiated a project for conducting a experimental skipjack fishery using modern pole and line method and a experimental fishery for live bait and small pelagic fish using purse seine and lampara nets, with the assistance of UNDP and FAO. Accordingly, the survey for small pelagic fish varieties using the purse seine and lampara nets commenced in April, 1972 and will continue until the end of 1975. This paper is a preliminary report on the results of the survey carried out between Septmber, 1972 to October, 1973.

MATERIALS AND METHODS OF ANALYSIS

Two 11-ton class steel vessels belonging to the Ceylon Fisheries Corporation were repaired, modified, and fitted with Simrad echosounders (basdic) and winches for Lampara and Purse seine nets under the direction of the FAO Masterfisherman Mr. G. Pajot, who also modified the fishing gear to suit local conditions and conducted the survey.

Investigations commenced in September, 1972, with one vessel (11 C 24) on the West coast and the second vessel (11 L 17) joined in January, 1973. With the onset of South-West monsoon, operations were shifted on to the East coast from May-October, 1973.

Day time surveys were carried out to cover the continental shelf areas. Depending upon the fish finder recordings and visual observations, light stations were selected. Four to five surface lamps with an average total light intensity of 1500 watts were used to attract fish, which were then caught by purse seine or lampara net. Lights were usually switched on for about 4-8

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hours before setting the net, which took about 30-60 minutes. Prior to setting the net, a small light boat (18-19 feet dinghy) with a 500 watt lamp was used to keep the attracted fish in position until they were encircled by the net.

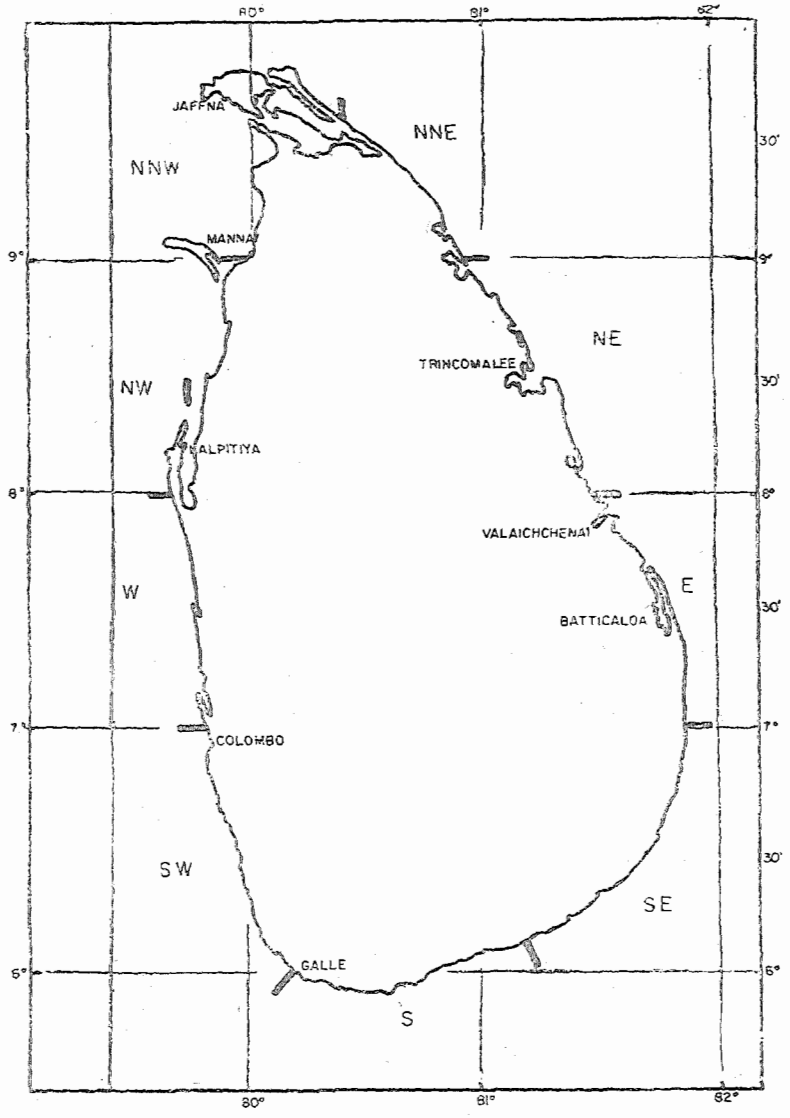

Fig. 1. Map showing the demarcation of areas for live bait and small pelagic fish survey.

