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MARINE FISH CALENDAR

IV. COCHIN*

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Introduction

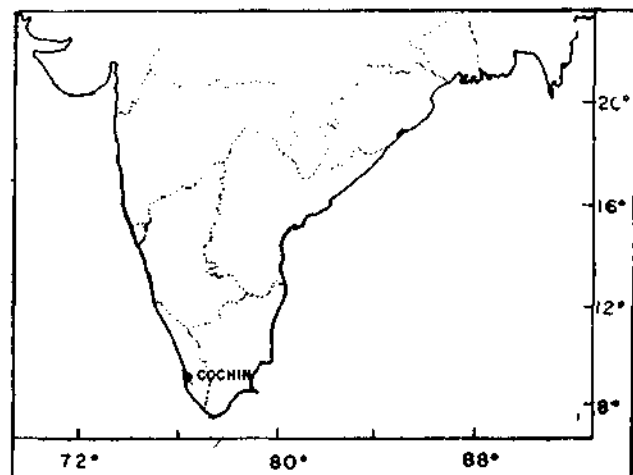
Cochin Fisheries Harbour, one of the major fisheries harbours of Kerala, accounted for an average annual landing of 25,700 t (1981-'85) of fish caught from the coastal waters by all gears operated by both non-mechanised and mechanised vessels which formed about 8% of the total fish landings of Kerala. The pelagic fish resources formed almost 64% and demersal fish 36% of the total yield. Prior to the commissioning of this fishery port in 1978, the landings were made mostly at Kannamali, Manassery, Soudhi beach and Fort Cochin. The principal gears then employed were shrimp trawls, boat seines ('thangu vala'), gill nets and hooks and lines. In the late seventies, the purse seines were introduced to the fishing fleet of Cochin Fisheries Harbour, which altogether changed the fishing strategy of this region. During the period 1981-'85 purse seines accounted for almost 52% of the total fish catch of this centre, followed by trawlers (38%) and the rest by drift gill nets, boat seines, hooks and lines *etc.*

Among the pelagic fishes landed, oil sardine ranked first, forming about 44% of the total fish catch of Cochin. The next important component in the pelagic realm was mackerel (11%) followed by tunas (3%), carangids (2.5%) *etc.* The demersal group was dominated by threadfin breams (12%) followed by cat fishes (3%), lizard fishes, flat fishes and sharks and rays.

Fishing activities are restricted upto a maximum depth of 80 m, between Alleppey in the south and Chawghat in the north. The bottom in the region is mostly of grey and black mud deposit upto about 40 m and beyond this depth upto 160 m, the bottom is predominantly sandy with lesser percentage of mud and shell fragments. Trawlers generally operate in

depth range of 25-50 m and drift gill nets in 25-80 m; whereas purse seine operates beyond 30 m, eventhough very often this gear encircles shoals of fishes in shallow depths (10 - 15 m) also depending on the seasonal availability of shoals, disregarding the restrictions.

Gearwise, purse seines made the bulk of the landings, and the most dominant fishes were oil sardine (74%), mackerel (15%), other sardines (3%), carangids (3%), cat fishes (1.2%), pomfrets (1.1%) *etc.* The peak fishing season for purse seine was postmonsoon (42%) followed by summer (32%), premonsoon (14%) and monsoon (12%). The important fish groups in the trawlers were threadfin breams (33.7%), cat fishes (5.2%), sciaenids (4%), soles (4.6%), anchovies (3%), clupeids (2.3%), lizard fishes (2.9%) *etc.* In addition to different fish groups, penaeid prawns and crabs contributed a substantial percentage (12.5%) in the trawl catches. The fishing season for the gear commences in monsoon period and almost 40% of the landings was during this period. The premonsoon period contributed 30%, summer 20% and the postmonsoon 10%. In the drift gill net, tunas were the most abun-



*Consolidated by N. Gopinatha Menon and K. Balachandran, CMFRI, Cochin.

dant fish (31%) followed by elasmobranchs (18%), cat fishes (15%), seer fishes (16%), carangids (7%), pomfrets (5%) etc. Monsoon months contributed the maximum landings (41%) followed by premonsoon (29%), postmonsoon (18%) and summer (1.2%).

The annual average catch of pelagic groups at Cochin showed that oil sardine ranked first (11,315 t), with 98% caught by purse seine, the peak months of landings being November and December. Mackerel was the next abundant fish forming 2,743 t, with 98% contributed by purse seine and the peak months of landings from September to November. Tunas and carangids formed about 770 t and 644 t respectively with the major landings during April to December. Seer fishes contributed 427 t and major fishing season was from August to December which was followed by whitebait (354 t) in October and November and pomfrets (271 t) in August to November.

Among the demersal resources, threadfin breams formed the bulk of the landings with an annual average catch of 3,118 t. The peak months of their landings were June to October. Cat fishes were the next dominant resource with the annual average catch at 696 t and the maximum harvest from June to February. Lizard fishes and flat fishes formed 430 and 381 t respectively with peak landings from June to September. Sharks and rays together contributed 378 t in almost equal proportions, the major season being April to December for sharks and November to March for rays. Perches were predominantly caught by hooks and line and were highly seasonal in their occurrence (January and February) with an annual average catch of 28 t.

CARANGIDAE

Popular English Name	:	Trevallies/Scads
Vernacular Name (Malayalam)	:	'Para'/'Vatta'
Annual average catch	:	245.3 t
Percentage in total catch	:	1.0
Fishing methods and their contribution	:	Purse seine : 66.5%
		Drift net : 32.4%
		Trawl net : 11.1%

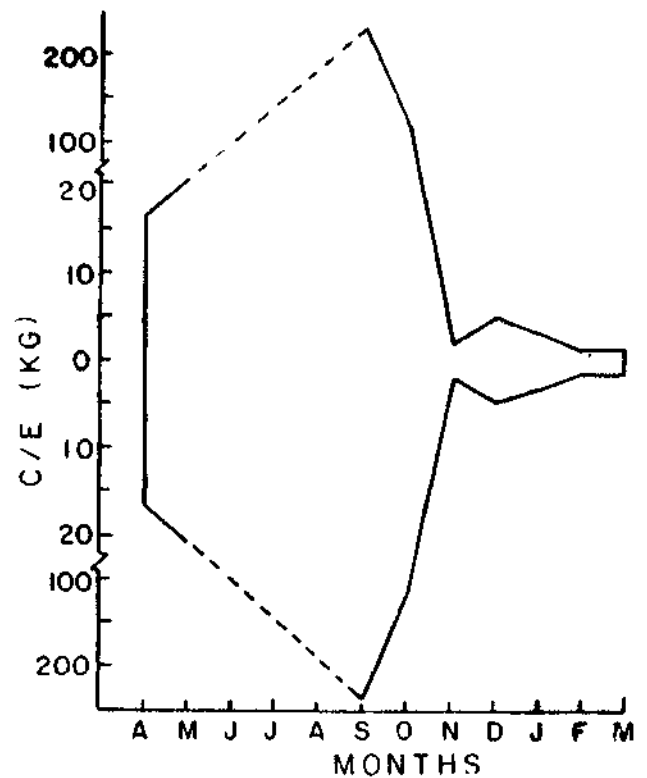


Fig. 1. Seasonal abundance of carangids. (Purse seine catch).

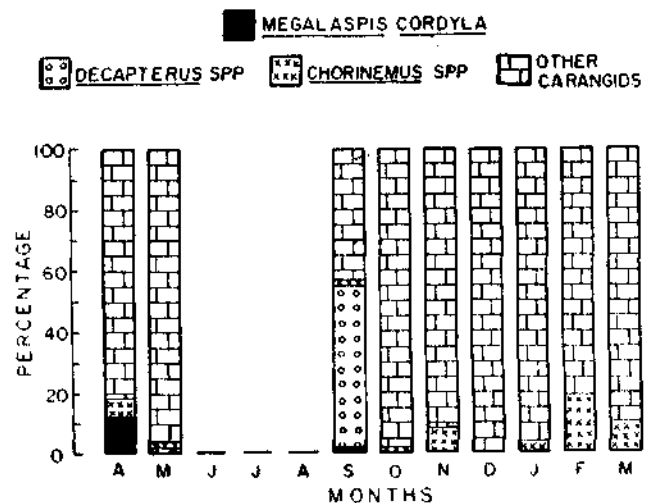


Fig. 2. Monthwise species composition of carangids in the purse seine catch.

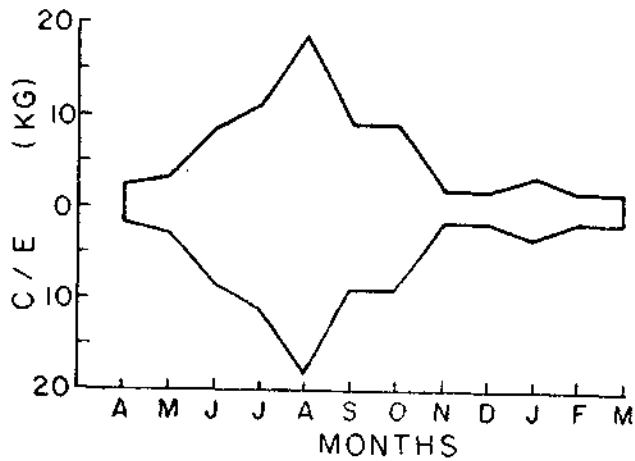


Fig. 3. Seasonal abundance of carangids (Drift net).

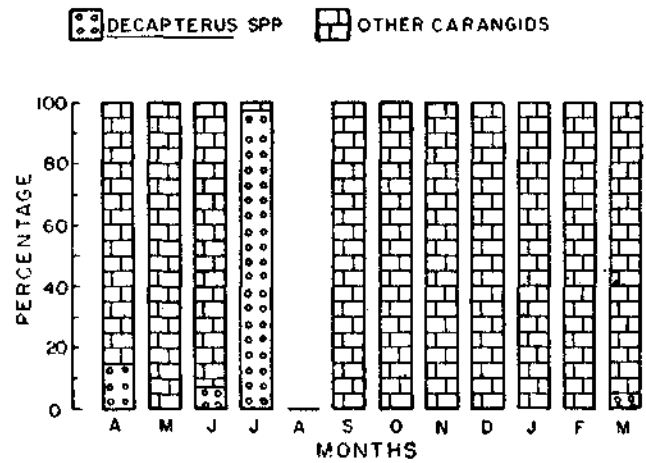


Fig. 6. Monthwise species composition of carangids in the trawl catch.

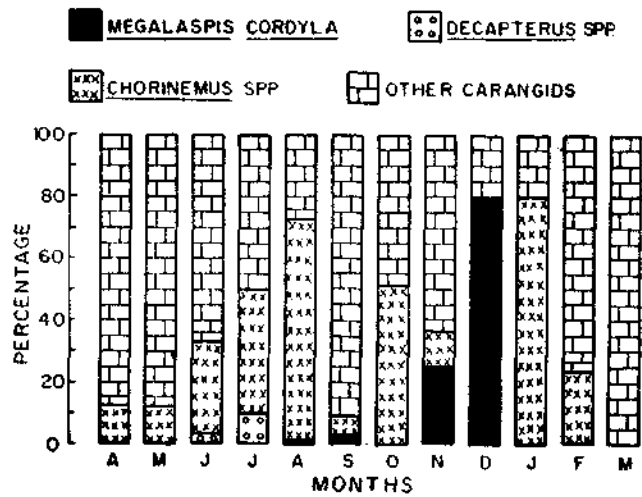


Fig. 4. Monthwise species composition of carangids in the drift net catch.

