

SCIENTIFIC COUNCIL MEETING - JUNE 1987Provisional Index of Journal of Northwest Atlantic Fishery Science
and NAFO Scientific Council Studies, 1980-86CONTENTS

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Introduction

In its consideration of the indexing of the Scientific Council's meeting documents and published papers at the June 1984 Meeting (NAFO, 1984), the Standing Committee on Publications (STACPUB) agreed to proceed with the publication of a 5-year index which would include all meeting documents to the end of 1984 (NAFO, 1985). At that time, it was decided not to proceed with publication of a 5-year index of published papers (*Journal of Northwest Atlantic Fishery Science* and *NAFO Scientific Council Studies*) because the volume of material was too low. However, it was agreed that a provisional index of these papers would be useful as a Summary Document, with consideration being given to the formal publication of an index when the volume of material is greater. The current provisional index of published papers pertains to all issues of the Journal and Studies to the end of 1986.

Subject and Author Indexes

Compilation of the subject and author indexes have generally followed the guidelines that were used in preparing the *Index and List of Titles of ICNAF Publications, 1951-79* (ICNAF, 1980). Each paper is identified by a letter (J for Journal and S for Studies), followed by the volume number, a colon, and the beginning page of the paper. This is followed in parenthesis by a shortened version of the title or a short expression which indicates the object of the referenced paper. Some users of this index may find the map useful in locating some place names and also the NAFO divisions and subareas which are frequently mentioned in the text.

List of Titles

This section contains the lists of contents of the *Journal of Northwest Atlantic Fishery Science* Vol. 1-6 and No. 1 of Vol. 7, which were issued from December 1980 to December 1986.

and the contents of *NAFO Scientific Council Studies* No. 1-10, which were issued from March 1981 to August 1986.

References

- ICNAF. 1980. Index and list of titles of ICNAF publications, 1951-79. ICNAF Spec. Publ., 11(revised): 193 p.
- NAFO. 1984. Report of Scientific Council, June 1984 Meeting. App. III. Report of Standing Committee on Publications. NAFO Sci. Coun. Rep., 1984: 77-79.
- NAFO. 1985. Index and list of titles of Scientific Council research and summary documents for the years 1979-84. NAFO Index of Meet. Doc., 1979-84: 5-141.

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Blue mussel (see Mussel, blue)

Blue runner (see Runner, blue)

Blue shark (see Shark, blue)

Blue whale (see Whale, blue)

Blue whiting (see Whiting, blue)

Blueback herring (see Herring, blueback)

Bluefin tuna (see Tuna, bluefin)

Bluefish (*Pomatomus saltatrix*)

J 4 : 238 (guide to early life stages of marine fishes)
6 : 117 (energy equivalents of marine organisms)

Bobtail snipe eel (see Eel, bobtail snipe)

Body proportions (see Morphometrics)

Bolinichthys indicus (see Lanternfish)

Bolinichthys supralateralis (see Lanternfish)

Bonapartia pedaliota (see Anglemouth)

Bonefish (*Albula vulpes*)

J 4 : 44 (guide to early stages of marine fishes)

Bongo sampling

J 1 : 91 (samplers used in MARMAP surveys)
S 1 : 31 (use in sampling ichthyoplankton)

Bonito, Atlantic (*Sarda sarda*)

J 4 : 314 (guide to early stages of marine fishes)

Boreogadus saida (see Cod, Arctic)

Borostomias antarcticus (see Dragonfish, bighead)

Bothidae (see also specific names)

J 3 : 127 (larvae in slope water off Scotian Shelf)
4 : 354 (guide to early stages of marine fishes)
5 : 33 (ichthyoplankton of Georges Bank area)

Bothus ocellatus (see Flounder, eyed)

Brachiopoda

J 6 :117 (energy equivalents of marine organisms)

Brachioteuthidae (Cephalopoda)

J 7 : 15 (occurrence in slope water off Nova Scotia)

Brachioteuthis rissoi (see Squid)Brachyura (see Crabs)Brama rayi (see Pomfret, smallscale)Bramidae (pomfrets)

J 4 :260 (guide to early stages of marine fishes)

Branchiostegals

J 5 :199 (re discrimination of Nfld capelin stocks)

Branchiostegidae (tilefishes)

J 4 :236 (guide to early stages of marine fishes)

Brauer's anglemouth (see Anglemouth, Brauer's)Bregmaceros sp. (Bregmaceratidae)J 3 :127 (larvae in slope water off Scotian Shelf)
4 :189 (guide to early stages of marine fishes)Brevoortia tyrannus (see Menhaden, Atlantic)Brief squid (see Squid, brief)Brittle star (*Gorgonocephalus* sp.)

S 6 : 35 (food of wolffishes in Nfld area)

Brittle stars (Ophiuroidea)J 3 :123 (food of thorny skate in NW Atlantic)
7 : 47 (food of spotted wolffish in NW Atlantic)
S 1 : 51 (food of haddock in Nfld area)
6 : 35 (food of wolffishes in Nfld area)
7 : 87 (food of hakes and other fish in SA 4-6)
8 : 49 (stomach contents of Atlantic wolffish)
10 : 47 (food of G. halibut in NW Atlantic)Brosme brosme (see Cusk)Brown seaweeds (see Seaweeds, brown)BryozoaJ 6 :117 (energy equivalents of marine organisms)
S 1 : 5 (food of haddock in Nfld area)
8 : 49 (food of wolffish in NW Atlantic)Buccinum sp. (see Whelks)Bumper (*Chloroscombrus chrysurus*)

J 6 :117 (energy equivalents of marine organisms)

BuoysS 1 : 47 (tracked by satellites in Div. 3M)
4 : 85 (use in surface circulation studies)Butterfish, Atlantic (*Peprilus triacanthus*)J 4 :344 (guide to early stages of marine fishes)
6 :117 (energy equivalents of marine organisms)
S 7 : 87 (feeding of hakes and other fish in SA 4-6)**C**Calanus sp. (copepods)J 2 : 47 (length-weight relations for copepods)
S 1 : 23 (food of Atl. saury in NW Atlantic)
7 : 53 (food of roundnose grenadier in N Atlantic)
8 : 25 (predation on fish larvae as regulatory force)
33 (feeding spectrum of long-finned squid)
39 (food of various species on Flemish Cap)
9 :125 (food of *Todarodes sagittatus* off Norway)Calcares sp. (Spongia)

S 10 : 47 (food of G. halibut in NW Atlantic)

Calathura sp. (isopods)

S 6 : 35 (food of wolffishes in Nfld area)

California CurrentS 9 : 47 (effect on life history of *Loligo opalescens*)Callionymidae (dragonets) (see also specific names)J 3 :127 (larvae in slope water off Scotian Shelf)
4 :400 (guide to early stages of marine fishes)Callionymus agassizi (see Dragonet)Callionymus bairdi (see Dragonet, lancer)Cancer irroratus (see Crab, rock)Candacia sp. (copepods)S 7 : 67 (food of shortfin squid in NW Atlantic)
8 : 33 (feeding spectrum of longfin squid)CannibalismS 3 : 39 (re simulated yield of shortfin squid)
7 : 67 (shortfin squid feeding in SA 4 to 6)
8 : 25 (predation on fish larvae as regulatory force)
33 (feeding spectrum of longfin squid)
9 :117 (feeding of longfin and shortfin squids)
125 (feeding of *Todarodes sagittatus* off Norway)Capelin (*Mallotus villosus*)J 3 :105 (growth patterns in Labrador-Nfld area)
123 (food of thorny skate in Nfld area)
4 : 62 (guide to early stages of marine fishes)
5 :119 (discrimination of stocks in Nfld area)
6 :135 (estimation of maturation rates)
157 (food of salmon in Grand Bank area)
S 1 : 41 (prey of cod in Nfld area)
51 (food of haddock in Nfld area)
3 : 67 (food of hooded seals at Greenland)
77 (food of cod in east Nfld area)
7 : 67 (food of shortfin squid in SA 4 to 6)
8 : 25 (predation on fish larvae as regulatory force)
9 :125 (food of *Todarodes sagittatus* off Norway)
10 : 47 (food of G. halibut in NW Atlantic)

Capillaria kabatai (nematode)

J 2 : 67 (parasite of grenadiers in NW Atlantic)

Caprellidea (amphipods)

S 7 : 87 (food of hakes and other fish in SA 4-6)

Carangidae (jacks and scads) (see also specific names)J 4 : 240 (guide to early stages of marine fishes)
6 : 117 (energy equivalents of marine organisms)Caranx bartholomaei (see Jack, yellow)Caranx crysos (see Runner, blue)Caranx hippos (see Jack, crevalle)Carapidae (pearlfishes)

J 4 : 397 (guide to early stages of marine fishes)

Carapus sp. (see Pearlfish)Caroharhinus plumbeus (see Shark, requiem)Catch; Catch/effortJ 1 : 21 (redfish exploitation in Gulf of Maine)
49 (white hake in Gulf of St. Lawrence)
101 (recruitment in 18 selected stocks)
3 : 1 (review of Georges Bank haddock fishery)
141 (G. Halibut in Gulf of St. Lawrence)
5 : 79 (inshore exploitation of cod at Nfld)
99 (discarding of redfish in a shrimp fishery)
181 (efficiency of trawls in catching flatfishes)
6 : 125 (herring on spawning bed in Gulf St. Lawrence)
157 (Atlantic salmon on and east of Grand Bank)
S 1 : 23 (Atlantic saury in NW Atlantic)
35 (wolffish species off W Greenland)
3 : 7 (grenadier, G. halibut and shrimp in SA 0+1)
53 (age composition of harp seals, 1952-80)
67 (hooded seals at Greenland, 1970-80)
6 : 7 (redfishes in Nfld-Labrador region)
8 : 83 (environment re fisheries management)
9 : 27 (squid resources of SE United States)
10 : 35 (dynamics of yellowtail and A. plaice)
53 (CPUE in the lobster trap fishery)
57 (harp and hooded seals in Greenland)
67 (fishery resources in Gulf of Maine)Caulophryne jordani (Caulophrynidae)

J 4 : 195 (guide to early stages of marine fishes)

Centrolophidae

J 4 : 330 (guide to early stages of marine fishes)

Centrolophus niger (see Ruff, black)Centropages sp. (copepods)J 2 : 47 (length-weight relations of copepods)
S 7 : 67 (food of shortfin squid in SA 4 to 6)
8 : 33 (feeding spectrum of longfin squid)Centrophrynidae

J 4 : 194 (guide to early stages of marine fishes)

Centropristis striata (see Seabass, black)Centrosyllium fabricii (see Dogfish, black)Cephalopods (see Squid and other specific names,
as only general references are given here)J 3 : 123 (food of thorny skate in NW Atlantic)
6 : 117 (energy equivalents of marine organisms)
7 : 15 (diel movement in slope water off Nova Scotia)
S 6 : 35 (food of wolffishes in Nfld area)
7 : 53 (food of roundnose grenadier in N Atlantic)
67 (food of shortfin squid in NW Atlantic)
87 (food of hakes and other fish in SA 4-6)
8 : 33 (feeding spectrum of longfin squid)
39 (food links of various species in Div. 3M)
49 (food of Atlantic wolffish in NW Atlantic)
9 : 7 (summary of symposium on squids)
27 (squid resources of SE United States)
47 (oceanography re cephalopod distribution)
139 (life history of myopsid and sepiolid squids)
143 (population dynamics of short-lived species)Cerattias holboelli (see Angler, deepsea)Ceratiidae (anglerfishes)

J 4 : 204 (guide to early stages of marine fishes)

Ceratomyxa sp. (myxosporidian)J 6 : 165 (parasite of A. plaice in NW Atlantic)
S 6 : 63 (parasites as natural tags in fish)Ceratoscopelus maderensis (see Lanternfish, horned)Ceratoscopelus warmingii (see Lanternfish)CestodesJ 2 : 67 (parasites of grenadiers in NW Atlantic)
6 : 165 (parasites of A. plaice in NW Atlantic)
7 : 25 (use of parasites as tags in herring)
S 6 : 63 (parasites as natural tags in fish)
7 : 77 (re stock identity of shortfin squid)Chaenophryne draco (Oneirodidae)

J 4 : 200 (guide to early stages of marine fishes)

Chaetodipterus faber (see Spadefish, Atlantic)ChaetognathsS 7 : 53 (food of roundnose grenadier in N Atlantic)
67 (food of shortfin squid in NW Atlantic)
8 : 33 (feeding spectrum of longfin squid)
9 : 117 (food of longfin and shortfin squids)
125 (food of *Todarodes sagittatus* off Norway)Chalinura brevibarbis (see Grenadier)Char, Arctic (*Salvelinus alpinus*)

S 1 : 7 (analysis of gillnet selection data)

Chauliodontidae (Viperfishes) (see also specific names)J 3 : 127 (larvae in slope water off Scotian Shelf)
4 : 88 (guide to early stages of marine fishes)
S 7 : 53 (food of roundnose grenadier in N Atlantic)
8 : 67 (mesopelagic fishes of Nfld area)

Chauliodus sloani (see Viperfish)

Chionoecetes opilio (see Crab, queen)

Chiroteuthidae (Cephalopoda)

J 7 : 15 (occurrence in slope water off Nova Scotia)

Chiroteuthis veranyi (see Squid)

Chitons (Polyplacophora)

J 7 : 47 (food of spotted wolffish in NW Atlantic)

Chlamys islandica (see Scallop, Iceland)

Chlorophthalmus agassizi (Chlorophthalmidae)

J 4 : 96 (guide to early stages of marine fishes)

Chlorophyll

S 4 : 7 (overview of satellite remote-sensing)
 41 (remote-sensing studies in Japan)
 53 (satellite observations of phytoplankton)
 61 (observation of fluorescence from space)
 63 (water color in E Canadian waters)
 69 (remote-sensing studies in B. Columbia)

Chloroscombrus chrysurus (see Bumper)

Chondrus crispus (see Irish moss)

Chrondracanthopsis nodosus (copepod)

S 6 : 63 (parasites as natural tags in fish)

Chrondracanthus radiatus (copepod)

J 2 : 67 (parasite of grenadiers in NW Atlantic)

Citharichthys arcifrons (see Flounder, Gulf Stream)

Citharichthys gymnorhinus (see Flounder, sand)

Cladocerans

J 6 : 141 (eastward extension of *Penilia* off US coast)

Clams (pelecypods)

J 3 : 93 (food of sand lance off US coast)
 123 (food of thorny skate in NW Atlantic)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 7 : 92 (food of hakes and other fish in SA 4-6)
 8 : 49 (food of wolffish in NW Atlantic)

Clavella adunca (Copepod)

J 2 : 67 (parasite of grenadiers in NW Atlantic)

Clavellomimus macruri (copepod)

J 2 : 67 (parasite of grenadiers in NW Atlantic)

Clupea harengus (see Herring, Atlantic)

Clupea pallasii (see Herring, Pacific)

Clupeidae (herrings) (see also specific names)

J 3 : 123 (food of thorny skate in Nfld area)
 4 : 24 (guide to early stages of marine fishes)
 5 : 33 (ichthyoplankton of Georges Bank area)
 6 : 117 (energy equivalents of marine organisms)

Cnidaria (see Anthozoa; Hydrozoa; Scyphozoa)

Coccorella atlantica (Evermannellidae)

J 4 : 164 (guide to early stages of marine fishes)

Cocco's lanternfish (see Lanternfish, Cocco's)

Cod, Arctic (*Boreogadus saida*)

J 3 : 123 (food of thorny skate in Nfld area)
 S 10 : 47 (food of G. halibut in NW Atlantic)

Cod, Atlantic (*Gadus morhua*)

J 1 : 101 (recruitment in N Atlantic stocks)
 2 : 21 (vertebral numbers in NW Atlantic stocks)
 57 (vertebral numbers in Flemish Cap stock)
 3 : 29 (environmental preferences on Scotian Shelf)
 123 (food of thorny skate in NW Atlantic)
 4 : 178 (guide to early stages of marine fishes)
 5 : 23 (vertebral numbers in juveniles at Nfld)
 33 (ichthyoplankton of Georges Bank area)
 79 (inshore exploitation of east Nfld stocks)
 141 (discrimination of E Nfld stocks by tagging)
 161 (fecundity variation in Nfld area)
 6 : 87 (fertilization failure in gadids)
 117 (energy equivalents of marine organisms)
 7 : 35 (trawl geometry re fish sampling)
 47 (food of spotted wolffish in NW Atlantic)
 S 1 : 7 (method of estimating gillnet selectivity)
 41 (predation on capelin and sand lance)
 57 (larval abundance on Flemish Cap)
 77 (age determination studies in Nfld area)
 3 : 77 (predation on capelin and sand lance)
 6 : 35 (food of wolffishes in Nfld area)
 57 (stock discrimination in marine fishes)
 63 (use of parasites for stock discrimination)
 7 : 67 (food of shortfin squid in SA 4 to 6)
 87 (feeding of hakes and other fish in SA 4-6)
 8 : 25 (predation on fish larvae as regulatory force)
 39 (food links of organisms on Flemish Cap)
 9 : 125 (food of *Todarodes sagittatus* off Norway)
 10 : 7 (cod year-classes off W Greenland)
 13 (cod survey off E Greenland)
 47 (food of G. halibut in NW Atlantic)
 67 (fishery resources of Gulf of Maine)

Comb jellies (see Ctenophores)

Common grenadier (see Grenadier, common)

Common halfbeak (see Halfbeak, common)

Common lumpfish (see Lumpfish, common)

Common porpoise (see Porpoise, common)

Conger eel (see Eel, conger)

Conger oceanicus (see Eel, conger)

Congridae (conger eels) (see also specific names)

- J 3 : 127 (larvae in slope water off Scotian Shelf)
 4 : 57 (guide to early stages of marine fishes)

Contracaecum aduncum (nematode)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)
 S 6 : 63 (use of parasites as natural tags in fish)

Copepods (see also under specific names)

- J 2 : 47 (length-weight relations of various species)
 67 (parasites of grenadiers in NW Atlantic)
 3 : 93 (food of sand lance off US coast)
 S 1 : 23 (food of saury in NW Atlantic)
 6 : 35 (food of wolffishes in NW Atlantic)
 63 (use of parasites as natural tags in fish)
 7 : 67 (food of shortfin squid in SA 4 to 6)
 87 (food of hakes and other fish in SA 4 to 6)
 8 : 25 (predation on fish larvae as regulatory force)
 33 (food of longfin squid in SA 5 and 6)
 39 (food of various fishes on Flemish Cap)
 9 : 117 (food of shortfin and longfin squids)
 125 (food of *Todarodes sagittatus* off Norway)
 10 : 47 (food of G. halibut in NW Atlantic)

Coryphaenidae (dolphinfishes)

- J 4 : 398 (guide to early stages of marine fishes)

Coryphaenoides rupestris (see Grenadier, roundnose)Cottidae (sculpins) (see also specific names)

- J 3 : 123 (food of thorny skate in Nfld area)
 4 : 224 (guide to early stages of marine fishes)
 117 (energy equivalents of marine organisms)
 125 (predator of herring eggs in Gulf St. Lawrence)
 S 7 : 53 (food of roundnose grenadier in N Atlantic)
 67 (food of shortfin squid in SA 4 to 6)
 10 : 47 (food of G. halibut in NW Atlantic)

Crab, hermit (*Pagurus* sp.)

- J 3 : 123 (food of thorny skate in NW Atlantic)
 6 : 11 (energy equivalents of marine organisms)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 6 : 35 (food of wolffishes in Nfld area)
 7 : 87 (food of hakes and other fish in SA 4-6)
 8 : 49 (food of wolffish in NW Atlantic)

Crab, northern stone (*Lithodes maia*)

- J 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 8 : 49 (food of wolffish in NW Atlantic)

Crab, queen (*Chionoecetes opilio*)

- J 3 : 123 (food of thorny skate in NW Atlantic)
 6 : 37 (area prospected by a baited trap)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 67 (changes in size of crabs in Div. 4T)

Crab, rock (*Cancer irroratus*)

- J 6 : 117 (energy equivalents of marine organisms)

Crab, toad (*Hyas* sp.)

- J 3 : 123 (food of thorny skate in NW Atlantic)
 7 : 47 (food of spotted wolffish in NW Atlantic)

- S 6 : 35 (food of wolffishes in Nfld area)
 8 : 49 (food of wolffish in NW Atlantic)
 10 : 47 (food of G. halibut in NW Atlantic)

Crab traps

- J 6 : 37 (experiment on area prospected by crabs)

Crabs (Brachyura) (general)

- S 7 : 45 (food of roughhead grenadier in SA 3)
 67 (food of shortfin squid in NW Atlantic)
 87 (food of hakes and other fish in SA 4-6)
 8 : 33 (feeding spectrum of longfin squid)
 49 (food of wolffish in NW Atlantic)

Cranchia scabra (see Squid)Cranchiidae (Cephalopoda)

- J 7 : 15 (occurrence in slope water off Nova Scotia)

Crangon septemspinosa (see Shrimp, sand)Crangonidae (see also Shrimp)

- S 7 : 67 (food of shortfin squid in NW Atlantic)

Crested blenny (see Blenny, crested)Crevelle jack (see Jack, crevelle)Crinoidea

- J 7 : 47 (food of spotted wolffish in NW Atlantic)

Croaker, Atlantic (*Micropogonias undulatus*)

- J 4 : 278 (guide to early stages of marine fishes)

Crustaceans (see more specific scientific and common names)Cryptoparus comesi (see Angler, lesser deepsea)Ctenodiscus crispatus (see also Sea stars)

- J 6 : 117 (energy equivalents of marine organisms)
 S 6 : 35 (food of wolffishes in Nfld area)

Ctenophores (comb jellies)

- S 6 : 35 (food of wolffishes in Nfld area)
 8 : 39 (food of various species in Div. 3M)
 10 : 47 (food of G. halibut in NW Atlantic)

Ctenopterygidae (Cephalopoda)

- J 7 : 15 (occurrence in slope water off Nova Scotia)

Ctenopteryx sicula (see Squid)Cubiceps pauciradiatus (Nomeidae)

- J 4 : 332 (guide to early stages of marine fishes)

Cummaceans

- J 3 : 93 (food of sand lance off US coast)
 123 (food of thorny skate in NW Atlantic)
 S 1 : 51 (food of haddock in Nfld area)

Cunner (*Tautoglabrus adspersus*)

- J 4 : 292 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)

Currents (water circulation)

- J 2 : 21 (re drift of cod eggs and larvae off Nfld)
 3 : 61 (larval herring movements off Maine coast)
 127 (ichthyoplankton drift off Scotian Shelf)
 5 : 33 (ichthyoplankton drift on Georges Bank)
 6 : 43 (re shortfin squid larvae in NW Atlantic)
 S 1 : 47 (drift of satellite-tracked buoys in Div. 3M)
 3 : 77 (cod predation re Labrador Current)
 4 : 21 (ocean fronts off US coast from satellites)
 41 (remote-sensing studies in Japan)
 51 (satellite imagery of Kuroshio eddies)
 53 (satellite observations of phytoplankton)
 85 (surface circulation by remote-sensing)
 5 : 39 (sea ice and iceberg drift in NW Atlantic)
 43 (oceanography of SA 0 and 1, 1970-79)
 51 (oceanography of SA 2 to 4, 1970-79)
 79 (autumn temperatures of Labrador Current)
 81 (variation off Labrador in the autumn)
 6 : 39 (re larval squid drift in NW Atlantic)
 7 : 7 (overview of environmental conditions, 1982)
 27 (circulation in Flemish Cap area, 1977-82)
 39 (oceanographic conditions in SA 1, 1970-82)
 8 : 7 (overview of environmental conditions, 1983)
 53 (fish orientation to currents)
 9 : 47 (cephalopod distribution re oceanography)
 59 (re life cycles of 5 ommastrephid squids)
 69 (squid egg masses re oceanography)
 77 (squid larvae and juveniles re Gulf Stream)
 10 : 21 (review of environmental conditions in 1985)

Cusk (*Brosme brosme*)

- J 3 : 29 (environmental preferences on Scotian Shelf)
 4 : 170 (guide to early stages of marine fishes)
 S 10 : 67 (fishery resources of Gulf of Maine)

Cusk-eel (*Ophidion vassali*)

- J 4 : 397 (guide to early stages of marine fishes)

Cutlassfish (*Benthodesmus elongatus*)

- J 3 : 127 (larvae in slope water off Scotian Shelf)

Cutlassfish (*Diplospinus multistriatus*)

- J 3 : 127 (larvae in slope water off Nova Scotia)
 4 : 302 (guide to early stages of marine fishes)

Cyclocotyloides pinguis (monogenean)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)

Cyclopsetta fimbriata (see Flounder, spotfin)Cyclopteridae (lumpfishes)

- J 3 : 123 (food of thorny skate in NW Atlantic)

Cyclopterus lumpus (see Lumpfish, common)Cyclothone braueri (see Anglemouth, Brauer's)Cyema atrum (see Eel, bobtail snipe)Cyemidae (snipe eels)

- J 4 : 49 (guide to early stages of marine fishes)

Cynoglossidae (tonguefishes) (see also specific names)

- J 3 : 127 (larvae in slope water off Scotian Shelf)
 4 : 390 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)

Cynoscion nebulosus (see Weakfish, spotted)Cynoscion regalis (see Weakfish, gray)Cyprids

- J 3 : 93 (food of sand lance off US coast)

Cypselurus furcatus (see Flyingfish, spotfin)Cystophora cristata (see Seal, hooded)**D**Daenitius truttiae (nematode)

- S 6 : 63 (use of parasite as natural tag in fish)

Dactylopteridae (gunnards)

- J 4 : 326 (guide to early stages of marine fishes)

Darter goby (see Goby, darter)Daubed shanny (see Shanny, daubed)Davis Strait (see Baffin Island and Greenland)Davisia newfoundlandia (myxosporidian)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)

Decapods (Crustacea) (see also specific names)

- J 3 : 123 (food of thorny skate in Nfld area)
 6 : 117 (energy equivalents of marine organisms)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 1 : 51 (food of haddock in Nfld area)
 3 : 67 (food of hooded seals at Greenland)
 6 : 35 (food of wolffishes in Nfld area)
 7 : 45 (food of roughhead grenadier in SA 3)
 53 (food of roundnose grenadier in N Atlantic)
 67 (food of shortfin squid in SA 4 to 6)
 87 (food of hakes and other fish in SA 4-6)
 8 : 39 (food of various fishes on Flemish Cap)
 49 (food of wolffish in NW Atlantic)
 9 : 117 (food of shortfin and longfin squids)
 10 : 47 (food of G. halibut in NW Atlantic)

Decapturus punctatus (see Scad, round)Deepsea angler (see Angler, deepsea)Deepwater flounder (see Flounder, deepwater)Derichthys serpentinus (Derichthyidae)

- J 4 : 53 (guide to early stages of marine fishes)

Derogenes varicus (trematode)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)
 6 : 165 (parasite of A. plaice in Nfld area)

Developmental stages (eggs and larvae)

- J 2 : 73 (eggs of roundnose grenadier)
 3 : 41 (embryology of *Illex* re temperature)
 47 (egg capsules of thorny skate)
 4 : 1 (guide to early stages of marine fishes)
 5 : 1 (eggs and larvae of northern searobin)
 6 : 9 (development of white, red and longfin hakes)
 65 (eggs and larvae of striped searobin)
 87 (fertilization failure in gadids)
 125 (Atlantic herring eggs on a spawning bed)
 7 : 47 (eggs and larvae of spotted wolffish)
 57 (eggs and larvae of Atlantic wolffish)

Diaphus holsti (see Lanternfish)*Diaphus rafinesquii* (see Lanternfish)Diceratiidae

- J 4 : 194 (guide to early stages of marine fishes)

Dichelopandalus leptocerus (see Shrimp)*Diclidophora macruri* (monogenean)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)

Diel effects (see Diurnal effects)*Dinobothrium* sp. (cestodes)

- S 7 : 77 (parasites of shortfin squid)

Diogenichthys atlanticus (see Lanternfish)*Diptherostomum microacetabulum* (trematode)

- J 6 : 165 (parasite of A. plaice in Nfld area)

Diplectrum sp. (see Sand perch)*Diplophos taenia* (see Anglemouth)*Diplospinus multistriatus* (see Cutlassfish)*Diplostomum spathaceum* (trematode)

- S 6 : 63 (use of parasite as natural tag in fish)

