

Authors, Titles, and Subjects in the *Marine Fisheries Review* 48(1-4), 1986

A

- Acanthophora*, ciguatera studies, 4:48
 Albacore
 Pacific Islands fisheries, 1:15-23
 U.S. tuna trade, 3:28-37
 Aleut Indians, subsistence harvest of Northern fur seals, 1:10-14
 Allmouth—see anglerfish, 3:50-53
Alteromonas and *Pseudomonas putrefaciens*, in ice-stored freshwater prawns, 2:46
Amphidinium carterae, photosynthetic complex, 4:46
Anchoa spp. (anchovy), potential Gulf product, 1:32
 Anglerfish, length estimation, 3:50-53
Arius felis, Trawling Efficiency Device use, 1:1-9
 Atlantic bumper, Trawling Efficiency Device use, 1:1-9
 Atlantic cutlassfish, Trawling Efficiency Device use, 1:1-9
 Atlantic threadfin, Trawling Efficiency Device use, 1:1-9

B

- Babinchak, John A., David J. Jollow, Michael S. Voegtline, and Thomas B. Higerd, "Toxin Production by *Gambierdiscus toxicus* Isolated From the Florida Keys," 4:51
 Babinchak, John A.—see Higerd et al.
 Bacteria
 coliform, in seafood plant air, 3:42-45
 collagenolytic, in freshwater prawns, 2:46
 in ciguatera studies, 4:57
 Bardales, A. T.—see Tosteson et al.
 Barnard, Geoffrey W.—see Nellis and Barnard
 Barracuda, ciguatera studies, 4:14,23
 Billfishes, fishing in Pacific Islands region, 1:15-23
 Bolger, M.—see Wagstaff et al.
 Booman, A., and R. Paul Singh, "A Mechanical Device to Sort Market Squid *Loligo opalescens*," 2:37
Brevoortia patronus
 Gulf resources and market, 1:32-36
 Trawling Efficiency Device use, 1:1-9
 Bumper, Atlantic, Gulf resources and market, 1:32-36

C

- Callorhinus ursinus*, Northern fur seal
 Aleut subsistence harvest, 1:10-14
 Interim Convention on Conservation of North Pacific Fur Seals, 1:10
 observations, 1:10-12
 regulations, 1:10
 St. Paul Island population, 1:13
Carcharhinus falciformis, fishing operations in Pacific Islands region, 1:15-23
Carcharhinus longimanus, fishing operations in Pacific Islands region, 1:15-23

- Caribbean Sea, ciguatera studies, 4:48
 Catfish, hardhead, Trawling Efficiency Device use, 1:1-9
Caulerpa, ciguatera studies, 4:48
Ceratum furca, ciguatera toxin, 4:46
Cervimunida johni, key to species, 2:30
 "Characterization of Proteolytic and Collagenolytic Psychrotropic Bacteria of Ice Stored Freshwater Prawn, *Macrobrachium rosenbergii*," by R. J. Premaratne, W. K. Nip, and J. H. Moy, 2:44
 "The Chemical Nature of Scaritoxin," by Yong-Goe Joh and Paul J. Scheuer, 4:18
Chloroscombrus chrysurus
 Gulf resources and potential market, 1:32-36
 Trawling Efficiency Device use, 1:1-9
 "Ciguatera: A Legal and Social Overview," by David W. Nellis and Geoffrey W. Barnard, 4:1
Ciguatera
 Acanthophora, 4:48
 Acanthurus sp., 4:48,53
 Amphidinium carterae, 4:46
 analysis of cases, 4:14
 bacterial strains, 4:57
 Barracuda, 4:14,23
 Caribbean, 4:48-52
 Caulerpa, 4:48
 Ceratum furca, 4:46
 comparative toxicity, 4:57
 Coolia sp., 4:38-42
 Ctenochaetus striatus, 4:33
 demographic characteristics, 4:15
 Dictyota, 4:48
 dinoflagellates, 4:2-59
 distribution of, 4:10,15,16
 economic implications, 4:14
 epidemiology, 4:6-13
 Epinephelus spp., 4:14
 fishery resource development, and, 4:6,11,12
 fishing industry, 4:2-5
 Florida Keys, 4:53
 Florida strains, 4:53
 folklore, 4:2
 Gambierdiscus toxicus
 photosynthetic pigment, identification, 4:44-46
 thecal analysis, 4:38-41
 Glenodinium sp., 4:46
 Gonyaulax polyedra, 4:46
 grouper, 4:14
 Halimeda, 4:48
 Hawaiian strains, 4:53
 Health associated problems, 4:6,11,12
 Heterocapsa spp., 4:46
 high performance liquid chromatography (HPLC), 4:23-26,29-33,53
 history, 4:6,8,9
 hogfish, 4:14
 HPLC, 4:23-26,29-33,53
 identification, 4:14,23-34,44-47
 impact in Pacific Region, 4:10-12
 incidence of, 4:6-10
 infected species, 4:9
 kingfish, 4:23