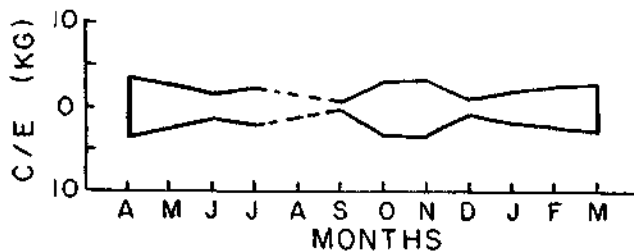


Fig. 5. Seasonal abundance of carangids (Trawl net).

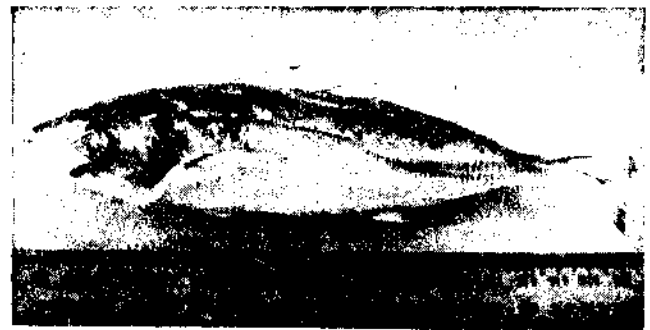


Fig. 7. *Decapterus russelli*.

Scientific Name : *Decapterus russelli*
 Vernacular Name : 'Thiriyan'
 Gear : Purse seine/Trawl net
 Percentage contribution by each gear : ---
 Peak period of occurrence : Jan.-Feb. and Jul.-Sep.
 Depth of occurrence : 20-50 m
 Length range in commercial fishery : 70-220 mm
 Size at first maturity : 130 mm
 Spawning season : May-July

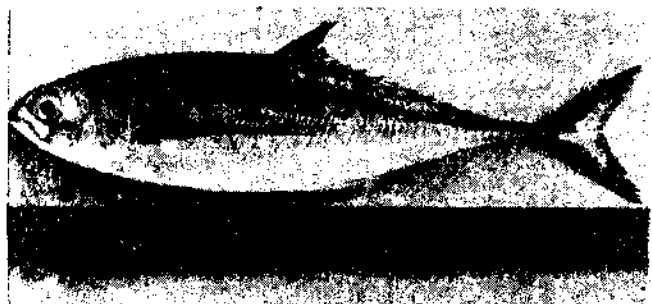


Fig. 8. *Megalaspis cordyla*.

Scientific Name : *Megalaspis cordyla*
 Vernacular Name : 'Vangada'
 Gear : Trawl net/Purse seine
 Percentage contribution by each gear : —
 Peak period of occurrence : Nov. - Dec.
 Depth of occurrence : 20-80 m
 Length range in commercial fishery : 150-390 mm
 Size at first maturity : 270 mm
 Spawning season : May - July

CLUPEIDAE

Popular English Name : Oil sardine
 Vernacular Name : 'Mathi'/'Chala' (Malayalam)
 Annual average catch : 11,314.8 t
 Percentage in total catch : 45.72
 Fishing methods and their contribution :
 Purse seine : 97.8%
 Trawl net : 2.2%

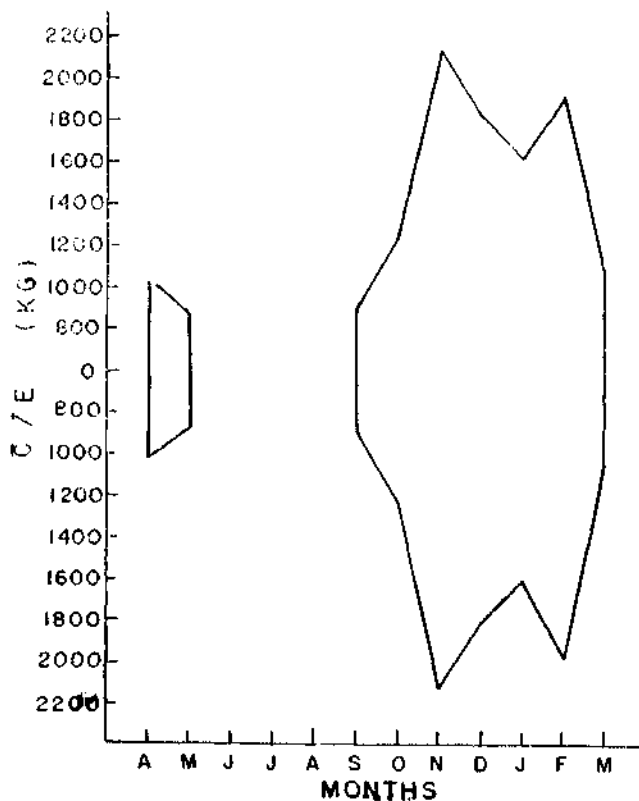


Fig. 9. Seasonal abundance of clupeids (Purse seine catch).

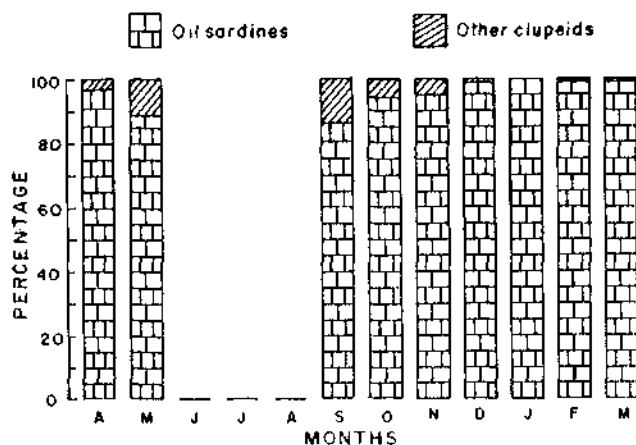


Fig. 10. Monthwise species composition of clupeids in the purse seine catch.

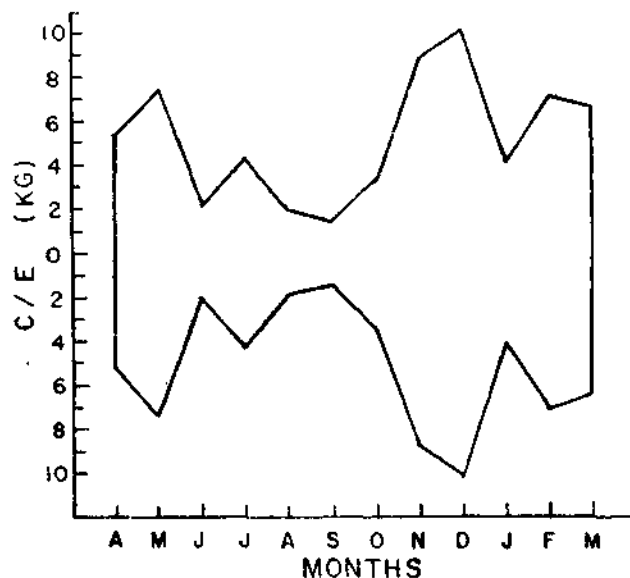


Fig. 11. Seasonal abundance of clupeids (Trawl net).

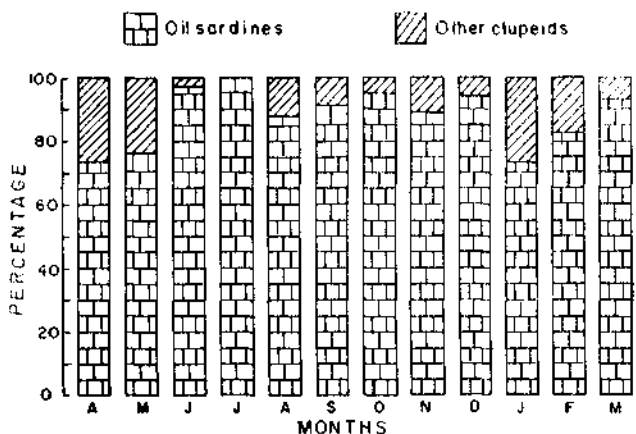


Fig. 12. Monthwise species composition of clupeids in trawl catch.

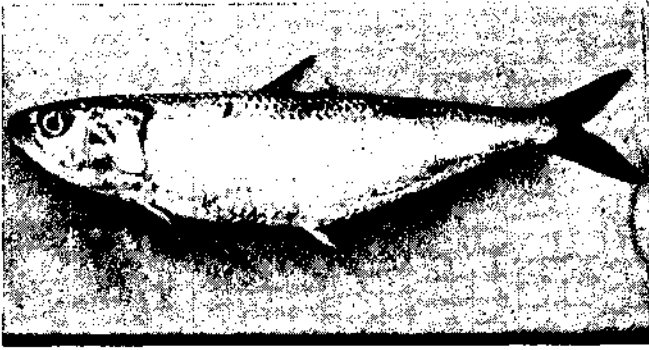


Fig. 13. *Sardinella longiceps*.

Scientific Name : *Sardinella longiceps*
 Vernacular Name : 'Nalla mathi'/'Neichala'
 Gear : Purse seine/Trawl net
 Percentage contribution
 by each gear : Purse seine : 97.8
 Trawl net : 2.2
 Peak period of occurrence : Nov. - Dec.
 Depth of occurrence : Upto 50 m
 Length range in
 commercial fishery : 145 - 185 mm
 Size at first maturity : 150 mm
 Spawning season : June - July

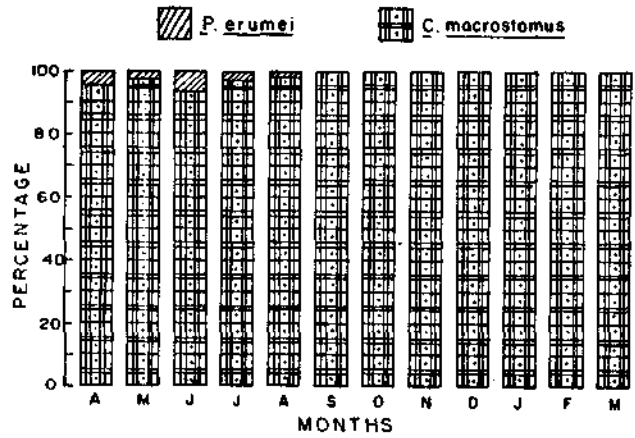


Fig. 15. Monthwise species composition of Cynoglossidae in trawl catch.

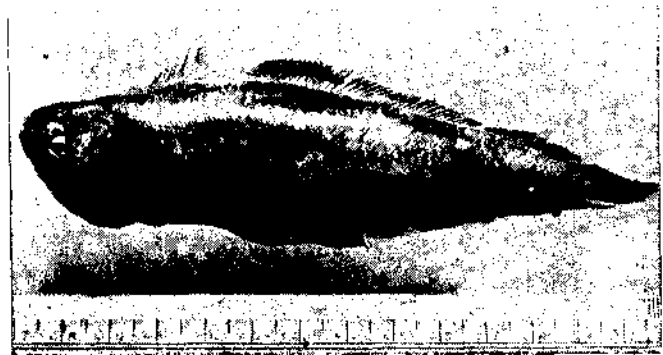


Fig. 16. *Cynoglossus macrostomus*.