Discoecotyle sagittae (trematode)

- S 6 : 63 (use of parasite as natural tag in fish)

Discriminant function analysis

- J 5 : 199 (capelin stocks in Nfld area)
 6 : 1 (morphometrics of golden and beaked redfish)
 S 6 : 57 (use in stock discrimination studies)

Distribution (see also Abundance)

- J 1 : 45 (pollock and sand lance in Bay of Fundy)
 3 : 47 (egg capsules of thorny skates)
 61 (larval herring along Maine coast)
 87 (young haddock around Sable Island)

- 115 (young redfish on Flemish Cap)
 127 (larvae in slope water off Nova Scotia)
 141 (G. halibut in Gulf of St. Lawrence)
 149 (A. plaice in Grand Bank area)
 159 (3 eelpout species in Nfld area)
 5 : 33 (ichthyoplankton in Georges Bank area)
 47 (tag recoveries of spiny dogfish in SA 3)
 55 (tag recoveries of thorny skate in SA 3)
 85 (tag recoveries of G. halibut in NW Atlantic)
 109 (young haddock around Sable Island)
 132 (herring larvae along Maine coast)
 141 (tag recoveries of cod in Nfld area)
 189 (beaked redfishes in Gulf of St. Lawrence)
 6 : 43 (shortfin squid larvae in NW Atlantic)
 141 (extension of *Penilia* eastward on Georges Bank)
 157 (salmon on and east of the Grand Bank)
 7 : 1 (sea scallops in surveys on Georges Bank)
 15 (squids in slope water off Nova Scotia)
 25 (various parasites in NW Atlantic herring)
 47 (spotted wolffish in NW Atlantic)
 57 (Atlantic wolffish in NW Atlantic)
 S 1 : 23 (Atlantic saury in NW Atlantic)
 35 (fishery for wolffishes off W Greenland)
 57 (redfish and cod larvae on Flemish Cap)
 3 : 7 (grenadier, G. halibut and shrimp in SA 0-1)
 29 (3 wolffish species in Nfld area)
 33 (larval herring by depth in Gulf of Maine)
 77 (sand lance and capelin as prey for cod)
 6 : 7 (redfish species in Nfld-Labrador area)
 15 (herring spawning on Georges Bank)
 7 : 53 (roundnose grenadier in N Atlantic)
 8 : 67 (mesopelagic fishes off Nfld)
 77 (haddock year-classes on Georges Bank)
 9 : 11 (shortfin squid on Scotian Shelf, 1980-83)
 27 (squid resources off southeastern USA)
 39 (arrow squids off New Zealand)
 47 (cephalopod stocks re oceanography)
 59 (life cycles of 5 onnastrephid squids)
 77 (squid larvae and juveniles re Gulf Stream)
 93 (squid larvae in NW Atlantic, winter 1982)
 10 : 13 (cod in trawl survey off E Greenland)
 57 (harp and hooded seal catches in Greenland)
 67 (fishery resources in the Gulf of Maine)

Diurnal effects

- J 3 : 87 (juvenile haddock around Sable Island)
 5 : 109 (young haddock around Sable Island)
 7 : 15 (squids in slope water off Nova Scotia)
 35 (trawl geometry re fish sampling)
 S 3 : 33 (larval herring in Gulf of Maine)
 9 : 93 (shortfin squid larvae in Gulf Stream)

Diversity index

- J 5 : 33 (ichthyoplankton in Georges Bank area)

Dogfish (*Etmopterus spinax*)

- S 7 : 53 (predator of grenadiers in N Atlantic)

Dogfish, black (*Centroscyllium fabricii*)

- S 7 : 53 (predator of grenadiers in N Atlantic)

Dogfish, spiny (*Squalus acanthias*)

- J 3 : 29 (environmental preferences on Scotian Shelf)
 5 : 47 (migrations in Nfld area from tagging)
 6 : 117 (energy equivalents of marine organisms)
 S 10 : 67 (fishery resources of Gulf of Maine)

Dolopichthys sp. (Oneirodidae)
 J 4 :200 (guide to early stages of marine fishes)
Dolphin, white-beaked (*Lagenorhynchus albirostris*)
 J 1 : 55 (by-catch during drift-netting for salmon)
Dolphin, white-sided (*Lagenorhynchus acutus*)
 J 6 :117 (energy equivalents of marine organisms)
Dolphinfishes (see Coryphaenidae)
Doryteuthis plei (see Squid, arrow)
Dragonet (*Callionymus agassizi*)
 J 3 :127 (larvae in slope water off Nova Scotia)
Dragonet, lancer (*Callionymus bairdi*)
 J 3 :127 (larvae in slope water off Nova Scotia)
 4 :400 (guide to early stages of marine fishes)
Dragonfish, bighead (Astronesthidae)
 S 8 : 67 (*Borostomias antarcticus* off Nfld)
Dragonfish, scaled (Stomiidae)
 J 4 : 88 (guide to early stages of *Stomias* sp.)
 S 8 : 67 (*Stomias boa ferox* off Nfld)
Dragonfish, smooth (Melanostomiidae)
 J 3 :127 (larvae in slope water off Nova Scotia)
 4 : 90 (guide to early stages of *Bathophilus* sp.,
Eustomias sp., *Plagellostomias boureei*,
Leptostomias gladiator, *Photoneutes*
parvimanus)
Drift-netting (see gillnets)
Driftfish (*Psenes* sp.)
 J 4 :336 (guide to early stages of marine fishes)
Drum, banded (*Larimus fasciatus*)
 J 4 :274 (guide to early stages of marine fishes)
Drum, black (*Pogonias cromis*)
 J 4 :282 (guide to early stages of marine fishes)
Drum, red (*Sciaenops ocellatus*)
 J 4 :282 (guide to early stages of marine fishes)
Drum, spot (*Leiostomus xanthurus*)
 J 4 :276 (guide to early stages of marine fishes)
 6 :117 (energy equivalents of marine organisms)
Drum, star (*Stellifer lanceolatus*)
 J 4 :284 (guide to early stages of marine fishes)
Duckbill eel (see Eel, duckbill)
Dusky flounder (see Flounder, dusky)

Dwarf herring (see Herring, dwarf)
Dynamic topography (see Geostrophic circulation)
Dysommidae (Anguilliformes)
 J 4 : 50 (guide to early stages of marine fishes)

E

East Greenland (see Greenland, East)
Echinarachnidae (see Sand dollars)
Echinoderms (see also more specific names)
 J 3 :123 (food of thorny skate in NW Atlantic)
 6 :117 (energy equivalents of marine organisms)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 1 : 51 (food of haddock in Nfld area)
 6 : 35 (food of wolffishes in Nfld area)
 7 : 45 (food of roughhead grenadier in SA 3)
 87 (food of hakes and other fish in SA 4-6)
 8 : 39 (food of various fishes on Flemish Cap)
 49 (food of wolffish in NW Atlantic)
 10 : 47 (food of G. halibut in NW Atlantic)
Echinorhynchus gadi (acanthocephalan)
 J 2 : 67 (parasite of grenadiers in NW Atlantic)
 6 :165 (parasite of A. plaice in Nfld area)
Echiodon sp. (see Pearlfish)
Eel, American (*Anguilla rostrata*)
 J 4 : 58 (guide to early stages of marine fishes)
 6 : 95 (growth of silver eels on Nfld rivers)
Eel, Atlantic snipe (*Nemichthys scolopaceus*)
 J 4 : 56 (guide to early stages of marine fishes)
Eel, bobtail snipe (*Cyema atrum*)
 J 4 : 49 (guide to early stages of marine fishes)
Eel, conger (*Ariosoma balearium*)
 J 4 : 57 (guide to early stages of marine fishes)
Eel, conger (Bathymyrinae)
 J 4 : 57 (guide to early stages of marine fishes)
Eel, conger (*Conger oceanicus*)
 J 6 :117 (energy equivalents of marine organisms)
Eel, conger (*Gnathopis bathytapes*)
 J 3 :127 (larvae in slope water off Nova Scotia)
Eel, conger (*Kaupichthys hyoprорoides*)
 J 4 : 54 (guide to early stages of marine fishes)
Eel, conger (*Neoconger mucronatus*)
 J 4 : 48 (guide to early stages of marine fishes)

Eel, conger (*Uroconger syringinus*)

J 4 : 57 (guide to early stages of marine fishes)

Eel, duckbill (*Nessorhamphus ingolfianus*)

J 4 : 53 (guide to early stages of marine fishes)

Eel, moray (*Anarchias yoshiae*)

J 4 : 58 (guide to early stages of marine fishes)

Eel, moray (*Gymnathorax nigromarginatus*)

J 4 : 52 (guide to early stages of marine fishes)

Eel, shortnose snipe (*Serrivomer beani*)

J 3 : 123 (food of thorny skates in NW Atlantic)
 4 : 51 (guide to early stages of marine fishes)
 S 7 : 53 (food of roundnose grenadier in N Atlantic)
 8 : 67 (mesopelagic fishes off Nfld)

Eel, snake (*Ophichthus cruentifer*)

J 4 : 60 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)

Eelpout, Arctic (*Lycodes reticulatus*)

J 3 : 159 (distribution in the Nfld area)

Eelpout, Esmark's (*Lycodes esmarki*)

J 3 : 159 (distribution in the Nfld area)

Eelpout, Laval's (*Lycodes lavalaei*)

J 3 : 123 (food of thorny skate in Nfld area)

Eelpout, pale (*Lycodes pallidus*)

S 10 : 47 (food of G. halibut in NW Atlantic)

Eelpout, Vahl's (*Lycodes vahlii*)

J 3 : 29 (environmental preferences on Scotian Shelf)
 159 (distribution in Nfld area)

Eelpouts (*Lycodes*) (general)

S 1 : 51 (food of haddock in Nfld area)

Eggs; Ova (see also Fecundity)

J 1 : 39 (fecundity of G. halibut in Nfld area)
 49 (fecundity of white hake in Div. 4RST)
 2 : 73 (description of roundnose grenadier eggs)
 3 : 41 (embryology of *Illex* re temperature)
 47 (egg capsules of thorny skate)
 57 (reproduction in hooded seals)
 93 (fecundity of sand lance off US coast)
 4 : 1 (guide to early stages of marine fishes)
 5 : 1 (development of northern searobin eggs)
 161 (fecundity of cod in Nfld area)
 6 : 21 (herring spawning in Georges bank area)
 65 (development of striped searobin eggs)
 87 (fertilization failure in gadids)
 125 (herring spawning in south Gulf St. Lawrence)
 149 (fecundity of herring in Gulf of Maine)
 7 : 47 (spotted wolffish in NW Atlantic)
 57 (Atlantic wolffish in NW Atlantic)

S 1 : 23 (saury distribution in NW Atlantic)
 31 (grid and random ichthyoplankton sampling)
 71 (oogenesis and maturity of G. halibut)
 6 : 15 (time of herring spawning on Georges Bank)
 9 : 69 (shortfin squid egg masses in captivity)

Eimeria sardinae (sporozoan)

S 6 : 63 (use of parasite as natural tag in fish)

Elagatis bipinnulatus (see Runner, rainbow)Electrona risso (see Lanternfish)Elopidae (tarpons) (see also specific names)

J 4 : 42 (guide to early stages of marine fishes)

Elops saurus (see Ladyfish)Embryology

J 3 : 41 (development of *Illex* re temperature)
 47 (egg capsules of thorny skate)
 57 (reproduction in hooded seals)
 5 : 1 (development of northern searobin eggs)
 6 : 65 (development of striped searobin eggs)
 S 1 : 71 (oogenesis and maturity in G. halibut)

Enchelyopus cimbrius (see Rockling, fourbeard)Energy equivalents

J 6 : 117 (for many invertebrate and fish species)

Energy metabolism

S 9 : 133 (respiration and swimming of shortfin squid)
 10 : 47 (re feeding of G. halibut in NW Atlantic)

Engraulidae (anchovies) (see also specific names)

J 1 : 101 (recruitment in two S Atlantic stocks)
 4 : 36 (guide to early stages of marine fishes)
 5 : 33 (ichthyoplankton of Georges Bank area)
 6 : 117 (energy equivalents of marine organisms)

Engraulis capensis (see Anchovy, South African)Engraulis eurystole (see Anchovy, silver)Engraulis ringens (see Anchovy, Peruvian)Engyophrys senta (see Flounder, spiny)Enoploteuthidae (Cephalopoda)

J 7 : 15 (occurrence in slope water off Nova Scotia)

Environment (because of the general nature of this heading, reference to many papers that could be listed here are indexed under such headings as Currents, Hydrography, Salinity, Temperature, Winds, etc.)

J 3 : 29 (environmental preferences of fish in SA 4)
 S 4 : 7 (use and nature of remote-sensing data)
 21 (ocean frontal zones by remote-sensing)
 31 (remote-sensing of surface temperatures)
 51 (characteristics of Kuroshio eddies)
 85 (surface circulation by remote-sensing)

- 5 : 7 (20th century marine climatic changes)
- 17 (meteorological conditions over NW Atlantic)
- 33 (weather conditions in SA 5-6, 1970-79)
- 39 (sea ice and icebergs, 1970-79)
- 43 (oceanographic conditions in SA 0-1, 1970-79)
- 51 (oceanographic conditions in SA 2-4, 1970-79)
- 79 (autumn temperatures off Labrador, 1970-80)
- 81 (variability in autumn off Labrador, 1970-79)
- 87 (hydrography of Flemish Cap section, 1970-79)
- 95 (oceanographic conditions in SA 5-6, 1970-79)
- 107 (effects on whales, seals and birds, 1970-79)
- 6 : 39 (oceanographic features re *Illex* movements)
- 7 : 7 (review of conditions in Div. 3M, 1977-82)
- 27 (water circulation in Div. 3M, 1977-82)
- 8 : 83 (factors re fisheries management problems)
- 9 : 47 (oceanography re cephalopod distribution)
- 10 : 21 (review of conditions in NW Atlantic, 1984)
- 35 (effect on yellowtail and A. plaice in SA 3)

Ephippidae (spadefishes)

- J 4 : 286 (guide to early stages of marine fishes)

Epinephelus sp. (see Grouper)

Equipment (see Apparatus)

Esmark's eelpout (see Eelpout, Esmark's)

Etmopterus spinax (see Dogfish)

Etropus microstomus (See Flounder, smallmouth)

Etrumeus sadina (see Herring, Atlantic round)

Etrumeus teres (see Herring, South African round)

Euchaeta sp. (copepod)

- S 7 : 67 (food of shortfin squid in SA 4-6)

Euchirella rostrata (copepod)

- S 7 : 67 (food of shortfin squid in SA 4-6)

Euphausiids (see also specific names)

- J 3 : 123 (food of thorny skate in NW Atlantic)
- 6 : 117 (energy equivalents of marine organisms)
- 7 : 15 (food of squids in slope water in SA 4)
- S 1 : 51 (food of haddock in Nfld area)
- 7 : 53 (food of roundnose grenadier in N Atlantic)
- 67 (food of shortfin squid in SA 4 to 6)
- 87 (food of hakes and other fish in SA 4-6)
- 8 : 33 (feeding spectrum of longfin squid)
- 39 (food of various species in Div. 3M)
- 9 : 117 (food of longfin and shortfin squid)
- 10 : 47 (food of G. halibut in NW Atlantic)

European flying squid (see Squid, European flying)

European plaice (see Plaice, European)

Eurypharyngidae (gulpers)

- J 4 : 48 (guide to early stages of marine fishes)

Eurypharynx pelecanooides (see Gulper)

Eustomias sp. (see Dragonfish, smooth)

Euthynnus alletteratus (see Tuna, little)

Evermannella sp. (Evermannellidae)

- J 4 : 164 (guide to early stages of marine fishes)

Exocoetidae (flyingfishes)

- J 4 : 208 (guide to early stages of marine fishes)

Exocoetus volitans (see Flyingfish, two-wing)

Eyed flounder (see Flounder, eyed)

F

Facciolella sp. (Nettastomatidae) (Anguilliformes)

- J 4 : 55 (guide to early stages of marine fishes)

Factorial analysis

- J 7 : 67 (length frequencies of queen crabs)

Fat content

- S 8 : 57 (tissues of silver and red hakes in SA 6)

Fecundity

- J 1 : 39 (G. halibut in Nfld-Labrador area)
- 49 (white hake in Gulf of St. Lawrence)
- 3 : 47 (egg capsules of thorny skate)
- 57 (reproduction in hooded seals)
- 93 (sand lance in New England area)
- 5 : 161 (variation in cod of Nfld area)
- 6 : 65 (striped searobin off US coast)
- 149 (herring populations in Gulf of Maine)
- 7 : 47 (spotted wolffish in NW Atlantic)
- 57 (Atlantic wolffish in NW Atlantic)

Feather blenny (see Blenny, feather)

Feeding; Food

- J 3 : 93 (study of sand lance in SA 4 to 6)
- 123 (study of thorny skate in NW Atlantic)
- 6 : 157 (Atlantic salmon in Grand Bank area)
- 7 : 15 (squids in slope water off Nova Scotia)
- 47 (study of spotted wolffish in NW Atlantic)
- S 1 : 23 (study of saury in NW Atlantic)
- 41 (cod predation on capelin and sand lance)
- 51 (study of haddock in Nfld area)
- 65 (digestive processes in shortfin squid)
- 3 : 67 (hooded seals in Greenland area)
- 77 (cod feeding on capelin and sand lance)
- 6 : 35 (study of wolffish in Nfld area)
- 7 : 45 (study of roughhead grenadier in SA 3)
- 53 (roundnose grenadier in NW Atlantic)
- 67 (shortfin squid in SA 4 to 6)
- 87 (hakes and other fish in SA 4 to 6)
- 8 : 25 (predation on larvae as a regulatory force)
- 33 (feeding spectrum of longfin squid)
- 39 (food links of various species in Div. 3M)
- 49 (stomach contents of Atlantic wolffish)
- 53 (fish orientation to currents when feeding)
- 9 : 117 (food consumption of *Illex* and *Loligo*)
- 125 (predatory role of *Todarodes sagittatus*)
- 10 : 47 (study of G. halibut in NW Atlantic)

Feelerfish (*Bathypterois* sp.)

J 4 : 98 (guide to early stages of marine fishes)

Filefish (*Monacanthus* sp.)Filefishes (see Balistidae)Fin rays; Fins

J 1 : 7 (meristics of redfishes in Nfld area)
 3 : 93 (meristics of sand lance in SA 4 to 6)
 5 : 1 (development in northern searobin)
 65 (meristics of redfish in NW Atlantic)
 199 (use in discriminating capelin stocks)
 207 (meristics of wolffish in NW Atlantic)
 6 : 9 (development in white, red and longfin hakes)
 65 (development in striped searobin)
 7 : 47 (spotted wolffish in NW Atlantic)

Fish (general) (see also specific names)

J 1 : 101 (recruitment in 18 selected stocks)
 3 : 29 (environmental preferences on Scotian Shelf)
 123 (food of thorny skate in NW Atlantic)
 127 (larvae in slope water off Nova Scotia)
 4 : 1 (guide to early stages of marine fishes)
 5 : 33 (ichthyoplankton of Georges Bank area)
 6 : 117 (energy equivalents of marine organisms)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 1 : 51 (food of haddock in Nfld area)
 3 : 67 (food of hooded seals at Greenland)
 6 : 35 (food of wolffishes in Nfld area)
 57 (stock discrimination in marine fishes)
 63 (parasites on biological tags in fish)
 7 : 45 (food of roughhead grenadier in SA 3)
 53 (food of roundnose grenadier in N Atlantic)
 67 (food of shortfin squid in SA 4 to 6)
 87 (food of hakes and other fish in SA 4 to 6)
 8 : 33 (feeding spectrum of longfin squid)
 39 (food links of various species in Div. 3M)
 49 (food of wolffish in NW Atlantic)
 9 : 117 (food of longfin and shortfin squid)
 125 (food of *Todarodes sagittatus* off Norway)
 10 : 47 (food of G. halibut in NW Atlantic)

Fishing effort

J 1 : 21 (redfish exploitation in SA 5)
 5 : 79 (cod exploitation in Nfld area)
 S 10 : 35 (yellowtail and A. plaice on Grand Bank)
 53 (CPUE for a lobster trap fishery)
 67 (fishery resources of the Gulf of Maine)

Fishing gears (see also names of gears)

J 1 : 81 (estimation of trawl door spread)
 5 : 181 (trawl efficiency in catching flatfish)
 6 : 21 (area prospected by a baited crab trap)
 7 : 35 (trawl geometry and fish sampling)
 S 1 : 7 (case studies of gillnet selectivity)
 2 : 7 (manual on groundfish trawl surveys)

Flagellostomias boureei (see Dragonfish, smooth)Flatfishes (see Flounder, Halibut, Plaice, Sole, Tonguefish)Flemish Cap (Div. 3M)

J 1 : 7 (melanophores in redfish larvae)
 2 : 21 (vertebral numbers in cod)

57 (study on meristics of cod)

67 (parasites of grenadiers)

3 : 47 (egg capsules of thorny skate)
 115 (study of juvenile redfish in winter)
 123 (study of feeding in thorny skate)
 165 (gasbladder muscles in golden redfish)
 5 : 55 (thorny skate migrations from tagging)
 65 (meristics of golden and beaked redfish)
 93 (wolffish migrations from tagging)
 117 (thorns and teeth rows in thorny skate)
 207 (meristic study of A. wolffish)

6 : 1 (morphometric of redfishes)
 9 (study on development of hakes)
 165 (parasite fauna of American plaice)
 7 : 47 (study on biology of spotted wolffish)
 57 (study on biology of Atlantic wolffish)
 S 1 : 47 (drift of satellite-tracked buoys, 1979-80)
 51 (haddock feeding in Nfld area)
 57 (redfish and cod larvae, 1978-79)
 3 : 29 (wolffish distribution in Nfld area)
 4 : 85 (remote-sensing of surface circulation)
 5 : 51 (oceanographic conditions, 1970-79)
 87 (hydrographic conditions, 1970-79)
 6 : 7 (redfish distribution in Nfld area)
 35 (wolffish feeding in Nfld area)
 7 : 27 (water circulation patterns, 1977-82)
 45 (biology of roughhead grenadier)
 8 : 39 (study on food links of various species)
 67 (mesopelagic fishes off Nfld)

Flounder, deepwater (*Monolene sessilicauda*)

J 4 : 366 (guide to early stages of marine fishes)

Flounder, dusky (*Syacium papillosum*)

J 4 : 362 (guide to early stages of marine fishes)

Flounder, eyed (*Bothus ocellatus*)

J 3 : 127 (larvae in slope water off Nova Scotia)
 4 : 366 (guide to early stages of marine fishes)
 5 : 33 (ichthyoplankton of Georges Bank area)

Flounder, fourspot (*Paralichthys oblongus*)

J 4 : 354 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)
 S 7 : 87 (feeding of hakes and other fish in SA 4-6)

Flounder, Gulf Stream (*Citharichthys arcetifrons*)

J 4 : 358 (guide to early stages of marine fishes)
 5 : 33 (ichthyoplankton of Georges Bank area)
 6 : 117 (energy equivalents of marine organisms)

Flounder, sand (*Citharichthys gymnorhinus*)

J 3 : 127 (larvae in slope water off Nova Scotia)

Flounder, sash (*Trichopsetta ventralis*)

J 4 : 370 (guide to early stages of marine fishes)

Flounder, smallmouth (*Etmopterus microstomus*)

J 4 : 360 (guide to early stages of marine fishes)

Flounder, smooth (*Liopsetta putnami*)

J 4 : 382 (guide to early stages of marine fishes)
 6 : 111 (energy equivalents of marine organisms)

Flounder, spiny (*Engyophrys senta*)

J 4 :368 (guide to early stages of marine fishes)

Flounder, spotfin (*Cyclosetta fimbriata*)

J 4 :364 (guide to early stages of marine fishes)

Flounder, summer (*Paralichthys dentatus*)

J 4 :356 (guide to early stages of marine fishes)

Flounder, windowpane (*Scophthalmus aquosus*)

J 4 :352 (guide to early stages of marine fishes)
 5 : 33 (ichthyoplankton of Georges Bank area)
 6 :117 (energy equivalents of marine organisms)

Flounder, winter (*Pseudopleuronectes americanus*)

J 3 : 29 (environmental preferences on Scotian Shelf)
 4 :384 (guide to early stages of marine fishes)
 6 :117 (energy equivalents of marine organisms)
 125 (predator on herring spawning ground)
 S 6 : 63 (parasites as natural tags in fish)
 7 : 87 (feeding of hakes and other fish in SA 4-6)
 10 : 67 (fishery resources of Gulf of Maine)

Flounder, witch (*Glyptocephalus cynoglossus*)

J 3 : 29 (environmental preferences on Scotian Shelf)
 123 (food of thorny skate in Nfld area)
 4 :372 (guide to early stages of marine fishes)
 5 :105 (weight-length relations in SA 2 and 3)
 181 (trawl efficiency in catching flatfishes)
 S 10 : 67 (fishery resources of Gulf of Maine)

Flounder, yellowtail (*Limanda ferruginea*)

J 3 : 29 (environmental preferences on Scotian Shelf)
 4 :380 (guide to early stages of marine fishes)
 6 :117 (energy equivalents of marine organisms)
 S 7 : 87 (feeding of hakes and other fish in SA 4-6)
 10 : 35 (dynamics of stock on the Grand Bank)
 67 (fishery resources of Gulf of Maine)

Flyingfish, small-wing (*Oxyporhamphus micropterus*)

J 4 :208 (guide to early stages of marine fishes)

Flyingfish, spotfin (*Cypselurus furcatus*)

J 4 :208 (guide to early stages of marine fishes)

Flyingfish, two-wing (*Exocoetus volitans*)

J 4 :208 (guide to early stages of marine fishes)

Food (see Feeding)Footballfish, Atlantic (*Himantolophus groenlandicus*)

J 4 :198 (guide to early stages of marine fishes)

Fourbeard rockling (see Rockling, fourbeard)Fourspot flounder (see Flounder, fourspot)Fratereula arctica (see Puffin, Atlantic)Frigate mackerel (see Mackerel, frigate)Frogfish (*Antennarius* sp.)