Ciguatera (continued)

- Labridae*, 4:14
Laurencia spp., 4:
 legal considerations, 4:3
 macroalgal hosts, 4:48,57
Menticirrhus sp., 4:23
 mortality, 4:7,14
 mouse bioassay, 4:
 Nocardiaceae, 4:57,59
 nutrition implications, 4:6,11,12
Ostreopsis lenticularis, 4:23,26,27,38,39,42,54, 57-59
Peridinium balticum, 4:46
Prorocentrum cassubicum, 4:46
 Pseudomonadaceae, 4:57,59
 Puerto Rico, 4:14-22
 response of mice to, 4:35-37
Scarus gibbus, 4:22
Scarus sordidus, 4:21,22
 social overview, 4:2-5
Sphyaera barracuda, 4:14,23
 surgeonfish, 4:33,53
 symptoms, 4:2,10,15-17,48
 test procedure, 4:2,3,5
 thecal analysis of *G. toxicus*, 4:38-41
 Thin-layer chromatography (TLC), 4:44-46
 toxic components, 4:48-51,58
 toxicity assay, 4:58
 Vibrionaceae, 4:57,59
 "Comparative Toxicity of *Gambierdiscus toxicus*, *Ostreopsis cf. lenticularis*, and Associated Microflora," by T. R. Tosteson, D. L. Ballantine, C. G. Tosteson, A. T. Bardales, H. D. Durst, and T. B. Higerd, 4:57
 Coliform bacteria—see bacteria
 Conservation—see Habitat conservation efforts
 Cod, Atlantic
 dimethylamine production, 3:38,40
 flavor, 3:38,39
 hypoxanthine, 3:38,40
 irradiation, 3:38,41
 potassium sorbate, 3:38-41
 preservation treatments, 3:38-41
 texture, 3:38,39
 trimethylamine production, 3:38-40
 Collagenolytic—see bacteria
 Conrath, S.—see Wagstaff et al.
Coolia, ciguatera studies, 4:38,42
 Crabmeat, Kamaboko substitution, 4:62
 Crab plants, air quality of
 assessment, 3:42-45
 coliform bacteria, 3:42,44,45
 mold, 3:42,44,45
 yeast, 3:42,44,45
 Creaser, Edwin P., and Kerry M. Lyons, "Estimating Total Length of Headless White Hake, *Urophycis tenuis*, Landed in Maine," 3:46
 Creaser, Edwin P.—also see Lyons and Creaser
 Croaker, surimi production in Japan, 4:61
 Croaker, Atlantic, Trawling Efficiency Device use, 1:1-9
Ctenochaetus striatus, ciguatera studies, 4:33
 Culture, Pacific salmon pen-rearing, 1:24-31
Cynoscion, Trawling Efficiency Device use, 1:1-9
Cytophaga, in iced freshwater prawns, 2:46

D

- Data sources, U.S. fish consumption, 3:20-23
Decapturus spp., Gulf resources and markets, 1:32-36
 D'Entremont, D. L.—see Licciardello et al.
Dictyota, ciguatera studies, 4:48
 Dinoflagellates, ciguatera studies, 4:1-59
 Douman, David J., "The Tuna Industry in the Pacific Islands Region: Opportunities for Foreign Investment," 1:15
 Durst, H. D.—see Tosteson et al.