Scientific Name : *Cynoglossus macrostomus*
 Vernacular Name : 'Manthal'/'Nangu'
 Gear : Trawl net
 Percentage contribution
 by the gear : 100
 Peak period of occurrence : Jun. - Aug.
 Depth of occurrence : Upto 40 m
 Length range in
 commercial fishery : 87 - 150 mm
 Size at first maturity : —
 Spawning season : —

CYNOGLOSSIDAE

Popular English Name : Soles
 Vernacular Name : 'Manthal'/'Nangu'
 (Malayalam)
 Annual average catch : 375 t
 Percentage in total catch : 1.6
 Fishing methods and their
 contribution : Trawl net : 100%

ELASMOBRANCHS

Popular English Name : Sharks
 Vernacular Name : 'Sravu'
 (Malayalam)
 Annual average catch : 163 t
 Percentage in total catch : 0.86
 Fishing methods and
 their contribution : Drift net : 76%
 Trawl net : 24%

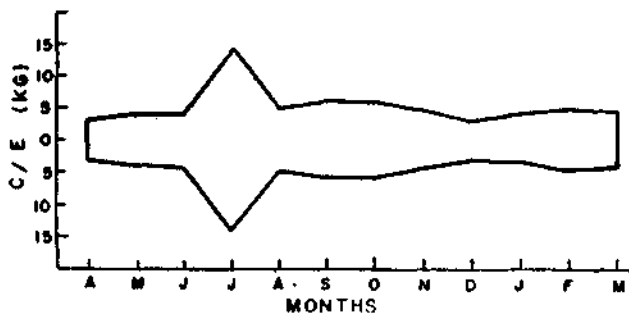


Fig. 14. Seasonal abundance of Cynoglossidae (Trawl net).

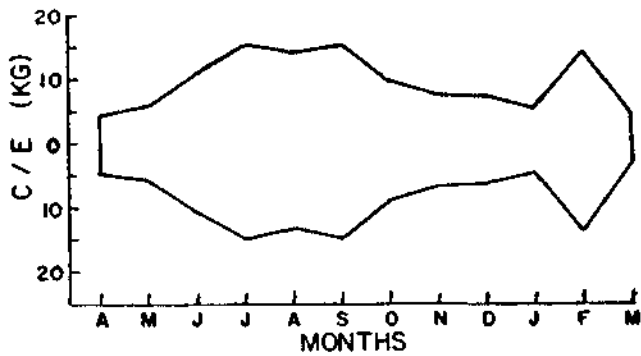


Fig. 17. Seasonal abundance of elasmobranchs (Drift net).

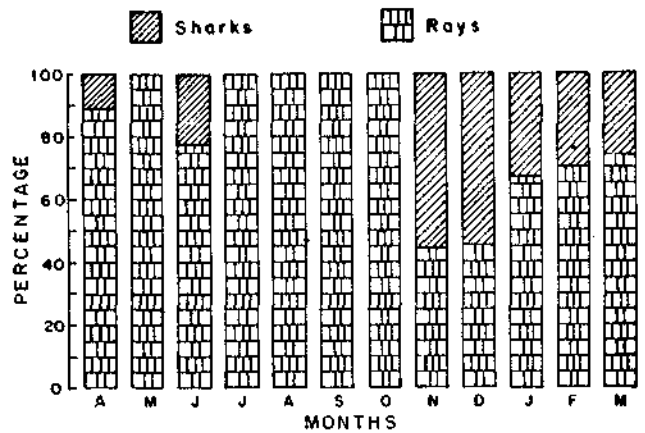


Fig. 20. Monthwise composition of shark and rays in trawl net.

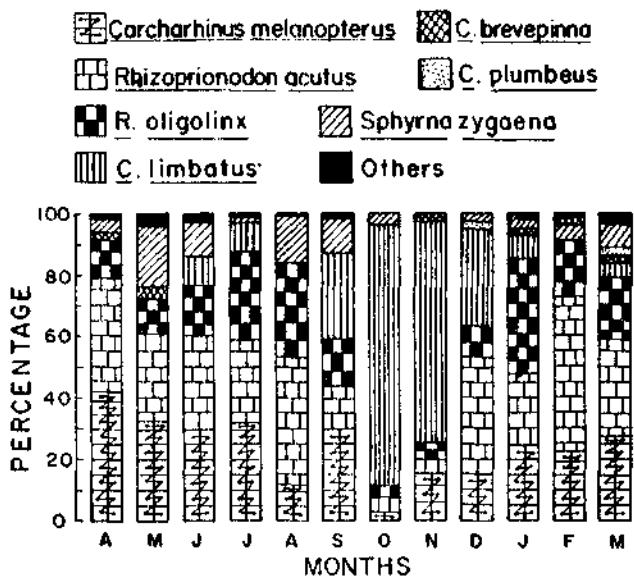


Fig. 18. Monthwise species composition of sharks in drift net catch.

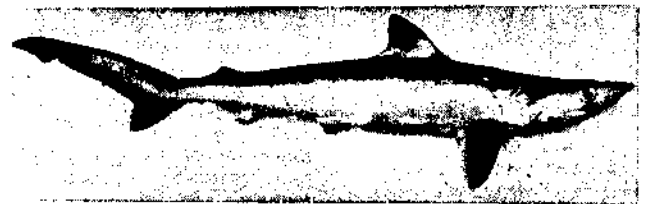


Fig. 21. *Rhizoprionodon acutus*.

Scientific Name	: <i>Rhizoprionodon acutus</i>
Vernacular Name	: 'Sravu'
Gear	: Drift net
Percentage contribution by the gear	: 100
Peak period of occurrence	: Feb. - May
Depth of occurrence	: 50 m
Length range in commercial fishery	: 485 - 780 mm
Size at first maturity	: --
Spawning season	: --

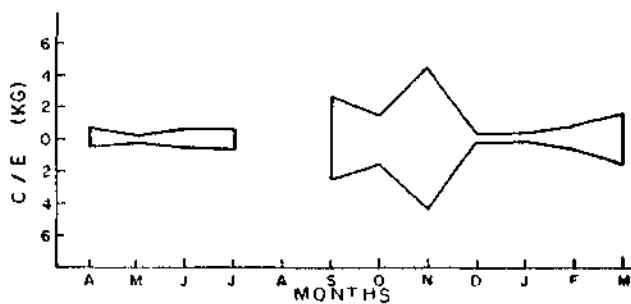


Fig. 19. Seasonal abundance of elasmobranchs (Trawl net).



Fig. 22. *Rhizoprionodon oligolinx*

Scientific Name : *Rhizoprionodon oligolinx*
 Vernacular Name : 'Sravu'
 Gear : Drift net
 Percentage contribution
 by the gear : 100
 Peak period of occurrence : Jan. and Jul. - Aug.
 Depth of occurrence : 50 m
 Length range in
 commercial fishery : 370 - 800 mm
 Size at first maturity : ---
 Spawning season : ---



Fig. 23. *Carcharhinus limbatus*.

Scientific Name : *Carcharhinus limbatus*
 Vernacular Name : 'Sravu'
 Gear : Drift net
 Percentage contribution
 by the gear : 100
 Peak period of occurrence : Oct. - Nov.
 Depth of occurrence : 50 m
 Length range in
 commercial fishery : 620 - 1,080 mm
 Size at first maturity : ---
 Spawning season : ---



Fig. 24. *Carcharhinus melanopterus*.

Scientific Name : *Carcharhinus melanopterus*
 Vernacular Name : 'Sravu'
 Gear : Drift net
 Percentage contribution
 by the gear : 100

Peak period of occurrence : Apr. - Jul.
 Depth of occurrence : 50 m
 Length range in
 commercial fishery : 530 - 2,120 mm
 Size at first maturity : ---
 Spawning season : ---



Fig. 25. *Scoliodon laticaudus*

Scientific Name : *Scoliodon laticaudus*
 Vernacular Name : 'Sravu'
 Gear : Trawl net
 Percentage contribution
 by the gear : 100
 Peak period of occurrence : Nov. - Dec.
 Depth of occurrence : 40 m
 Length range in
 commercial fishery : 290 - 565 mm
 Size at first maturity : ---
 Spawning season : ---

SPHYRNIDAE
HAMMER HEAD SHARK

Popular English Name : Hammer-head shark
 Vernacular Name : 'Komban Sravu'
 (Malayalam)
 Annual average catch : 12.3 t
 Percentage in total catch : 0.05
 Fishing methods and
 their contribution : Drift net : 100%



Fig. 26. *Sphyrna zygaena*

Scientific Name : *Sphyrna zygaena*
 Vernacular Name : 'Komban Sravu'
 Gear : Drift net
 Percentage contribution by the gear : 100
 Peak period of occurrence : Jun. - Sep.
 Depth of occurrence : 50 m
 Length range in commercial fishery : 700 - 1,640 mm
 Size at first maturity : —
 Spawning season : —

ENGRAULIDAE

Popular English Name : White baits/Anchovies
 Vernacular Name : 'Kozhuva'/'Netholi' (Malayalam)
 Annual average catch : 353.8 t
 Percentage in total catch : 1.4
 Fishing methods and their contribution :
 Purse seine : 46.9%
 Trawl net : 53.1%

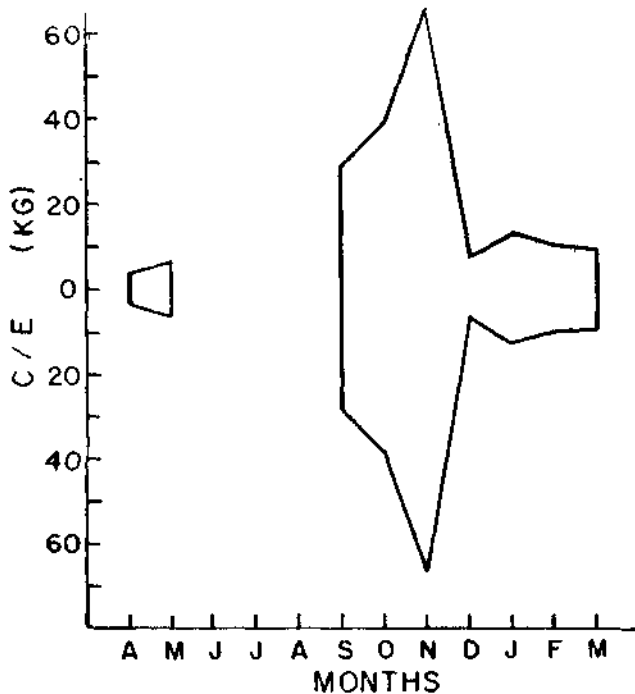


Fig. 27. Seasonal abundance of engraulids (Purse seine).

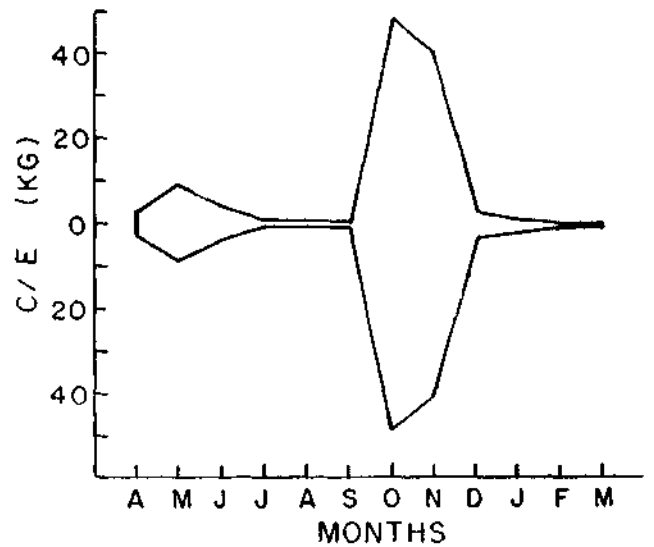


Fig. 28. Seasonal abundance of engraulids (Trawl net).

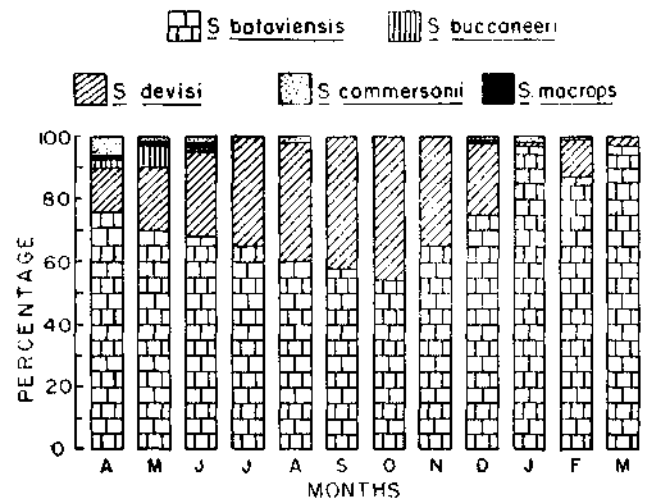


Fig. 29. Monthwise species composition of engraulids in trawl net.