J 3 :127 (larvae in slope water off Nova Scotia)

Front area (pertains to seal-hunting off Labrador and eastern Newfoundland)

S 3 : 53 (age composition of hooded seal catches)

Frostfish (*Benthodesmus simonyi*)

J 3 :127 (larvae in slope water off Nova Scotia)

Fucus sp. (see Rockweeds)Fulmar petrel (see Petrel, fulmar)Fulmarus glacialis (see Petrel, fulmar)**G**Gadidae (general only; see also specific names)

J 3 :123 (food of thorny skate in NW Atlantic)
 4 :168 (guide to early stages of marine fishes)
 5 : 33 (ichthyoplankton of Georges Bank area)
 6 : 87 (fertilization failure in gadids)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 3 : 67 (food of hooded seals at Greenland)
 6 : 35 (food of wolffishes in Nfld area)
 7 : 67 (food of shortfin squid in SA 4 to 6)
 87 (feeding of hakes and other fish in SA 4-6)

Gadus merlangus (see Whiting)Gadus morhua (see Cod, Atlantic)Gaidropsarus ensis (see Rockling, threebeard)Galiteuthis armata (see Squid)Gammarids (amphipods)

S 1 : 51 (food of haddock in Nfld area)
 6 : 35 (food of wolffishes in Nfld area)
 7 : 67 (food of shortfin squid in SA 4 to 6)
 87 (food of hakes and other fish in SA 4-6)
 8 : 33 (food of longfin squid in SA 5 and 6)
 39 (food of various species on Flemish Cap)
 10 : 47 (food of G. halibut in NW Atlantic)

Gasbladder muscle (see Muscle, gasbladder)Gaspereau (see Alewife)Gastropods (molluscs) (see also specific names)

J 3 :123 (food of thorny skate in NW Atlantic)
 6 :117 (energy equivalents of marine organisms)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 1 : 51 (food of haddock in Nfld area)
 6 : 35 (food of wolffishes in Nfld area)
 7 : 67 (food of shortfin squid in SA 4 to 6)
 87 (food of hakes and other fish in SA 4-6)
 8 : 39 (food of various species on Flemish Cap)
 49 (food of wolffish in NW Atlantic)
 9 :125 (food of *Todarodes sagittatus* off Norway)
 10 : 47 (food of G. halibut in NW Atlantic)
 93 (literature review for Nfld area)

Gempylidae (snake mackerels) (see also specific names)

- J 3 :127 (larvae in slope water off Nova Scotia)
 4 :302 (guide to early stages of marine fishes)

Gempylus serpens (see Snake mackerel)General production model (see Production model)Genetics

- J 3 :169 (study of redfish species off Nfld)
 S 6 : 73 (study of mussel populations in SA 4)

Gennades sp. (see Shrimp)Genolinea laticauda (trematode)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)
 6 :165 (parasite of A. plaice in Nfld area)

Georges Bank (Division 5Z)

- J 1 : 21 (redfish exploitation in SA 5)
 110 (recruitment in 4 major fish stocks)
 2 : 13 (age validation in redfish)
 21 (vertebral numbers in cod)
 47 (copepod length-weight relations)
 3 : 1 (assessment of haddock fishery)
 47 (egg capsules of thorny skate)
 93 (biological study of sand lance)
 123 (feeding study of thorny skate)
 5 : 33 (ichthyoplankton distribution in SA 5)
 6 : 21 (herring spawning and mortality of larvae)
 117 (energy equivalents of marine organisms)
 141 (distributional extension of *Penilia*)
 7 : 1 (USA and Canadian scallop surveys)
 S 1 : 23 (distribution of Atlantic saury)
 31 (grid and random plankton sampling)
 3 : 47 (age and size of spiny dogfish)
 4 : 21 (ocean fronts off US coast)
 5 : 33 (meteorological conditions, 1970-79)
 95 (oceanographic conditions, 1970-79)
 6 : 15 (time and location of herring spawning)
 39 (oceanography re *Illex* spawning)
 7 : 67 (feeding of shortfin squid in SA 4 to 6)
 87 (feeding of hakes and other fish in SA 4-6)
 8 : 33 (feeding spectrum of longfin squid)
 53 (fish orientation to currents in feeding)
 77 (abundance of specific haddock year-classes)
 9 :117 (food consumption of *Illex* and *Loligo*)
 10 : 67 (fishery resources of Gulf of Maine area)

Geostrophic circulation (water)

- S 5 : 43 (oceanographic features in SA 1)
 81 (variation in autumn off Labrador)
 7 : 27 (water movements on Flemish Cap)

Gigantactis sp. (Gigantactinidae)

- J 4 :202 (guide to early stages of marine fishes)

Gillnets

- J 1 : 55 (drift-netting for salmon in Irminger Sea)
 6 :157 (drift-netting for salmon in Grand Bank area)
 S 1 : 7 (analysis of selectivity data)

Gillrakers (meristics)

- J 5 :199 (meristics of capelin in Nfld area)
 6 : 9 (development of white, red and longfin hakes)

Gilquinia squali (cestode)

- S 6 : 63 (parasites as biological tags in fish)

Glacier lanternfish (see Lanternfish, glacier)Globicephala melaene (see Whale, pilot)Glomeracirrus macrouri (trematode)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)

Glugea stephani (microsporan)

- S 6 : 63 (use of parasite as natural tag in fish)

Glyptocephalus cynoglossus (see Flounder, witch)Gnathophis bathytos (see Eel, conger)Gobiidae (gobies) (see also specific names)

- J 3 :127 (larvae in slope water off Nova Scotia)
 4 :300 (guide to early stages of marine fishes)
 5 : 33 (ichthyoplankton of Georges Bank area)

Gobionellus boleosoma (see Goby, darter)Gobiosoma bosci (see Goby, naked)Goby, darter (*Gobionellus boleosoma*)

- J 4 :300 (guide to early stages of marine fishes)

Goby, naked (*Gobiosoma bosci*)

- J 4 :300 (guide to early stages of marine fishes)

Golden redfish (see Redfish, golden)Gonatidae (Cephalopoda)

- J 7 : 15 (occurrence in slope water off Nova Scotia)
 S 10 : 47 (food of G. halibut in NW Atlantic)

Gonatus fabricei (see Squid, Arctic)Gonichthys coccoi (see Lanternfish, Cocco's)Gonioplectrus hispanus (see Spanish flag)Gonocera crassa (trematode)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)

Gonocera macroformis (trematode)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)

Gonocera macrouri (trematode)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)

Gonostoma elongatum (see Anglemouth, longtooth)Gonostoma sp. (see Anglemouth)Gonostomatidae (anglemouths) (see also specific names)

- J 3 :127 (larvae in slope water off Nova Scotia)
 4 : 72 (guide to early stages of marine fishes)
 S 7 : 67 (food of shortfin squid in SA 4 to 6)

Goosefish (see Angler, American)

Gorgonocephalus sp. (see Brittle star)

Grammistidae

J 4 : 232 (guide to early stages of marine fishes)

Grand Bank (Divisions 3LNQ)

- J 1 : 7 (melanophores in redfish larvae)
- 2 : 7 (gasbladder muscles in redfish species)
- 21 (vertebral numbers in Atlantic cod)
- 67 (study on parasites of grenadiers)
- 3 : 47 (egg capsules of thorny skates)
- 105 (growth patterns in capelin)
- 123 (study on feeding of thorny skate)
- 149 (distribution of American plaice)
- 159 (distribution of 3 eelpout species)
- 5 : 55 (migration of thorny skate from tagging)
- 65 (meristics of golden and beaked redfish)
- 79 (inshore exploitation of cod in SA 2 and 3)
- 85 (migrations of G. halibut from tagging)
- 95 (migrations of wolffishes from tagging)
- 141 (discrimination of east Nfld cod stocks)
- 161 (variation in fecundity of cod)
- 171 (thorns and teeth rows in thorny skates)
- 199 (discrimination of Nfld capelin stocks)
- 207 (study on meristics of A. wolffish)
- 6 : 9 (development and osteology of hakes)
- 43 (shortfin squid larvae south of Grand Bank)
- 157 (salmon abundance on and east of the bank)
- 165 (parasitic fauna of American plaice)
- 7 : 47 (study on biology of spotted wolffish)
- 57 (study on biology of Atlantic wolffish)
- S 1 : 23 (distribution of saury in NW Atlantic)
- 43 (cod predation on capelin and sand lance)
- 51 (study on feeding of haddock)
- 77 (age determination in east Nfld cod)
- 3 : 29 (distribution of 3 wolffish species)
- 77 (cod feeding on capelin and sand lance)
- 5 : 39 (sea ice and icebergs, 1970-79)
- 51 (oceanographic conditions, 1970-79)
- 87 (hydrographic anomalies, 1970-79)
- 6 : 7 (redfish species in Nfld-Labrador area)
- 35 (feeding of wolffishes in NW Atlantic)
- 7 : 45 (biology and feeding of roughhead grenadier)
- 53 (feeding study of roundnose grenadier)
- 8 : 49 (stomach contents of Atlantic wolffish)
- 67 (distribution of mesopelagic fishes)
- 10 : 35 (dynamics of yellowtail and A. plaice)
- 47 (feeding study of G. halibut)
- 93 (literature review of molluscs in Nfld area)

Gray weakfish (see Weakfish, gray)

Great barracuda (see Barracuda, great)

Greater amberjack (see Amberjack, great)

Greenland, East

- J 1 : 55 (recaptures of tagged Atlantic salmon)
- 3 : 57 (reproduction of hooded seals)
- S 3 : 67 (study of hooded seals, 1970-80)
- 10 : 13 (trawl survey to estimate cod stock)
- 57 (updated catches of harp and hooded seals)

Greenland, West (Subarea 1)

- J 2 : 21 (vertebral numbers in Atlantic cod)
- 3 : 47 (egg capsules of thorny skate)
- 57 (reproduction in hooded seals)

- 123 (study on feeding of thorny skate)
- 5 : 65 (meristics of golden and beaked redfish)
- 85 (migration of G. halibut from tagging)
- 171 (thorns and teeth rows in thorny skate)
- 207 (meristic study of Atlantic wolffish)
- 7 : 47 (study on biology of spotted wolffish)
- 57 (study on biology of Atlantic wolffish)
- S 1 : 35 (biology and fishery of wolffishes)
- 3 : 7 (grenadier, G. halibut and shrimp fisheries)
- 53 (age structure of harp seals, 1952-80)
- 67 (age structure of hooded seals, 1970-80)
- 5 : 7 (20th century marine climatic changes)
- 39 (sea ice and icebergs, 1970-79)
- 43 (oceanographic conditions, 1970-79)
- 7 : 39 (temperatures and salinities, 1970-82)
- 53 (feeding study on roundnose grenadier)
- 8 : 49 (stomach contents of Atlantic wolffish)
- 10 : 7 (prediction of cod year-classes)
- 47 (feeding study on G. halibut)
- 57 (catches of harp and hooded seals)

Greenland halibut (see Halibut, Greenland)

Grenadier (*Chalinura brevibarbis*)

J 2 : 67 (specimen caught in Flemish Cap area)

Grenadier, common (*Nezumia bairdii*)

- J 2 : 53 (proposed partial length measurement)
- 67 (parasites of macrourids in NW Atlantic)
- 3 : 29 (environmental preferences on Scotian Shelf)
- 123 (food of thorny skate in NW Atlantic)

Grenadier, roughhead (*Macrourus berglax*)

- J 2 : 53 (proposed partial length measurement)
- 67 (parasites of macrourids in NW Atlantic)
- S 7 : 45 (biology and feeding in Grand Bank area)

Grenadier, roundnose (*Coryphaenoides rupestris*)

- J 2 : 53 (proposed partial length measurement)
- 67 (parasites of macrourids in NW Atlantic)
- 73 (description of eggs from NE Atlantic)
- 4 : 396 (guide to early stages of marine fishes)
- S 3 : 7 (biology and fishery in Davis Strait)
- 7 : 57 (study of feeding in N Atlantic)
- 8 : 61 (measurements of total and preanal length)
- 10 : 47 (food of G. halibut in NW Atlantic)

Grenadiers (Macrouridae) (general)

- J 3 : 127 (larvae in slope water off Nova Scotia)
- 4 : 168 (guide to early stages of marine fishes)
- S 7 : 45 (food of roughhead grenadier in SA 3)
- 67 (food of shortfin squid in SA 4 to 6)

Greysole (see Flounder, witch)

Grillotia erinaceus (cestode)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)
- 6 : 165 (parasite of A. plaice in Nfld area)
- 7 : 25 (parasite as biological tag of herring)
- S 6 : 63 (parasites as biological tags in fish)

Groundfish (see common names of species)

Grouper (*Epinephelus* sp.)

J 4 : 233 (guide to early stages of marine fishes)

Growth

- J 1 : 21 (redfish in Georges Bank area)
 49 (white hake in Gulf of St. Lawrence)
 65 (silver hake on Scotian Shelf)
 2 : 13 (re age validation of redfish in SA 5)
 3 : 1 (haddock in Georges Bank area)
 105 (capelin stocks in Nfld area)
 141 (G. halibut in Gulf of St. Lawrence)
 5 : 103 (compensatory growth in bay scallops)
 132 (larval herring in Gulf of Maine)
 6 : 95 (silver eels in Nfld rivers)
 S 1 : 23 (Atlantic saury in NW Atlantic)
 35 (wolffishes off West Greenland)
 3 : 7 (grenadier, G. halibut and shrimp in SA 0+1)
 39 (yield analysis of shortfin squid)
 47 (age and size of spiny dogfish)
 6 : 73 (mussel populations in SA 4)
 79 (age determination of northern shrimp)
 7 : 45 (roughhead grenadier of Grand Bank area)
 9 : 39 (arrow squids off New Zealand)
 59 (life cycles of 5 ommastrephid squids)
 101 (re age determination of shortfin squid)
 139 (re life history of myopsids and sepiolids)
 143 (population dynamics of short-lived species)
 10 : 47 (G. halibut in NW Atlantic)

Grunts (see Haemulidae)Guillemots (Uria sp.)

- J 1 : 55 (by-catch in salmon drift-nets)

Gulf of Maine (Division 5Y)

- J 1 : 21 (redfish exploitation in SA 5)
 45 (pollock and sand lance in Bay of Fundy)
 2 : 13 (age validation in redfish)
 47 (length-weight relations for copepods)
 3 : 1 (assessment of SA 5 haddock fishery)
 61 (larval herring production, 1964-78)
 93 (biological study of sand lance)
 5 : 71 (herring migrations from tagging)
 132 (movements of larval herring)
 6 : 117 (energy equivalents of marine organisms)
 149 (fecundity estimates for herring)
 7 : 25 (parasites as natural tags in herring)
 43 (movements of age 1 herring from tagging)
 S 3 : 33 (depth distribution of larval herring)
 5 : 33 (meteorological conditions, 1970-79)
 95 (oceanographic conditions, 1970-79)
 9 : 117 (food consumption of *Illex* and *Loligo*)
 10 : 67 (distribution of fishery resources)

Gulf of Mexico

- S 4 : 53 (satellite observations on phytoplankton)
 9 : 27 (squid resources of southeastern USA)

Gulf of St. Lawrence (Divisions 4RST)

- J 1 : 39 (fecundity of Greenland halibut)
 49 (study on biology of white hake)
 2 : 21 (vertebral numbers in cod)
 61 (records of mature shortfin squid)
 3 : 47 (egg capsules of thorny skate)
 93 (biology of sand lance in SA 4 to 6)
 123 (feeding of thorny skate)
 144 (dynamics of G. halibut populations)
 5 : 17 (migrations of herring from tagging)
 23 (vertebral numbers in young cod)
 47 (migrations of spiny dogfish from tagging)

- 55 (migrations of thorny skate from tagging)
 65 (meristics of golden and beaked redfish)
 99 (redfish discarding in shrimp fishery)
 107 (weight-length relations for G. halibut)
 171 (thorns and teeth rows in thorny skate)
 181 (trawl efficiency in catching flatfishes)
 189 (redfish distribution, 1976-81)
 199 (discrimination of capelin stocks)
 207 (meristics of Atlantic wolffish stocks)
 6 : 9 (study on development of hakes)
 37 (area prospected by a baited crab trap)
 125 (fishery and spawning of herring in spring)
 7 : 47 (study on biology of spotted wolffish)
 57 (study on biology of Atlantic wolffish)
 67 (changes in size of snow crabs)
 S 3 : 53 (age structure of harp seals, 1952-80)
 5 : 7 (20th century marine climatic changes)
 51 (oceanographic conditions, 1970-79)
 107 (some biological correlates, 1970-79)
 6 : 7 (redfishes in Nfld-Labrador area)
 73 (genetics of mussel populations)
 8 : 49 (feeding of Atlantic wolffish)
 10 : 93 (literature review of molluscs in Nfld area)

Gulf Stream

- J 3 : 127 (fish larvae in slope water off Nova Scotia)
 6 : 43 (occurrence of shortfin squid larvae)
 S 4 : 7 (remote-sensing via satellites)
 21 (satellite imagery of ocean fronts)
 6 : 39 (oceanography re squid distribution)
 7 : 7 (review of environmental conditions, 1982)
 8 : 7 (review of environmental conditions, 1983)
 9 : 47 (squid distribution re oceanography)
 59 (life cycle of *Illex illecebrosus*)
 69 (shortfin squid egg masses re oceanography)
 77 (distribution of *Illex* larvae and juveniles)
 93 (distribution of shortfin squid larvae)
 10 : 21 (review of environmental conditions, 1984)

Gulf Stream flounder (see Flounder, Gulf Stream)Gulper (Eurypharynx pelicanoides)

- J 4 : 48 (guide to early stages of marine fishes)

Gunnel, rock (Pholis gunnellus)

- J 4 : 294 (guide to early stages of marine fishes)

Gymnothorax nigromarginatus (see Eel, moray)**H**Haddock (Melanogrammus aeglefinus)

- J 1 : 10 (recruitment in N Atlantic populations)
 3 : 1 (assessment of fishery in SA 5)
 29 (environmental preferences on Scotian Shelf)
 87 (juvenile distribution around Sable I.)
 123 (food of thorny skate in Nfld area)
 4 : 182 (guide to early stages of marine fishes)
 5 : 33 (ichthyoplankton of Georges Bank area)
 109 (abundance of juveniles around Sable I.)
 213 (meristics of young from Scotian Shelf)
 6 : 117 (energy equivalents of marine organisms)
 7 : 35 (trawl geometry and fish sampling)
 47 (food of spotted wolffish in NW Atlantic)
 S 1 : 51 (aspects of feeding in Nfld area)
 6 : 63 (use of parasites as natural tags)

- 7 : 67 (food of shortfin squid in SA 4 to 6)
- 87 (feeding of hakes and other fish in SA 4-6)
- 8 : 77 (specific year-classes on Georges Bank)
- 9 : 125 (food of *Todarodes sagittatus* off Norway)
- 10 : 67 (fishery resources of Gulf of Maine)

Haemulidae (grunts)

- J 4 : 262 (guide to early stages of marine fishes)

Hake, longfin (*Phycis chesteri*)

- J 4 : 174 (guide to early stages of marine fishes)
- 6 : 9 (development and osteology)

Hake, offshore (*Merluccius albidus*)

- J 3 : 29 (environmental preferences on Scotian Shelf)
- 4 : 184 (guide to early stages of marine fishes)

Hake, red (*Urophycis chuss*)

- J 3 : 29 (environmental preferences on Scotian Shelf)
- 4 : 174 (guide to early stages of marine fishes)
- 6 : 9 (development and osteology)
- 117 (energy equivalents of marine organisms)
- S 7 : 87 (feeding of hakes and other fish in SA 4-6)
- 8 : 57 (fat content of hakes in SA 6, 1978)
- 10 : 67 (fishery resources of Gulf of Maine)

Hake, silver (*Merluccius bilinearis*)

- J 1 : 65 (age determination from otoliths)
- 101 (recruitment to Georges Bank stock)
- 3 : 29 (environmental preferences on Scotian Shelf)
- 4 : 186 (guide to early stages of marine fishes)
- 6 : 117 (energy equivalents of marine organisms)
- S 7 : 67 (food of shortfin squid in NW Atlantic)
- 87 (feeding of hakes and other fish in SA 4-6)
- 8 : 53 (observations on orientation in currents)
- 57 (fat content of hakes in SA 6, 1978)
- 10 : 67 (fishery resources of Gulf of Maine)

Hake, spotted (*Urophycis regius*)

- J 4 : 176 (guide to early stages of marine fishes)
- 6 : 117 (energy equivalents of marine organisms)

Hake, white (*Urophycis tenuis*)

- J 1 : 49 (biology of Gulf of St. Lawrence population)
- 3 : 29 (environmental preferences on Scotian Shelf)
- 123 (food of thorny skate in Nfld area)
- 4 : 174 (guide to early stages of marine fishes)
- 6 : 9 (development and osteology)
- 117 (energy equivalents of marine organisms)
- S 7 : 87 (feeding of hakes and other fish in SA 4-6)
- 10 : 67 (fishery resources of Gulf of Maine)

Hakes (general)

- S 7 : 87 (feeding of hakes and other fish in SA 4-6)
- 8 : 53 (observations on orientation in currents)

Halfbeak, balao (*Hemiramphus balao*)

- J 4 : 210 (guide to early stages of marine fishes)

Halfbeak, ballyhoo (*Hemiramphus brasiliensis*)

- J 4 : 210 (guide to early stages of marine fishes)

Halfbeak, common (*Hyporhamphus unifasciatus*)

- J 4 : 210 (guide to early stages of marine fishes)

Halibut, Atlantic (*Hippoglossus hippoglossus*)

- J 3 : 29 (environmental preferences on Scotian Shelf)
- 4 : 376 (guide to early stages of marine fishes)
- S 10 : 67 (fishery resources of Gulf of Maine)

Halibut, Greenland (*Reinhardtius hippoglossoides*)

- J 1 : 39 (fecundity in Nfld-Labrador area)
- 3 : 29 (environmental preferences on Scotian Shelf)
- 123 (food of thorny skate in Nfld area)
- 141 (distribution in Gulf of St. Lawrence)
- 4 : 378 (guide to early stages of marine fishes)
- 5 : 85 (migrations in NW Atlantic from tagging)
- 107 (length-weight relations in SA 2 to 4)
- 181 (catching efficiency of young in trawls)
- S 1 : 71 (study on oogenesis and sexual maturity)
- 3 : 7 (ecology and fishery in Davis Strait)
- 67 (food of hooded seals at Greenland)
- 10 : 67 (fishery resources of Gulf of Maine)

Harengula jaguana (see Sardine)

Harp seal (see Seal, harp)

Harvestfish, northern (*Pephrilus paru*)

- J 4 : 344 (guide to early stages of marine fishes)

Harvestfish, southern (*Pephrilus alepidotus*)

- J 4 : 344 (guide to early stages of marine fishes)
- 6 : 117 (energy equivalents of marine organisms)

Hatchetfish (*Argyropelecus hemingymmus*)

- J 4 : 86 (guide to early stages of marine fishes)

Hatchetfish, transparent (*Sternoptyx diaphana*)

- J 3 : 127 (larvae in slope water off Nova Scotia)

Heart urchins (see Urchins, heart)

Helicocranchia pfefferi (see Squid)

Helicolenus dactylopterus (see Redfish, black-bellied)

Hemiramphidae (halfbeaks) (see also specific names)

- J 4 : 262 (guide to early stages of marine fishes)

Hemiramphus balao (see Halfbeak, balao)

Hemiramphus brasiliensis (see Halfbeak, ballyhoo)

Hemitripterus americanus (see Sea raven)

Hemiurus levinsoni (trematode)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)

Hermit crab (see Crab, hermit)

Herring, Atlantic (*Clupea harengus*)

- J 1 : 101 (recruitment in N Atlantic stocks)

- 3 : 29 (environmental preferences on Scotian Shelf)
- 61 (larval production off Maine, 1964-78)
- 123 (food of thorny skate in Nfld area)
- 4 : 26 (guide to early stages of marine fishes)
- 5 : 17 (migrations from tagging off west Nfld)
- 33 (ichthyoplankton of Georges Bank area)
- 71 (migrations from tagging along Maine)
- 121 (migrations from tagging off east Nfld)
- 132 (larval movements along Maine coast)
- 6 : 21 (spawning in Georges Bank area, 1971-78)
- 117 (energy equivalents of marine organisms)
- 125 (spawning in southern Gulf St. Lawrence)
- 149 (fecundity of Gulf of Maine populations)
- 7 : 25 (use of parasites as natural tags in fish)
- 43 (movements of age 1 fish in Gulf of Maine)
- S 1 : 7 (methods of estimating gillnet selectivity)
- 3 : 33 (depth distribution of larvae off Maine)
- 6 : 15 (time and area of spawning in SA 5)
- 63 (use of parasites as natural tags in fish)
- 7 : 87 (food of hakes and other fish in SA 4 to 6)
- 8 : 25 (predation on larvae as a regulatory force)
- 9 : 125 (food of *Todarodes sagittatus* off Norway)
- 10 : 67 (fishery resources of Gulf of Maine)

Herring, Atlantic round (*Etrumeus sadina*)

- J 6 : 117 (energy equivalents of marine organisms)
- S 7 : 87 (feeding of hakes and other fish in SA 4-6)

Herring, Atlantic thread (*Opisthonema oglinum*)

- J 4 : 32 (guide to early stages of marine fishes)
- 6 : 117 (energy equivalents of marine organisms)

Herring, blueback (*Alosa aestivalis*)

- J 6 : 117 (energy equivalents of marine organisms)
- S 7 : 87 (feeding of hakes and other fish in SA 4-6)

Herring, dwarf (*Jenkinsai lamprotaenia*)

- J 4 : 30 (guide to early stages of marine fishes)

Herring, Pacific (*Clupea pallasii*)

- S 6 : 63 (use of parasites as natural tags in fish)

Herring, South African round (*Etrumeus teres*)

- J 1 : 101 (recruitment in SE Atlantic stocks)

Heterenchelyidae (Anguilliformes)

- J 4 : 55 (guide to early stages of marine fishes)

Heterocongrinae (Anguilliformes)

- J 4 : 57 (guide to early stages of marine fishes)

Hickory skad (see Shad, hickory)

Himantolophidae (footballfishes)

- J 4 : 198 (guide to early stages of marine fishes)

Himantolophus groenlandicus (see Footballfish, Atlantic)

Hippoglossina oblonga (see Paralichthys oblongus)

Hippoglossoides platessoides (see Plaice, American)

Hippoglossus hippoglossus (see Halibut, Atlantic)

Histioteuthidae (cephalopods)

- J 7 : 15 (occurrence in slope water off Nova Scotia)
- S 7 : 67 (food of shortfin squid in SA 4 to 6)

Histioteuthis bonnellii (see Squid)

Histology

- S 1 : 71 (oogenesis and maturity of G. halibut)

Histrio histrio (see Sargassumfish)

Hogchoker (*Trinectes maculatus*)

- J 4 : 386 (guide to early stages of marine fishes)

Holocentridae (Squirrelfishes)

- J 4 : 326 (guide to early stages of marine fishes)

Holothuroidea (see Sea cucumbers)

Homarus americanus (see Lobster, American)

Hooded seal (see Seal, hooded)

Horned lanternfish (see Lanternfish, horned)

Hyas sp. (see Crab, toad)

Hydrography (see also under more specific names)

- J 3 : 29 (environmental preferences on Scotian Shelf)
- 5 : 33 (re ichthyoplankton on Georges Bank)
- 189 (re redfish in Gulf of St. Lawrence)
- 6 : 43 (re shortfin squid larvae in NW Atlantic)
- 141 (re distribution of the cladoceran *Penilia*)
- 157 (re Atlantic salmon in Grand Bank area)
- 7 : 15 (effect on squid movements in slope water)
- S 1 : 23 (re distribution of Atlantic saury)
- 3 : 29 (re wolffish distribution in Nfld area)
- 4 : 7 (oceanography by remote-sensing)
- 21 (ocean fronts off USA by remote-sensing)
- 31 (surface temperatures by remote-sensing)
- 41 (remote-sensing studies in Japan)
- 53 (remote-sensing of phytoplankton)
- 5 : 7 (20th century marine climatic changes)
- 43 (conditions in Davis Strait, 1970-79)
- 51 (conditions in Nfld-Labrador area, 1970-79)
- 79 (autumn conditions off Labrador, 1970-79)
- 81 (variability off southern Labrador)
- 87 (anomalies on Flemish Cap section, 1970-79)
- 95 (conditions off US coast, 1970-79)
- 6 : 15 (re herring spawning on Georges Bank)
- 39 (re shortfin squid larvae in SA 4 to 6)
- 7 : 7 (review of environmental conditions, 1982)
- 27 (water circulation on Flemish Cap, 1977-82)
- 39 (conditions off West Greenland, 1970-79)
- 8 : 7 (review of environmental conditions, 1983)
- 21 (surface temperatures in SA 2 to 6)
- 9 : 11 (re *Illex* distribution on Scotian Shelf)
- 27 (re squid resources of southeast USA)
- 47 (re distribution of cephalopods)
- 69 (re potential distribution of squid eggs)
- 77 (distribution of squid larvae and juveniles)
- 93 (re *Illex* distribution in NW Atlantic)
- 10 : 7 (re cod year-classes off W Greenland)
- 21 (review of environmental conditions, 1984)

Hydrozoa (Cnidaria)

- J 3 : 93 (food of sand lance in SA 5 and 6)
 6 : 117 (energy equivalents of marine organisms)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 6 : 35 (food of wolffishes in Nfld area)
 8 : 25 (predator on fish larvae in Norway)

Hygophum benoiti (see Lanternfish, Benoit's)

Hygophum hygomii (see Lanternfish)

Hygophum macrochir (see Lanternfish)

Hygophum reinhardtii (see Lanternfish)

Hygophum taaningi (see Lanternfish)

Hyperiid (amphipods)

- S 1 : 51 (food of haddock in Nfld area)
 7 : 53 (food of roundnose grenadier in NW Atlantic)
 67 (food of shortfin squid in SA 4 to 6)
 8 : 33 (food of longfin squid in SA 5 and 6)
 9 : 125 (food of shortfin and longfin squids)

Hypleurochilus geminatus (see Blenny, crested)

Hyporhamphus unifasciatus (see Halfbeak, common)

Hypsoblennius hentzi (see Blenny, feather)

Hysterothylacium aduncum (nematode)

- J 7 : 25 (parasite as natural tag in herring)

IIce; Icebergs

- S 5 : 7 (20th century marine climatic changes)
 17 (meteorological conditions, 1970-79)
 39 (distribution in Nfld area, 1970-79)
 109 (effect on seals, whales and birds, 1970-79)
 7 : 7 (review of environmental conditions, 1982)
 8 : 7 (review of environmental conditions, 1983)
 10 : 21 (review of environmental conditions, 1984)

Iceland area (Northeast Atlantic)

- J 5 : 171 (meristic variation in thorny skates)
 S 5 : 7 (20th century marine climatic changes)
 7 : 53 (study on feeding of roundnose grenadier)

Iceland scallop (see Scallop, Iceland)

Ichthyococcus ovatus (see Anglemouth)

Ichthyoplankton (fish eggs and larvae)

- J 1 : 45 (pollock and sand lance in Bay of Fundy)
 3 : 127 (larvae in slope water off Nova Scotia)
 4 : 1 (guide to early stages of marine fishes)
 5 : 1 (study on development of northern searobin)
 33 (distribution in Georges Bank area)
 6 : 21 (larval herring surveys of Georges Bank)
 65 (study on development of striped searobin)
 S 1 : 31 (grid and random sampling with bongos)
 3 : 33 (depth distribution of larval herring)
 6 : 15 (larval herring on Georges Bank)
 10 : 7 (larval cod index for W Greenland)

Idiacanthidae (sawtailfishes)

- J 4 : 92 (guide to early stages of marine fishes)

Idiacanthus fasciola (see Sawtailfish, ribbon)

Illex argentinus (see Squid, Argentinian shortfin)

Illex coindetii (see Squid, southern shortfin)

Illex illecebrosus (see Squid, shortfin)

Illex oxygonius (see Squid, sharptail shortfin)

Inshore lizardfish (see Lizardfish, inshore)

Irish moss (*Chondrus crispus*)

- J 6 : 125 (macrophyte on herring spawning beds)

Irminger Sea (North Atlantic)

- J 1 : 55 (drift-netting for Atlantic salmon)

Isopods

- J 3 : 93 (food of sand lance off US coast)
 123 (food of thorny skate in NW Atlantic)
 S 1 : 51 (food of haddock in Nfld area)
 6 : 35 (food of wolffishes in Nfld area)
 7 : 53 (food of roundnose grenadier in N Atlantic)

Istiophoridae (billfishes)

- J 4 : 326 (guide to early stages of marine fishes)

Istiophorus sp. (see Sailfish)

Isurus paucus (see Shark, mako)

J

Jack, crevalle (*Caranx hippos*)

- J 4 : 244 (guide to early stages of marine fishes)

Jack, yellow (*Caranx bartholomaei*)

- J 4 : 244 (guide to early stages of marine fishes)

Japanese common squid (see Squid, Japanese common)

Jellyfishes (see Scyphozoa)

Jenkinsia lamprotaenia (see Herring, dwarf)

Jewel lanternfish (see Lanternfish, jewel)

K

Katsuwonus pelamis (see Tuna, skipjack)

Kaupichthys hyopronoides (see Eel, conger)

Kelp (*Laminaria* sp.)