The purse seine and the lampara net used during fishing operations were made of nylon and had the following dimensions:—

	Purse seine	*Lampara*
Hung length along—		
Cork line	234.5 M	.. 223.6 M
Lead line	234.5 M	.. 186 M
Stretched depth	30 M	.. 31 M
Effective depth	18 M	.. 10 M
Mesh size— ..		
In body	16mm.SM	.. Wings—6″ SM 1st Rocker—4″ SM 2nd Rocker—2″ SM
In bunt or bag	11mm.SM	.. 10mm.SM

Actual fishing operations were carried out at light stations only when the echosounders indicated a good attraction of fish towards the lights. Only a single fishing operation (using either the purse seine or lampara net) was usually tried out at each light station. Operations were repeated when the echogram continued to indicate concentrations of fish even after a good catch during the first operation.

Fishing activities were generally concentrated in waters 7-15 fathom depth range. Attepmts were also made to use the purse seine during day time in shallow water areas. This was not successful as the number of surface schools sighted were insufficient to carry out enough trials.

Accurate information on the catches made during each operation was reported by the Masterfisherman. Depending on the total catch at each fishing operation, the random sample taken for purposes of analysis varied from 1-10% of the total catch by weight. The different varieties of fish in each sample were identified and the percentage species composition of each sample determined. The length measurements (body length) of all major varietits were taken with a wooden measuring board. Stomach contents and gonads were also examined in the major varieties present in the catches.

For the purpose of analysis the coastal area surrounding Sri Lanka was conveniently divided into nine areas (S, SW, W, NW, NNW, NNE, NE, E, SE); the boundaries between the areas having been fixed taking into consideration the latitude and the longitudinal lines crossing the island (Fig. 1). These areas were further sub-divided into 10′ × 10′ units. Adequate sampling could not be achieved for all these smaller units or grids evenly and hence the occurrance, seasonal variation and distribution of small pelagic fish have been considered only on the basis of the larger areas.

TABLE I

Light Stations, Fishing effort and catches obtained by the Purse Seine and Lampara nets in different Areas

Area	Light Stations	No. of Sets		Catch in KG.		Total Catch KG.	AV. Catch/Set	
		P. Seine	Lampara	P. Seine	Lampara		P. Seine	Lampara
S	17	2	9	650	180	838	325	20.8
SW	27	3	22	630	251	881	210	11.4
W	45	13	23	4405	3543	7948	338.8	154
NW	9	1	2	300	63	363	300	31.5
NNW	19	1	3	750	125	875	750	41.6
NNE	23	4	9	7700	389	8089	1925	43.2
NE	55	22	16	20700	1368	22068	940.9	85.5
E	20	3	7	420	213	633	140	30.4

Table I shows that the number of light stations carried out in the areas ' NW ', ' NNW ' and ' S ' are small compared to the rest of the areas. It is also evident that fishing operations have not been tried at every light station. Fishing operations were attempted only in about 65% of the total number of light stations. Light stations at which the light attraction resulted in a fishing operation have been considered as successful light stations. On an area basis the percentage of successful light stations were as follows:—S-52%; SW-92%; W-80%; NW-33%; NNW-21%; NNE-56%; NE-69% and E-50%. The percentages of successful light stations in the areas ' NW ' and ' NNW ' are also small when compared with those for the other areas. This may perhaps be due to a poor availability of pelagic fish to this gear in these areas.

A single fishing operation with either purse seine or lampara net has been considered as the unit of effort. Considering the average catch per unit of effort for both types of gear in different areas, it was observed that high values were obtained for areas ' W ' and ' S ', on the Western side and for areas ' NNE ' and ' NE ' on the Eastern side of the Island. In the area ' SW ' the average catch per unit of effort was not high, even though 92% of the light stations in that region were successful. High values of average catch per unit of effort for the two types of gear together with high percentage values for successful light stations may indicate regions of high distributon of small pelagic fish.

COMPARISON OF THE TWO FISHING GEARS

The purse seine and the lampara net were tried out 49 and 91 times respectively during the period under consideration. The average catch per unit of effort obtained for all areas is 67.4 kg. in the case of the lampara net and 725.6 kg. in the case of the purse seine—i.e. about 10 times the average catch obtained for the lampara net

At the beginning of the project lampara net was more frequently used than the purse seine and with the realisation of the above evidence of relative efficiency emphasis was shifted on to the purse seine operations. However a lampara net is cheaper to build and can be operated by a smaller crew than the purse seine. It can be set and retrieved quickly and its operation in shallow and rocky areas is also easy. But there are certain disadvantages which might have been responsible for the poor catches obtained by it.

(*a*) It does not fish very deep.

(*b*) The hauling operation pulls the lead line upwards, further distorting the net and making it more shallow.

On the other hand the purse seine has proved to be a very effective gear of this type of fishing with light attraction. The lampara net tends to scoop less of the attracted fish than the purse seine.

The percentage composition of major verieties caught by lampara and purse seine nets in the area 'W' is given in Table II.