Fig. 30. *Stolephorus bataviensis*.

Scientific Name : *Stolephorus bataviensis*
 Vernacular Name : 'Kozhuva'
 Gear : Purse seine/Trawl net
 Percentage contribution
 by each gear : Purse seine : 27.6
 Trawl net : 72.4
 Peak period of occurrence : Jan. – Feb.
 Depth of occurrence : Upto 50 m
 Length range in
 commercial fishery : 45 – 105 mm
 Size at first maturity : 67 mm (male)
 77 mm (female)
 Spawning season : Dec. – Mar.

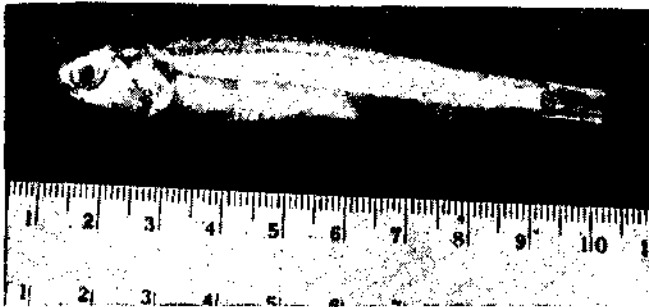


Fig. 31. *Stolephorus devisi*.

Scientific Name : *Stolephorus devisi*
 Vernacular Name : 'Kozhuva'/'Netholi'
 Gear : Purse seine/Trawl net
 Percentage contribution
 by each gear : Purse seine : 75
 Trawl net : 25
 Peak period of occurrence : Oct. – Nov.
 Depth of occurrence : Upto 50 m
 Length range in
 commercial fishery : 40 – 100 mm
 Size at first maturity : 57 mm (male)
 61 mm (female)
 Spawning season : Dec. – Mar.



Fig. 32. *Stolephorus buccaneri*

Scientific Name : *Stolephorus buccaneri*
 Vernacular Name : 'Kozhuva'

Gear : Purse seine/Trawl net
 Percentage contribution
 by each gear : Purse seine : 99.1
 Trawl net : 0.9
 Peak period of occurrence : Apr. – Jun.
 Depth of occurrence : Upto 50 m
 Length range in
 commercial fishery : 50 – 90 mm
 Size at first maturity : —
 Spawning season : Dec. – Mar.



Fig. 33. *Stolephorus commersonii*.

Scientific Name : *Stolephorus commersonii*
 Vernacular Name : 'Kozhuva'
 Gear : Purse seine/Trawl net
 Percentage contribution
 by each gear : Purse seine : 98.7
 Trawl net : 1.3
 Peak period of occurrence : Apr. – May
 Depth of occurrence : upto 50 m
 Length range in
 commercial fishery : 75 – 125 mm
 Size at first maturity : 110 mm
 Spawning season : Dec. – Mar.

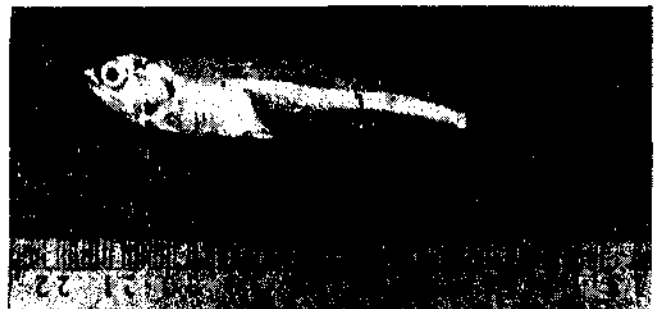


Fig. 34. *Stolephorus macrops*.

Scientific Name : *Stolephorus macrops*
 Vernacular Name : 'Kozhuva'
 Gear : Purse seine/Trawl net
 Percentage contribution
 by each gear : Purse seine : 99.7
 Trawl net : 0.3

Peak period of occurrence : Apr. - Jun.
 Depth of occurrence : Upto 50 m
 Length range in commercial fishery : 45-85 mm
 Size at first maturity : 67 mm
 Spawning season : Dec. - Mar.

NEMIPTERIDAE

Popular English Name : Threadfin bream
 Vernacular Name : 'Kilimeen' /
 (Malayalam) 'Puthiapla kora'
 Annual average catch : 3,118 t
 Percentage in total catch : 37.6
 Fishing methods and their contribution : Trawl net : 100%



Fig. 37. *Nemipterus japonicus*.

Scientific Name : *Nemipterus japonicus*
 Vernacular Name : 'Kilimeen' /
 'Puthiapla kora'
 Gear : Trawl net
 Percentage contribution by the gear : 100
 Peak period of occurrence : Jul. - Sept.
 Depth of occurrence : upto 75 m
 Length range in commercial fishery : 70-300 mm
 Size at first maturity : 180 mm
 Spawning season : Jul. - Nov.

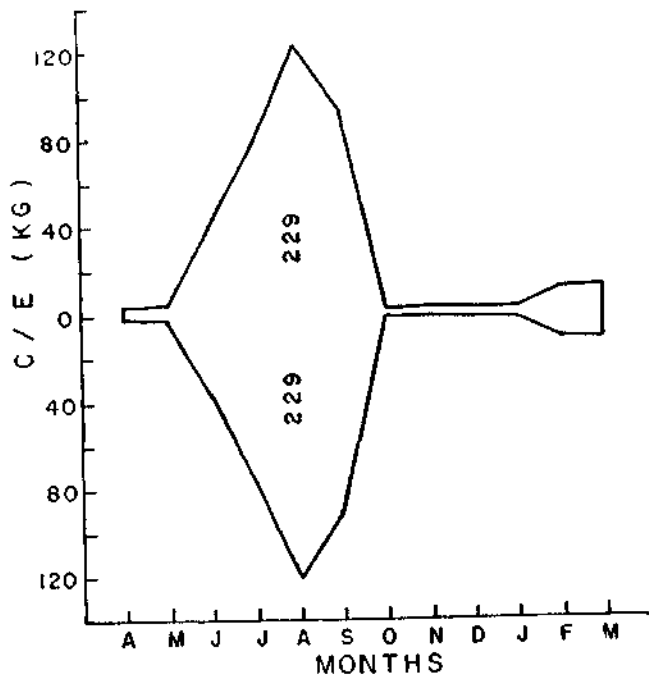


Fig. 35. Seasonal abundance of nemipterids (Trawl net).

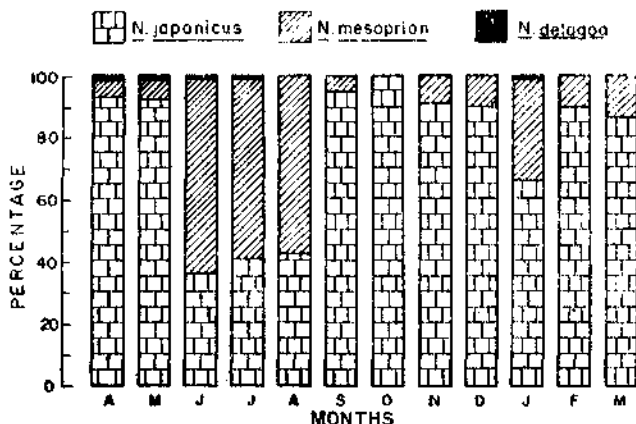


Fig. 36. Monthwise species composition of nemipterids (Trawl net).



Fig. 38. *Nemipterus mesoprion*

Scientific Name : *Nemipterus mesoprion*
 Vernacular Name : 'Kilimeen' /
 'Puthiapla kora'
 Gear : Trawl net
 Percentage contribution by the gear : 100
 Peak period of occurrence : Jun. - Oct.
 Depth of occurrence : Upto 75 m
 Length range in commercial fishery : 70-260 mm
 Size at first maturity : 155 mm
 Spawning season : Jul. - Nov.



Fig. 39. *Nemipterus delagoae*.

Scientific Name : *Nemipterus delagoae*
 Vernacular Name : 'Kilimeen'
 'Puthiapla kora'
 Gear : Trawl net
 Percentage contribution
 by the gear : 100
 Peak period of occurrence : --
 Depth of occurrence : Upto 15 m
 Length range in
 commercial fishery : --
 Size at first maturity : --
 Spawning season : --

PLATYCEPHALIDAE

Popular English Name : Flat head
 Vernacular Name : 'Prathal'/'Eriyan'
 (Malayalam)
 Annual average catch : 43.8 t
 Percentage in total catch : 0.18
 Fishing methods and their
 contribution : Trawl net : 100%

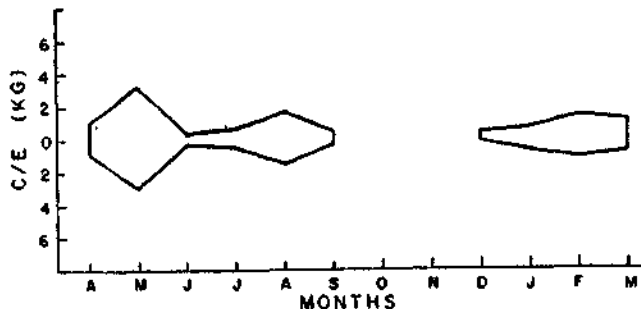


Fig. 40. Seasonal abundance of platycephalids (Trawl net).

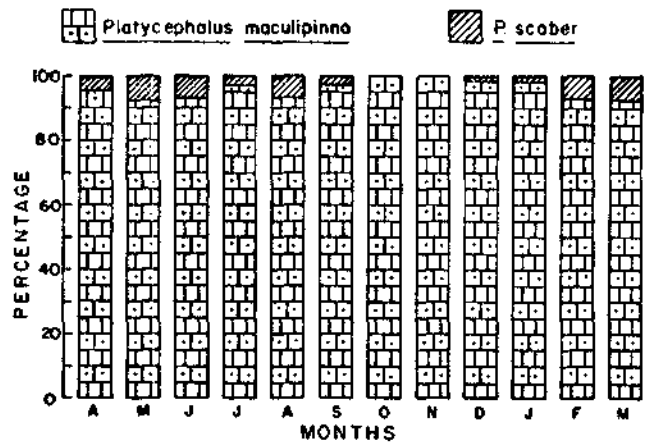


Fig. 41. Monthwise species composition of platycephalids in trawl net.



Fig. 42. *Platycephalus maculipinna*.

Scientific Name : *Platycephalus maculipinna*
 Vernacular Name : 'Prathal'/'Eriyan'
 Gear : Trawl net
 Percentage contribution
 by the gear : 100
 Peak period of occurrence : Feb. - Mar. and
 Jul. - Aug.
 Depth of occurrence : Upto 40 m
 Length range in
 commercial fishery : 160 - 290 mm
 Size at first maturity : --
 Spawning season : --

SCIAENIDAE

Popular English Name : Croaker/Jew fish
 Vernacular Name : 'Kora'/'Kuttan'/'
 (Malayalam) 'Pallikora'
 Annual average catch : 505 t
 Percentage in total catch : 2.1
 Fishing methods and
 their contribution : Trawl net : 100%

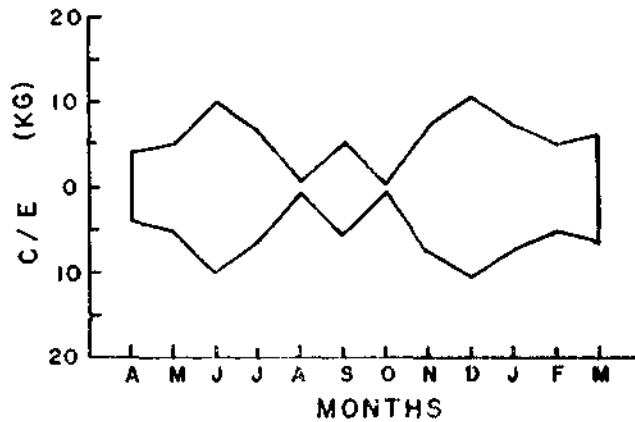


Fig. 43. Seasonal abundance of sciaenids (Trawl net).