- S 5 : 101 (wide scale destruction by sea urchins)

King mackerel (see Mackerel, king)

Kingfish (*Menticirrhus* sp.)

J 4 : 280 (guide to early stages of marine fishes)

Kudoa clupeiidae (myxosporidian)

S 6 : 63 (parasite as a natural tag in fish)

Kuroshio Current (North Pacific)

S 4 : 41 (remote-sensing studies in Japan)
 51 (features of eddies by remote-sensing)
 9 : 47 (re migrations of *Todarodes pacificus*)
 59 (re life cycle of *Todarodes pacificus*)

LLabidocera aestiva (copepod)

J 3 : 93 (food of sand lance off US coast)

Labrador (Subarea 2)

J 1 : 7 (melanophores in redfish larvae)
 39 (fecundity study of *G. halibut*)
 2 : 21 (vertebral numbers in cod)
 67 (study of parasites in grenadiers)
 3 : 47 (egg capsules of thorny skate)
 105 (growth patterns in capelin)
 123 (study on feeding of thorny skate)
 159 (distribution of 3 eelpout species)
 169 (population genetics of redfishes)
 5 : 23 (vertebral numbers in young cod)
 55 (migration of thorny skate from tagging)
 65 (meristics of golden and beaked redfish)
 79 (inshore exploitation of cod)
 85 (migration of *G. halibut* from tagging)
 93 (migration of wolffishes from tagging)
 105 (weight-length relations for witch flounder)
 107 (weight-length relations for *G. halibut*)
 141 (stock discrimination of E Nfld cod)
 171 (thorns and teeth rows in thorny skate)
 199 (stock discrimination of capelin)
 207 (meristic study of Atlantic wolffish)
 6 : 1 (morphometrics of golden and beaked redfish)
 165 (parasitic fauna of American plaice)
 7 : 47 (biological aspects of spotted wolffish)
 57 (biological aspects of Atlantic wolffish)
 77 (spotted forms of northern wolffish)
 S 1 : 1 (sexual maturity of *G. halibut*)
 77 (age determination of cod)
 5 : 7 (20th century marine climatic changes)
 39 (ice and icebergs, 1970-79)
 51 (oceanographic conditions, 1970-79)
 79 (temperature anomalies of Labrador Current)
 81 (variation in oceanographic conditions)
 107 (environment effects on seals and birds)
 6 : 7 (distribution of redfish species)
 35 (study on feeding of wolffishes)
 7 : 57 (study on feeding roundnose grenadier)
 8 : 49 (stomach contents of Atlantic wolffish)
 67 (mesopelagic fishes in Nfld area)
 10 : 47 (study of feeding of *G. halibut*)
 93 (literature review of studies on molluscs)

Labridae (wrasses) (see also specific names)

J 3 : 127 (larvae in slope water off Nova Scotia)
 4 : 292 (guide to early stages of marine fishes)
 5 : 33 (ichthyoplankton of Georges Bank area)
 6 : 117 (energy equivalents of marine organisms)

Lacistorhynchus sp. (cestode)

J 7 : 25 (parasite as natural tag in herring)
 S 6 : 63 (parasite as a natural tag in fish)

Ladyfish (*Elops saurus*)

J 4 : 42 (guide to early stages of marine fishes)

Lagenorhynchus acutus (see Dolphin, white-sided)Lagenorhynchus albirostris (see Dolphin, white-beaked)Lamna nasus (see Porbeagle)Lagodon rhomboides (see Pinfish)Laminaria sp. (see Kelp)Lampadena luminosa (see Lanternfish)Lampadena urothaeos (see Lanternfish)Lampanyctodes hectoris (see Lanternfish)Lampanyctus crocodilus (see Lanternfish, jewel)Lampanyctus pusillus (see Lanternfish)Lance, sand (see Sand lance)Lancer dragonet (see Dragonet, lancer)Lancetfish (*Alepisaurus* sp.)

J 4 : 162 (guide to early stages of marine fishes)

Lanternfish (*Bentosema suborbitale*)

J 4 : 124 (guide to early stages of marine fishes)

Lanternfish (*Bolinichthys indicus*)

J 3 : 127 (larvae in slope water off Nova Scotia)

Lanternfish (*Bolinichthys supralateralis*)

J 4 : 130 (guide to early stages of marine fishes)

Lanternfish (*Ceratoscopelus warmingii*)

J 3 : 127 (larvae in slope water off Nova Scotia)
 4 : 133 (guide to early stages of marine fishes)

Lanternfish (*Diaphus holsti*)

J 4 : 138 (guide to early stages of marine fishes)

Lanternfish (*Diaphus rafinesquii*)

J 3 : 127 (larvae in slope water off Scotian Shelf)
 4 : 138 (guide to early stages of marine fishes)

Lanternfish (*Diogenichthys atlanticus*)

J 3 : 127 (larvae in slope water off Nova Scotia)
 4 : 122 (guide to early stages of marine fishes)

Lanternfish (*Electrona risso*)

J 4 : 110 (guide to early stages of marine fishes)

Lanternfish (*Hygophum hygomi*)

- J 3 :127 (larvae in slope water off Nova Scotia)
4 :112 (guide to early stages of marine fishes)

Lanternfish (*Hygophum macrochir*)

- J 3 :127 (larvae in slope water off Nova Scotia)
4 :114 (guide to early stages of marine fishes)

Lanternfish (*Hygophum reinhardtii*)

- J 3 :127 (larvae in slope water off Nova Scotia)
4 :114 (guide to early stages of marine fishes)

Lanternfish (*Hygophum taaningi*)

- J 4 :114 (guide to early stages of marine fishes)

Lanternfish (*Lampadena luminosa*)

- J 4 :128 (guide to early stages of marine fishes)

Lanternfish (*Lampadena urotaos*)

- J 4 :128 (guide to early stages of marine fishes)

Lanternfish (*Lampanyctodes hectoris*)

- J 4 :102 (guide to early stages of marine fishes)

Lanternfish (*Lampanyctus pusillus*)

- J 4 :134 (guide to early stages of marine fishes)

Lanternfish (*Lepidophanes gausi*)

- J 4 :130 (guide to early stages of marine fishes)

Lanternfish (*Lepidophanes guentheri*)

- J 4 :130 (guide to early stages of marine fishes)

Lanternfish (*Lobianchia dofleini*)

- J 4 :136 (guide to early stages of marine fishes)

Lanternfish (*Lobbranchia gemellerii*)

- J 4 :136 (guide to early stages of marine fishes)

Lanternfish (*Loweina rara*)

- J 4 :126 (guide to early stages of marine fishes)

Lanternfish (*Myctophum asperum*)

- J 4 :118 (guide to early stages of marine fishes)

Lanternfish (*Myctophum nitidulum*)

- J 3 :127 (larvae in slope water off Nova Scotia)
4 :118 (guide to early stages of marine fishes)

Lanternfish (*Myctophum obtusirostre*)

- J 4 :118 (guide to early stages of marine fishes)

Lanternfish (*Myctophum selenops*)

- J 3 :127 (larvae in slope water off Nova Scotia)
4 :118 (guide to early stages of marine fishes)

Lanternfish (*Notolychnus valdiviae*)

- J 3 :127 (larvae in slope water off Nova Scotia)
4 :142 (guide to early stages of marine fishes)

Lanternfish (*Notoscopelus resplendens*)

- J 4 :140 (guide to early stages of marine fishes)

Lanternfish (*Protomyctophum arcticum*)

- J 4 :108 (guide to early stages of marine fishes)

Lanternfish (*Symbolophorus* sp.)

- J 4 :120 (guide to early stages of marine fishes)

Lanternfish (*Taaningichthys minimus*)

- J 4 :128 (guide to early stages of marine fishes)

Lanternfish, Benoit's (*Hygophum benoiti*)

- J 4 :112 (guide to early stages of marine fishes)

Lanternfish, Cocco's (*Gonichthys coccoi*)

- J 4 :126 (guide to early stages of marine fishes)

Lanternfish, glacier (*Benthosema glaciale*)

- J 3 :127 (larvae in slope water off Nova Scotia)
4 :124 (guide to early stages of marine fishes)
S 7 : 53 (food of roundnose grenadier in N Atlantic)

Lanternfish, horned (*Ceratoscopelus maderensis*)

- J 3 :127 (larvae in slope water off Nova Scotia)
4 :132 (guide to early stages of marine fishes)
5 : 33 (ichthyoplankton of Georges Bank area)

Lanternfish, jewel (*Lampanyctus crocodilus*)

- J 4 :134 (guide to early stages of marine fishes)
S 7 : 53 (food of roundnose grenadier in N Atlantic)

Lanternfish, spotted (*Myctophum punctatum*)

- J 4 :116 (guide to early stages of marine fishes)

Lanternfishes (Myctophidae) (general)

- J 3 :123 (food of thorny skate in NW Atlantic)
127 (larvae in slope water off Nova Scotia)
4 :102 (guide to early stages of marine fishes)
5 : 33 (ichthyoplankton of Georges Bank area)
6 :157 (food of salmon in Grand Bank area)
S 7 : 53 (food of roundnose grenadier in N Atlantic)
67 (food of shortfin squid in SA 4 to 6)
8 : 39 (food of various fishes on Flemish Cap)
10 : 47 (food of G. halibut in NW Atlantic)

Large-eyed argentine (see Argentine, large-eyed)Larimus fasciatus (see Drum, banded)Larvae

- J 1 : 7 (study of melanophores in redfish)
45 (pollock and sand lance in Bay of Fundy)
3 : 41 (embryology of *Illex* re temperatures)
61 (herring production in Maine waters)

- 93 (biology of sand lance in SA 4 to 6)
- 127 (fish larvae in slope water off Nova Scotia)
- 4 : 1 (guide to early stages of marine fishes)
- 5 : 1 (development of the northern searobin)
- 33 (ichthyoplankton of Georges Bank area)
- 132 (herring movements along Maine coast)
- 213 (meristic of haddock on Scotian Shelf)
- 6 : 9 (development of white, red and longfin hakes)
- 21 (from herring spawning on Georges Bank)
- 43 (shortfin squid re currents in NW Atlantic)
- 65 (development of the striped searobin)
- 7 : 57 (biological aspects of Atlantic wolffish)
- S 1 : 31 (grid and random sampling with bongos)
- 57 (redfish and cod in Div. 3M, 1978-79)
- 3 : 33 (herring distribution on Georges Bank)
- 39 (*Illex* re oceanography in NW Atlantic)
- 6 : 15 (herring distribution on Georges Bank)
- 8 : 25 (predation on larvae as a regulatory force)
- 9 : 77 (squid distribution re Gulf Stream system)
- 93 (squid distribution from winter survey, 1982)
- 101 (use of squid statoliths for ageing)
- 10 : 7 (predicting cod year-classes in SA 1)

Laval's eelpout (see Eelpout, Laval's)

Leachia sp. (see Squid)

Leafweeds (*Phyllophora* sp.)

J 6 : 125 (macrophyte on herring spawning beds)

Leatherjacket (*Oligoplites saurus*)

J 4 : 252 (guide to early stages of marine fishes)

Lecithaster confusus (trematode)

J 2 : 67 (parasite of grenadiers in NW Atlantic)

Lecithaster gibbosus (trematode)

J 6 : 165 (parasite of A. plaice in Nfld area)

Lecithophyllum bothyophorum (trematode)

J 2 : 67 (parasite of grenadiers in NW Atlantic)

Leiostomus xanthurus (see Drum, spot)

Length; Length composition

- J 1 : 29 (analysis of redfish fishery in SA 5)
- 39 (re fecundity of G. halibut)
- 45 (pollock and sand lance in Bay of Fundy)
- 49 (white hake in Gulf of St. Lawrence)
- 65 (silver hake on Scotian Shelf)
- 2 : 13 (re age validation of redfish in SA 5)
- 47 (re weight of copepods in SA 5)
- 53 (partial length for measuring grenadiers)
- 3 : 1 (re growth of haddock in SA 5)
- 87 (young haddock around Sable Island)
- 93 (sand lance in SA 4-6, 1972-75)
- 105 (growth patterns in capelin of Nfld area)
- 115 (young redfish on Flemish Cap)
- 141 (G. halibut in Gulf of St. Lawrence)
- 159 (3 eelpout species in Nfld area)
- 5 : 71 (herring stocks along Maine coast)
- 99 (redfish discarded in shrimp fishery)
- 103 (re compensatory growth in bay scallop)
- 105 (re weight relations for witch flounder)
- 107 (re weight relations for G. halibut)
- 109 (young haddock around Sable Island)

- 161 (re fecundity of cod in Nfld area)
- 181 (re trawl efficiency in catching flatfishes)
- 189 (beaked redfish in Gulf of St. Lawrence)
- 6 : 1 (re morphometrics of redfish species)
- 43 (shortfin squid larvae in NW Atlantic)
- 57 (reproductive cycles of redfishes)
- 95 (re growth of eels in Nfld rivers)
- 107 (re ageing technique for shortfin squid)
- 149 (re fecundity of herring in Gulf of Maine)
- 7 : 1 (shell height of scallops on Georges Bank)
- 15 (young squid in slope water off Nova Scotia)
- 47 (re weight relation for spotted wolffish)
- 57 (re weight relation for Atlantic wolffish)
- 67 (changes in size of queen crabs in Div. 4T)
- S 1 : 7 (estimating gillnet selection of fishes)
- 23 (saury catches in NW Atlantic)
- 35 (re weight for wolffishes in SA 1)
- 57 (redfish and cod larvae in Div. 3M)
- 71 (re maturity of G. halibut off Labrador)
- 3 : 7 (grenadier, G. halibut and shrimp in SA 0+1)
- 33 (larvae herring along Maine coast)
- 47 (age and size of spiny dogfish)
- 6 : 15 (larval herring on Georges Bank)
- 79 (re age determination of shrimp)
- 7 : 45 (roughhead grenadier in Nfld area)
- 77 (shortfin squid in NW Atlantic)
- 8 : 61 (total vs preanal for measuring grenadiers)
- 9 : 11 (shortfin squid on Scotian Shelf, 1980-83)
- 39 (arrow squids off New Zealand)
- 77 (squid larvae and juveniles in Gulf Stream)
- 101 (re age determination of *Illex* by statoliths)

Lepidapedon elongatum (trematode)

J 2 : 67 (parasite of grenadiers in NW Atlantic)

Lepidophanes gaussi (see Lanternfish)

Lepidophanes guentheri (see Lanternfish)

Leptacanthichthys gracilispinis (Oneirodidae)

J 4 : 200 (guide to early stages of marine fishes)

Leptagonus decagonus (see Poacher, Atlantic)

Leptocephalus larvae (Anguilliformes)

J 4 : 46 (guide to early stages of marine fishes)

Leptoclinus maculatus (see Shanny)

Leptostomias gladiator (see Dragonfish, smooth)

Lernaeocera branchialis (copepod)

S 6 : 63 (use of parasite as natural tag in fish)

Lesser deepwater angler (see Angler, lesser deepwater)

Lestidiops sp. (see Barracudina)

Lestidium atlanticum (see Barracudina)

Lestrolepis intermedia (see Barracudina)

Limacina retroversa (gastropod)

S 9 : 125 (food of *Todarodes sagittatus* off Norway)

Limanda ferruginea (see Flounder, yellowtail)

Lined sole (see Sole, lined)

Linophryne macrorhinus (Linophrynidae)

J 4 : 206 (guide to early stages of marine fishes)

Liopsetta putnami (see Flounder, smooth)

Liparus sp. (see Seasnail)

Lithodes maia (see Crab, northern stone)

Little sculpin (see Sculpin, little)

Little skate (see Skate, little)

Little tuna (see Tuna, little)

Lizardfish (*Saurida* sp.)

J 4 : 94 (guide to early stages of marine fishes)

Lizardfish, inshore (*Synodus foetens*)

J 4 : 94 (guide to early stages of marine fishes)
6 : 117 (energy equivalents of marine organisms)

Lizardfish, snake (*Trachinocephalus myops*)

J 3 : 127 (larvae in slope water off Nova Scotia)
4 : 95 (guide to early stages of marine fishes)

Lobianchia dofleini (see Lanternfish)

Lobianchia gemellarii (see Lanternfish)

Lobster, American (*Homarus americanus*)

J 6 : 117 (energy equivalents of marine organisms)
S 5 : 101 (prey of sea urchins along Nova Scotia)
10 : 53 (computing CPUE for a trap fishery)
67 (fishery resources of Gulf of Maine)

Loligo opalescens (see Squid, Pacific longfin)

Loligo pealei (see Squid, longfin)

Loliguncula brevis (see Squid, brief)

Longfin hake (see Hake, longfin)

Longfin squid (see Squid, longfin)

Longhorn sculpin (see Sculpin, longhorn)

Longtooth anglemouth (see Anglemouth, longtooth)

Lookdown, Atlantic (*Selene vomer*)

J 4 : 254 (guide to early stages of marine fishes)

Loosejaw (*Malacosteus niger*)

S 8 : 67 (mesopelagic fishes off Nfld)

Lophiidae (anglers) (see also specific names)

J 4 : 190 (guide to early stages of marine fishes)
6 : 117 (energy equivalents of marine resources)

Lophius americanus (see Angler, American)

Lopholatilus chamaeleonticeps (see Tilefish)

Louvar (*Luvarus imperialis*)

J 4 : 399 (guide to early stages of marine fishes)

Loweina rara (see Lanternfish)

Lumpenus lumpretaeformis (see Blenny, snake)

Lumpenus maculatus (see Shanny, daubed)

Lumpenus sp. (see Blennies)

Lumpfish, common (*Cyclopterus lumpus*)

J 1 : 55 (by-catch in drift-netting for salmon)
S 10 : 47 (food of G. halibut in NW Atlantic)

Luvarus imperialis (see Louver)

Lycodes esmarki (see Eelpout, Esmark's)

Lycodes lavalaei (see Eelpout, Laval's)

Lycodes pallidus (see Eelpout, pale)

Lycodes reticulatus (see Eelpout, Arctic)

Lycodes sp. (see Eelpouts)

Lycodes vahlii (see Eelpout, Vahl's)

M

Mackerel, Atlantic (*Scomber scombrus*)

J 1 : 101 (recruitment in North Atlantic stocks)
3 : 29 (environmental preferences on Scotian Shelf)
4 : 318 (guide to early stages of marine fishes)
6 : 117 (energy equivalents of marine organisms)
S 7 : 77 (medium for culture of Anisakis larvae)
87 (feeding of hakes and other fish in SA 4-6)
10 : 67 (fishery resources of Gulf of Maine)

Mackerel, frigate (*Auxis* sp.)

J 4 : 312 (guide to early stages of marine fishes)

Mackerel, king (*Scomberomorus cavalla*)

J 4 : 320 (guide to early stages of marine fishes)

Mackerel, Pacific (*Scomber japonicus*)

J 6 : 117 (energy equivalents of marine organisms)

Mackerel, snake (*Gempylus serpens*)

J 4 : 302 (guide to early stages of marine fishes)

Mackerel, Spanish (*Scomberomorus maculatus*)

J 4 : 320 (guide to early stages of marine fishes)

Mackerel shark (see Porbeagle)

Macroparalepis affine (see Barracudina)

Macroparalepis breva (see Barracudina)

Macrouridae (see Grenadiers)Macrourus berglax (see Grenadier, roughhead)Macrourus rupestris (see *Coryphaenoides rupestris*)Macrozoarces americanus (see Pout, ocean)Macrura (Reptantia)

J 7 : 47 (food of spotted wolffish in NW Atlantic)

Mailed sculpin (see Sculpin, mailed)Mako shark (see Shark, mako)Malacosteidae (loosejaws)S 7 : 53 (food of roundnose grenadier in N Atlantic)
8 : 67 (mesopelagic fishes off Nfld)Malacosteus niger (see Loosejaw)Mallotus villosus (see Capelin)Man-of-war fish (*Nomeus gronowi*)

J 4 : 334 (guide to early stages of marine fishes)

ManagementJ 3 : 1 (re assessment of Georges Bank haddock)
7 : 67 (implications re size change of queen crabs)
S 4 : 77 (use of satellite-tracked vessel terminals)
8 : 83 (re effects of environmental factors)ManualsJ 4 : 1 (guide to early stages of marine fishes)
S 2 : 7 (for groundfish surveys in NW Atlantic)Margrethia obtusirostra (see Anglemouth)Mastigoteuthidae (Cephalopoda)

J 7 : 15 (occurrence in slope water off Nova Scotia)

Mastigoteuthis sp. (see Squid)Mathematical analysisJ 1 : 101 (recruitment in 18 selected stocks)
5 : 99 (stock discrimination of capelin)
6 : 1 (morphometric classification of redfishes)
7 : 1 (data from USA and Canadian scallop surveys)
67 (analysis of changes in size of queen crab)
S 3 : 39 (yield-per-recruit simulation of *Illex*)
6 : 39 (simulated drift of *Illex* larvae)
79 (modal analysis in ageing shrimp)
7 : 61 (causal analysis of *Illex* data)
9 : 143 (population dynamics of short-lived species)
10 : 35 (dynamics of flounder stocks on Grand Bank)Maturation; Maturity (see also spawning)J 1 : 49 (white hake in Gulf of St. Lawrence)
65 (silver hake on Scotian Shelf)
2 : 61 (records of mature female shortfin squid)
3 : 47 (re egg capsules in thorny skate)
57 (reproduction in hooded seals)
93 (sand lance off US coast)
141 (G. halibut in Gulf of St. Lawrence)5 : 71 (herring tagging along Maine coast)
6 : 57 (redfishes in the south Nfld area)
135 (estimating maturation rates of capelin)
7 : 47 (biology of spotted wolffish in NW Atlantic)
57 (biology of Atlantic wolffish in NW Atlantic)
S 1 : 23 (saury population in NW Atlantic)
71 (oogenesis and maturity of G. halibut)
6 : 15 (herring spawning on Georges Bank)
79 (re age determination of shrimp)
7 : 45 (roughhead grenadier in Grand Bank area)
9 : 11 (shortfin squid on Scotian Shelf)
107 (reproductive features of male *Illex*)
139 (life histories of sepiolids and myopsids)Maurolicus muelleri (see Anglemouth, Müller's)Medusae (see Hydrozoa)Megalops atlanticus (see Tarpon)Meganyctiphanes sp. (euphausiid)S 7 : 53 (food of roundnose grenadier in N Atlantic)
67 (food of shortfin squid in SA 4 to 6)
9 : 125 (food of *Todarodes sagittatus* off Norway)Melamphaes sp. (Melamphaidae)J 4 : 214 (guide to early stages of marine fishes)
S 7 : 53 (food of roundnose grenadier in N Atlantic)Melanocetus sp. (Melanocetidae)

J 4 : 196 (guide to early stages of marine fishes)

Melanogrammus aeglefinus (see Haddock)Melanophores (see Pigmentation)Melanostomiatidae (smooth dragonfishes)J 3 : 127 (larvae in slope water off Nova Scotia)
4 : 90 (guide to early stages of marine fishes)Menhaden, Atlantic (*Brevoortia tyrannus*)J 4 : 24 (guide to early stages of marine fishes)
6 : 117 (energy equivalents of marine organisms)Menidia menidia (see Silverside, Atlantic)Menticirrhus sp. (see Kingfish)MeristicsJ 1 : 7 (vertebrae and finrays in redfish larvae)
2 : 21 (vertebral numbers in NW Atlantic cod)
57 (vertebral numbers in Flemish Cap cod)
3 : 93 (vertebrae and finrays in sand lance)
4 : 1 (guide to early stages of marine fishes)
5 : 1 (finrays and spines in northern searobin)
23 (vertebral numbers in east Nfld cod)
65 (variation in golden and beaked redfish)
171 (thorns and teeth rows in thorny skate)
199 (re stock discrimination of capelin)
207 (vertebrae and finrays in Atlantic wolffish)
213 (vertebrae in young haddock on Scotian Shelf)
6 : 9 (development of white, red and longfin hakes)
65 (development of striped searobin)
7 : 47 (variation in spotted wolffish of NW Atlantic)
S 6 : 57 (use in discriminating fish stocks)
9 : 107 (re reproductive features of male *Illex*)

Merlucciidae (general) (see also specific names)

- J 4 : 168 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)
 S 7 : 67 (food of shortfin squid in SA 4 to 6)
 87 (food of hakes and other fish in SA 4 to 6)

Merluccius albidus (see Hake, offshore)

Merluccius bilinearis (see Hake, silver)

Meteorology

- S 5 : 17 (conditions over North Atlantic, 1970-79)
 33 (conditions off US coast, 1970-79)
 107 (effect on seals, whales and birds, 1970-79)
 7 : 7 (review of environmental conditions, 1982)
 27 (effect on water circulation in Div. 3M)
 8 : 7 (review of environmental conditions, 1983)
 10 : 21 (review of environmental conditions, 1984)