TABLE II

Percentage Composition of Major Varieties of Pelagic Fish caught by the Purse Seine and Lampara Net in the 'West' Area

Fishing Gear	*Percentage Catch (KG)*																			
	Sardine		*Herring*		*Red Bait*		*Anchovy*		*Silver Belly*		*Carangids*		*Squids*		*Barracuda*		*I. Mackerel*	
Purse Seine	30.1	..	24.1	..	36.2	..	0.6	..	2.4	..	—	..	0.6	..	0.5	..	3.0	
Lampara	19.4	..	—	..	74.2	..	0.9	..	1.2	..	—	..	1.2	..	1.4	..	0.6	

Percentage catches of sardines, herrings and red bait show marked differences for the two types of gear, while there are no such marked differences with regard to the other varieties. This is probably due partly to the high percentage value obtained for red bait with the lampara net, as a result of a catch of 2000 kg. of red bait caught in this area in February 1973. It is premature to state whether there is a difference in the selectivity of the two gears. The length frequency measurements taken for the major varieties do not show any significant differences for the two methods. But, considering the effectiveness of the purse seine in sampling the various pelagic species and the relatve efficiency of the purse seine compared to that of the lampara net. the catches made by the purse seine has been largely made use in considering density of distribution, seasonal variation etc.

SPECIES COMPOSITION

About 60 species of pelagic fish have been identified from the samples that were analysed. Half of this could be termed as major varieties, appearing consistently in the catches irrespective of their contribution to the total catch by weight. Most of the other varieties did not make any significant contribution to the total catch and the frequency of their occurrence in the catches was also very low. The major varieties of fish identified from the catches are listed below:

Family and Scientific Name	*Common Names English (E) Sinhalese (S)*	*Size range of fish in Samples (body length)*
Clupeidae—		
Sardinella jussieu ..	.. E. Tembang S. Salaya	.. 7.0—15.7 cm.
Sardinella fimbriata ..	.. E. Fringe-scale sardine S. Gal Salaya	.. 10.3—16.4 cm.
Sardinella longiceps ..	.. E. Oil sardine S. Pesalaya	10.6—16.8 cm.
Harengula ovalis ..	.. E. Spotted herring S. Korrumburua	.. 7.5—16.0 cm.
Amblygaster sirm ..	.. E. Herring S. Hurulla	.. 8.3—20.8 cm.
Amblygaster clupeoides ..	.. E. Herring S. Gal Hurulla	.. —
Engraulidae—		
Anchoviella indica ..	.. E. Indian anchovy S. Halmassa	.. 5.0—14.6 cm. ..
Anchoviella commersonii	.. E. Commerson's anchovy S. Halmassa	6.2—12.0 cm.
Carangidae—		
Decapterus russelli ..	.. E. Russel's scad S. Linna	.. 6.4—16.1 cm.
Selaroides leptolepis ..	.. E. Slender scaled scad S. Sura paraw	.. 5.7—17.2 cm.
Selar mate ..	.. E. One finlet scad	.. 10.0—21.4 cm.
Selar kalla ..	.. E. Golden scad	.. 10.4—16.9 cm.
Selar cruminopthalmus ..	.. E. Round scad S. Bolla	.. 7.6—20.9 cm.
Megalspis cordyla ..	.. E. Torpedeo travelly S. Giralava	.. —
Chorenemus tala	.. E. Queen fish S. Kattawa	.. 20.7—32.0 cm. ..

Family and Scientific Name	*Common Names English (E) Sinhalese (S)*	*Size range of fish in Samples (body length)*
Gnathodon speciousus ..	.. E. Golden travelly ..	—
	S. Kabara parawa	
Leiognathidae—		
Gazza minuta ..	.. E. Toothed pony fish ..	6.7—12.8 cm.
	S. Mas karalla	
Secutor ruconius ..	.. E. Deep bodied pony fish..	6.1—9.5 cm
	S. Vali panna	
Secutor insidiator ..	.. E. Slender barred pony fish	5.5—8.1 cm.
Leiognathus lineolatus ..	.. E. Lined pony fish ..	5.4—9.6 cm.
	.. S. Karalla	
Leiognathus dussumieri	.. E. Dussumier's pony fish ..	6.6—10.9 cm.
	S. Karalla	
Leiognathus splendens ..	.. E. Splendid pony fish ..	5.5—10.2 cm.
	S. Katu Karalla	
Scombridae—		
Restrelliger kanagurta	.. E. Indian mackeral ..	11.2—26.4 cm.
	S. Kumbalawa	
Sphyreanidae—		
Spyhyraena jello ..	.. E. Sea pike ..	11.2—21.2 cm.
	S. Seelava	
Hemirhamphidae—		
Hyporhampus gaimerdi	.. E. Half beak ..	11.5—14.7 cm.
	S. Moralla	
Hyporhampus xanthopterus	.. E. Red tipped half beak ..	12. —16.7 cm.
	S. Moralla	
Atherinidae—		
Allanetta forskali	.. E. Hardy head ..	6.3—11.8 cm.
	S. Korala babba	
Emmelichthyidae—		
Dipteyogonotus leucogrammicus	.. E. Red bait ..	4.5—10.7 cm.
	S. Hingura	
Loligo		
	E. Squid ..	5.7—22.5 cm.
	S. Della	(Mantle length)