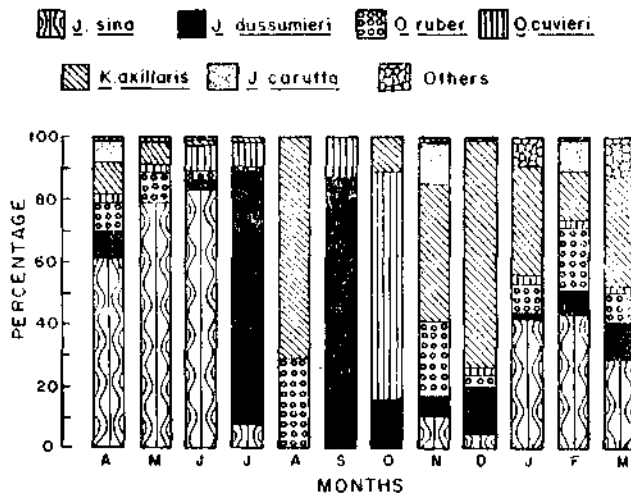


Fig. 44. Monthwise species composition of sciaenids in trawl net



Fig. 45. *Johnieops sina*.

Scientific Name : *Johnieops sina*
 Vernacular Name : 'Kora'/'Kuttan'
 Gear : Trawl net
 Percentage contribution by the gear : 100

Peak period of occurrence : Jan. - May
 Depth of occurrence : Upto 40 m
 Length range in commercial fishery : 90 - 170 mm
 Size at first maturity : 125 mm
 Spawning season : Feb. - May



Fig. 46. *Johnieops dussumieri*.

Scientific Name : *Johnieops dussumieri*
 Vernacular Name : 'Kuttan'/'Kora'
 Gear : Trawl net
 Percentage contribution by the gear : 100
 Peak period of occurrence : Jun. and Sept. - Dec.
 Depth of occurrence : Upto 40 m
 Length range in commercial fishery : 85 - 170 mm
 Size at first maturity : 125 mm
 Spawning season : Nov. - Feb.



Fig. 47. *Kathala axillaris*.

Scientific Name : *Kathala axillaris*
 Vernacular Name : 'Kora'/'Kuttan'
 Gear : Trawl net
 Percentage contribution by the gear : 100
 Peak period of occurrence : Nov. - Feb.
 Depth of occurrence : Upto 40 m

Length range in commercial fishery : 95–175 mm
 Size at first maturity : —
 Spawning season : Jun. – Sep.

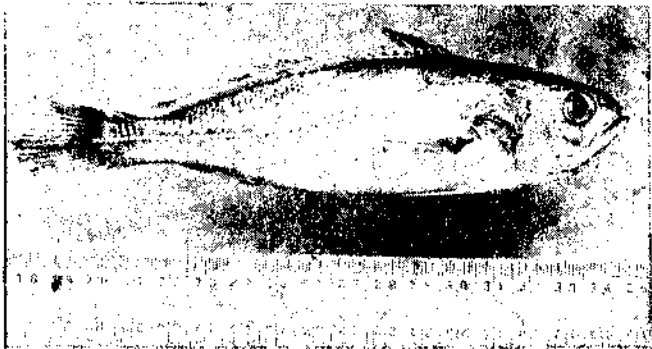


Fig. 48. *Otolithes ruber*.

Scientific Name : *Otolithes ruber*
 Vernacular Name : 'Pallikkora'/Kuttan'
 Gear : Trawl net
 Percentage contribution by the gear : 100
 Peak period of occurrence : Jan. – Apr.
 Depth of occurrence : Upto 40 m
 Length range in commercial fishery : 85–250 mm
 Size at first maturity : —
 Spawning season : Jun. – Oct.

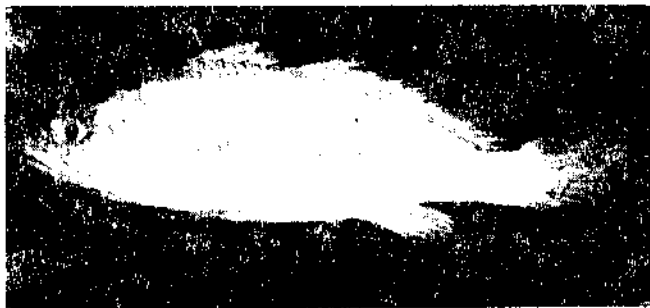


Fig. 49. *Otolithes cuvieri*.

Scientific Name : *Otolithes cuvieri*
 Vernacular Name : 'Pallikkora'/Kuttan'
 Gear : Trawl net
 Percentage contribution by the gear : 100
 Peak period of occurrence : Apr. – Mar.
 Depth of occurrence : Upto 40 m
 Length range in commercial fishery : 80–240 mm

Size at first maturity : —
 Spawning season : Jun. – Oct.



Fig. 50. *Johnius carutta*.

Scientific Name : *Johnius carutta*
 Vernacular Name : 'Kora'/Kuttan'
 Gear : Trawl net
 Percentage contribution by the gear : 100
 Peak period of occurrence : Nov. – Dec. and Feb.
 Depth of occurrence : Upto 40 m
 Length range in commercial fishery : 90–170 mm
 Size at first maturity : —
 Spawning season : —

SCOMBRIDAE

Popular English Name : Mackerel/Tunas/
 Seer fishes
 Vernacular Name : 'Ayila'/Chooru'/
 (Malayalam) 'Neimeen'/Arkiab'
 Annual average catch : 3,985 t
 Percentage in total catch : 16.2
 Fishing methods and their contribution : Purse seine : 58.2%
 Drift net : 41.0%
 Trawl net : 0.8%

MACKEREL

Popular English Name : Indian mackerel
 Vernacular Name : 'Ayila'
 (Malayalam)
 Annual average catch : 2,743 t
 Percentage in total catch : 11.6
 Fishing methods and their contribution : Purse seine : 97.9%
 Drift net : 1.7%
 Trawl net : 0.4%

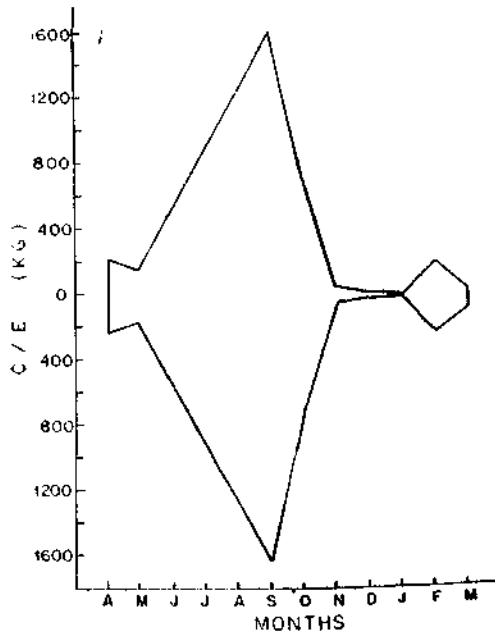


Fig. 51. Seasonal abundance of mackerel (Purse seine).

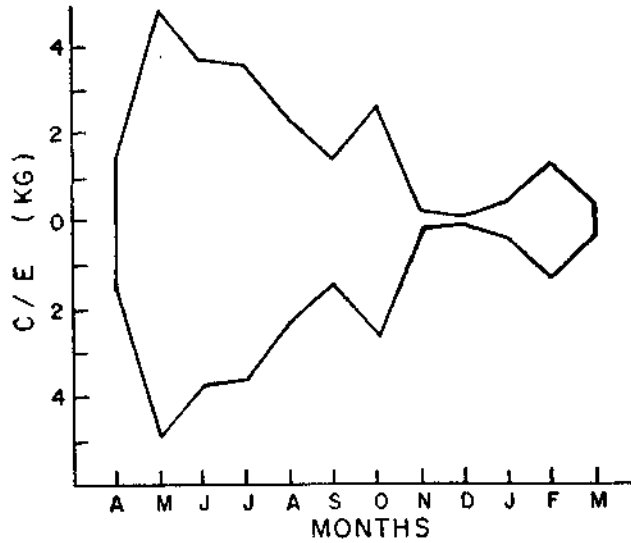


Fig. 52. Seasonal abundance of mackerel (Drift net).

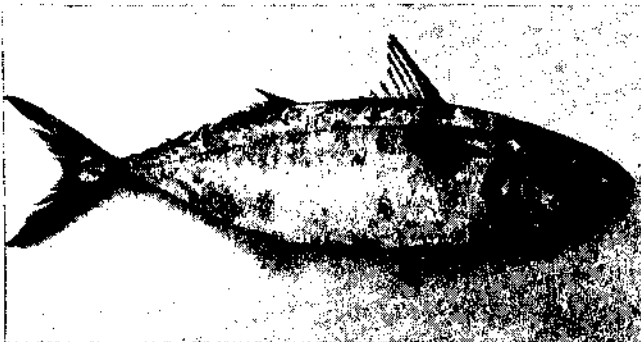


Fig. 53. *Rastrelliger kanagurta*.

Scientific Name : *Rastrelliger kanagurta*
 Vernacular Name : 'Ayila'
 Gear : Purse seine/Drift net/
 Trawl net
 Percentage contribution
 by each gear : Purse seine : 97.9
 Drift net : 1.7
 Trawl net : 0.4
 Peak period of occurrence : Sep.- Nov.
 Depth of occurrence : Upto 50 m
 Length range in
 commercial fishery : 160-240 mm
 Size at first maturity : 220 mm
 Spawning season : Jun.- Aug.

TUNAS

Popular English Name : Tunas
 Vernacular Name : 'Choorā'
 (Malayalam)
 Annual average catch : 770 t
 Percentage in total catch : 3.3
 Fishing methods and
 their contribution : Drift net : 97.6%
 Purse seine : 2.4%

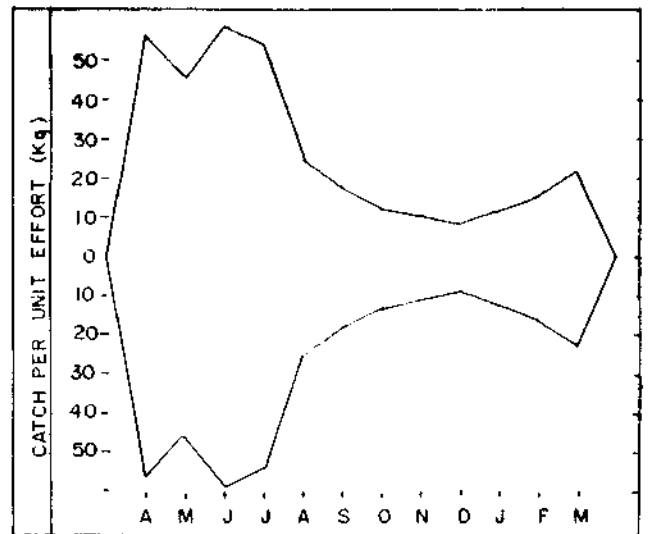


Fig. 54. Seasonal abundance of tunas (Drift net).