Methodology

- J 1 : 65 (guidelines for ageing silver hake)
 81 (estimation of trawl-door spread)
 91 (MARMAP bongo plankton samplers)
 2 : 7 (gasbladder muscles for redfish speciation)
 13 (age validation of redfish in SA 5)
 53 (partial length measurement for grenadiers)
 3 : 165 (gasbladder muscles in golden redfish)
 4 : 1 (guide to early stages of marine fishes)
 5 : 161 (re fecundity of cod in Nfld area)
 6 : 1 (morphometrics of golden and beaked redfish)
 37 (tagging experiment with snow crabs)
 107 (ageing technique for shortfin squid)
 135 (estimating maturation rates of capelin)
 7 : 35 (trawl geometry and fish sampling)
 S 1 : 7 (estimating gillnet selectivity)
 77 (age determination of cod in Nfld area)
 2 : 7 (manual on groundfish surveys)
 3 : 39 (simulating yield-per-recruit of *Illex*)
 47 (ageing spiny dogfish with spines)
 4 : 7 (nature and use of remote-sensing data)
 21 (remote-sensing of ocean fronts)
 31 (remote-sensing of surface temperatures)
 61 (fluorescence line imager for phytoplankton)
 69 (remote-sensing studies in B. Columbia)
 77 (satellite-tracked fishing vessel terminal)
 6 : 57 (stock discrimination in marine fishes)
 63 (use of parasites as biological tags)
 79 (shrimp ageing workshops, 1981)
 7 : 61 (causal analysis of shortfin squid data)
 8 : 61 (partial length for measuring grenadiers)
 9 : 101 (statoliths for age determination of *Illex*)
 107 (reproductive features of male *Illex*)
 143 (population dynamics of short-lived species)
 10 : 13 (trawl survey for cod off E Greenland)
 35 (dynamics of Grand Bank flounder stocks)
 53 (computing CPUE in a lobster fishery)

Metopomyster sp. (Anguilliformes)

- J 4 : 49 (guide to early stages of marine fishes)

Metridia sp. (copepod)

- S 8 : 33 (feeding spectrum of longfin squid)
 39 (food links of various species in Div. 3M)

Micromesistius poutassou (see Whiting, blue)

Micropogonias undulatus (see Croaker, Atlantic)

Microspora

- S 6 : 63 (use of parasites as natural tags in fish)

Microstoma microstoma (see Argentine)

Mid-Atlantic Ridge

- S 7 : 53 (study on feeding of roundnose grenadier)

Migrations

- J 1 : 55 (Atlantic salmon recaptured at Greenland)
 2 : 75 (tagged *Illex* from Nfld to Delaware)
 5 : 17 (west Nfld herring populations)
 47 (spiny dogfish in Nfld area)
 55 (thorny skates in Nfld area)
 71 (juvenile and adult herring off Maine)
 85 (G. halibut tagged in Nfld area)
 93 (wolffishes tagged in Nfld area)
 121 (east Nfld herring populations)
 132 (larval herring along Maine coast)
 141 (east Nfld cod stocks from tagging)
 189 (beaked redfish in Gulf of St. Lawrence)
 6 : 141 (eastward extension of a marine cladoceran)
 157 (Atlantic salmon on and east of Grand Bank)
 7 : 25 (use of parasites as natural tags in herring)
 43 (tagged age 1 herring in Gulf of Maine)
 S 1 : 23 (saury populations in NW Atlantic)
 6 : 57 (use in stock discrimination studies)
 63 (use of parasites as natural tags in fish)
 67 (study on hooded seals at Greenland)
 9 : 47 (cephalopod distributions re oceanography)
 59 (migration types in five ommastrephid squids)
 77 (squid larvae and juveniles re Gulf Stream)

Mola, slender (*Ranzania laevis*)

- J 4 : 400 (guide to early stages of marine fishes)

Molluscs (general) (see also specific names)

- J 5 : 123 (food of thorny skate in NW Atlantic)
 6 : 117 (energy equivalents of marine organisms)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 1 : 51 (food of haddock in Nfld area)
 6 : 35 (food of wolffishes in Nfld area)
 7 : 45 (food of roughhead grenadier in SA 3)
 53 (food of roundnose grenadier in N Atlantic)
 67 (food of shortfin squid in SA 4 to 6)
 87 (food of hakes and other fish in SA 4 to 6)
 8 : 33 (food of longfin squid in SA 5 and 6)
 39 (food of various fishes on Flemish Cap)
 49 (food of Atlantic wolffish in Nfld area)
 9 : 1 (special session on squids, Sep 1984)
 117 (food of *Illex* and *Loligo* off US coast)
 125 (food of *Todarodes sagittatus* off Norway)
 10 : 47 (food of G. halibut in NW Atlantic)
 93 (literature review of molluscs in Nfld area)

Monacanthus sp. (see Filefish)

Monogenea

- J 2 : 67 (parasites of grenadiers in NW Atlantic)
 S 6 : 63 (use of parasites as natural tags in fish)

Monognathidae (Anguilliformes)

- J 4 : 48 (guide to early stages of marine fishes)

Monolene sessilicauda (see Flounder, deepwater)

Moray eel (see Eel, moray)

Moridae (moras)

J 4 :169 (guide to early stages of marine fishes)

Moringuidae (Anguilliformes)

J 4 : 48 (guide to early stages of marine fishes)

Morphology (see also Morphometrics)

- J 2 : 7 (gasbladder muscles in beaked redfish)
- 3 :165 (gasbladder muscles in golden redfish)
- 4 : 1 (guide to early stages of marine fishes)
- 5 : 1 (development of the northern searobin)
- 6 : 9 (development of white, red and longfin hakes)
- 65 (development of the striped searobin)
- S 6 : 57 (use in distinguishing fish stocks)

Morphometrics

- J 3 : 93 (biology of sand lance in SA 4 to 6)
- 4 : 1 (guide to early stages of marine fishes)
- 5 : 1 (development of northern searobin)
- 6 : 1 (study of golden and beaked redfishes)
- 9 (development of white, red and longfin hakes)
- 65 (development of striped searobin)
- 95 (American eels in Nfld rivers)
- S 6 : 57 (use in discriminating fish stocks)
- 9 :107 (re reproductive features of male *Illex*)

Mortality

- J 1 : 21 (redfish exploitation in SA 5)
- 3 : 1 (status of haddock stock in SA 5)
- 61 (larval herring along Maine coast)
- 5 : 79 (exploitation of cod in Nfld area)
- 132 (larval herring in Maine waters)
- 6 : 21 (re herring spawning on Georges Bank)
- 125 (re herring spawning in Gulf St. Lawrence)
- 135 (estimating maturation rates of capelin)
- S 1 : 23 (saury populations in NW Atlantic)
- 3 : 39 (yield-per-recruit analysis of *Illex*)
- 6 : 73 (mussel populations in SA 4)
- 9 :143 (population dynamics of short-lived species)

Mugil cephalus (see Mullet, striped)

Mugilidae (mulletts)

J 4 :288 (guide to early stages of marine fishes)

Müller's anglemouth (see Anglemouth, Müller's)

Mullet, striped (*Mugil cephalus*)

J 4 :288 (guide to early stages of marine fishes)

Muraenesocidae (Anguilliformes)

J 4 : 56 (guide to early stages of marine fishes)

Muraenidae (Anguilliformes)

J 4 : 52 (guide to early stages of marine fishes)

Muscle, gasbladder

- J 2 : 7 (use in separating beaked redfishes)
- 3 :165 (use in identifying golden redfish)

Mussel, blue (*Mytilus edulis*)

S 6 : 73 (genetics of populations in SA 4)

Myctophidae (see Lanternfishes)

Myctophum asperum (see Lanternfish)

Myctophum nitidulum (see Lanternfish)

Myctophum obtusirostre (see Lanternfish)

Myctophum punctatum (see Lanternfish, spotted)

Myctophum selenops (see Lanternfish)

Myopsid squids (see also specific names)

S 9 :139 (comparative life history study)

Myoxocephalus aeneus (see Sculpin, little)

Myoxocephalus octodecemspinosus (see Sculpin, longhorn)

Myoxocephalus scorpius (see Sculpin, shorthorn)

Myrophis punctatus (Anguilliformes)

J 4 : 50 (guide to early stages of marine fishes)

Mysidacea

- J 3 : 93 (food of sand lance in SA 4 to 6)
- 123 (food of thorny skate in NW Atlantic)
- 6 :117 (energy equivalents of marine organisms)
- S 1 : 51 (food of haddock in Nfld area)
- 7 : 53 (food of roundnose grenadier in N Atlantic)
- 8 : 33 (feeding spectrum of longfin squid)
- 10 : 47 (food of G. halibut in NW Atlantic)

Mytilus edulis (see Mussel, blue)

Myxidium sp. (myxosporidian)

- J 2 : 67 (parasites of grenadiers in NW Atlantic)
- 6 :165 (parasites of A. plaice in Nfld area)
- S 6 : 63 (use of parasites as natural tags in fish)

Myxobolus sp. (myxosporidian)

S 6 : 63 (use of parasites as natural tags in fish)

Myxosporidia (see two preceding genera)

N

Naked goby (see Goby, naked)

Nansenia groenlandica (see Argentine, large-eyed)

Natantia (see Shrimp)

Natural tags (see Tags, biological)

Naucrates duotor (see Pilotfish)

Needlefish, Atlantic (*Strongylura marina*)

J 4 :212 (guide to early stages of marine fishes)

Nematodes

- J 2 : 67 (parasites of grenadiers in NW Atlantic)
 6 : 157 (feeding of salmon in Grand Bank area)
 165 (parasites of A. plaice in Nfld area)
 7 : 25 (parasites as natural tags in fish)
 S 1 : 53 (food of haddock in Nfld area)
 6 : 63 (parasites as natural tags in fish)
 7 : 77 (re stock identity of shortfin squid)

Nematoscelus sp. (euphausiid)

- S 7 : 53 (food of roundnose grenadier in N Atlantic)

Nemichthyidae (Anguilliformes) (snipe eels)

- J 4 : 56 (guide to early stages of marine fishes)

Nemichthys scolopaceus (see Eel, Atlantic snipe)Neoceratiidae

- J 4 : 194 (guide to early stages of marine fishes)

Neoconger mucronatus (see Eel, conger)Neoechinorhynchus rutili (acanthocephalan)

- S 6 : 63 (parasite as a biological tag in fish)

Neomysis americana (mysid)

- J 3 : 93 (food of sand lance off US coast)

Neoscolopidae

- J 3 : 98 (guide to early stages of marine fishes)

Nereis pelagica (polychaete)

- S 9 : 125 (food of *Todarodes sagittatus* off Norway)

Nesiarchus nasutus (Gempylidae)

- J 4 : 304 (guide to early stages of marine fishes)

Nessorhamphus ingolfianus (see Eel, duckbill)Nettastomatidae (Anguilliformes)

- J 4 : 49 (guide to early stages of marine fishes)

New England area (Subareas 5 and 6) (pertains generally to region from Cap Cod to Cape Hatteras; see Georges Bank and Gulf of Maine for other parts of the region)

- J 2 : 61 (records of mature shortfin squid)
 75 (long-distance migration of a tagged squid)
 3 : 93 (study on biology of sand lance)
 4 : 1 (guide to early stages of marine fishes)
 5 : 1 (early development of northern searobin)
 33 (ichthyoplankton distribution, 1971-77)
 103 (compensatory growth of bay scallop)
 6 : 9 (development of white, red and longfin hakes)
 21 (variation in herring spawning grounds)
 43 (shortfin squid larvae in NW Atlantic)
 65 (early development of striped searobin)
 117 (energy equivalents of marine organisms)
 141 (distributional extension of *Penilia*)
 7 : 25 (use of parasites as natural tags in herring)
 S 3 : 47 (age and size of spiny dogfish)

- 4 : 21 (ocean fronts off US coast)
 5 : 33 (review of weather conditions, 1970-79)
 95 (oceanographic conditions, 1970-79)
 6 : 15 (time and location of herring spawning)
 39 (oceanography re *Illex* distribution)
 7 : 67 (feeding spectrum of shortfin squid)
 87 (feeding of hakes and other fish in SA 4-6)
 8 : 33 (feeding spectrum of longfin squid)
 57 (fat content of silver and red hakes)
 9 : 117 (food consumption of *Illex* and *Loligo*)
 10 : 53 (computing CPUE for a lobster fishery)

New Zealand

- S 9 : 39 (distribution of *Nototodarus sloani*)
 59 (life cycle of *Nototodarus sloani*)

Newfoundland area (inshore Subarea 3)

- J 1 : 7 (melanophores in redfish larvae)
 2 : 21 (vertebral numbers in Atlantic cod)
 75 (long-distance migration of a tagged squid)
 3 : 105 (growth patterns in capelin)
 5 : 17 (migrations of west Nfld herring)
 23 (vertebral averages of young cod)
 47 (migrations of spiny dogfish from tagging)
 55 (migrations of thorny skate from tagging)
 79 (inshore exploitation of east Nfld cod)
 85 (migrations of G. halibut from tagging)
 93 (migrations of wolffishes from tagging)
 121 (migrations of east Nfld herring)
 141 (discrimination of east Nfld cod stocks)
 161 (variations in fecundity of cod)
 199 (stock discrimination of capelin)
 6 : 57 (reproductive cycles of redfishes)
 95 (growth of silver eels in two rivers)
 S 1 : 41 (cod predation on capelin and sand lance)
 5 : 39 (sea ice and icebergs, 1970-79)
 107 (environment re seals, birds and whales)
 6 : 7 (distribution of redfish species)
 7 : 77 (stock identity of shortfin squid)
 10 : 93 (literature review of marine molluscs)

Nezumia bairdi (see Grenadier, common)Nicholsina usta (see Parrotfish)Nomeidae

- J 4 : 332 (guide to early stages of marine fishes)

Nomeus gronowi (see Man-of-war Fish)Northeast Atlantic (see Atlantic Ocean, Northeast)Northeast Nfld Shelf (Division 3K)

- J 1 : 7 (melanophores in redfish larvae)
 2 : 21 (vertebral members in Atlantic cod)
 3 : 47 (egg capsules of thorny skate)
 123 (study of feeding in thorny skate)
 159 (distribution of three eelpout species)
 5 : 55 (migrations of thorny skate from tagging)
 65 (meristics of golden and beaked redfish)
 79 (inshore exploitation of Atlantic cod)
 85 (migrations of G. halibut from tagging)
 93 (migrations of wolffishes from tagging)
 105 (weight-length relation for witch flounder)
 107 (weight-length relation for G. halibut)
 141 (discrimination of cod stocks from tagging)
 207 (meristic study of Atlantic wolffish)

- 6 : 165 (parasitic fauna of American plaice)
- 7 : 47 (biological aspects of spotted wolffish)
 - 57 (biological aspects of Atlantic wolffish)
 - 77 (spotted forms of northern wolffish)
- S 1 : 77 (age determination of Atlantic cod)
- 3 : 29 (distribution of three wolffish species)
- 5 : 39 (sea ice and icebergs, 1970-79)
 - 51 (oceanographic conditions, 1970-79)
- 6 : 7 (distribution of golden and beaked redfish)
 - 35 (study of feeding in wolffishes)
- 7 : 53 (feeding spectrum of roundnose grenadier)
- 8 : 49 (stomach contents of Atlantic wolffish)
 - 67 (mesopelagic fishes off Nfld and Labrador)
- 10 : 47 (studies on feeding of G. halibut)
 - 93 (literature review of marine molluscs)

Northeast Pacific (see Pacific Ocean)

Northern barracuda (see Barracuda, northern)

Northern harvestfish (see Harvestfish, northern)

Northern prawn (see Shrimp, northern)

Northern puffer (see Puffer, northern)

Northern searobin (see Searobin, northern)

Northern shrimp (see Shrimp, northern)

Northern stargazer (see Stargazer, northern)

Northern stone crab (see Crab, northern stone)

Northern wolffish (see Wolffish, northern)

Northwest Atlantic (see Atlantic Ocean, Northwest)

Northwest Pacific (see Pacific Ocean)

Norway (Northeast Atlantic)

- S 8 : 25 (study of predation on fish larvae)
- 125 (study of predation by *Todarodes sagittatus*)

Norway pout (see Pout, Norway)

Notolepis rissoi kroyeri (see Barracudina, white)

Notolychnus valdivias (see Lanternfish)

Notoscopelus resplendens (see Lanternfish)

Notosudidae

- J 3 : 127 (larvae in slope water off Nova Scotia)
- 4 : 100 (guide to early stages of marine fishes)

Nototodarus sloani (see Squid, arrow)

Nova Scotia area (inshore waters)

- J 1 : 45 (pollock and sand lance larvae)
- 6 : 157 (recapture of salmon tagged on Grand Bank)
- S 4 : 31 (remote-sensing of surface temperature)
 - 63 (water color by remote-sensing)
- 5 : 101 (nearshore ecosystem changes, 1970-79)
- 6 : 73 (genetics of mussel populations)
- 9 : 133 (respiration and swimming of shortfin squid)

Nybelin's sculpin (see Sculpin, Nybelin's)

O

Obituaries

- J 3 : 175 (Francis D. McCracken, 1916-82)
- 5 : 113 (Arno Meyer, 1913-82)
 - 115 (K. G. Konstantinov, 1918-83)
 - 219 (Alister M. Flemming, 1918-83)
- 6 : 101 (Herbert A. Cole, 1911-84)
- 7 : 81 (Eric M. Poulsen, 1900-85)

Ocean pout (see Pout, ocean)

Oceanography (see Environment and more specific names, such as Currents, Hydrography, Salinity, Temperature, etc.)

Octopoteuthidae

- J 7 : 15 (occurrence in slope water off Nova Scotia)

Octopoteuthis sp. (see Squid)

Octopus (general)

- S 8 : 49 (food of Atlantic wolffish in NW Atlantic)

Odontostomops normalops (Evermannellidae)

- J 4 : 164 (guide to early stages of marine fishes)

Oegopsida (Cephalopoda)

- S 10 : 47 (food of G. halibut in NW Atlantic)

Offshore hake (see Hake, offshore)

Oikopleura sp. (Urochordata)

- S 8 : 49 (food links of organisms on Flemish Cap)

Oithona sp. (copepod)

- J 2 : 47 (length-weight relation in Georges Bank area)
- S 8 : 39 (food links of organisms on Flemish Cap)

Oligoplites saurus (see Leatherjacket)

Ommastrephes sp. (see Squid)

Ommastrephidae (Cephalopoda)

- J 7 : 15 (occurrence in slope water off Nova Scotia)

Omosudia lowei (Omosudidae)

- J 4 : 160 (guide to early stages of marine fishes)

Oncorhynchus gorbuscha (see Salmon, pink)

Oncorhynchus nerka (see Salmon, sockeye)

Oneirodidae

- J 4 : 200 (guide to early stages of marine fishes)

Onychoteuthidae (Cephalopoda)

- J 7 : 15 (occurrence in slope water off Nova Scotia)

Onychoteuthis banksi (see Squid)

Oogenesis

S 1 : 71 (histology and maturity of G. halibut)

Ophichthidae (Anguilliformes)

J 4 : 60 (guide to early stages of marine fishes)

Ophichthus cruentifer (see Eel, snake)

Ophidiidae (cusk-eels)

J 4 : 397 (guide to early stages of marine fishes)
5 : 33 (ichthyoplankton of Georges Bank area)

Ophidion vassali (see Cusk-eel)

Ophiocantha bidentata

S 6 : 35 (food of wolffishes in Nfld area)

Ophiopholis aculeata (brittle star)

S 6 : 35 (food of wolffishes in Nfld area)

Ophiuroidea (see Brittle stars)

Opisthonema oglinum (see Herring, Atlantic thread)

Ornithoteuthis antillarum (see Squid)

Ortholinea divergens (protozoa)

J 6 : 165 (parasite of A. plaice in Nfld area)

Orthopristis chrysopterus (see Pigfish)

Osmeridae (smelts) (see also specific names)

J 3 : 123 (food of thorny skate in NW Atlantic)
4 : 62 (guide to early stages of marine fishes)
S 7 : 67 (food of shortfin squid in SA 4 to 6)

Osmerus mordax (see Smelt, American)

Osteology

J 5 : 1 (development of northern searobin)
6 : 9 (development of white, red and longfin hakes)
65 (development of striped searobin)

Ostracods

J 3 : 93 (food of sand lance off US coast)
S 1 : 51 (food of haddock in Nfld area)
7 : 53 (food of roundnose grenadier in N Atlantic)

Otoliths

J 1 : 65 (age determination of silver hake)
2 : 13 (age validation of redfish in SA 5)
3 : 105 (re growth of capelin in SA 2 and 3)
S 1 : 77 (age determination of cod in SA 3)
6 : 57 (use in stock discrimination studies)

Otter trawls (see Trawls)Ova; Ovaries (see Eggs; Fecundity)Oxygen

J 7 : 15 (effect on diurnal movements of squid)

S 7 : 27 (re water circulation in Div. 3M, 1977-83)
9 : 133 (respiration and swimming of shortfin squid)
10 : 47 (energy metabolism of G. halibut)

Oxyporhamphus micropterus (see Flyingfish, small-wing)

P

Pacific herring (see Herring, Pacific)

Pacific longfin squid (see Squid, Pacific longfin)

Pacific mackerel (see Mackerel, Pacific)

Pacific Ocean

J 1 : 101 (recruitment in Peruvian anchovy stock)
S 4 : 41 (remote-sensing studies in Japan)
51 (satellite imagery of Kuroshio eddies)
69 (remote-sensing studies in B. Columbia)
6 : 63 (parasites as natural tags in fish)
9 : 39 (arrow squids off New Zealand)
47 (cephalopod distribution re oceanography)
59 (life cycles of *Todarodes* and *Nototodarus*)

Pagophilus groenlandicus (see Seal, harp)

Pagurus sp. (see Crab, hermit)

Pale eelpout (see Eelpout, pale)

Pandalus borealis (see Shrimp, northern)

Pantopoda (sea spiders)

S 1 : 51 (food of haddock in Nfld area)

Paralepididae (barracudinas) (see also specific names)

J 3 : 127 (larvae in slope water off Nova Scotia)
4 : 144 (guide to early stages of marine fishes)
5 : 33 (ichthyoplankton of Georges Bank area)
S 7 : 53 (food of roundnose grenadier in N Atlantic)
10 : 47 (food of G. halibut in NW Atlantic)

Paralepis atlantica (see Barracudina)

Paralepis rissoi kroyeri (see Barracudina, white)

Paralepis sp. (see Barracudina)

Paralichthys dentatus (see Flounder, summer)

Paralichthys oblongus (see Flounder, fourspot)

Parasites (general) (see also more specific names)

J 2 : 67 (parasitic fauna of grenadiers)
6 : 165 (parasitic fauna of American plaice)
7 : 25 (use as natural tags in herring)
S 6 : 57 (use in stock discrimination studies)
63 (use as biological tags in fish)
7 : 77 (re stock identity of shortfin squid)

Parathemisto sp. (amphipod)

S 7 : 53 (food of roundnose grenadier in N Atlantic)
67 (food of shortfin squid in SA 4 to 6)
9 : 125 (food of *Todarodes sagittatus* off Norway)
10 : 47 (food of G. halibut in NW Atlantic)

Paraxenomystax sp. (Anguilliformes)

J 4 :56 (guide to early stages of marine fishes)

Parrotfish (*Nicholsina usta*)

J 3 :127 (larvae in slope water off Nova Scotia)

Pasiphaea (see Shrimp)Pearleyes (*Scopelarchoides danae*)

J 4 :166 (guide to early stages of marine fishes)

Pearlfish (*Carapus* sp.; *Echiodon* sp.)

J 4 :397 (guide to early stages of marine fishes)

Penilia avirostris (Cladocera)

J 6 :141 (eastward extension to Georges Bank)

Peprilus alepidotus (see Harvestfish, southern)Peprilus paru (see Harvestfish, northern)Peprilus triacanthus (see Butterfish, Atlantic)Perch, sand (*Diplectrum* sp.)

J 4 :233 (guide to early stages of marine fishes)

Perch, silver (*Bairdiella chrysoura*)

J 4 :270 (guide to early stages of marine fishes)

Peruvian anchovy (see Anchovy, Peruvian)Petrel, fulmar (*Fulmarus glacialis*)S 5 :107 (distribution in Nfld area, 1970-79)
7 : 67 (predator of squid in Nfld area)Phaeophyta (see Seaweeds, brown)Philobythos atlanticus (cestode)

J 2 : 67 (parasite of grenadiers in NW Atlantic)

Phoca groenlandica (see Seal, harp)Phocanema decipiens (nematode)J 2 : 67 (parasite of grenadiers in NW Atlantic)
6 :165 (parasite of American plaice off Nfld)Phocoena phocoena (see Porpoise, common)Pholididae (gunnels)

J 4 :294 (guide to early stages of marine fishes)

Pholis gunnellus (see Gunnel, rock)PhotographyJ 1 : 65 (guidelines for ageing silver hake)
S 1 : 77 (use in age determination of cod)Photonectes parvimanus (see Dragonfish, smooth)Phronima atlantica (amphipod)

S 7 : 67 (food of shortfin squid in SA 4 to 6)

Phycis chesteri (see Hake, longfin)Phyllobothrium sp. (cestode)

S 7 : 77 (parasite of squid in SA 3 to 6)

Phyllophora sp. (see Leafweeds)PhytoplanktonS 4 : 7 (detection by satellite remote-sensing)
41 (remote-sensing studies in Japan)
53 (satellite imagery of phytoplankton)
61 (fluorescence line imager for chlorophyll)
63 (water color in east Canadian waters)
69 (remote-sensing studies in B. Columbia)Pigfish (*Orthopristis chrysopterus*)

J 4 :262 (guide to early stages of marine fishes)

PigmentationJ 1 : 7 (melanophores in redfish larvae)
3 : 93 (melanophores in sand lance larvae)
4 : 1 (guide to early stages of marine fishes)
5 : 1 (development of northern searobin larvae)
6 : 9 (development of white, red and longfin hakes)
65 (development of striped searobin larvae)
7 : 77 (spotted forms of northern wolffish)Pilchard, South African (*Sardinops ocellata*)

J 1 :111 (recruitment of SE Atlantic stocks)

Pilot whale (see Whale, pilot)Pilotfish (*Naucrates duotor*)

J 4 :250 (guide to early stages of marine fishes)

Pinfish (*Lagodon rhomboides*)

J 4 :266 (guide to early stages of marine fishes)

Pink salmon (see Salmon, pink)Placopecten magellanicus (see Scallop, sea)Plaice, American (*Hippoglossoides platessoides*)J 3 : 29 (environmental preferences on Scotian Shelf)
123 (food of thorny skate in Nfld area)
149 (distribution of young on Grand Bank)
4 :374 (guide to early stages of marine fishes)
5 :181 (efficiency of trawls in catching flatfish)
6 :117 (energy equivalents of marine organisms)
165 (parasitic fauna of A. plaice off Nfld)
S 7 : 87 (feeding of hakes and other fish in SA 4-6)
8 : 39 (food links of various organism in Div. 3M)
49 (food of wolffish in NW Atlantic)
10 : 35 (dynamics of Grand Bank populations)
47 (food of G. halibut in NW Atlantic)
67 (fishery resources of Gulf of Maine)

Plaice, European (*Pleuronectes platessa*)

- S 6 : 63 (use of parasites as natural tags in fish)
8 : 25 (predation on larvae as a regulatory force)

Plankton (see also Ichthyoplankton, Phytoplankton, and Zooplankton)

- J 1 : 91 (MARMAP bongo zooplankton samplers)
2 : 47 (length-weight relations of copepods)
3 : 93 (food of sand lance in SA 4 to 6)
127 (ichthyoplankton of slope water in SA 4)
5 : 33 (ichthyoplankton of Georges Bank area)
6 : 117 (energy equivalents of marine organisms)
141 (eastward extension of a marine cladoceran)
S 1 : 23 (food of saury in NW Atlantic)
31 (grid versus random plankton sampling)
51 (food of haddock in Nfld area)
6 : 35 (feeding characteristics of wolffishes)
7 : 53 (food of grenadiers in N Atlantic)
67 (feeding spectrum of shortfin squid)
87 (feeding of hakes and other fish in SA 4-6)
8 : 33 (feeding spectrum of longfin squid)
39 (food links of various organisms in Div. 3M)
9 : 117 (food of longfin and shortfin squid)
125 (food of *Todarodes sagittatus* off Norway)

Pleuronectes platessa (see Plaice; European)Pleuronectidae (see also specific names)

- J 3 : 29 (environmental preferences on Scotian Shelf)
123 (food of thorny skate in NW Atlantic)
4 : 372 (guide to early stages of marine fishes)
5 : 181 (trawl efficiency in catching flatfish)
6 : 117 (energy equivalents of marine organisms)
S 7 : 87 (feeding of hakes and other fish in SA 4-6)

Poacher, Atlantic (*Agonus decagonus*)

- J 3 : 123 (food of thorny skate in NW Atlantic)
4 : 398 (guide to early stages of marine fishes)
S 10 : 47 (food of G. halibut in NW Atlantic)

Pogonias cromis (see Drum, black)Polar cod (see Cod, Arctic)Pollachius virens (see Pollock)Pollichthys maui (see Anglemouth)Pollock (*Pollachius virens*)

- J 1 : 45 (occurrence as larvae in Bay of Fundy)
101 (recruitment in the North Sea stock)
3 : 29 (environmental preferences on Scotian Shelf)
123 (food of thorny skate in Nfld area)
4 : 180 (guide to early stages of marine fishes)
5 : 33 (larvae in Georges Bank area, 1971-77)
6 : 87 (fertilization failure in gadids)
117 (energy equivalents of marine organisms)
S 7 : 67 (predator of shortfin squid in SA 4 to 6)
87 (feeding of hakes and other fish in SA 4-6)
9 : 125 (food of *Todarodes sagittatus* off Norway)
10 : 67 (fishery resources of Gulf of Maine)

Polychaetes

- J 3 : 93 (food of sand lance off US coast)
123 (food of thorny skate in NW Atlantic)
6 : 117 (energy equivalents of marine organisms)

- 157 (food of salmon in Grand Bank area)
7 : 47 (food of spotted wolffish in NW Atlantic)
S 1 : 51 (food of haddock in Nfld area)
6 : 35 (food of wolffishes in Nfld area)
7 : 45 (food of roughhead grenadier in SA 3)
53 (food of roundnose grenadier in N Atlantic)
87 (food of hakes and other fish in SA 4 to 6)
8 : 33 (feeding spectrum of longfin squid)
39 (food links of various organisms in Div. 3M)
49 (food of Atlantic wolffish off Nfld)
9 : 117 (food of shortfin and longfin squid)
125 (food of *Todarodes sagittatus* off Norway)
10 : 47 (food of G. halibut in NW Atlantic)

Polymorphism (see also Genetics)

- J 3 : 69 (population genetics of redfishes)
S 6 : 73 (genetics of blue mussel populations)

Polyplacophora (chitons)

- J 7 : 47 (food of spotted wolffish in NW Atlantic)

Pomatomidae (bluefishes)

- J 4 : 238 (guide to early stages of marine fishes)
6 : 117 (energy equivalents of marine organisms)

Pomatomus saltatrix (see Bluefish)Pomfret, bigscale (*Paractichthys longipinnis*)

- J 4 : 260 (guide to early stages of marine fishes)

Pomfret, smallscale (*Brama rayi*)

- J 1 : 55 (by-catch in salmon drift-nets)

Pomfrets (see Bramidae)Pomphorhynchus sp. (acanthocephalan)

- S 6 : 63 (parasites as natural tags in fish)

Pompano (*Trachinotus* sp.)