The minor varieties included some other species of sardine, silver belly; anchovy and also species of silver biddies, half beaks, cardinal fish etc.,

TABLE III

Percentage Composition of the Major Varieties of Pelagic Fish caught by the Purse Seine in the different Areas

	West Coast (Sept. 1972–April 1973)					*East Coast* (May 1973—October 1973)		
	S	*SW*	*W*	*NW*	*NNW*	*NNE*	*NE*	*E*
Sardine	38.9	67.8	30.1	58.1	37.1	82.1	31.3	41.2
Herring	24.4	7.1	24.1	12.3	—	0.7	18.6	12.6
Red Bait	16.1	3.6	36.2	—	—	0.3	3.3	19.4
Anchovy	2.9	8.1	0.6	—	—	0.6	0.8	—
Silver Belly	—	2.3	2.4	3.0	27.0	0.4	—	1.5
Carangids	—	—	—	—	—	1.6	26.6	14.2
I. Mackerel	10.9	2.8	3.0	—	—	0.6	4.4	1.5
Squids	4.7	5.1	0.6	5.5	—	0.3	3.8	—
Barracuda	—	—	0.5	4.4	9.1	8.6	0.4	2.3

PERCENTAGE SPECIES COMPOSITION BY AREA

In the area ' S ' the major part of the catch was made up of sardines (38.9%), herrings (24.4%) and red bait (16.1%). Red bait entered the catches from Jan. to March 1973, while herrings predominated in December-February period. Catches of sardines showed a gradual increase from Feb. to April. Poor catches made with the lampara net during the first half of the survey in this area (Sept.-Dec. 1972) may have been partly due to a general scarcity of pelagic fish stocks in this area during this period. It may also be partly due to the poor performance of the lampara net. The purse seine was used during the latter half (Jan.-April 1973) and realised good catches.

In the area ' SW ' most of the fishing operations were carried out during the period January April. Sardines made the largest contribution to the catches (67.7%) followed by herrings (8.0%) and anchovies (8.4%). Good catches of sardines and herrings were obtained in February-March. Red bait entered the catches in January-March, but in very small quantities.

Sardines (30.2%), herrings (24%) and red bait (36.1%) were the dominant varieties in the catches taken off the area ' W '. Only the lampara net had been tried out in this area during the first half of the survey period, and sardines were dominant during this period. Red bait was present in the catches from February to April, 1973. The high overall percentage value obtained for red bait in this area can be attributed to the large catch of 2000 kg. taken by the lampara net, as mentioned earlier. Catches of sardines improved from February onwards while big catches of herrings were also obtained during February to April.

The number of light stations carried out in ' NW ' area was small and the catches made during few fishing operations in this region show sardines (58.1%) and herrings (12.3%) to be dominant varieties.

The number of fishing operations carried out in the area ' NNW ' was also very small compared to the number of light stations. This has been due to poor attraction and may be indicative of a poor availability of pelagic fish in this region. As is known for this area, silver bellies were dominant in the catches (27%), along with sardines (37.1%). Large carangids and barracuda were also present in appreciable quantities in catches made by the purse seine.

In the area ' NNE ' sardines made up as much as 80% of the catches for both types of gear Small varieties of carangidae appeared in the catches from July onwards. Herring and red bait were also present in small quantities.

Sardines (31.3%), herrings (18.6%) and small varieties of carangidae (26.6%) were dominant in the catches made from the area ' NE ' Sardines and herrrings were predominant in May-July. The small carangids made their appearance in late July and their percentage value in the catches improved up to November, while the catches of sardines and herrings showed a gradual decrease during this period.

In the area ' E ' the pattern was more or less similar to that obtained in the ' NE ' ; sardines (41.2%), herrings (12.6%), Red bait (19.4%) and carangids (14.2%) dominating the catches. During the first half of the survey (May-July) in this area only the purse seine had been operated while during the second half (Aug.-Nov.) only the lampara net was used.

The percentage composition of the catches were more or less similar in the area ' S ' and ' W ' as far as the major varieties sardines, herrings and red bait are concerned. Sardines were obtained right along the West coast--from ' S ' to ' NNW ', but the concentrations of herrings and red bait showed a decrease in the Northern coast areas—' NE ' and ' NNE '. Red bait shows a fairly high concentration in areas ' S ' and ' W '. In the area ' W ' large concentration of red bait were observed off Chilaw, Pamunugama and Colombo. Some grounds in the 'SW'—notably off Beruwala and Hikkaduwa—also yielded fairly good catches of red bait.