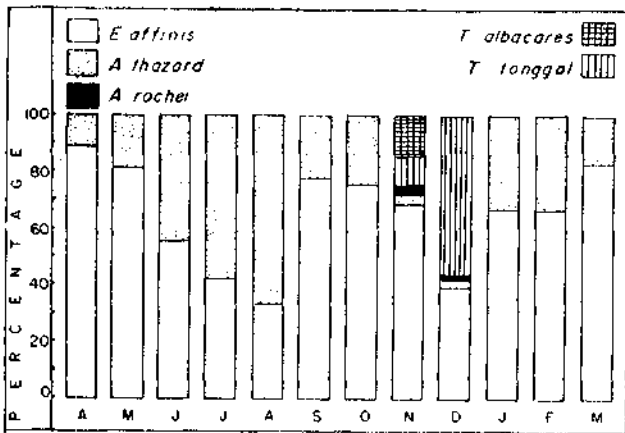


Fig. 55. Monthly species composition of tunas in drift net.



Fig. 58. *Euthynnus affinis*.

Scientific Name : *Euthynnus affinis*
 Vernacular Name : 'Choorā'
 Gear : Drift net/Purse seine
 Percentage contribution by each gear : Drift net : 99.6
 Purse seine : 0.4
 Peak period of occurrence : Apr. - Nov.
 Depth of occurrence : 20 - 40 m
 Length range in commercial fishery : 220 - 720 mm
 Size at first maturity : 420 - 430 mm
 Spawning season : Oct. - Mar.

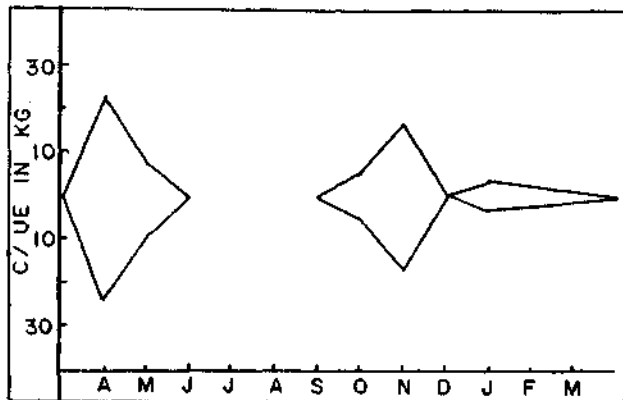


Fig. 56. Seasonal abundance of tunas (Purse seine).

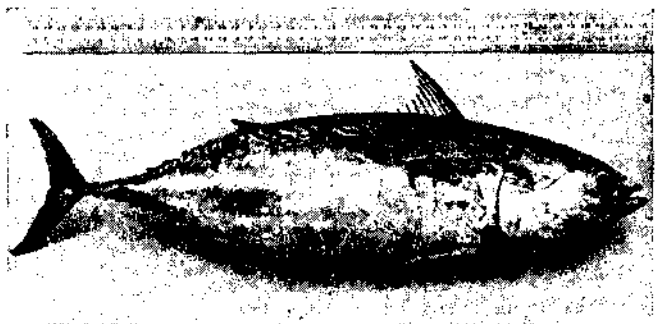


Fig. 59. *Auxis thazard*.

Scientific Name : *Auxis thazard*
 Vernacular Name : 'Kuduthā'
 Gear : Drift net/Purse seine
 Percentage contribution by each gear : Drift net : 98.6
 Purse seine : 1.4
 Peak period of occurrence : Apr. - Nov.
 Depth of occurrence : 20 - 40 m
 Length range in commercial fishery : 200 - 480 mm
 Size at first maturity : 300 mm
 Spawning season : Oct. - Dec.

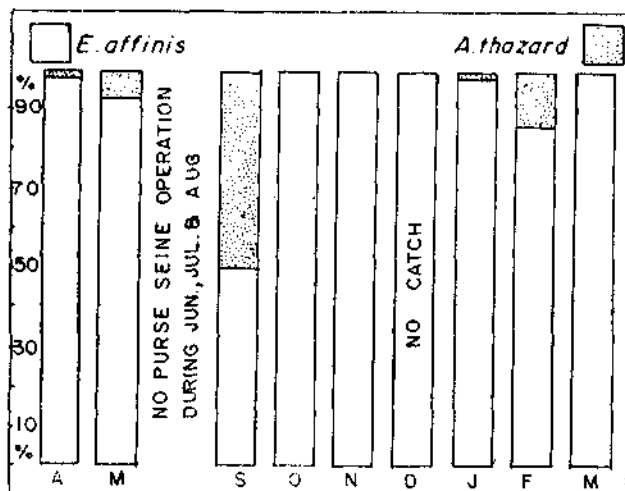


Fig. 57. Monthly species composition of tunas in purse seine.

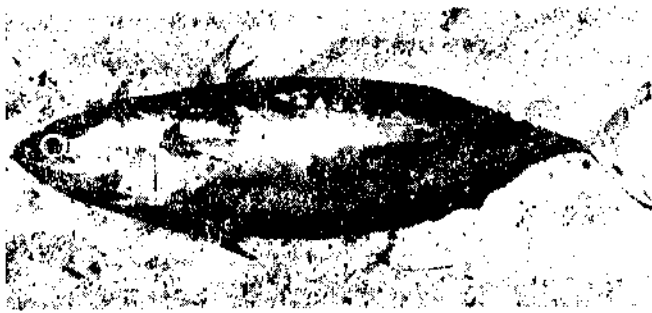


Fig. 60. *Auxis rochei*.

Scientific Name : *Auxis rochei*
 Vernacular Name : 'Elichoorā'
 Gear : Drift net/Purse seine
 Percentage contribution
 by each gear : Drift net : 90.9
 Purse seine : 9.1
 Peak period of occurrence : Jul. - Nov.
 Depth of occurrence : 30-40 m
 Length range in
 commercial fishery : 200-320 mm
 Size at first maturity : 240 mm
 Spawning season : September

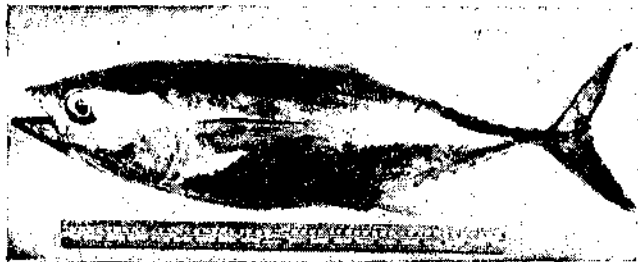


Fig. 61. *Thunnus albacares*.

Scientific Name : *Thunnus albacares*
 Vernacular Name : 'Manja choora'
 Gear : Drift net
 Percentage contribution
 by the gear : 100
 Peak period of occurrence : Feb. - Aug.
 Depth of occurrence : 30-40 m
 Length range in
 commercial fishery : 500-1,200 mm
 Size at first maturity : --
 Spawning season : --

SEER FISHES

Popular English Name : Seer fishes
 Vernacular Name : 'Neimeen'/'Arkiah'
 (Malayalam)
 Annual average catch : 472 t

Percentage in total catch : 2.0
 Fishing methods and
 their contribution : Trawl net : 0.2%
 Drift net : 99.8%

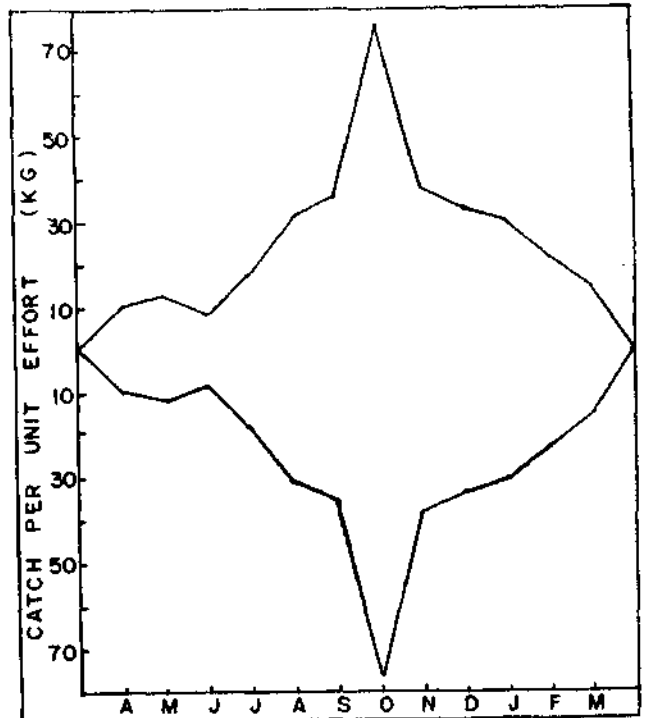


Fig. 62. Seasonal abundance of seer fishes (Drift net).

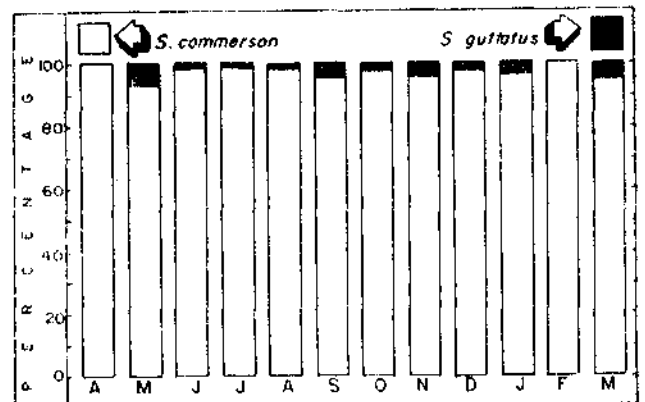


Fig. 63. Monthly species composition of seer fishes in drift net catch.



Fig. 64. *Scomberomorus commerson*.

Scientific Name : *Scomberomorus commerson*
 Vernacular Name : 'Neimeen'/'Arkiah'
 Gear : Drift net
 Percentage contribution by the gear : 100
 Peak period of occurrence : Aug. - Sep.
 Depth of occurrence : 30 - 40 m
 Length range in commercial fishery : 350 - 1,250 mm
 Size at first maturity : 750 mm
 Spawning season : Jan. - Sep.

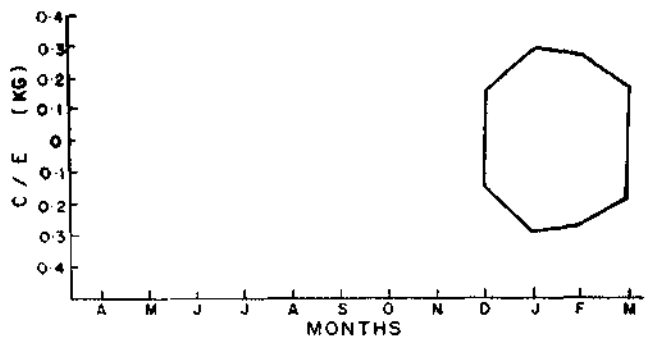


Fig. 66. Seasonal abundance of perches (Hooks and line).

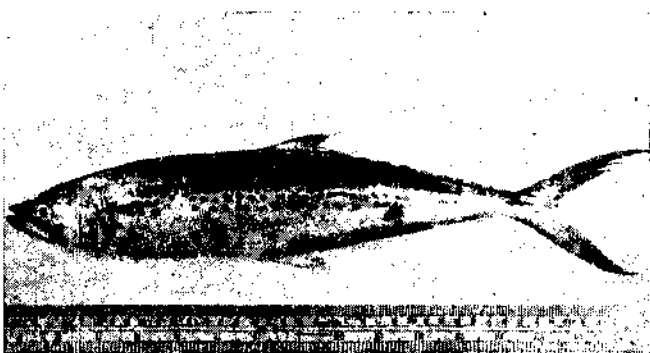


Fig. 65. *Scomberomorus guttatus*.