- J 4 : 258 (guide to early stages of marine fishes)

Porbeagle (*Lamna nasus*)

- J 6 : 117 (energy equivalents of marine organisms)

Porgies (see Sparidae)Porifera

- J 6 : 117 (energy equivalents of marine organisms)
S 10 : 47 (food of G. halibut in NW Atlantic)

Poromitra sp. (Melamphaidae)

- J 4 : 214 (guide to early stages of marine fishes)

Porpoise, common (*Phocoena phocoena*)

- J 1 : 55 (by-catch in salmon drift-nets)

Porrocaecum decipiens (see *Phocanema decipiens*)Pout, Norway (*Trisopterus esmarki*)

- S 9 : 125 (food of *Todarodes sagittatus* off Norway)

Pout, ocean (*Macrozoarces americanus*)

- J 3 : 29 (environmental preferences on Scotian Shelf)
- 6 : 117 (energy equivalents of marine organisms)
- S 7 : 67 (food of shortfin squid in SA 4 to 6)
- 87 (feeding of hakes and other fish in SA 4-6)
- 8 : 53 (observation on orientation to currents)

Pouts (see also Eelpouts)Prawn (see Shrimp)Predation (see also Cannibalism; Feeding)

- J 3 : 61 (effect on larval herring along Maine)
- 6 : 125 (on herring eggs in south Gulf St. Lawrence)
- S 1 : 41 (on capelin and sand lance by cod in SA 3)
- 65 (digestive processes in shortfin squid)
- 3 : 77 (on capelin and sand lance by cod off Nfld)
- 5 : 101 (sea urchins on kelp beds in Nova Scotia)
- 6 : 35 (feeding of wolffishes in Nfld area)
- 7 : 53 (roundnose grenadier in N Atlantic)
- 67 (feeding spectrum of shortfin squid)
- 87 (feeding of hakes and other fish in SA 4-6)
- 8 : 25 (experiment with fish larvae in Norway)
- 33 (feeding spectrum of longfin squid)
- 39 (food links of various organisms in Div. 3M)
- 9 : 117 (food consumption of *Illex* and *Loligo*)
- 125 (role of *Todarodes sagittatus* off Norway)

Pressure (atmospheric)

- S 5 : 17 (meteorological conditions over N Atlantic)
- 33 (weather conditions in SA 5-6, 1970-79)
- 7 : 7 (review of environmental conditions, 1982)
- 27 (storms re water movements in Div. 3M)
- 8 : 7 (review of environmental conditions, 1983)
- 10 : 21 (review of environmental conditions, 1984)

Prionotus carolinus (see Searobin, northern)Prionotus evolans (see Searobin, striped)Prionace glauca (see Shark, blue)Production model analysis

- S 10 : 35 (dynamics of flounder stocks in Div. 3LN0)

Protomyctophum arcticum (see Lanternfish)Protozoa (see also more specific names)

- J 6 : 165 (parasites of A. plaice in Nfld area)

Psenes sp. (see Driftfish)Pseudocalanus sp. (copepod)

- J 2 : 47 (length-weight relations in SA 5)

Pseudophichthys splendens (Anguilliformes)

- J 4 : 57 (guide to early stages of marine fishes)

Pseudophyllidea sp. (cestode)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)

Pseudopleuronectes americanus (see Flounder, winter)Pteraclis carolinus (Bramidae)

- J 4 : 260 (guide to early stages of marine fishes)

Pterycombus brama (Bramidae)

- J 4 : 260 (guide to early stages of marine fishes)

Pterygioteuthis gemmata (see Squid)Puffer, northern (*Sphaeroides maculatus*)

- J 4 : 394 (guide to early stages of marine fishes)
- 6 : 117 (energy equivalents of marine organisms)

Puffin, Atlantic (*Fratercula arctica*)

- J 1 : 55 (by-catch in salmon drift-nets)

Puffins (*Puffinus* sp.)

- S 7 : 67 (predators of shortfin squid off Nfld)

Pyroteuthis margaritifera (see Squid)Pythonichthys micropthalmus (Anguilliformes)

- J 4 : 55 (guide to early stages of marine fishes)

QQueen, crab (see Crab, queen)**R**Radiated shanny (see Shanny, radiated)Rainbow runner (see Runner, rainbow)Raja erinacea (see Skate, little)Raja ocellata (see Skate, winter)Raja radiata (see Skate, thorny)Raja venta (see Skate, smooth)Raja sp. (see Skates)Ranzania laevis (see Mola, slender)Rathkea oetopunctata (hydrozoan)

- S 8 : 25 (predator on fish larvae in Norway)

Rattail (see Grenadier)Rebelula bonvieri

- J 2 : 67 (parasite of grenadiers in NW Atlantic)

Recaptures (see Tagging)Recruitment

- J 1 : 21 (redfish fishery in Gulf of Maine)
- 101 (analysis of 18 selected fish stocks)

- 3 : 1 (haddock fishery on Georges Bank)
- 61 (larval herring production along Maine)
- 87 (young haddock around Sable Island)
- 141 (G. halibut in Gulf of St. Lawrence)
- 5 : 109 (young haddock around Sable Island)
- 7 : 67 (queen crabs in Gulf of St. Lawrence)
- S 3 : 39 (re simulated yield of shortfin squid)
- 6 : 79 (re age determination of shrimp)
- 9 : 143 (population dynamics of short-lived species)
- 10 : 35 (yellowtail and A. plaice on Grand Bank)

Red drum (see Drum, red)

Red hake (see Hake, red)

Red seaweeds (see Seaweeds, red)

Redfish, beaked (*Sebastes fasciatus*; *S. mentella*)

- J 1 : 7 (study of melanophores in larvae)
- 2 : 7 (species separation by gasbladder muscles)
- 3 : 169 (genetic study of species differences)
- 5 : 65 (meristics of golden and beaked redfish)
- 189 (distribution in Gulf of St. Lawrence)
- 6 : 1 (morphometrics of golden and beaked types)
- 57 (reproductive cycles of redfishes)
- S 6 : 7 (distribution in Nfld area)

Redfish, black-bellied (*Helicolenus dactylopterus*)

- J 4 : 220 (guide to early stages of marine fishes)

Redfish, golden (*Sebastes marinus*)

- J 1 : 7 (study of melanophores in larvae)
- 3 : 165 (morphology of gasbladder muscles)
- 169 (genetic studies of species differences)
- 5 : 65 (meristics of golden and beaked types)
- 6 : 1 (morphometrics of golden and beaked types)
- 57 (reproductive cycles of redfishes)
- S 6 : 7 (distribution in Nfld area)

Redfishes, Atlantic (*Sebastes* sp.)

- J 1 : 21 (exploitation in the Gulf of Maine)
- 55 (food of salmon in Irminger Sea)
- 2 : 13 (age validation study in SA 5)
- 3 : 29 (environmental preferences on Scotian Shelf)
- 115 (distribution of young on Flemish Cap)
- 123 (food of thorny skate in NW Atlantic)
- 4 : 216 (guide to early stages of marine fishes)
- 5 : 99 (discards of young in a shrimp fishery)
- 6 : 117 (energy equivalents of marine organisms)
- 7 : 47 (food of spotted wolffish in NW Atlantic)
- S 1 : 51 (food of haddock in Nfld area)
- 57 (larval distribution in Div. 3M)
- 3 : 67 (food of hooded seals at Greenland)
- 6 : 35 (food of wolffishes in Nfld area)
- 63 (use of parasites as natural tags)
- 7 : 45 (food of roughhead grenadier in SA 3)
- 67 (food of shortfin squid in NW Atlantic)
- 87 (feeding of hakes and other fish in SA 4-6)
- 8 : 39 (food links of various organisms in Div. 3M)
- 49 (food of Atlantic wolffish in Nfld area)
- 9 : 125 (food of *Todarodes sagittatus* off Norway)
- 10 : 47 (food of G. halibut in NW Atlantic)
- 67 (fishery resources of Gulf of Maine)

Reinhardtius hippoglossoides (see Halibut, Greenland)

Remote-sensing

- S 1 : 47 (satellite-tracked buoys on Flemish Cap)
- 4 : 7 (use and nature of satellite data)
- 21 (ocean fronts off US coast)
- 31 (surface temperature off eastern Canada)
- 41 (oceanographic studies in Japan)
- 51 (characteristics of Kuroshio eddies)
- 53 (satellite imagery of phytoplankton)
- 61 (fluorescence imager for chlorophyll)
- 63 (water color in east Canadian waters)
- 69 (oceanographic studies in B. Columbia)
- 77 (fishing vessel transmitting terminals)
- 85 (surface circulation from satellites)
- 93 (availability of remote-sensing data)
- 7 : 7 (review of environmental conditions, 1982)
- 8 : 8 (review of environmental conditions, 1983)

Renicola sp. (trematode)

- S 6 : 63 (parasites as natural tags in fish)

Reproduction (see also Eggs, Maturity, Spawning)

- J 1 : 49 (white hake in Gulf of St. Lawrence)
- 3 : 41 (embryonic development of *Illex*)
- 47 (egg capsules of thorny skate)
- 57 (hooded seals in Greenland area)
- 93 (sand lance off US coast)
- 5 : 1 (early development of northern searobin)
- 161 (variation in cod fecundity off Nfld)
- 6 : 21 (abundance of larval herring in SA 5)
- 57 (reproductive cycles of redfishes)
- 65 (early development of striped searobin)
- 87 (fertilization failure in gadids)
- 125 (herring in southern Gulf of St. Lawrence)
- S 1 : 7 (biology of saury in NW Atlantic)
- 71 (oogenesis and maturity of G. halibut)
- 6 : 15 (herring spawning on Georges Bank)
- 9 : 107 (reproductive features of male *Illex*)

Requiem shark (see Shark, requiem)

Rhodophyta (see Seaweeds, red)

Rhynchocoela

- J 6 : 117 (energy equivalents of marine organisms)

Ribbed sculpin (see Sculpin, ribbed)

Ribbon sawtailfish (see Sawtailfish, ribbon)

Robinia catherinae (Anguilliformes)

- J 4 : 54 (guide to early stages of marine fishes)

Rock crab (see Crab, rock)

Rock grenadier (see Grenadier, rock)

Rock gunnel (see Gunnel, rock)

Rockling, fourbeard (*Enchelyopus cimbrius*)

- J 4 : 172 (guide to early stages of marine fishes)
- 6 : 117 (energy equivalents of marine organisms)

Rockling, threebeard (*Gaidropsaurus ensis*)

- J 4 : 172 (guide to early stages of marine fishes)

Rockweeds (*Fucus* sp.)

J 6 : 125 (occurrence on herring spawning beds)

Rotifers

S 8 : 25 (predator of fish larvae in Norway)

Roughhead grenadier (see Grenadier, roughhead)Round herring (see *Etrumeus* sp.)Round scad (see Scad, round)Roundnose, grenadier (see Grenadier, roundnose)Rudderfish, banded (*Seriola zonata*)

J 4 : 256 (guide to early stages of marine fishes)

Ruff, black (*Centrolophus niger*)

J 4 : 330 (guide to early stages of marine fishes)

Runner, blue (*Caranx crysos*)J 4 : 242 (guide to early stages of marine fishes)
6 : 117 (energy equivalents of marine organisms)Runner, rainbow (*Elagatis bipinnulatus*)

J 4 : 248 (guide to early stages of marine fishes)

Rypticus sp. (see Soapfish)**S**Saccopharyngidae (Anguilliformes)

J 4 : 48 (guide to early stages of marine fishes)

Sagitta sp. (chaetognaths)S 7 : 67 (food of shortfin squid in SA 4 to 6)
8 : 33 (food of longfin squid in SA 5 and 6)
9 : 117 (food of *Illex* and *Loligo* in SA 5 and 6)
125 (food of *Todarodes sagittatus* off Norway)Sailfish (*Istiophorus* sp.)J 4 : 326 (guide to early stages of marine fishes)
S 9 : 27 (predator of squid off Florida)Saithe (see Pollock)SalinityJ 3 : 29 (re preferences of Scotian Shelf fishes)
6 : 43 (re distribution of shortfin squid larvae)
7 : 15 (re diel movements of squids in slope water)
S 5 : 43 (oceanographic conditions in SA 0+1, 1970-79)
51 (oceanographic conditions in SA 2-4, 1970-79)
81 (variability in conditions off Labrador)
87 (variability on Flemish Cap section, 1970-79)
95 (oceanographic conditions in SA 5+6, 1970-79)
7 : 7 (review of environmental conditions, 1982)
39 (hydrographic conditions in SA 1, 1970-82)
8 : 7 (review of environmental conditions, 1983)
9 : 77 (re distribution of shortfin squid larvae)
10 : 21 (review of environmental conditions, 1984)Salmo salar (see Salmon, Atlantic)Salmon, Atlantic (*Salmo salar*)J 1 : 55 (drift-net catches in Irminger Sea)
6 : 157 (occurrence on and east of Grand Bank)
S 6 : 63 (use of parasites as natural tags)Salmon, pink (*Oncorhynchus gorbuscha*)

S 1 : 7 (analysis of gillnet selection data)

Salmon, sockeye (*Oncorhynchus nerka*)S 1 : 7 (analysis of gillnet selection data)
6 : 63 (use of parasites as natural tags)Salvelinus alpinus (see Char, Arctic)Sampler, bongo (see Bongo sampling)Sampling (biological)J 1 : 91 (MARMAP bongo zooplankton samplers)
2 : 53 (partial length measurement for grenadiers)
5 : 181 (efficiency of trawls in catching flatfish)
7 : 35 (trawl geometry and fish sampling)
S 1 : 31 (grid and random sampling of plankton)
2 : 1 (manual for groundfish surveys)
8 : 61 (partial length measuring of grenadiers)Sand dollars (Echinarachnidae)J 7 : 47 (food of spotted wolffish in NW Atlantic)
S 8 : 49 (food of Atlantic wolffish off Nfld)Sand flounder (see Flounder, sand)Sand lance (*Ammodytes americanus*; *A. dubius*)J 1 : 45 (occurrence of larvae in Bay of Fundy)
3 : 29 (environmental preferences on Scotian Shelf)
93 (biological characteristics in SA 4 to 6)
4 : 298 (guide to early stages of marine fishes)
5 : 33 (ichthyoplankton of Georges Bank area)
6 : 117 (energy equivalents of marine organisms)
157 (food of salmon in Grand Bank area)
S 1 : 41 (prey of cod in Nfld area)
3 : 77 (prey of cod in Grand Bank area)
7 : 45 (food of roughhead grenadier in SA 3)
10 : 47 (food of G. halibut in NW Atlantic)Sand lance (*Ammodytes tobianus*)S 9 : 125 (food of *Todarodes sagittatus* off Norway)Sand perch (see Perch, sand)Sand shrimp (see Shrimp, sand)Sarda sarda (see Bonito, Atlantic)Sardine (*Harengula jaguana*)

J 4 : 34 (guide to early stages of marine fishes)

Sardine (*Sardinella aurita*)J 4 : 34 (guide to early stages of marine fishes)
6 : 117 (energy equivalents of marine organisms)Sardinella aurita (see Sardine)

- Sardinops ocellata (see Pilchard, South African)
- Sargassumfish (*Histrio histrio*)
- J 3 :127 (larvae in slope water off Nova Scotia)
4 :192 (guide to early stages of marine fishes)
- Sarsia sp. (hydrozoan)
- S 8 : 25 (predator of fish larvae in Norway)
- Sash flounder (see Flounder, sash)
- Satellite imagery (see Remote-sensing)
- Saurida sp. (see Lizardfish)
- Saury, Atlantic (*Scomberesox saurus*)
- J 3 :127 (larvae in slope water off Nova Scotia)
4 :212 (guide to early stages of marine fishes)
6 :117 (energy equivalents of marine organisms)
S 1 : 23 (biology and distribution in NW Atlantic)
- Sawtailfish, ribbon (*Idiacanthus fasciola*)
- J 4 : 92 (guide to early stages of marine fishes)
- Scabbardfish, black (*Aphanopus carbo*)
- S 7 : 53 (predator of grenadiers in N Atlantic)
- Scad, bigeye (*Selar crumenophthalmus*)
- J 6 :117 (energy equivalents of marine organisms)
- Scad, round (*Decapterus punctatus*)
- J 4 :246 (guide to early stages of marine fishes)
6 :117 (energy equivalents of marine organisms)
- Scaled dragonfish (see Dragonfish, scaled)
- Scallop, bay (*Argopecten irradians*)
- J 5 :103 (study of compensatory growth)
- Scallop, Iceland (*Chlamys islandica*)
- J 6 :117 (energy equivalents of marine organisms)
7 : 47 (food of spotted wolffish in NW Atlantic)
S 8 : 49 (food of Atlantic wolffish in Nfld area)
- Scallop, sea (*Placopecten magellanicus*)
- J 6 : 11 (energy equivalents of marine organisms)
7 : 1 (USA and Canadian surveys on Georges Bank)
S 10 : 67 (fishery resources of Gulf of Maine)
- Scaridae (parrotfishes)
- J 3 :127 (larvae in slope water off Nova Scotia)
5 : 33 (ichthyoplankton of Georges Bank area)
- Schedophilus medusophagus (Centrolophidae)
- J 4 :330 (guide to early stages of marine fishes)
- Schulmania aenigmatica (protozoan)
- J 6 :165 (parasite of American plaice off Nfld)
- Sciaenidae (croakers and drums)
- J 4 :268 (guide to early stages of marine fishes)
6 :117 (energy equivalents of marine organisms)
- Sciaenops ocellatus (see Drum, red)
- Scolecithrix danae (copepod)
- S 7 : 67 (food of shortfin squid in SA 4 to 6)
- Scolex pleuronectis (cestode)
- J 2 : 67 (parasite of grenadiers in NW Atlantic)
6 :165 (parasite of American plaice off Nfld)
- Scomber japonicus (see Mackerel, Pacific)
- Scomber scombrus (see Mackerel, Atlantic)
- Scomberesocidae (sauries) (see also specific names)
- J 3 :127 (larvae in slope water off Nova Scotia)
4 :212 (guide to early stages of marine fishes)
- Scomberesox saurus (see Saury, Atlantic)
- Scomberomorus cavalla (see Mackerel, king)
- Scomberomorus maculatus (see Mackerel, Spanish)
- Scombridae (mackerels) (see also specific names)
- J 4 :306 (guide to early stages of marine fishes)
- Scombrolabrax heterolepis
- J 4 :309 (guide to early stages of marine fishes)
- Scopelarchoides danae (see Pearleyes)
- Scopelarchus sp. (see Pearleyes)
- Scopelengys tristis (Neoscopelidae)
- J 4 : 98 (guide to early stages of marine fishes)
- Scopeloberx sp. (Melamphaidae)
- J 4 :214 (guide to early stages of marine fishes)
- Scopelogadus sp. (Melamphaidae)
- J 4 :214 (guide to early stages of marine fishes)
- Scopelosaurus sp. (Scopelosauridae)
- J 3 :127 (larvae in slope water off Nova Scotia)
4 :100 (guide to early stages of marine fishes)
- Scophthalmidae (see also specific names)
- J 4 :352 (guide to early stages of marine fishes)
5 : 33 (ichthyoplankton of Georges Bank area)
- Scophthalmus aquosus (see Flounder, windowpane)
- Scorpaenidae (see also specific names)
- J 3 :123 (food of thorny skate in NW Atlantic)
127 (larvae in slope water off Nova Scotia)

- 4 : 216 (guide to early stages of marine fishes)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 7 : 53 (food of roundnose grenadier in N Atlantic)

Scorpionfish (*Scorpaena* sp.)

- J 3 : 127 (larvae in slope water off Nova Scotia)

Scotian Shelf (Divisions 4VWX)

- J 1 : 65 (age determination of silver hake)
 2 : 21 (vertebral numbers in Atlantic cod)
 61 (records of mature shortfin squid)
 3 : 29 (environmental preferences of fish)
 41 (embryology of *Illex* re temperature)
 47 (egg capsules of thorny skate)
 87 (young haddock around Sable Island)
 93 (study on biology of sand lance)
 123 (study on feeding of thorny skate)
 127 (ichthyoplankton in slope water)
 5 : 109 (juvenile haddock around Sable Island)
 171 (thorns and teeth rows of thorny skate)
 207 (meristics of Atlantic wolffish)
 213 (meristics of larval and juvenile haddock)
 6 : 9 (development of white, red and longfin hakes)
 7 : 15 (diel movements of squid in slope water)
 25 (use of parasites as natural tags in fish)
 47 (biological aspects of spotted wolffish)
 57 (biological aspects of Atlantic wolffish)
 S 1 : 23 (distribution of Atlantic saury)
 3 : 39 (yield-per-recruit simulation of *Illex*)
 47 (age and size of spiny dogfish)
 4 : 85 (remote-sensing of surface circulation)
 5 : 7 (20th century marine climatic changes)
 51 (review of oceanographic conditions, 1982)
 7 : 61 (causal analysis of shortfin squid data)
 67 (feeding spectrum of shortfin squid)
 87 (feeding of hakes and other fish in SA 4-6)
 8 : 49 (study on feeding of Atlantic wolffish)
 9 : 11 (distribution of shortfin squid, 1980-83)
 10 : 67 (fishery resources of Gulf of Maine)

Sculpin (*Artedidellus* sp.)

- J 3 : 123 (food of thorny skate in NW Atlantic)

Sculpin (*Triglops* sp.)

- J 3 : 123 (food of thorny skate in NW Atlantic)
 S 10 : 47 (food of G. halibut in NW Atlantic)

Sculpin, little (*Myoxocephalus aeneus*)

- J 4 : 226 (guide to early stages of marine fishes)

Sculpin, longhorn (*Myoxocephalus octodecemspinosus*)

- J 3 : 29 (environmental preferences on Scotian Shelf)
 4 : 228 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)
 S 7 : 87 (feeding of hakes and other fish in SA 4-6)

Sculpin, mailed (*Triglops murrayi*)

- J 4 : 230 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)

Sculpin, Nybelini's (*Triglops nybelini*)

- J 6 : 117 (energy equivalents of marine organisms)

Sculpin, ribbed (*Triglops pingeli*)

- S 7 : 67 (food of shortfin squid in NW Atlantic)

Sculpin, shorthorn (*Myoxocephalus scorpius*)

- J 4 : 230 (guide to early stages of marine fishes)

Sculpins (Cottidae)

- S 7 : 53 (food of roundnose grenadier in N Atlantic)
 10 : 47 (food of G. halibut in NW Atlantic)

Scup (*Stenotomus chrysops*)

- J 4 : 264 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)

Scyphozoa (cnidarians)

- J 6 : 117 (energy equivalents of marine organisms)
 S 7 : 53 (food of roundnose grenadier in N Atlantic)
 10 : 47 (food of G. halibut in NW Atlantic)

Sea anemones (Actiniaria)

- J 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 8 : 49 (food of Atlantic wolffish off Nfld)

Sea birds (see also specific names)

- S 5 : 107 (affected by environmental factors)
 7 : 67 (predators of squid in NW Atlantic)

Sea cucumbers (Holothuroidea)

- J 3 : 123 (food of thorny skate in NW Atlantic)
 6 : 117 (energy equivalents of marine organisms)
 S 1 : 51 (food of haddock in Nfld area)
 7 : 45 (food of roughhead grenadier in SA 3)
 83 (food of hakes and other fish in SA 4 to 6)

Sea scallop (see Scallop, sea)

Sea raven, Atlantic (*Hemitripterus americanus*)

- J 3 : 29 (environmental preferences on Scotian Shelf)
 4 : 224 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)
 S 7 : 87 (feeding of hakes and other fish in SA 4-6)

Sea stars (Asteroidea)

- J 6 : 117 (energy equivalents of marine organisms)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 6 : 35 (food of wolffishes in Nfld area)
 7 : 45 (food of roughhead grenadier in SA 3)
 8 : 49 (food of Atlantic wolffish in Nfld area)

Sea urchin (see Urchin, sea)

Seabass, black (*Epinephelus* sp.)

- J 4 : 233 (guide to early stages of marine fishes)

Seabream (*Archosargus rhomboidalis*)

- J 4 : 266 (guide to early stages of marine fishes)

Seal, harp (*Phoca groenlandica*)

- S 3 : 53 (age structure of catches, 1952-80)
 5 : 107 (effects of environment factors, 1970-79)
 10 : 57 (catches in Greenland, 1939-83)

Seal, hooded (*Cystophora cristata*)

- J 1 : 55 (by-catch in salmon drift-nets)
 3 : 57 (reproductive features at S Greenland)
 S 3 : 67 (study of Greenland population, 1970-80)
 10 : 57 (catches in Greenland, 1939-83)

Searobin, northern (*Prionotus carolinus*)

- J 4 : 222 (guide to early stages of marine fishes)
 5 : 1 (development of eggs, larvae and osteology)
 6 : 117 (energy equivalents of marine organisms)

Searobin, striped (*Prionotus evolans*)

- J 6 : 65 (development of eggs, larvae and osteology)

Searsiidae

- S 7 : 53 (food of roundnose grenadier in N Atlantic)

Seasnail (*Liparus* sp.)