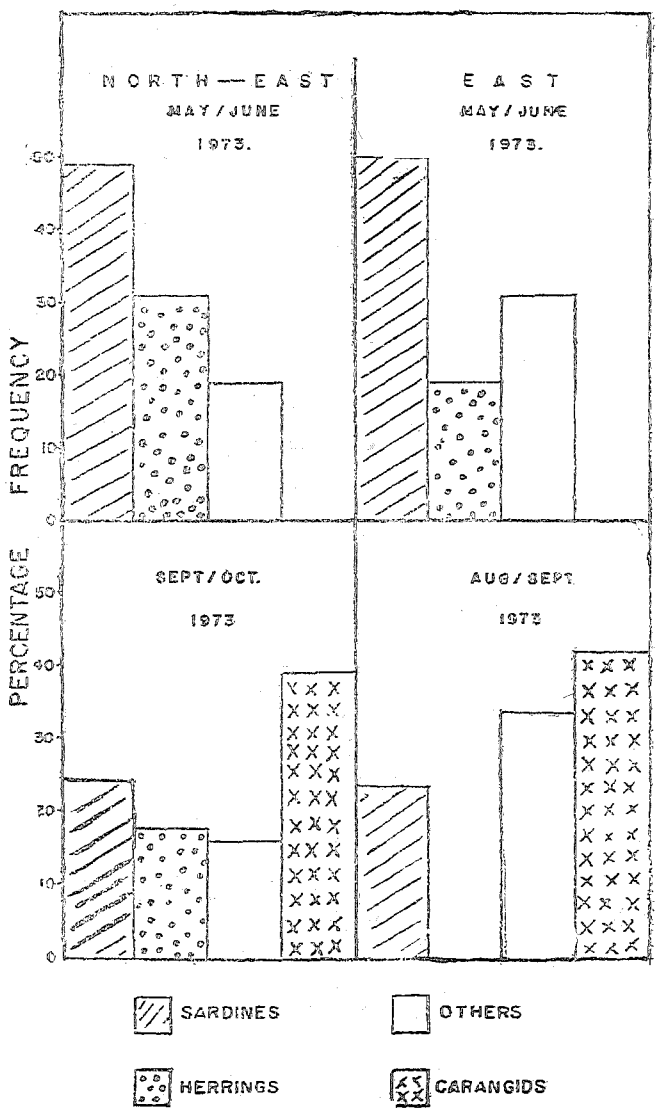

Fig. 2. Seasonal variation of the percentage catch composition in NE and E in May–October, 1973.

On the East coast the percentage composition of catches for the three areas 'NNE', 'NE' ' E ' show more or less a similar pattern which is different to that of any area on the West coast. A noticeable difference between the West and East coast areas is the presence of some smaller varieties of carangidae in the catches made from the East coast areas. These appeared in the catches in late July and by October had displaced the sardines and herrings as the dominant variety in the catches. They also showed a seasonal variation pattern with herrings and sardines, which was more marked in the areas ' NE ' and ' E '. The variation in the percentage composition of the major varieties for the areas ' NE ' and ' E ' during May-Octo. 1973 period is shown in fig. 2. It is seen that during May-June period sardines and herrings together made up nearly 70% of the total catch in these regions. The percentage of carangids in the catches gradually increased from August while those of sardines and herrings showed a decrease. Thus in September-October, period nearly 40% of the catches in 'NE' and 'E' were made up of carangids. During September-October the purse seine and the lampara net were tried out 8 and 4 times respectively in and around the Trincomalee harbour area. The carangids alone made up 5835 kgs. out of the total catch of 14245 kgs. obtained during these fishing operations.

Herrings and red bait were not very abundant in ' NNE ' compared to the other areas, while in ' E ' the percentage catch of red bait rose from 16.0% in May-June to 24.8% in August-September period.

SIZE COMPOSITIONS OF MAJOR SPECIES

From Table III it is also seen that sardiness, together with herrings make up more than half the catch in each area. Sardines seem to be available all round the island making up 30-89% of the total catch in the different areas. Of the various species of sardines caught *Sardinella jussieu* was the most dominant species and was available right round the island. The length frequency distributions of *S. jussieu* in ' NW ' ; ' NNW ', ' W ' and ' SW ' for the period September-April 1973 and in ' NE ', ' E ' and ' NNE ' for the period May-October, 1973, are given in fig. 3. The size range was from 7-16 cm. with a unimodal distribution and the mode was at 11-11.9 cm. size group for the West coast areas. In the area ' NNE ' the mode was at 10-10.9 cm. group while for 'NE' and 'E', the mode was observed at 12-12.9 cm. group. *Harengula ovalis* was another species of sardine that was caught right round the island in small quantities with a size range of 6-16 cm. Small quanties of *Sardinella longiceps* (size range 13-17) cm.) were obtained in area ' NNW '. *Sardinella fimbriata* (size range 11-14 cm.) and *Sardinella melanura* were also identified in the catches made off West coast regions.