Scientific Name : *Scomberomorus guttatus*
 Vernacular Name : 'Neimeen'/'Arkiah'
 Gear : Drift net
 Percentage contribution by the gear : 100
 Peak period of occurrence : Sept. - Nov.
 Depth of occurrence : 30 - 40 m
 Length range in commercial fishery : 300 - 500 mm
 Size at first maturity : --
 Spawning season : --

Legend for Fig. 67:
 ■ *Pristipomoides typus*
 ▨ *E. areolatus*
 ▩ *E. chlorostigma*
 ▤ *E. diacanthus*
 ▧ *E. tauvina*
 ■ *Lutjanus sp*

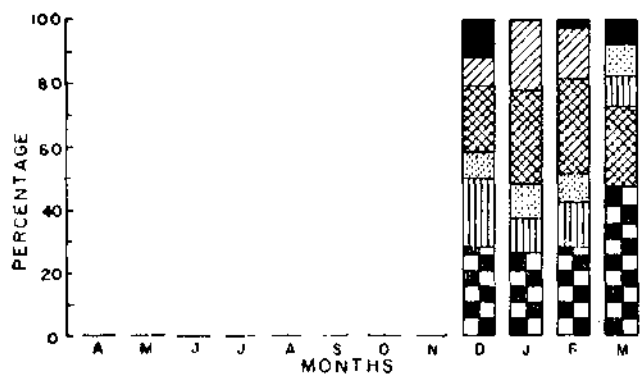


Fig. 67. Monthwise species composition of perches in hooks and line.



Fig. 68. *Epinephelus areolatus*.

SERRANIDAE

Popular English Name : Reef cod/Grouper
 Vernacular Name (Malayalam) : 'Kalava'
 Annual average catch : 19.8 t
 Percentage in total catch : 0.1
 Fishing methods and their contribution : Hooks & line : 100%

Scientific Name : *Epinephelus areolatus*
 Vernacular Name : 'Kalava'
 Gear : Hooks and line
 Percentage contribution by the gear : 100
 Peak period of occurrence : Jan. - Feb.
 Depth of occurrence : 50 m
 Length range in commercial fishery : 290 - 650 mm

Size at first maturity : ---
 Spawning season : ---

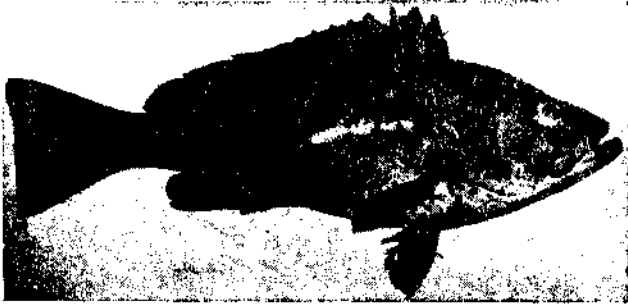


Fig. 69. *Epinephelus chlorostigma*.

Scientific Name : *Epinephelus chlorostigma*
 Vernacular Name : 'Kalava'
 Gear : Hooks and line
 Percentage contribution
 by the gear : 100
 Peak period of occurrence : Jan. - Feb.
 Depth of occurrence : 50 m
 Length range in
 commercial fishery : 270 - 580 mm
 Size at first maturity : ---
 Spawning season : ---



Fig. 70. *Epinephelus diacanthus*.

Scientific Name : *Epinephelus diacanthus*
 Vernacular Name : 'Kalava'
 Gear : Hooks and line
 Percentage contribution
 by the gear : 100
 Peak period of occurrence : Jan. - Feb.
 Depth of occurrence : 50 m
 Length range in
 commercial fishery : 190 - 620 mm
 Size at first maturity : ---
 Spawning season : ---



Fig. 71. *Epinephelus tauvina*.

Scientific Name : *Epinephelus tauvina*
 Vernacular Name : 'Kalava'
 Gear : Hooks and line
 Percentage contribution
 by the gear : 100
 Peak period of occurrence : Jan. - Feb.
 Depth of occurrence : 50 m
 Length range in
 commercial fishery : 300 - 970 mm
 Size at first maturity : ---
 Spawning season : ---

LUTJANIDAE

Popular English Name : Bass
 Vernacular Name : 'Chemballi'/'Kalava'
 (Malayalam)
 Annual average catch : 7.8 t
 Percentage in total catch : 0.03
 Fishing methods and
 their contribution : Hooks and line



Fig. 72. *Pristipomoides typus*.

Scientific Name : *Pristipomoides typus*
 Vernacular Name : 'Chemballi'/'Kalava'
 Gear : Hooks and line
 Percentage contribution
 by the gear : 100
 Peak period of occurrence : Jan. - Feb.
 Depth of occurrence : 50 m
 Length range in
 commercial fishery : 210 - 590 mm
 Size at first maturity : ---
 Spawning season : ---

STROMATEIDAE

Popular English Name : Pomfrets
 Vernacular Name : 'Machan'/'Avoli'
 (Malayalam)
 Annual average catch : 271 t
 Percentage in total catch : 1.01
 Fishing methods and their contribution :
 Purse seine : 56.9%
 Drift net : 38.6%
 Trawl net : 4.5%

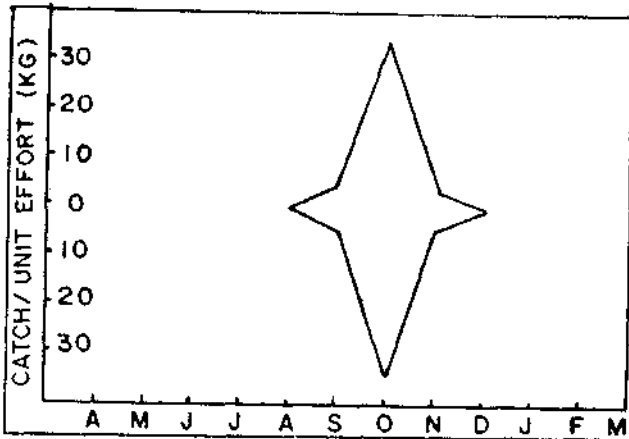


Fig. 73. Seasonal abundance of pomfrets (Purse seine).

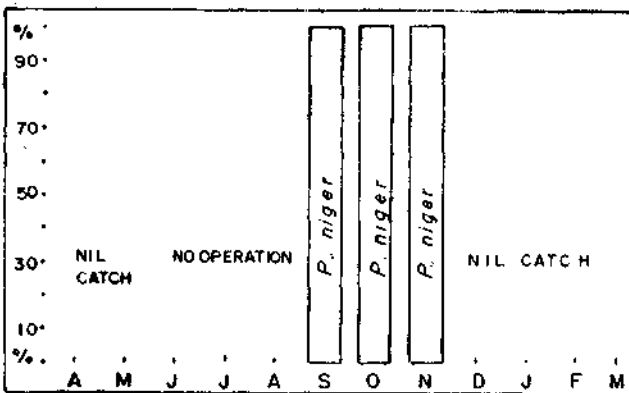


Fig. 74. Monthwise species composition of pomfrets in purse seine catch.

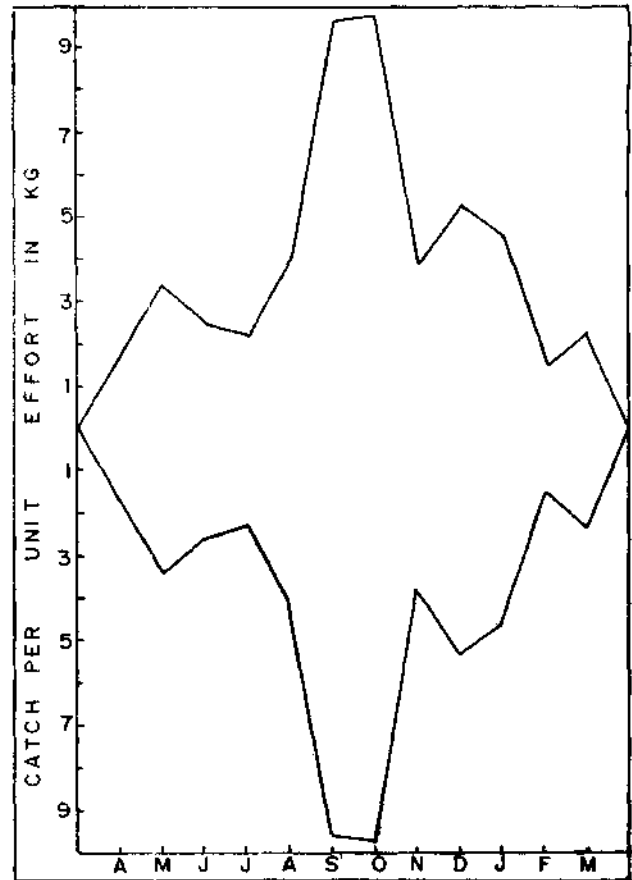


Fig. 75. Seasonal abundance of pomfrets (Drift net).

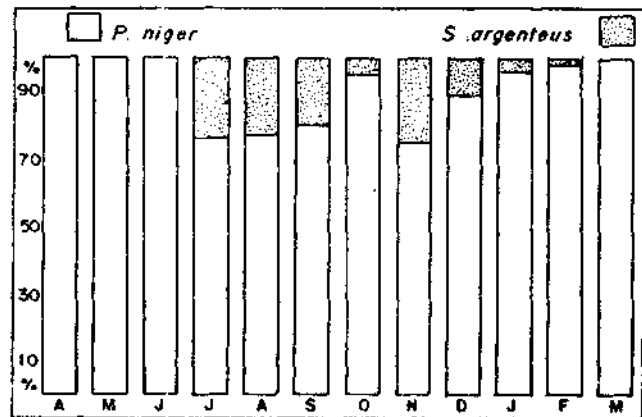


Fig. 76. Monthwise species composition of pomfrets in drift net catch.

Scientific Name : *Parastromateus niger*
 Vernacular Name : 'Machan'/'Avoli'
 Gear : Drift net/Purse seine
 Percentage contribution by each gear :
 Drift net : 77
 Purse seine : 23



Fig. 77. *Parastromateus niger*.

Peak period of occurrence : Aug. - Nov.
 Depth of occurrence : 30 - 40 m
 Length range in commercial fishery : 180 - 520 mm
 Size at first maturity : 280 mm
 Spawning season : Sep. - Dec. & Feb.



Fig. 78. *Pampus argenteus*.

Scientific Name : *Pampus argenteus*
 Vernacular Name : 'Vella avoli'
 Gear : Trawl/Drift net
 Percentage contribution by each gear : Trawl net : 83.3
 Drift net : 16.7
 Peak period of occurrence : Aug. - Oct.
 Depth of occurrence : 25 - 40 m
 Length range in commercial fishery : 100 - 350 mm
 Size at first maturity : ---
 Spawning season : ---

SYNODONTIDAE

Popular English Name : Lizard fishes
 Vernacular Name : 'Arana meen' (Malayalam)

Annual average catch : 430 t
 Percentage in total catch : 1.8
 Fishing methods and their contribution : Trawl net : 100%

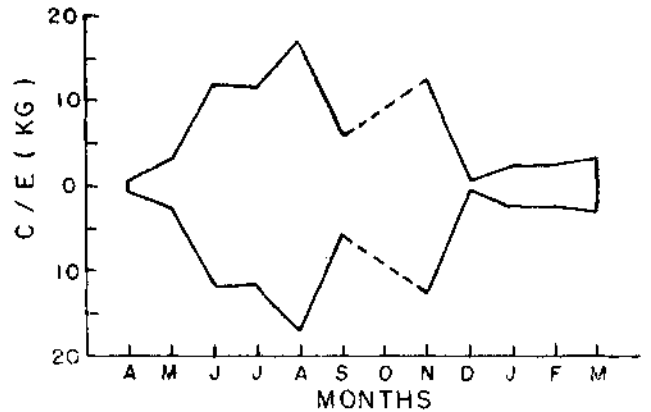


Fig. 79. Seasonal abundance of lizard fishes (Trawl net).