- J 3 : 123 (food of thorny skate in NW Atlantic)
 S 10 : 47 (food of G. halibut in NW Atlantic)

Seaweeds, brown (Phaeophyta)

- J 6 : 125 (occurrence on herring spawning beds)
 S 5 : 101 (distribution by sea urchins in Nova Scotia)

Seaweeds, red (Rhodophyta)

- J 6 : 125 (occurrence on herring spawning beds)

Sebastes fasciatus (see Redfish, beaked)Sebastes marinus (see Redfish, golden)Sebastes mentella (see Redfish, beaked)Sebastes sp. (see Redfishes, Atlantic)Selar arumenophthalmus (see Scad, bigeye)Selection; Selectivity

- S 1 : 7 (analysis of gillnet selection data)

Selene vomer (see Lookdown, Atlantic)Sepioides sp. (see Squid)Sepiolidae (cephalopods)

- S 7 : 67 (food of shortfin squid in SA 4 to 6)
 9 : 139 (comparison of myopsid and sepiolid squid)

Sergestes sp. (see Shrimp)Seriola dumerili (see Amberjack, greater)Seriola zonata (see Rudderfish, banded)Serranidae (seabasses)

- J 4 : 232 (guide to early stages of marine fishes)

Serrivomer beani (see Eel, shortnose snipe)Serrivomeridae (Anguilliformes)

- J 3 : 123 (food of thorny skate in NW Atlantic)
 4 : 51 (guide to early stages of marine fishes)
 S 7 : 53 (food of roundnose grenadier in N Atlantic)
 8 : 67 (mesopelagic fishes off Newfoundland)

Shad, American (*Alosa sapidissima*)

- J 6 : 117 (energy equivalents of marine organisms)
 S 10 : 67 (fishery resources of Gulf of Maine)

Shad, hickory (*Alosa mediocris*)

- J 6 : 117 (energy equivalents of marine organisms)

Shanny (*Leptoclinus maculatus*)

- S 9 : 125 (food of *Todarodes sagittatus* off Norway)

Shanny, Arctic (*Stichaeus punctatus*)

- J 4 : 294 (guide to early stages of marine fishes)

Shanny, daubed (*Lumpenus maculatus*)

- J 4 : 294 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)

Shanny, radiated (*Ulvaria subulifurcata*)

- J 4 : 294 (guide to early stages of marine fishes)

Shark, blue (*Prionace glauca*)

- J 1 : 55 (by-catch in salmon drift-nets)
 6 : 117 (energy equivalents of marine organisms)

Shark, dogfish (see Dogfish, spiny)Shark, mackerel (see Porbeagle)Shark, mako (*Isurus paucus*)

- J 6 : 117 (energy equivalents of marine organisms)

Shark, requiem (*Carcharhinus plumbeus*)

- J 6 : 117 (energy equivalents of marine organisms)

Sharptail shortfin squid (see Squid, sharptail shortfin)Sheepshead (*Archosargus probatocephalus*)

- J 4 : 266 (guide to early stages of marine fishes)

Short-finned squid (see Squid, shortfin)Shorthorn sculpin (see Sculpin, shorthorn)Shortnose snipe eel (see Eel, shortnose snipe)Shrimp (*Acanthephyra* sp.)

- S 7 : 53 (food of roundnose grenadier in N Atlantic)

Shrimp (*Argis dentata*)

J 3 : 123 (food of thorny skate in NW Atlantic)

Shrimp (*Dichelopandalus leptocerus*)

J 6 : 117 (energy equivalents of marine organisms)

Shrimp (*Gennades* sp.)

S 7 : 53 (food of roundnose grenadier in N Atlantic)

Shrimp (*Macrura*)

J 7 : 47 (food of spotted wolffish in NW Atlantic)

Shrimp (*Pasiphaea* sp.)

J 6 : 117 (energy equivalents of marine organisms)
 S 7 : 53 (food of roundnose grenadier in N Atlantic)
 67 (food of shortfin squid in SA 4 to 6)

Shrimp (*Sergestes* sp.)

J 3 : 123 (food of thorny skate in NW Atlantic)
 S 7 : 53 (food of roundnose grenadier in N Atlantic)
 67 (food of shortfin squid in SA 4 to 6)

Shrimp (*Spirontocaris* sp.)

J 3 : 123 (food of wolffishes in Nfld area)

Shrimp, northern (*Pandalus borealis*)

J 3 : 123 (food of thorny skate in NW Atlantic)
 5 : 99 (redfish discarding in west Nfld fishery)
 S 3 : 7 (ecology and fishery in Davis Strait)
 6 : 35 (food of wolffishes in Nfld area)
 79 (workshop on ageing shrimp, 1981)
 7 : 53 (food of roundnose grenadier in N Atlantic)
 8 : 39 (food links of various organisms in Div. 3M)
 10 : 47 (food of G. halibut in NW Atlantic)
 67 (fishery resources of Gulf of Maine)

Shrimp, sand (*Crangon septemspinosa*)

J 6 : 117 (energy equivalents of marine organisms)

Shrimps (general) (see also specific names)

J 3 : 123 (food of thorny skate in NW Atlantic)
 6 : 117 (energy equivalents of marine organisms)
 157 (food of salmon in Grand Bank area)
 S 7 : 45 (food of roughhead grenadier in SA 3)
 53 (food of roundnose grenadier in N Atlantic)
 67 (food of shortfin squid in SA 4 to 6)
 87 (food of hakes and other fish in SA 4 to 6)
 8 : 33 (food of longfin squid in SA 5 and 6)
 9 : 117 (food of *Illex* and *Loligo* off US coast)
 125 (food of *Todarodes sagittatus* off Norway)

Silver anchovy (see Anchovy, silver)Silver, hake (see Hake, silver)Silver perch (see Perch, silver)Silversides, Atlantic (*Menidia menidia*)

J 6 : 117 (energy equivalents of marine organisms)

Sipunculoidea (worms)

S 7 : 87 (food of hakes and other fish in SA 4 to 6)

Skate, little (*Raja erinacea*)

J 3 : 29 (environmental preference on Scotian Shelf)
 6 : 117 (energy equivalents of marine organisms)

Skate, smooth (*Raja senta*)

J 3 : 29 (environmental preferences on Scotian Shelf)

Skate, thorny (*Raja radiata*)

J 3 : 29 (environmental preferences on Scotian Shelf)
 47 (development of egg capsules)
 123 (study on feeding in NW Atlantic)
 5 : 55 (migration patterns in Nfld area)
 171 (variation in thorns and teeth rows)

Skate, winter (*Raja ocellata*)

J 3 : 29 (environmental preferences on Scotian Shelf)

Skates (*Raja* sp.)

S 6 : 35 (food of wolffishes in Nfld area)
 7 : 45 (food of roughhead grenadier in SA 3)
 87 (feeding of hakes and other fish in SA 4-6)
 10 : 47 (food of G. halibut in NW Atlantic)

Skipjack tuna (see Tuna, skipjack)Slender mola (see Mola, slender)Slickhead (*Alepocephalus* sp.)

S 10 : 47 (food of G. halibut in NW Atlantic)

Smallmouth flounder (see Flounder, smallmouth)Smallscale pomfret (see Pomfret, smallscale)Small-wing flyingfish (see Flyingfish, small-wing)Smelt, American (*Osmerus mordax*)

J 4 : 62 (guide to early stages of marine fishes)

Smooth dragonfish (see Dragonfish, smooth)Smooth flounder (see Flounder, smooth)Smooth skate (see Skate, smooth)Smoothhead (see Slickhead)Snails

J 3 : 93 (food of sand lance off US coast)

Snake blenny (see Blenny, snake)Snake eel (see Eel, snake)Snake lizardfish (see Lizardfish, snake)Snake mackerel (see Mackerel, snake)Snipe eel (see Eel, Atlantic snipe; Eel, bobtail snipe; and Eel, shortnose snipe)

Snow crab (see Crab, queen)

Soapfish (*Rypticus* sp.)

J 4 : 233 (guide to early stages of marine fishes)

Sockeye salmon (see Salmon, sockeye)

Solariella obscura

S 6 : 35 (food of wolffishes in Nfld area)

Sole (*Solea solea*)

S 6 : 63 (use of parasites as natural tags)

Sole, lined (*Achirus lineatus*)

J 4 : 388 (guide to early stages of marine fishes)

Soleidae (see also specific names)

J 4 : 386 (guide to early stages of marine fishes)

South Africa (see Africa, South)

South African anchovy (see Anchovy, South African)

South African pilchard (see Pilchard, South African)

South African round herring (see Herring, round)

South Atlantic Bight (Cape Hatteras to Florida)

J 6 : 43 (distribution of larval shortfin squid)

S 9 : 27 (squid resources of southeast USA)

77 (distribution of squid larvae and juveniles)

Southeast Atlantic (see Atlantic Ocean, Southeast)

Southern harvestfish (see Harvestfish, southern)

Southern New England (see New England area)

Southern shortfin squid (see Squid, southern shortfin)

Southwest Atlantic (see Atlantic Ocean, Southwest)

Spadefish, Atlantic (*Chaetodipterus faber*)

J 4 : 286 (guide to early stages of marine fishes)

Spanish flag (*Gonioplectrus hispanus*)

J 4 : 232 (guide to early stages of marine fishes)

Spanish, mackerel (see Mackerel, Spanish)

Sparidae (porgies)

J 4 : 264 (guide to early stages of marine fishes)

S 8 : 33 (food of longfin squid in SA 5 and 6)

Spawning (see also Eggs, Maturation, Reproduction)

J 3 : 47 (egg capsules of thorny skate)

61 (larval herring production off Maine)

93 (sand lance in southern New England)

5 : 132 (movements of larval herring off Maine)

6 : 21 (herring spawning in Georges Bank area)

43 (shortfin squid larvae in NW Atlantic)

87 (fertilization failure in gadids)

125 (herring spawning in Gulf of St. Lawrence)

135 (estimating maturation rates of capelin)

7 : 47 (biology of spotted wolffish in NW Atlantic)

57 (biology of Atlantic wolffish in NW Atlantic)

S 1 : 23 (Atlantic saury in NW Atlantic)

3 : 7 (grenadier, G. halibut and shrimp in SA 0+1)

6 : 15 (time and location for Georges Bank herring)

39 (re oceanographic features for *Illex*)

57 (re stock discrimination in marine fishes)

9 : 47 (cephalopod distribution re oceanography)

59 (life cycles of five ommastrephid squids)

67 (*Illex* egg masses re oceanography)

139 (life history of myopsids and sepiolids)

Speciation

J 1 : 7 (melanophore variation in redfish larvae)

2 : 7 (variation in redfish gasbladder muscles)

3 : 93 (comparison of *Ammodytes* sp. larvae)

165 (gas bladder muscles in golden redfish)

169 (population genetics of redfishes)

5 : 65 (meristics of golden and beaked redfish)

Sphaeroides maculatus (see Puffer, northern)

Sphyræna barracuda (see Barracuda, great)

Sphyræna borealis (see Barracuda, northern)

Sphyrænidae (barracudas)

J 4 : 290 (guide to early stages of marine fishes)

Sphyrion lumpi (copepod)

S 6 : 63 (use of parasite as natural tag in fish)

Spines

J 5 : 1 (development in northern searobin)

171 (variation in thorny skate)

6 : 65 (development in striped searobin)

S 3 : 47 (use in ageing spiny dogfish)

Spiny dogfish (see Dogfish, spiny)

Spiny flounder (see Flounder, spiny)

Spirontocaris sp. (see Shrimp)

Sponges (see Porifera)

Sporozoa

S 6 : 63 (use of parasites as natural tags in fish)

Sont drum (see Drum, spot)

Spotfin flounder (see Flounder, spotfin)

Spotfin flyingfish (see Flyingfish, spotfin)

Spotted hake (see Hake, spotted)

Spotted lanternfish (see Lanternfish, spotted)

Spotted weakfish (see Weakfish, spotted)

Spotted wolffish (see Wolffish, spotted)

Squalus acanthias (see Dogfish, spiny)

Squairetail (*Tetragonurus* sp.)

J 4 : 342 (guide to early stages of marine fishes)

Squid (*Abrolia* sp. *Helicocranchia pfefferi*
Abroliaopsis hoylei *Histioteuthis bonnellii*
Alloposus mollis *Leachia* sp.
Ancistroteuthis sp. *Octopoteuthis* sp.,
Brachiototeuthis rossoi *Onychoteuthis banksi*
Chroteuthis veranyi *Ornithoteuthis antillarum*
Cranchia scabra *Pterygioteuthis gemmata*
Ctenopteryx sicula *Pyroteuthis margaretifera*
Galiteuthis sp. *Teuthowenia megalops*)

J 7 : 15 (occurrence in slope water off Nova Scotia)

Squid (*Mastigoteuthis* sp.)

J 7 : 15 (occurrence in slope water off Nova Scotia)

S 7 : 53 (food of roundnose grenadier in N Atlantic)

Squid (*Ommastrephes* sp.)

S 9 : 27 (squid resources of southeastern USA)

Squid, Arctic (*Gonatus fabricii*)

J 3 : 123 (food of thorny skate in NW Atlantic)

7 : 15 (occurrence in slope water off Nova Scotia)

S 7 : 53 (food of roundnose grenadier in N Atlantic)

8 : 33 (food of longfin squid in SA 5 and 6)

10 : 47 (food of G. halibut in NW Atlantic)

Squid, Argentinian shortfin (*Illex argentinus*)

S 9 : 59 (description of life cycle)

Squid, arrow (Atlantic) (*Doryteuthis plei*)

S 9 : 27 (squid resources of southeastern USA)

Squid, arrow (New Zealand) (*Nototodarus sloani*)

S 9 : 39 (distribution and biology off New Zealand)

59 (description of life cycle)

Squid, brief (*Lolliguncula brevis*)

S 9 : 27 (squid resources of southeastern USA)

Squid, European flying (*Todarodes sagittatus*)

S 7 : 53 (food of roundnose grenadier in N Atlantic)

9 : 125 (study on feeding spectrum off Norway)

Squid, Japanese common (*Todarodes pacificus*)

S 9 : 47 (squid distribution re oceanography)

59 (description of the life cycle)

Squid, longfin (*Loligo pealei*)

S 7 : 67 (food of shortfin squid in SA 5 and 6)

8 : 33 (feeding spectrum in SA 5 and 6)

9 : 27 (squid resources of southeastern USA)

117 (food consumption of *Illex* and *Loligo*)

139 (life history adaptation of squids)

143 (population dynamics of short-lived species)

10 : 67 (fishery resources of Gulf of Maine)

Squid, Pacific longfin (*Loligo opalescens*)

S 9 : 47 (squid distribution re oceanography)

Squid, sharptail shortfin (*Illex oxygonius*)

S 9 : 27 (squid resources of southeastern USA)

Squid, shortfin (*Illex illecebrosus*)

J 2 : 61 (records of mature females in SA 3 to 5)

75 (long-distance migration of a tagged squid)

3 : 41 (effect of temperature on embryology)

123 (food of thorny skate in NW Atlantic)

6 : 43 (larval distribution in NW Atlantic)

107 (ageing techniques from marking)

7 : 15 (movements in slope water off Nova Scotia)

S 1 : 65 (study on feeding and predation)

3 : 39 (yield-per-recruit simulation study)

6 : 39 (re NW Atlantic oceanographic features)

7 : 61 (causal analysis of Scotian Shelf data)

67 (feeding spectrum in SA 4 to 6)

77 (stock identity in NW Atlantic)

9 : 11 (synopsis of special session, Sep 1984)

27 (squid resources of southeastern USA)

47 (squid distribution re oceanography)

59 (life cycles of ommastrephid squids)

69 (observations on egg masses re hydrography)

77 (squid larvae and juveniles in Gulf Stream)

93 (distribution of larvae in NW Atlantic)

101 (age determination from statolith sizes)

107 (reproductive features of males)

117 (food consumption of *Illex* and *Loligo*)

139 (life history adaptations of squids)

143 (population dynamics of short-lived species)

155 (bibliography of the genus *Illex*)

10 : 67 (fishery resources of Gulf of Maine)

Squid, southern shortfin (*Illex coindetii*)

S 9 : 27 (squid resources of southeastern USA)

Squids (general)

J 3 : 123 (food of thorny skate in NW Atlantic)

S 3 : 67 (food of hooded seals at Greenland)

7 : 53 (food of roundnose grenadier in N Atlantic)

67 (food of shortfin squid in SA 4 to 6)

87 (food of hakes and other fish in SA 5)

8 : 33 (food of longfin squid in SA 5 and 6)

49 (food of Atlantic wolffish off Nfld)

9 : 7 (synopsis of special session, Sep 1984)

47 (cephalopod distribution re oceanography)

117 (food of *Illex* and *Loligo* in SA 5)125 (food of *Todarodes sagittatus* off Norway)

139 (life history of myopsid and sepiolid squids)

143 (population dynamics of short-lived species)

St. Pierre Bank (Subdivision 3Ps)

J 2 : 21 (vertebral numbers in Atlantic cod)

61 (records of mature female *Illex*)

3 : 47 (egg capsules of thorny skate)

123 (feeding spectrum of thorny skate)

165 (golden redfish gasbladder musculature)

5 : 47 (migrations of spiny dogfish from tagging)

55 (migrations of thorny skate from tagging)

65 (meristics of golden and beaked redfish)

107 (weight-length relations for G. halibut)

161 (variation in fecundity of cod)

171 (thorns and teeth rows of thorny skate)

199 (stock discrimination of capelin)

207 (meristics of Atlantic wolffish)

6 : 57 (reproductive cycles of redfishes)

7 : 47 (biological aspects of spotted wolffish)

57 (biological aspects of Atlantic wolffish)

S 1 : 1 (study on feeding of haddock)

- 6 : 7 (redfish distribution in Nfld-Labrador area)
- 8 : 49 (stomach contents of Atlantic wolffish)
- 67 (mesopelagic fishes off Nfld)
- 10 : 93 (literature review of molluscs in Nfld area)

Star drum (see Drum, star)

Starfish (see Sea stars and Brittle stars)

Stargazer, northern (*Astroscopus guttatus*)

J 4 : 399 (guide to early stages of marine fishes)

Statoliths

- J 6 : 107 (age validation technique for squid)
- S 9 : 101 (use for ageing shortfin squid)

Stelleroidea (see Sea stars and Brittle stars)

J 6 : 117 (energy equivalents of marine organisms)

Stellifer lanceolatus (see Drum, star)

Stemonosudis intermedia (see Barracudina)

Stenakron vestustum (trematode)

J 6 : 165 (parasite of A. plaice in Nfld area)

Stenotomus chrysops (see Scup)

Steringophorus furciger (trematode)

J 6 : 165 (parasite of A. plaice in Nfld area)

Steringotrema ovaculum (trematode)

J 6 : 165 (parasite of A. plaice in Nfld area)

Sternoptychidae (hatchetfishes)

- J 3 : 127 (larvae in slope water off Nova Scotia)
- 4 : 72 (guide to early stages of marine fishes)
- S 7 : 53 (food of roundnose grenadier in N Atlantic)

Sternoptyx diaphana (see Hatchetfish, transparent)

Stichaeidae (pricklebacks)

J 4 : 294 (guide to early stages of marine fishes)

Stichaeus punctatus (see Shanny, Arctic)

Stock discrimination

- J 2 : 21 (vertebral numbers in cod of SA 1 to 5)
- 5 : 17 (west Nfld herring populations)
- 23 (vertebral numbers in SA 2 and 3 cod)
- 71 (herring populations along Maine coast)
- 85 (re G. halibut migrations from tagging)
- 121 (east Nfld herring populations)
- 141 (east Nfld cod populations)
- 199 (capelin stocks in Nfld area)
- 207 (meristic study of Atlantic wolffish)
- 213 (meristics of young haddock in SA 4)
- 6 : 1 (morphometrics of golden and beaked redfish)
- S 6 : 57 (review of methods for marine fishes)
- 63 (use of parasites as natural tags)
- 73 (genetic study of mussel populations)
- 7 : 77 (identity of shortfin squid stocks)

Stomatopoda (crustaceans)

J 6 : 117 (energy equivalents of marine organisms)

Stomias boa (see Dragonfish, scaled)

Stomiatidae (scaled dragonfishes)

J 4 : 88 (guide to early stages of marine fishes)

S 8 : 67 (mesopelagic fishes off Nfld)

Stone crab (see Crab, northern stone)

Stratification schemes

S 2 : 1 (manual on groundfish surveys)

Striped anchovy (see Anchovy, striped)

Striped mullet (see Mullet, striped)

Striped searobin (see Searobin, striped)

Strongylocentrotus sp. (see Urchin, sea)

Strongylura marina (see Needlefish, Atlantic)

Strontium chloride

J 6 : 107 (use in marking squid statoliths)

Sudis sp. (see Barracudina)

Summer flounder (see Flounder, summer)

Surveys (biological)

- J 7 : 1 (sea scallop surveys on Georges Bank)
- 35 (trawl geometry re fish sampling)
- S 2 : 1 (manual on groundfish surveys)
- 10 : 13 (trawl survey for cod off E Greenland)

Swordfish (*Xiphias gladius*)

- J 4 : 324 (guide to early stages of marine fishes)
- 6 : 117 (energy equivalents of marine organisms)
- S 7 : 67 (predator of squids in NW Atlantic)
- 9 : 27 (predator of squid off Florida)
- 10 : 67 (fishery resources of Gulf of Maine)

Syacium papillosum (Flounder, dusky)

Symbolophorus sp. (see Lanternfish)

Symphurus plagiosa (see Tonguefish, blackcheek)

Symposia

- S 4 : 1 (special session on remote-sensing)
- 5 : 1 (environmental review, 1970-79)
- 9 : 1 (special session on squids, Sep 1984)

Synphobranchidae (Anguilliformes)

J 4 : 50 (guide to early stages of marine fishes)

Synodontidae (lizardfishes)

- J 3 : 127 (larvae in slope water off Nova Scotia)
- 4 : 94 (guide to early stages of marine fishes)
- 6 : 117 (energy equivalents of marine organisms)

Synodus foetens (see Lizardfish, inshore)

Systematics (see Speciation)

Synodus sp. (see Lizardfishes)

T

Taaningichthys minimus (see Lanternfish)

Tagging (methods, recaptures, returns, losses, etc.)

- J 1 : 56 (salmon recaptures at E Greenland)
- 2 : 75 (long-distance migration of tagged *Illex*)
- 5 : 17 (migrations of west Nfld herring)
- 47 (migrations of spiny dogfish in Nfld area)
- 55 (migrations of thorny skate in Nfld area)
- 71 (migrations of herring along Maine)
- 85 (migrations of G. halibut in NW Atlantic)
- 93 (migrations of wolffishes in Nfld area)
- 121 (migrations of east Nfld herring)
- 141 (discrimination of east Nfld cod stocks)
- 6 : 37 (baited trap experiment with snow crabs)
- 157 (re migrations of A. salmon in SA 3 and 4)
- 7 : 43 (age 1 herring movements in Gulf of Maine)
- S 3 : 67 (hooded seal recaptures at Greenland)
- 6 : 57 (stock discrimination of marine fishes)

Tags, biological

- J 7 : 25 (parasites as natural tags in herring)
- S 6 : 57 (use for stock discrimination in fish)
- 63 (use for stock discrimination studies)

Taractichthys longipinnis (see Pomfret, bigscale)

Tarpon (*Megalops atlanticus*)

- J 4 : 42 (guide to early stages of marine fishes)

Tautog (*Tautoga onitis*)

- J 4 : 292 (guide to early stages of marine fishes)

Tautoglabrus adspersus (see Cunner)

Taxonomy (see Speciation)

Teeth rows (meristics)

- J 5 : 171 (count variation in thorny skate)

Temora sp. (copepod)

- S 8 : 33 (food of longfin squid in SA 5 and 6)

Temperature

- J 2 : 21 (re vertebral numbers in cod off Nfld)
- 57 (re vertebral numbers in Div. 3M cod)
- 3 : 29 (environmental preferences of fish in SA 4)
- 41 (re embryology of shortfin squid)
- 149 (re A. plaice distribution in Div. 3LNO)
- 159 (re eelpout distribution in SA 2 and 3)
- 5 : 23 (re vertebral averages in E Nfld cod)
- 33 (ichthyoplankton of Georges Bank area)
- 161 (re variation in cod fecundity off Nfld)
- 189 (re beaked redfish in Gulf of St. Lawrence)
- 6 : 43 (re shortfin squid larvae in NW Atlantic)
- 141 (re eastward extension of *Penula* distribution)

- 157 (re salmon distribution in Grand Bank area)
- 7 : 15 (re diel movements of squid off Nova Scotia)
- S 1 : 23 (re saury distribution in NW Atlantic)
- 47 (data from satellite-tracked buoys)
- 3 : 29 (re wolffish distribution in Nfld area)
- 4 : 7 (nature and use of remote-sensing data)
- 21 (remote-sensing ocean fronts off USA)
- 31 (remote-sensing of surface temperature)
- 41 (remote-sensing studies in Japan)
- 53 (satellite observations on phytoplankton)
- 69 (remote-sensing studies in B. Columbia)
- 85 (remote-sensing of surface circulation)
- 5 : 7 (20th century marine climatic changes)
- 17 (weather conditions in NW Atlantic, 1970-79)
- 33 (weather conditions in SA 5 and 6, 1970-79)
- 43 (oceanographic conditions in SA 0+1, 1970-79)
- 51 (oceanographic conditions in SA 2-4, 1970-79)
- 79 (autumn conditions off Labrador, 1969-80)
- 81 (variability on Hamilton Bank, 1970-79)
- 87 (anomalies on Flemish Cap section, 1970-79)
- 95 (oceanographic conditions in SA 5+6, 1970-79)
- 6 : 15 (re herring spawning on Georges Bank)
- 39 (re *Illex* distribution in SA 4 to 6)
- 7 : 7 (review of environmental conditions, 1982)
- 39 (variation in SA 1 conditions, 1970-82)
- 8 : 7 (review of environmental conditions, 1983)
- 21 (surface conditions in SA 2 to 6, 1983)
- 9 : 11 (re shortfin squid on Scotian Shelf)
- 27 (re squid resources off southeastern USA)
- 69 (effect on shortfin squid egg masses)
- 77 (re *Illex* larvae and juveniles in Gulf Stream)
- 93 (re *Illex* larvae distribution, winter 1982)
- 10 : 7 (effect on cod year-classes off W Greenland)
- 21 (review of environmental conditions, 1985)

Terranova decipiens (see *Phocanema decipiens*)

Tetracycline HCL

- J 6 : 107 (use for marking squid statoliths)

Tetragonuridae (squaretails)

- J 4 : 342 (guide to early stages of marine fishes)

Tetragonurus sp. (see Squaretail)

Tetraodontidae (puffers)

- J 4 : 394 (guide to early stages of marine fishes)

Teuthowenia megalops (see Squid)

Themisto sp. (amphipod)

- S 6 : 35 (food of wolffishes in Nfld area)
- 8 : 39 (food links of some species in Div. 3M)

Thorny skate (see Skate, thorny)

Threebeard rockling (see Rockling, threebeard)

Thunnus albacares (see Tuna, yellowfin)

Thunnus thynnus (see Tuna, bluefin)

Thynnascaris adunca (nematode)

- J 6 : 165 (parasite of A. plaice in Nfld area)
- S 6 : 63 (parasites as natural tags in fish)

Thysanoessa sp. (euphausiid)

- S 7 : 67 (food of shortfin squid in SA 4 to 6)
 8 : 39 (food of various organisms in Div. 3M)

Tiaropsis sp. (hydrozoan)

- S 8 : 25 (predator of fish larvae in Norway)

Tilefish (*Lopholatilus chamaeleonticeps*)

- J 4 : 236 (guide to early stages of marine fishes)

Toad crab (see Crab, toad)Todarodes pacificus (see Squid, Japanese common)Todarodes sagittatus (see Squid, European flying)Tonguefish (*Symphurus* sp.)