Of the two species of herrings caught the bigger *Amblygaster clupeoides* made only a very small contribution to the catches. Large catches of the smaller variety *Amblygaster sirm* was obtained in the fishing grounds off Negombo. Chilaw in area ' W ' on the west coast and off the east coast areas. Adequate sampling of herrings could be done only on the east coast areas. The length frequency distribution of *Amblygaster sirm* sampled in ' NNE ', ' NE ' and ' E ' is shown in fig. 3. The distribution was unimodal and the mode for areas 'NNE' and 'NE' is at 12-12.9 cm. group while for the area ' E ' it was at 13-13.9 cm. group.

Length frequency distribution of red bait for some of the areas is shown in fig. 4. In the area 'W' the size range was 6.1-10.0 cm. with the mode at 7.6-8.0 cm. size group. In 'SW' the mode has shifted to 8.6-9.0 cm. size group. A bimodal distribution was seen in the length frequency measurements obtained for east coast areas. In ' E ' there was a size range of 4.6-10.0 cm. with the first mode at 5.1-5.5 cm. group and the more prominent second mode at 8.1-8.5 cm. group. The data from ' NE ' were separated into periods May-June ; July-August and October-November as shown in fig. 4. There is a shift in the dominant modal group from May-June to October-November. During the period May-June the mode was observer at 6.1-6.5 cm. size group, in July-August the mode has shifted to 8.6-9.0 cm. size group. In October-November period there was a noticeable increase in the proportion of size groups beyond 8.6-9.0 cm.

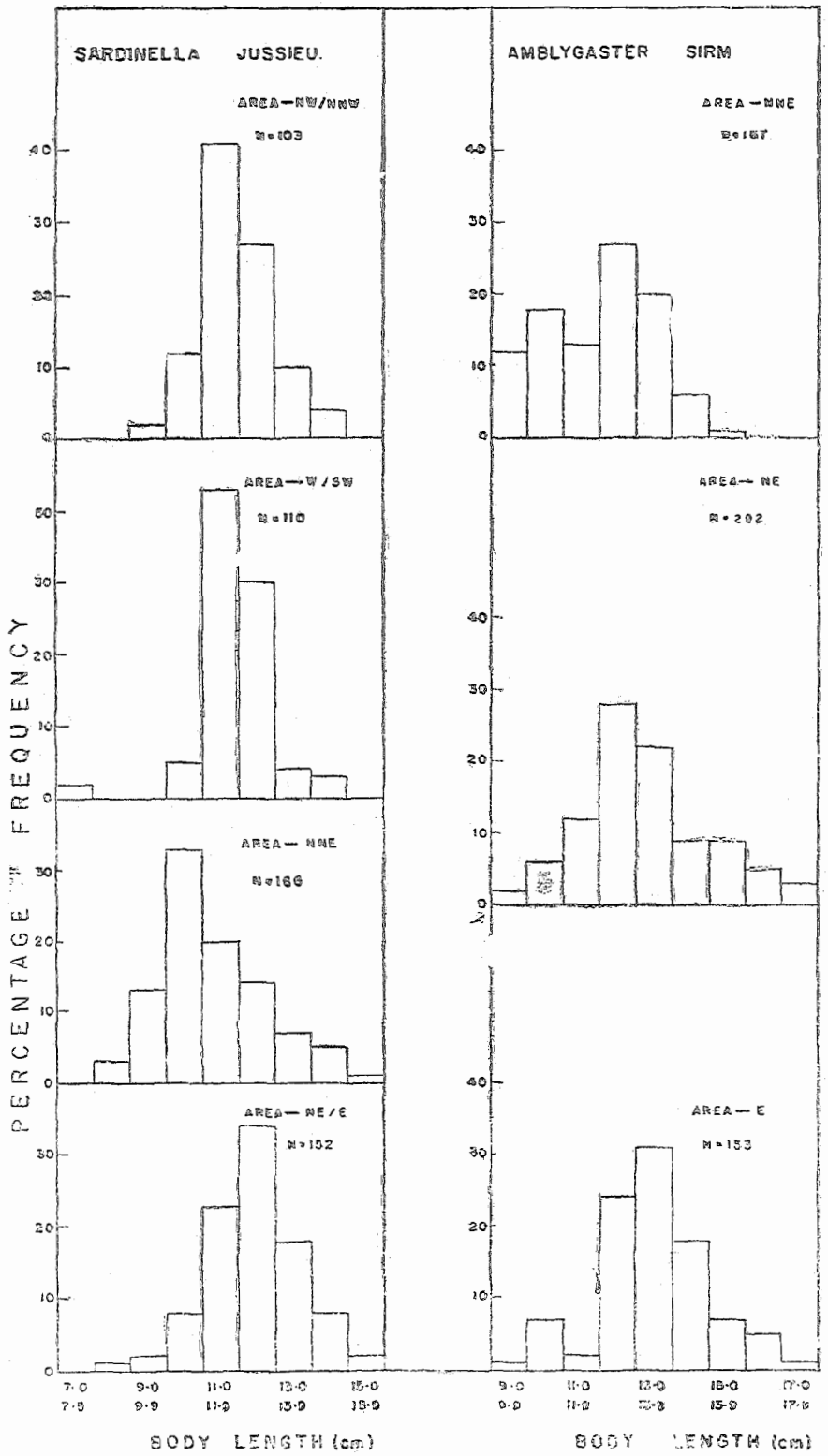

Fig. 3. Length frequency distribution for *S. jussieu* and *A. Sirm* caught in differente areas, in 1972/73.