E

- Ecology, see Habitat conservation efforts, 3:1-8
 "Economic Aspects of the Japanese Kamaboko Industry," by Myles Raizin and Lloyd Regier, 4:60
 Economic studies
 ciguatera implications, 4:14
 Japanese Kamaboko industry, 4:60-64
 Louisiana shrimp industry, 4:65-70
 swordfish, U.S. market resurgence, 3:28-37
 tuna industry investment in Pacific Islands region, 1:15-23
 tuna trade summary, U.S. (1984), 3:28-37
 El Niño
 effect on (U.S.) tuna fishery, 3:28-37
 effects on squid market, 2:38
 Environmental studies
 habitat conservation efforts, 3:1-8
 inshore environmental effects on *Penaeus* spp., 3:9-19
 microbiological air quality assessment of sea-food plants, 3:42-45
 "Epidemiology and Impact of Ciguatera in the Pacific: A Review," by Nancy Davis Lewis, 4:6
Epinephelus spp., ciguatera studies, 4:14
 Escalona de Motta, G., J. F. Feliu, and A. Izquierdo, "Identification and Epidemiological Analysis of Ciguatera Cases in Puerto Rico," 4:14
 "Estimating Total Length of Headless Anglerfish, *Lophius americanus*, Landed in Maine," by Kerry M. Lyons and Edwin P. Creaser, 3:50
 "Estimating Total Length of Headless White Hake, *Urophycis tenuis*, Landed in Maine," by Edwin P. Creaser and Kerry M. Lyons, 3:46
Erythraeus teres, Gulf resources and markets, 1:32-36
 EEZ's—see Exclusive Economic Zones, 1:15,17, 21,22
Euthynnus pelamis, U.S. tuna trade summary, 3:28-37
 Exclusive Economic Zones
 impact on Japanese Kamaboko industry, 4:62
 tuna industry in the Pacific Islands region, 1:15-23

F

- Feliu, J. F.—see Escalona de Motta et al.
 Felton, Edwin T.—see Kelley et al.
 Finfish, Gulf
 incidental catch, 1:1
 fish:shrimp weight ratios, 1:3-7
 Fish consumption, U.S.
 data sources, 3:20-23
 environmental contamination, 3:20
 fish production data, 3:21
 human diet, 3:20
 national food intake survey, 3:21
 nutritional properties, 3:20
 per capita consumption, 3:20
 Fisheries, lobster
 annual catch, 2:1,2
 major world fishing areas, 2:1-4
 Fishery, commercial
 exploitable populations of small pelagic fishes, 1:32-36
 sardines, canned, potential market, 1:32-36
 squid, market, sorting device, 2:37-43
 processing costs, 2:37,38
 packing, 2:38
 swordfish, U.S. market resurgence, 3:24-27
 tuna, Pacific Islands region
 development, 1:15-23
 fishing fleet operations, 1:15,16
 investment opportunities, 1:15-23
 processing facilities, 1:15-23
 Fishery, recreational, pen-reared salmon, 1:24
 Flavobacterium, bacteria in iced freshwater prawns, 2:44-47

Florida Keys, ciguatera studies, 4:53-55

G

- Gadus morhua*, preservation treatments
 dimethylamine production, 3:38,40
 flavor, 3:38,39
 hypoxanthine, 3:38,40
 irradiation, 3:38-41
 potassium sorbate, 3:38-41
 preservation, 3:38-41
 texture, 3:38,39
 trimethylamine production, 3:38,39
 Galathea, key to species of squat lobsters, 2:30
Gambierdiscus toxicus (also see ciguatera), 4:1-59
 "Gambierdiscus toxicus From the Caribbean: A Source of Toxins Involved in Ciguatera," by Joseph P. McMillan, Patricia A. Hoffman, and H. Ray Granade, 4:46
Glenodinium polyedra, ciguatera toxin, 4:46
 Goosefish—see Anglerfish
 Granade, H. Ray—see McMillan et al.
 Green, Roger E.—see Leet et al.
 Grouper, ciguatera studies, 4:14
 Gulf butterfish, Trawling Efficiency Device use, 1:1-9