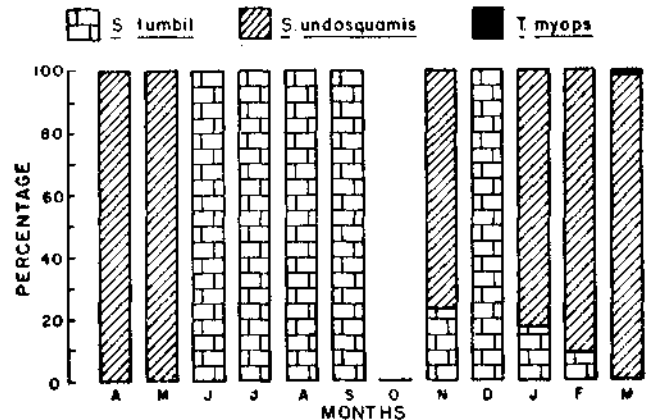


Fig. 80. Monthwise species composition of lizard fishes in trawl catches.

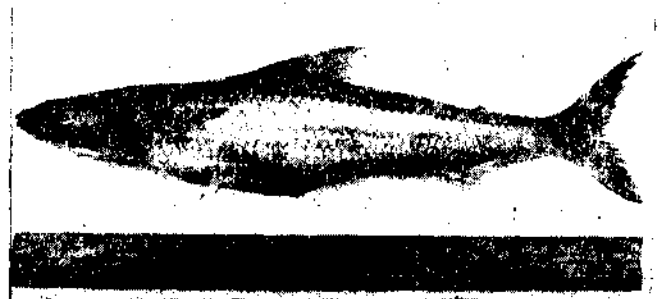


Fig. 81. *Saurida tumbil*.

Scientific Name : *Saurida tumbil*
 Vernacular Name : 'Arana meen'
 Gear : Trawl net

Percentage contribution
by the gear : 100
Peak period of occurrence : Jan. - Sep.
Depth of occurrence : Upto 70 m
Length range in
commercial fishery : 160 - 420 mm
Size at first maturity : —
Spawning season : May - Sep.

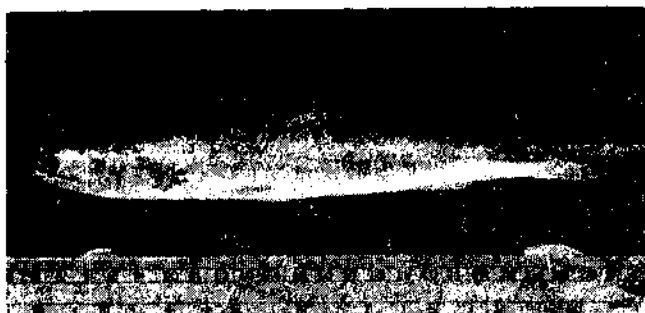


Fig. 82. *Saurida undosquamis*.

Scientific Name : *Saurida undosquamis*
Vernacular Name : 'Arana meen'
Gear : Trawl net
Percentage contribution
by the gear : 100
Peak period of occurrence : Apr. - May; Nov. and
Jan. - Feb.
Depth of occurrence : Upto 70 m
Length range in
commercial fishery : 90 - 200 mm
Size at first maturity : —
Spawning season : Nov. and Jan. - Feb.

TACHYSURIDAE

Popular English Name : Cat fishes
Vernacular Name : 'Aetta'/'Koori'
(Malayalam)
Annual average catch : 695.5t
Percentage in total catch : 0.03
Fishing methods and
their contribution : Drift net : 55.8%
Trawl net : 41.4%
Purse seine : 2.8%

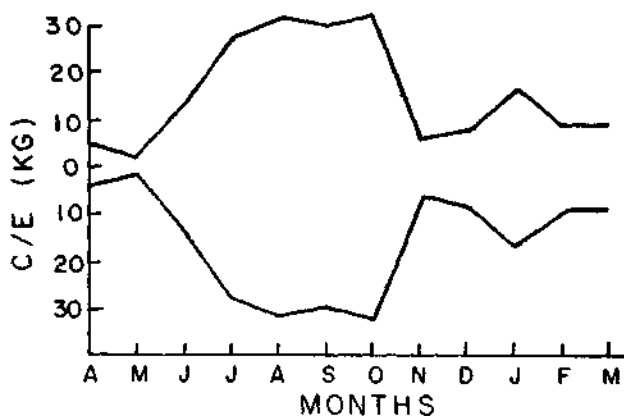


Fig. 83. Seasonal abundance of cat fishes (Drift net).

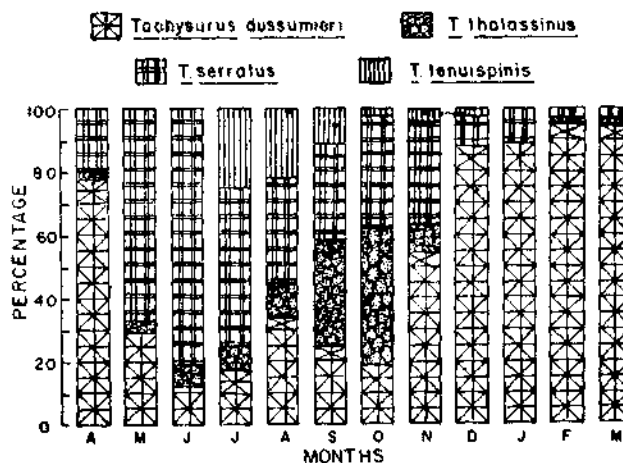


Fig. 84. Monthwise species composition of cat fishes in drift net.

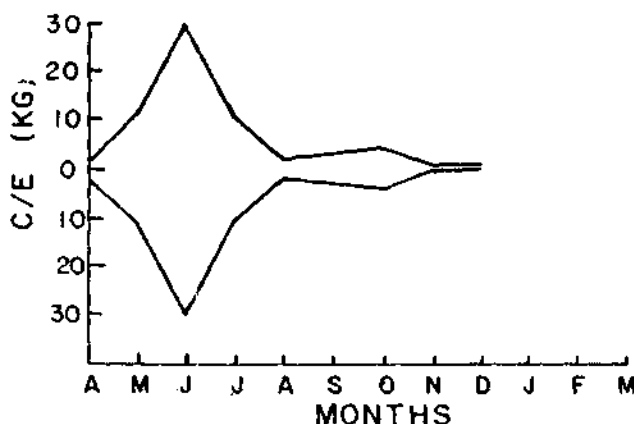


Fig. 85. Seasonal abundance of cat fishes (Trawl net).

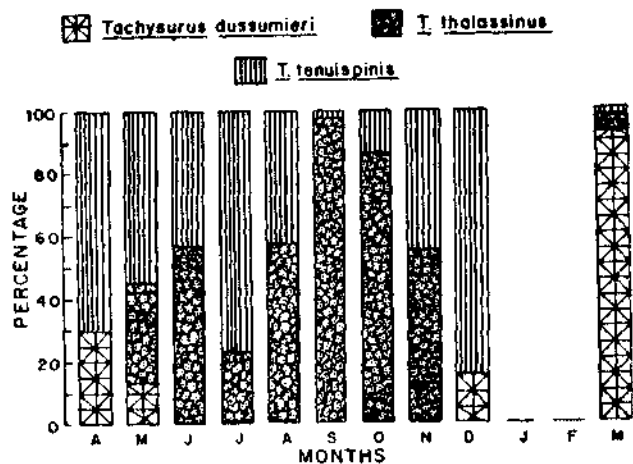


Fig. 86. Monthwise species composition of cat fishes in trawl net.

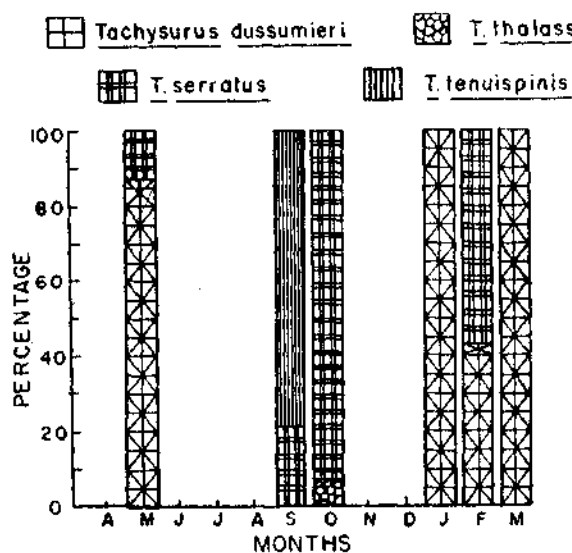


Fig. 87. Monthwise species composition of cat fishes in purse seine.

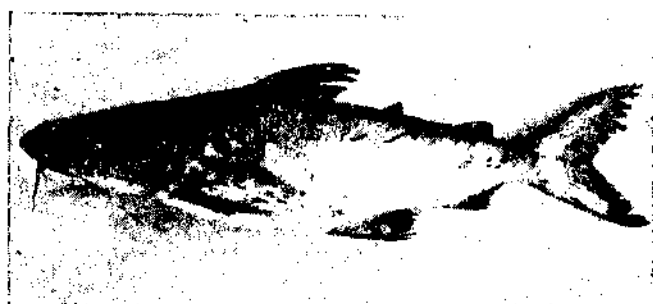


Fig. 88. *Tachysurus dussumieri*.

Scientific Name : *Tachysurus dussumieri*
 Vernacular Name : 'Valiaetta'
 Gear : Drift net/Trawl net/
 Purse seine

Percentage contribution
 by each gear : Drift net : 79.2
 Trawl net : 11.8
 Purse seine : 9.0
 Peak period of occurrence : Jul. - Feb.
 Depth of occurrence : Upto 70 m -
 Length range in
 commercial fishery : 500 - 800 mm
 Size at first maturity : 520 mm
 Spawning season : Sep. - Jan.



Fig. 89. *Tachysurus thalassinus*.

Scientific Name : *Tachysurus thalassinus*
 Vernacular Name : 'Valiaetta'
 Gear : Drift net/Trawl net/
 Purse seine
 Percentage contribution
 by each gear : Trawl net : 63.1
 Drift net : 36.8
 Purse seine : 0.1
 Peak period of occurrence : May - Oct.
 Depth of occurrence : Upto 70 m
 Length range in
 commercial fishery : 300 - 600 mm
 Size at first maturity : 370 mm
 Spawning season : Aug. - Oct.



Fig. 90. *Tachysurus serratus*.

Scientific Name : *Tachysurus serratus*
 Vernacular Name : 'Navetta'
 Gear : Drift net/Trawl net/
 Purse seine

Percentage contribution : Drift net : 96.0
 by each gear Purse seine : 3.0
 Trawl net : 1.0
 Peak period of occurrence : June - Oct.
 Depth of occurrence : Upto 70 m
 Length range in
 commercial fishery : 600 - 900 mm
 Size at first maturity : 600 mm
 Spawning season : Sep. - Oct.

Scientific Name : *Tachysurus tenuispinis*
 Vernacular Name : 'Urianetta'
 Gear : Drift net/Trawl net/
 Purse seine

Percentage contribution
 by each gear : Trawl net : 74.4
 Drift net : 24.7
 Purse seine : 0.9

Peak period of occurrence : May - Oct.
 Depth of occurrence : Upto 80 m
 Length range in
 commercial fishery : 300 - 450 mm
 Size at first maturity : 320 mm
 Spawning season : Apr. - Sep.



Fig. 91. *Tachysurus tenuispinis*.