As mentioned earlier large amounts of carangids were taken on the east coast areas. These carangids were mostly the smaller varieties with *D. russelli*, *S. leptolepis* and *S. mate* being predominant. The length frequency distribution of some of these major species of carangids is shown

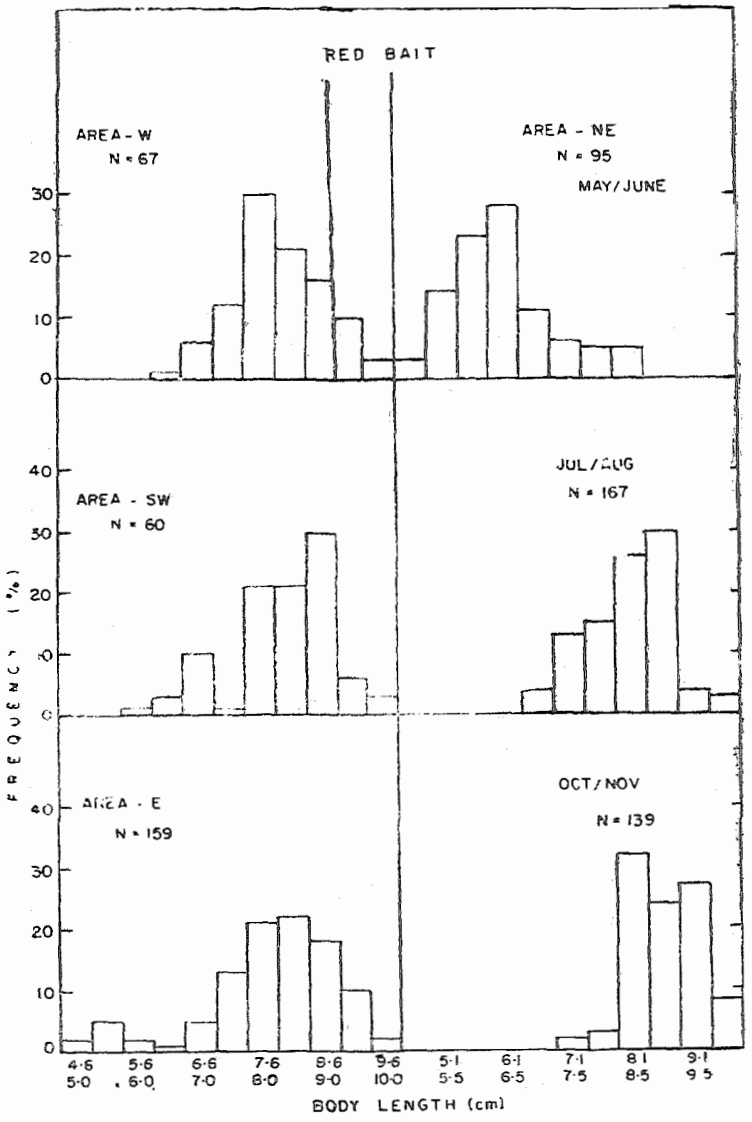

Fig. 4. Length frequency distribution for Red bait ccught in different areas in 1972–73.

in fig. 5. *S. leptolepis and* D. *russelli* both show unimodal distribution with the mode at 11-11.9 cm. group. *S. mate* seems to have a bimodal distribution with peaks at 13-14.9 cm. and 17-18.9 cm. groups *S. cruminopthalmus* showed a size range of 9-23 cm. with a peak at 13-14.9 c.m. c.m.

DENSITY OF DISTRIBUTION

The density of distribution of small pelagic fish in the different areas can best be measured by the catch per unit effort applied through the purse seine. However, the number of operations carried out by the purse seine was rather small in many areas (Table I.) A plot of catch per unit effort for the purse seine against catch per unit effort for the lampara net in

different areas showed a liner correlation indicating that the pattern of relative variation in the densities of distribution obtained for the lampara net would resemble that for the purse seine. Hence, wherever necessary, the catch per unit effort for the lampara net has also been made use of in observing relative densities of distribution.