H

- Habitat conservation efforts
 alterations, 3:1,3,6
 creation, 3:3
 draining, 3:5
 dredging, 3:3
 filling, 3:4
 fishery resources, 3:1
 habitat alteration, 3:1,3,6
 habitat creation, 3:3
 impounding, 3:5
 mitigation, 3:1,5
 NMFS efforts in S.E. region, 3:1-8
 wetlands, 3:1,2,4
 Hackley, B.—see Wagstaff et al.
 Hake, white
 fishery, 3:46
 length estimations, 3:46-49
 species identification, 3:47
 statistical analysis, length, 3:48
Halimeda, ciguatera studies, 4:48
Harengula jaguana
 potential market, 1:32
 Trawling Efficiency Device use, 1:1-9
 Herrick, Samuel F., Jr., and Steven J. Koplín, "U.S. Tuna Trade Summary, 1984," 3:28
 Herring
 Atlantic thread, potential market, 1:32
 round, potential market, 1:32
Heterocapsa spp., ciguatera toxin, 4:46
 Higerd, T. B.—see Tosteson et al.
 Higerd, Thomas B., John A. Babinchak, Paul J. Scheuer, and David J. Jollow, "Resolution of Ciguatera-Associated Toxins Using High-Performance Liquid Chromatography (HPLC)," 4:22
 Higerd, Thomas B.—see Babinchak et al.
 Higerd, Thomas B.—see Kelley et al.
 High-Performance Liquid Chromatography (HPLC), 4:23-26,29-33,53
Hippoglossus hippoglossus, fishery, 3:49
 Hoffman, Patricia—see McMillan et al.
 Hogfish, ciguatera studies, 4:14
Homarus americanus, identification, world distribution, and U.S. trade, 2:4,5
Homarus gammarus, key to species, 2:8
 Hopson, Debra J. O.—see Ward and Hopson
 Horseshoe crabs, Trawling Efficiency Device use, 1:1-9
 "An HPLC-Fluorescence Method For Identifying a Toxic Fraction Extracted From the Marine

Dinoflagellate *Gambierdiscus toxicus*," by L. V. Sick, D. C. Hansen, J. A. Babinchak, and T. B. Higerd, 4:28
 HPLC—see High-Performance Liquid Chromatography

I

- Ibacus ciliatus*, key to species, 2:26
Ibacus novemdentatus, 2:8,26
 "Identification and Epidemiological Analysis of Ciguatera Cases in Puerto Rico," by E. Escalona de Motta, J. F. Feliu, and A. Izquierdo, 4:13
 "Identification of the Photosynthetic Pigments of the Tropical Benthic Dinoflagellate *Gambierdiscus toxicus*," by Stephen R. Indelicato and David A. Watson, 4:42
Illex illecebrosus, 2:38,39
 "Impact of U.S. Wholesale Demand for Canned Sardines on Market Accessibility of Potential Gulf of Mexico Products," by Myles Raizin and Lloyd Regier, 1:32
 Indelicato, Stephen R., and David A. Watson, "Identification of the Photosynthetic Pigments of the Tropical Benthic Dinoflagellate *Gambierdiscus toxicus*," 4:42
 Indelicato, Stephen R.—see Loeblich and Indelicato
 "Inshore Environmental Effects of Brown Shrimp, *Penaeus aztecus*, and White Shrimp, *P. setiferus*, Populations in Coastal Waters, Particularly of Texas," by Zoula P. Zein-Eldin and Maurice L. Renaud, 3:9
 Interim Convention on Conservation of North Pacific Fur Seals
 subsistence harvest, 1:10-12
 regulations, 1:10
 Irradiation (cod preservation), 3:38-41
 "Irradiation and Potassium Sorbate Compared as Preservative Treatments for Atlantic Cod, *Gadus morhua*," by J. J. Licciardello, E. M. Ravesi, and D. L. D'Entremont, 3:38
Istiophorus orientalis, fishing operations in Pacific Islands region, 1:15-23
Isurus oxyrinchus, fishing operations in Pacific Islands region, 1:15-23
 Izquierdo, A.—see Escalona de Motta, G. et al.

J

- Janus*, key to species, 2:4,12
Janus edwardsii, key to species, 2:13
Janus frontalis, key to species, 2:13
Janus lalandei, key to species, 2:12
Janus novaehollandiae, key to species 2:13
Janus paulensis, key to species, 2:14
Janus tristiani, key to species, 2:14
Janus verreauxi, key to species, 2:12
 Jellyfish, cannonball, Trawling Efficiency Device use, 1:1-9
 Joh, Yong-Goe, and Paul J. Scheuer, "The Chemical Nature of Scaritoxin," 4:18
 Jollow, David J.—see Babinchak et al.
 Jollow, David J.—see Higerd et al.
 Jollow, David J.—see Kelley et al.