- J 3 : 127 (larvae in slope water off Nova Scotia)
 4 : 390 (guide to early stages of marine fishes)

Tonguefish, blackbeak (*Symphurus plagiusa*)

- J 4 : 390 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)

Trachinocephalus myops (see Lizardfish, snake)Trachinotus sp. (see Pompano)Transparent hatchetfish (see Hatchetfish, transparent)Transport, water (see Currents)Trawls

- J 1 : 81 (estimating door spread from wing spread)
 5 : 181 (trawl efficiency in catching flatfishes)
 7 : 35 (trawl geometry and fish sampling)
 S 2 : 7 (manual on groundfish surveys)
 10 : 13 (development of survey for cod off W Greenland)

Trematodes

- J 2 : 67 (parasites of grenadiers in NW Atlantic)
 6 : 165 (parasites of A. plaice in Nfld area)
 S 6 : 63 (parasites as natural tags in fish)

Triacnophorus crassus (cestode)

- S 6 : 63 (parasites as natural tags in fish)

Trichiuridae (cutlassfishes)

- J 3 : 127 (larvae in slope water off Nova Scotia)
 4 : 302 (guide to early stages of marine fishes)

Trichopsetta ventralis (see Flounder, sash)Trichotropis borealis (gastropod)

- S 6 : 35 (food of wolffishes in Nfld area)

Triglidae (searobins)

- J 4 : 222 (guide to early stages of marine fishes)

Triglops murrayi (see Sculpin, mailed)Triglops nybelini (see Sculpin, Nybelin's)Triglops pingeli (see Sculpin, ribbed)Triglops sp. (see Sculpin)Trinectes maculatus (see Hogchoker)Trisopterus esmarki (see Pout, Norway)Trophic relationship (see Feeding; Predation)Trout, alpine (see Char, Arctic)Trypanorhynchus sp. (cestode)

- S 6 : 63 (parasites as natural tags in fish)

Tuna, bluefin (*Thunnus thynnus*)

- J 4 : 322 (guide to early stages of marine fishes)
 S 7 : 67 (predator of squid in NW Atlantic)

Tuna, little (*Euthynnus alletteratus*)

- J 4 : 314 (guide to early stages of marine fishes)

Tuna, skipjack (*Katsuwonus pelamis*)

- J 4 : 316 (guide to early stages of marine fishes)

Tuna, yellowfin (*Thunnus albacares*)

- J 4 : 322 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)

Tunicata

- J 6 : 117 (energy equivalents of marine organisms)
 S 1 : 51 (food of haddock in Nfld area)
 7 : 53 (food of roundnose grenadier in N Atlantic)

Turbot (see Halibut, Greenland)Tusk (see Cusk)Two-wing flyingfish (see Flyingfish, two-wing)Tylosurus sp. (Belonidae)

- J 4 : 212 (guide to early stages of marine fishes)

U

Ulvaria sublifurcata (see Shanny, radiated)Ungava Bay

- J 5 : 171 (variation in meristics of thorny skate)

Uranoscopidae (stargazers)

- J 4 : 399 (guide to early stages of marine fishes)

Urchin, sea (*Strongylocentrotus* sp.)

- J 6 : 117 (energy equivalents of marine organisms)
 S 5 : 101 (predation on kelp beds off Nova Scotia)
 7 : 45 (food of roughhead grenadier in SA 3)
 8 : 49 (food of Atlantic wolffish in Nfld area)

Urchins, heart (Echinoidea)

J 7: 47 (food of spotted wolffish in NW Atlantic)

Uria sp. (see Guillemots)Uroconger syringinus (see Eel, conger)Urophycis chesteri (see Hake, longfin)Urophycis chuss (see Hake, red)Urophycis regius (see Hake, spotted)Urophycis tenuis (see Hake, white)**V**Vahl's eelpout (see Eelpout, Vahl's)Valenciennellus tripunctulatus (see Anglemouth)Vertebrae (see also Meristics)

- J 1 : 7 (meristics of larval redfish in Nfld area)
 2 : 21 (use for discrimination of cod stocks)
 57 (variation re temperature on Flemish Cap)
 3 : 93 (counts in sand lance from SA 4 to 6)
 4 : 1 (guide to early stages of marine fishes)
 5 : 1 (development of northern searobin larvae)
 23 (counts in young cod off east Nfld)
 65 (meristics of golden and beaked redfish)
 199 (use for discrimination of capelin stocks)
 207 (variation in counts for Atlantic wolffish)
 213 (counts in young haddock on Scotian Shelf)
 6 : 9 (development of white, red and longfin hake)
 65 (development of striped searobin larvae)
 7 : 47 (biological aspects of spotted wolffish)
 S 6 : 57 (use in discrimination of fish stocks)

Vinciguerrria sp. (see Anglemouth)Viperfish (*Chauliodes sloani*)

- J 3 : 127 (larvae in slope water off Nova Scotia)
 4 : 88 (guide to early stages of marine fishes)

Virtual population analysis (VPA)

- J 3 : 1 (assessment of SA 5 haddock fishery)

WWahoo (*Acanthocybium solanderi*)

- J 4 : 310 (guide to early stages of marine fishes)

Water circulation (see Currents)Wave conditions

- S 7 : 7 (review of environmental conditions, 1982)
 8 : 7 (review of environmental conditions, 1983)
 10 : 21 (review of environmental conditions, 1984)

Weakfish, gray (*Cynoscion regalis*)

- J 4 : 272 (guide to early stages of marine fishes)
 6 : 117 (energy equivalents of marine organisms)

Weakfish, spotted (*Cynoscion nebulosus*)

- J 4 : 272 (guide to early stages of marine fishes)

Weight (see also Catches)

- J 1 : 49 (re length relation for white hake)
 2 : 47 (re length relations for copepods)
 3 : 141 (re length relation for G. halibut)
 5 : 105 (re length relation for witch flounder)
 107 (re length relation for G. halibut)
 6 : 95 (re length relation for eels in Nfld)
 149 (re fecundity of herring in Gulf of Maine)
 7 : 47 (re length relation for spotted wolffish)
 57 (re length relation for Atlantic wolffish)
 S 1 : 23 (re length relation for Atlantic saury)
 35 (re length relations for wolffishes)
 6 : 7 (re distribution of redfishes in Nfld area)
 7 : 45 (re length relation for roughhead grenadier)
 9 : 39 (re length relations for arrow squids)

West Greenland (see Greenland, West)Western Central Atlantic (see Atlantic Ocean, Western Central)Whale, blue (*Balaenoptera musculus*)

- S 5 : 107 (re environmental conditions, 1970-79)

Whale, killer (*Orcinus orca*)

- S 5 : 107 (re environmental conditions, 1970-79)

Whale, pilot (*Globicephalus melaene*)

- S 7 : 67 (predator of shortfin squid in SA 4 to 6)

Whelks (gastropods)

- J 3 : 123 (food of thorny skate in NW Atlantic)
 6 : 117 (energy equivalents of marine organisms)
 7 : 47 (food of spotted wolffish in NW Atlantic)
 S 6 : 35 (food of wolffishes in Nfld area)
 8 : 49 (food of Atlantic wolffish in NW Atlantic)

White barracudina (see Barracudina, white)White hake (see Hake, white)White-beaked dolphin (see Dolphin, white-beaked)White-sided dolphin (see Dolphin, white-sided)Whiting (*Gadus merlangus*)

- J 1 : 101 (statistical description of recruitment)
 S 6 : 63 (use of parasites as natural tags)

Whiting, blue (*Micromesistius pouassou*)

- S 9 : 125 (food of *Todarodes sagittatus* off Norway)

Windowpane flounder (see Flounder, windowpane)Winds

- S 5 : 17 (conditions over NW Atlantic, 1970-79)
 33 (conditions in SA 5 and 6, 1970-79)
 51 (conditions in SA 2 to 4, 1970-79)
 7 : 7 (review of environmental conditions, 1982)
 27 (re water circulation in Div. 3M, 1977-82)

- 8 : 7 (review of environmental conditions, 1983)
10 : 21 (review of environmental conditions, 1984)

Winter flounder (see Flounder, winter)

Winter skate (see Skate, winter)

Witch flounder (see Flounder, witch)

Wolffish, Atlantic (*Anarhichas lupus*)

- J 3 : 29 (environmental preferences on Scotian Shelf)
5 : 93 (migrations from tagging in Nfld area)
207 (meristic variation in NW Atlantic)
7 : 57 (aspects of biology in NW Atlantic)
S 1 : 35 (review of fishery off W Greenland)
3 : 29 (distribution in Nfld area)
6 : 35 (study on feeding in Nfld area)
8 : 49 (stomach contents in NW Atlantic)

Wolffish, northern (*Anarhichas denticulatus*)

- J 5 : 93 (migrations from tagging in Nfld area)
7 : 77 (spotted forms in NW Atlantic)
S 1 : 35 (review of fishery off W Greenland)
3 : 29 (distribution in Nfld area)
6 : 35 (study on feeding in Nfld area)
7 : 53 (predator of grenadiers in NW Atlantic)

Wolffish, spotted (*Anarhichas minor*)

- J 5 : 93 (migrations from tagging in Nfld area)
7 : 47 (aspects of biology in NW Atlantic)
S 1 : 35 (review of fishery off W Greenland)
3 : 29 (distribution in Nfld area)
6 : 35 (study on feeding in Nfld area)

Wolffishes (general) (*Anarhichadidae*)

- J 3 : 123 (food of thorny skate in NW Atlantic)
S 1 : 51 (food of haddock in Nfld area)
3 : 67 (food of harp seals at W Greenland)
10 : 47 (food of G. halibut in NW Atlantic)

Working Group; Workshop

- S 6 : 79 (shrimp ageing workshop, May and Nov 1981)

Wrasses (see Labridae)

X

Xenocoegradae

- J 4 : 54 (guide to early stages of marine fishes)

Xiphias gladius (see Swordfish)

Xiphiidae

- J 4 : 324 (guide to early stages of marine fishes)

Y

Year-class (see Age composition)

Yellow jack (see Jack, yellow)

Yellowtail flounder (see Flounder, yellowtail)

Yield, equilibrium

- J 1 : 21 (redfish exploitation in SA 5)
S 10 : 35 (yellowtail and A. plaice in Div. 3LNO)

Yield-per-recruit analysis

- J 1 : 21 (redfish exploitation in SA 5)
3 : 1 (assessment of SA 5 haddock fishery)
S 1 : 23 (Atlantic saury in NW Atlantic)
3 : 39 (simulation for *Illex* in SA 4)
10 : 35 (yellowtail and A. plaice in Div. 3LNO)

Z

Zoarcidae (see also specific names)

- J 3 : 123 (food of thorny skate in NW Atlantic)
S 7 : 67 (food of shortfin squid in SA 4 to 6)

Zooplankton (see also Plankton)

- J 1 : 91 (description of bongo samplers)
2 : 47 (length-weight relations of copepods)
3 : 93 (food of sand lance in SA 4 to 6)
S 7 : 67 (feeding spectrum of shortfin squid)
87 (food of hakes and other fish in SA 4 to 6)
8 : 33 (feeding spectrum of longfin squid)
39 (food links of some fishes in Div. 3M)
9 : 117 (food consumption of *Illex* and *Loligo*)
125 (food of *Todarodes sagittatus* off Norway)

Zshokkelia hildae (myxosporidian)

- J 2 : 67 (parasite of grenadiers in NW Atlantic)

A

- AKENHEAD, S. A. (Canada)
S 1 : 57 (redfish and cod larvae on Flemish Cap)
- ALBIKOVSKAYA, L. K. (USSR)
S 3 : 29 (abundance of wolffishes in Nfld area)
6 : 35 (feeding characteristics of wolffishes)
- ALDRICH, F. A. (Canada)
S 9 : 101 (squid age determination from statoliths)
- AMARATUNGA, T. (Canada)
J 3 : 41 (embryonic development of shortfin squid)
S 1 : 65 (digestive processes in shortfin squid)
9 : 93 (shortfin squid larvae re Gulf Stream system)
- ANDERSON, J. T. (Canada)
S 1 : 57 (redfish and cod larvae on Flemish Cap)
- ARKHIPKIN, A. I. (USSR)
J 7 : 15 (diel movements of squids off Nova Scotia)
- ATKINSON, D. B. (Canada)
J 2 : 53 (partial length for measuring grenadiers)
5 : 99 (redfish discarding in Div. 4R shrimp fishery)
189 (beaked redfish in Gulf of St. Lawrence)
S 3 : 7 (grenadier, G. halibut and shrimp in SA 0+1)
- AUSTER, P. J. (USA)
J 5 : 103 (compensatory growth of bay scallops)
S 8 : 53 (aspects of fish orientation to currents)
10 : 53 (computing CPUE for a lobster fishery)

B

- BAILEY, R. F. J. (Canada)
J 7 : 67 (factorial analysis of crab size frequencies)
- BALCH, N. (Canada)
J 3 : 41 (embryonic development of shortfin squid)
S 9 : 69 (properties of shortfin squid egg masses)
155 (bibliography of squid genus *Illex*)
- BEACHAM, T. D. (Canada)
J 1 : 49 (biology of white hake in Gulf of St. Lawrence)
- BECK, P. C. (Canada)
J 2 : 75 (long-distance migration of tagged *Illex*)
6 : 43 (shortfin squid larvae in NW Atlantic)
- BERNSTEIN, B. B. (Canada)
S 5 : 101 (nearshore ecosystem changes, 1968-81)
- BIER, J. W. (USA)
J 7 : 25 (use of parasites as natural tags in herring)

- BOGDANOV, A. S. (USSR)
J 5 : 115 (obituary for K. G. Konstantinov)
- BOLZ, G. R. (USA)
J 5 : 33 (ichthyoplankton of Georges Bank area)
6 : 21 (abundance and mortality of herring larvae)
- BORN, E. W. (Denmark)
J 3 : 57 (reproduction of female hooded seals)
- BOROVKOV, V. A. (USSR)
S 5 : 81 (oceanographic variation off Labrador)
7 : 27 (water circulation on Flemish Cap, 1977-82)
- BORSTAD, G. A. (Canada)
S 4 : 69 (remote-sensing studies in B. Columbia)
- BOUCHARD, R. (Canada)
J 6 : 37 (area prospected by a baited snow crab trap)
7 : 67 (factorial analysis of crab size frequencies)
- BOUILLON, D. R. (Canada)
J 6 : 95 (growth of eels in Nfld rivers)
- BOWEN, W. D. (Canada)
S 3 : 53 (age structure of harp seal catches, 1952-80)
- BOWERING, W. R. (Canada)
J 1 : 39 (fecundity of Greenland halibut)
3 : 141 (population dynamics of G. halibut)
5 : 85 (migrations of G. halibut from tagging)
105 (length-weight relations for witch flounder)
107 (length-weight relations for G. halibut)
S 1 : 71 (oogenesis and maturity in G. halibut)
3 : 7 (grenadier, G. halibut and shrimp in SA 0+1)
- BOWMAN, R. E. (USA)
S 9 : 117 (food consumption of *Illex* and *Loligo*)
- BRAKONIECKI, T. F. (USA)
S 9 : 27 (squid resources off southeastern USA)
- BREIBY, A. (Norway)
S 9 : 125 (predation of *Todarodes sagittatus* off Norway)
- BRÊTHES, J. C. F. (Canada)
J 6 : 37 (area prospected by baited snow crab trap)
7 : 67 (factorial analysis of crab size frequencies)
- BROWN, B. E. (USA)
J 1 : 101 (recruitment in 18 selected fish stocks)
- BROWN, R. M. (Canada)
S 4 : 69 (remote-sensing studies in B. Columbia)

BUCH, E. (Denmark)

- S 5 : 43 (oceanographic conditions in SA 0+1, 1970-79)
 7 : 39 (hydrographic variation off W Greenland)
 10 : 7 (prediction of cod year-classes off Greenland)

CCARROTHERS, P. J. G. (Canada)

- J 1 : 81 (estimation of trawl door spread)

CARSCADDEN, J. E. (Canada)

- J 5 : 199 (discrimination of capelin stocks)
 6 : 135 (estimating maturation rates of capelin)

CHAMBERLIN, J. L. (USA)

- S 4 : 21 (water masses and movements by remote-sensing)

CHENOWETH, J. F. (USA)

- J 7 : 25 (use of parasites as natural tags in herring)

CHUMAKOV, A. K. (USSR)

- S 10 : 47 (feeding G. halibut in NW Atlantic)

CLARK S. H. (USA)

- J 3 : 1 (assessment of SA 5 haddock fishery)

CLAY, D. (Canada)

- S 1 : 7 (estimation of gillnet selectivity)

COELHO, M. L. (Portugal)

- S 7 : 61 (causal analysis of shortfin squid data)
 9 : 47 (oceanography re cephalopod distribution)
 107 (reproductive features of male *Illex*)

COHEN, R. E. (USA)

- J 2 : 47 (length-weight relations for copepods)

COLTON, J. B. (USA)

- J 6 : 141 (extension of cladoceran *Penilia* in SA 5 and 6)

CORNUS, H. P. (Federal Republic of Germany)

- S 10 : 13 (trawl survey for cod off E Greenland)

CREASER, E. P. (USA)

- J 5 : 71 (movements of herring from tagging off Maine)
 7 : 43 (age 1 herring movements along Maine coast)

CROSBY, C. L. (USA)

- J 5 : 131 (larval herring along Maine coast)

CROSS, R. K. (Canada)

- S 4 : 31 (remote-sensing of surface temperatures)

DDAWE, E. G. (Canada)

- J 2 : 61 (records of mature female shortfin squid)
 75 (long-distance migration of tagged *Illex*)
 6 : 43 (shortfin squid larvae in NW Atlantic)
 107 (validation of ageing technique for squid)
 S 7 : 77 (stock identify of *Illex* in NW Atlantic)
 9 : 77 (*Illex* larvae re Gulf Stream frontal zone)

DESROSIERS, G. (Canada)

- J 6 : 37 (area prospected by a baited snow crab trap)
 7 : 67 (factorial analysis of crab size frequencies)

DICKIE, L. M. (Canada)

- S 6 : 73 (genetic structure of mussel populations)

DOUBLEDAY, W. G. (Canada)

- S 2 : 7 (manual on groundfish surveys)

DREW, H. J. (Canada)

- J 2 : 61 (records of mature female shortfin squid)
 75 (long-distance migration of tagged *Illex*)

DRINKWATER, K. F. (Canada)

- S 7 : 7 (review of environmental conditions, 1982)
 8 : 7 (review of environmental conditions, 1983)
 10 : 21 (review of environmental conditions, 1984)

DUDNIK, Y. I. (USSR)

- S 1 : 23 (distribution and biology of Atlantic saury)

DUNBAR, M. J. (Canada)

- S 5 : 7 (20th century marine climatic changes)

EEDEL, H. (Canada)

- S 4 : 93 (availability of remote-sensing data)

ENGÅS, A. (Norway)

- J 7 : 35 (effect of trawl geometry on fish sampling)

EVSEENKO, S. A. (USSR)

- J 3 : 127 (ichthyoplankton in slope water off Nova Scotia)

FFAHAY, M. P. (USA)

- J 4 : 1 (guide to early stages of marine fishes)

FEDULOV, P. P. (USSR)

J 7 : 15 (diel movements of squids off Nova Scotia)

FLEMING, A. M. (Canada)

S 1 : 41 (cod predation on capelin and sand lance)

FÖRCH, E. C. (New Zealand)

S 9 : 39 (arrow squids off New Zealand)

FOY, E. A. (Canada)

J 3 : 41 (embryonic development of shortfin squid)

FRECHETTE, J. (Canada)

S 6 : 79 (report of shrimp ageing workshop, 1981)

FROERMAN, Y. M. (USSR)

S 7 : 67 (feeding spectrum of shortfin squid)

G

GARROD, D. J. (UK)

J 6 : 101 (obituary for Herbert A Cole)

GAVARIS, C. A. (Canada)

J 3 : 115 (juvenile redfish on Flemish Cap, 1978-82)

GIFFORD, V. M. (USA)

J 2 : 13 (age validation of SA 5 redfish)

GILKINSON, K. D. (Canada)

S 10 : 9 (literature review of molluscs in Nfld area)

GODØ, O. R. (Norway)

J 7 : 35 (effect of trawl geometry on fish sampling)

GOWER, J. F. R. (Canada)

S 4 : 7 (nature and use of remote-sensing data)
61 (mapping of sea-surface chlorophyll from space)
69 (remote-sensing studies in B. Columbia)

GRAHAM, J. J. (USA)

J 3 : 63 (larval herring production along Maine)

5 : 131 (larval herring along Maine coast)

S 3 : 33 (depth distribution of larval herring)

GRIGORIEV, G. V. (USSR)

J 2 : 73 (eggs of roundnose grenadier)

GRIMM, S. K. (Poland)

S 6 : 15 (changes in herring spawning in Div. 5Z)

GROSSLEIN, M. D. (USA)

J 6 : 21 (abundance and mortality of herring larvae)

GUSHCHIN, A. V. (USSR)

S 7 : 53 (feeding spectrum of roundnose grenadier)

H

HAEDRICH, R. L. (Canada)

J 6 : 95 (growth of eels in Nfld rivers)

S 8 : 67 (mesopelagic fishes off Nfld and Labrador)

HALLIDAY, R. G. (Canada)

J 3 : 175 (obituary for F. D. McCracken)

S 8 : 83 (environment re fisheries problems)

10 : 67 (fishery resources of Gulf of Maine)

HANSEN, H. (Denmark)

S 10 : 7 (prediction of cod-year-classes off Greenland)

HATANAKA, H. (Japan)

S 9 : 59 (life cycles of five ommastrephid squids)

93 (shortfin squid larvae re Gulf Stream system)

HAYES, R. M. (USA)

S 4 : 77 (satellite-tracked fishing vessel terminal)

HENNEMUTH, R. C. (USA)

J 1 : 101 (recruitment in 18 selected fish stocks)

3 : 1 (assessment of SA 5 haddock fishery)

HIRTLE, W. M. (Canada)

J 3 : 41 (embryonic development of shortfin squid)

HORSTED, Sv. Aa. (Denmark)

S 3 : 7 (grenadier, G. halibut and shrimp in SA 0+1)

HUNT, J. J. (Canada)

J 1 : 65 (guidelines for ageing silver hake)

HURLBUT, T. (Canada)

J 6 : 125 (herring spawning in south Gulf St. Lawrence)

HURLEY, G. V. (Canada)

J 6 : 107 (validation of ageing technique for squid)

INGHAM, M. C. (USA)

S 5 : 33 (weather conditions in SA 5 and 6, 1970-79)

8 : 21 (surface temperatures in SA 2 to 6, 1983)

IRBE, J. G. (Canada)

S 4 : 31 (remote-sensing of surface temperatures)

J

- JEARLD, A. (USA)
 J 2 : 13 (age validation of SA 5 redfish)
JENSEN, J. M. (Denmark)
 J 1 : 55 (salmon drift-netting in Irminger Sea)
JOBLING, M. (Norway)
 S 9 : 125 (predation of *Todarodes sagittatus* off Norway)
JOHNSTON, D. A. (Canada)
 J 3 : 41 (embryonic development of shortfin squid)
JOULE, B. J. (USA)
 J 5 : 131 (larval herring along Maine coast)

K

- KAPEL, F. O. (Denmark)
 S 3 : 67 (study on hooded seals at Greenland)
 10 : 57 (harp and hooded seal catches in Greenland)
KASAHARA, S. (Japan)
 S 9 : 59 (life cycles of five ommastrephid squids)
KAWAHARA, S. (Japan)
 S 9 : 59 (life cycles of five ommastrephid squids)
KEELEY, J. R. (Canada)
 S 5 : 87 (hydrographic anomalies off Nfld, 1970-79)
KELLY, K. H. (USA)
 J 6 : 149 (fecundity of herring in Gulf of Maine)
KITANO, K. (Japan)
 S 4 : 51 (visual features of Kuroshio eddies)
KONSTANTINOV, K. G. (USSR)
 S 8 : 39 (food links of some species in Div. 3M)
KUDLO, B. P. (USSR)
 S 7 : 27 (water circulation of Flemish Cap, 1977-82)
KUDRIN, V. D. (USSR)
 S 1 : 23 (distribution and biology of Atlantic saury)

L

- LANGE, A. M. (USA)
 S 9 : 93 (shortfin squid larvae re Gulf Stream system)
LARRAÑETA, M. G. (Spain)
 S 10 : 35 (dynamics of yellowtail and A. plaice in SA 3)

LAWRENCE, D. J. (Canada)

- S 4 : 85 (remote-sensing re surface circulation)

LEAR, W. H. (Canada)

- J 1 : 55 (salmon drift-netting in Irminger Sea)
 2 : 57 (vertebral numbers in cod from Flemish Cap)
 5 : 23 (vertebral numbers of east Nfld cod)
 143 (stock discrimination of east Nfld cod)

LIBBY, D. A. (USA)

- J 5 : 71 (movements of herring from tagging off Maine)
 7 : 43 (age 1 herring movements along Maine coast)

LILLY, G. R. (Canada)

- J 3 : 115 (juvenile redfish on Flemish Cap, 1978-82)
 S 1 : 41 (cod predation on capelin and sand lance)
 3 : 77 (effect of Labrador Current on cod predation)

LOUGH, R. G. (USA)

- J 2 : 47 (length-weight relations for copepods)
 5 : 33 (ichthyoplankton of Georges Bank area)
 6 : 21 (abundance and mortality of herring larvae)

LUND, W. A. (USA)

- J 5 : 1 (development of the northern searobin)

M

MACPHERSON, P. (Canada)

- J 6 : 125 (herring spawning in Gulf of St. Lawrence)

MAHON, R. (Canada)

- J 5 : 213 (vertebral numbers in young haddock)

MALLET, M. D. (Canada)

- S 9 : 107 (reproductive features of male *Illex*)

MANN, K. H. (Canada)

- S 5 : 101 (nearshore ecosystem changes, 1968-81)

MARAK, R. R. (USA)

- J 1 : 99 (MARMAP bongo zooplankton samplers)

MARKLE, D. F. (Canada)

- J 6 : 87 (fertilization failure in gadids)

MATTLIN, R. H. (New Zealand)

- S 9 : 39 (arrow squids off New Zealand)

MAURER, R. O. (USA)

- S 9 : 117 (food consumption of *Illex* and *Loligo*)

MAYO, R. K. (USA)

- J 1 : 21 (redfish exploitation in Gulf of Maine)
 2 : 13 (age validation of SA 5 redfish)

MCGLADDERY, S. E. (Canada)

J 7 : 25 (use of parasites as natural tags in herring)

MCGLADE, J. (Canada)

S 10 : 67 (fishery resources of Gulf of Maine)

MCKELVIE, D. S. (Canada)

S 8 : 67 (mesopelagic fishes off Nfld and Labrador)

MCKONE, W. D. (Canada)

S 6 : 7 (distribution of redfishes in SA 2 and 3)

MCLAIN, D. R. (USA)

S 8 : 21 (surface temperatures in SA 2 to 6, 1983)

MERCER, M. C. (Canada)

S 7 : 77 (stock identity of *Illex* in NW Atlantic)

MESSIEH, S. N. (Canada)

J 6 : 125 (herring spawning in Gulf of St. Lawrence)

MESSTORFF, J. (Federal Republic of Germany)

J 5 : 113 (obituary for Arno Meyer)

METHVEN, D. A. (Canada)

J 6 : 9 (development of red, white and longfin hakes)

MILLER, D. S. (Canada)

J 6 : 135 (estimating maturation rates of capelin)

MINET, J. P. (France)

S 3 : 7 (grenadier, G. halibut and shrimp in SA 0+1)

MISRA, R. K. (Canada)

J 5 : 199 (discrimination of capelin stocks)

MOHN, R. K. (Canada)

S 3 : 39 (yield-per-recruit analysis of shortfin squid)
10 : 67 (fishery resources of Gulf of Maine)

MOORES, J. A. (Canada)

J 5 : 17 (migrations of West Nfld herring from tagging)

MOROSOVA, G. N. (USSR)

J 3 : 159 (distribution of 3 eelpouts in Nfld area)

MORRIS, C. C. (Canada)

S 9 : 101 (squid age determination from statoliths)

MOUNTAIN, D. G. (USA)

S 5 : 95 (oceanographic conditions in SA 5+6, 1970-79)

MULLIGAN, T. R. (Canada)

S 4 : 69 (remote-sensing studies in B. Columbia)

MURRAY, J. J. (USA)

S 4 : 77 (satellite-tracked fishing vessel terminal)

N

NEPSZY, S. J. (Canada)

J 1 : 49 (biology of white hake in Gulf of St. Lawrence)

NESTEROV, A. S. (USSR)

S 1 : 23 (distribution and biology of Atlantic saury)

NESVETOV, V. A. (USSR)

S 1 : 23 (distribution and biology of Atlantic saury)

NI, I-HSUN. (Canada)

J 2 : 7 (separation of sharp-beaked redfishes)
3 : 165 (gasbladder musculature of golden redfish)
169 (population genetics of redfish off Nfld)
5 : 65 (meristic variation in redfish species)
6 : 1 (morphometrics of golden and beaked redfish)
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