On the west coast, fishing operations by both purse seine and the lampara net were small in the areas ' NW ' and ' NNW ' (Table 1). Hence no attempt was made to determine relative densities of distribution of small pelagic fish in these areas. As indicated by the catch per unit effort applied through the purse seine, the rest of the areas on the west coast—' S ', ' SW ' and ' W ' does not seem to bring out noticeable differences in their densities of distribution. The catch per unit effort obtained through the lampara not for these areas also showed the same distribution pattern. However in the area ' W ' catch per unit effort for lampara is unusually high due to a catch of over 2004 kg. of red bait obtained by this gear.

On the east coast, the areas ' NNE ' and ' NE ' show high densities of distribution as shown by the catch per unit effort for the purse seine with 1925 kg. for ' NNE ' and 940.9 kg. for ' NE ' The high value obtained for 'NNE' could be largely attributed to a single catch of about 7000 kg. (90% sardines) obtained by the purse seine. The catch per unit effort obtained for ' E ' is the lowest when compared to the other areas on the east coast. This is also supported by the catch per unit effort values obtained for the lampara net in these areas.

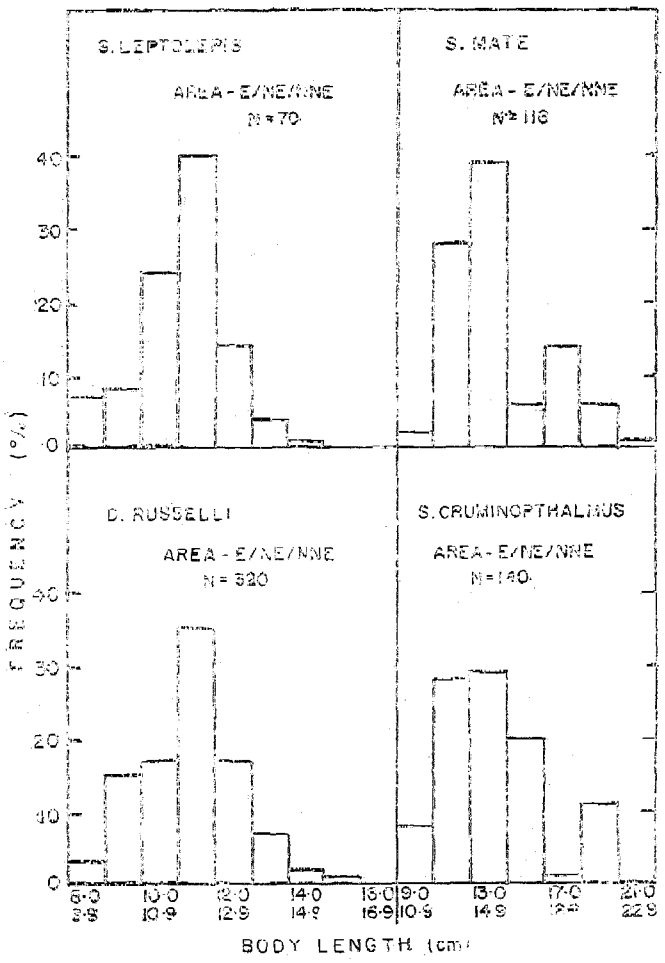

Fig. 5. Length frequendy distribution for some small carangid species caught on the East coast areas in 1973.

CONCLUSION

Investigations carried out during the first year shows that the popular skipjack live bait namely the red bait is distributed along the west and east coasts, mainly in the areas 'S', 'SW', 'W' 'NE' and 'E'. Areas where pole and line method is used for skipjack tuna fishery (Sivasubramaniam 1972) coincide with those areas except in the 'W' where the effort is directed mainly through trolling and drift netting. On the west coast the relative density of distribution of red bait was highest in the fishing grounds off Colombo and Chilaw, areas where no significant pole and line fishery is conducted for skipjack tuna at present. It is also felt that red bait concentrations round the island may not be sufficient for expanding the pole and line fishery. Under the present survey project, investigations are being carried out to locate other suitable varieties of small pelagic fish that could be used as skipjack live bait.

Beach seining, which contributed as much as 38% to the total fish production in Sri Lanka in 1954 has been steadily losing its importance as a major source of fish, in the face of a rising total production from other sources. The catch per man hour of labour is very low partly because the beach seine is not a very efficient fishing device and partly too, it seems, because the shoals of fish entering the narrow ribbon of seinable inshore waters are few and small (Canagaratnam and Medcof, 1952). Beach seine fishermen must always depend on the vagaries of fish movements. Because of these limitations, large increases in production could not be expected from beach seine fishery. This could be achieved by a mobile capture device operating without having to depend on the distance from shore or depth of water. The purse seine with its light attraction is a gear of such type. It does not wait for concentrated shoals to come close to the shore, but actively concentrates small scattered fish shoals close to the boat and the net. Trials carried out so far indicate that the purse seine has the potential to make a significant contribution to the production of small pelagic fish in Sri Lanka.

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