K

- Kamaboko
 economic aspects of Japanese industry, 4:60-64
 manufacture of, 4:60-64
Katsuwonus pelamis, fishing operations in Pacific Islands region, 1:15-23
 Kelley, Bonnie A., David J. Jollow, Edwin T. Felton, Michael S. Voegtline, and Thomas B. Higerd, "Response of Mice to *Gambierdiscus toxicus* Toxin," 4:34
 Kensaki ida, 2:38
 Kingfish, ciguatera studies, 4:23
 Koplín, Steven J.—see Herrick and Koplín

L

- Labridae, ciguatera studies, 4:14
Laurencia, ciguatera studies, 4:48
 Leet, William S., Roger E. Green, and Daniel Ralph, "Pen Rearing Pacific Salmon, *Oncorhynchus* spp., in San Francisco Bay," 1:24
Leistostomus xanthurus, Trawling Efficiency Device use, 1:1-9
 Letcher, James D.—see Zimmerman and Letcher
 Lewis, Nancy Davis, "Epidemiology and Impact of Ciguatera in the Pacific: A Review," 4:5
 Licciardello, J. J., E. M. Ravesi, and D. L. D'Entremont, "Irradiation and Potassium Sorbate Compared as Preservative Treatments for Atlantic Cod, *Gadus morhua*," 3:38
Limulus sp., Trawling Efficiency Device use, 1:1-9
Linuparus, key to species, 2:11,14
Linuparus somniosus, key to species, 2:14
Linuparus sordidus, key to species, 2:14
Linuparus trigonus, key to species 2:7,14
 Lipton, Douglas W., "The Resurgence of the U.S. Swordfish Market," 3:24
 Lizardfish, surimi production in Japan 4:61
 Lobster, American, key to tail, 2:8
 Lobster, clawed, key to tail, 2:8
 Lobster, flat, key to species, 2:26
 Lobster, locust, key to species, 2:26
 Lobster, shovel-nosed, key to species, 2:26
 Lobster, slipper, key to species, 2:26
 Lobster, Spanish, key to species, 2:26
 "Lobsters—Identification, World Distribution, and U.S. Trade," by Austin B. Williams, 2:1
 Lobsters, spiny, key to genera, 2:10
 Loeblich, Alfred R. III, and Stephen R. Indelicato, "Thecal Analysis of the Tropical Benthic Dinoflagellate *Gambierdiscus toxicus*," 4:37
Loligo bleekeri, 2:38
Loligo edulis, 2:38
Loligo opalescens
 fishery, 2:37
 mechanical device for sorting, 2:39
 packing, 2:38
 processing costs, 2:37-38
 sorting, 2:37,41
 Longlining, Pacific Islands region tuna industry, 1:15-23
Lophius americanus
 fishery, 3:49-51
 length estimations, 3:50-53
 Louisiana shrimp industry, 4:65-70
 Lyons, Kerry M., and Edwin P. Creaser, "Estimating Total Length of Headless Anglerfish, *Lophius americanus*, Landed in Maine," 3:50
 Lyons, Kerry M.—see Creaser and Lyons
- ## M
- Macroalgae, ciguatera studies, 4:48,57
 Mackerel, Atka, Japan's surimi production, 4:61
 Mackerel, Jack, Japan's surimi production, 4:61
 Mackerel, Spanish, Japan's Trawling Efficiency Device use, 1:1-9
Macrobrachium rosenbergii, bacteria in iced storage
Alteromonas putrefaciens, 2:46
 collagenolytic bacteria, 2:46
Cytophaga, 2:46
 flavobacterium, 2:46
 proteolytic bacteria, 2:46
Pseudomonas putrefaciens, 2:46
Pseudomonas Type I, 2:46
Pseudomonas Type II, 2:46
 Mager, Andreas, Jr., and Gordon W. Thayer, "National Marine Fisheries Service Habitat Conservation Efforts in the Southeast Region of the United States From 1981 Through 1985," 3:1
Makaira marlina, fishing operations in Pacific Islands region, 1:15-23
Makaira nigricans, fishing operations in Pacific Islands region, 1:15-23
 Marketing studies, Louisiana shrimp industry, 4:65-70
 McMillan, Joseph P., Patricia A. Hoffman, and H. Ray Granade, "Gambierdiscus toxicus From the Caribbean; A Source of Toxins Involved in Ciguatera," 4:46
 Meaburn, M.—see Wagstaff et al.
 "A Mechanical Device to Sort Market Squid, *Loligo opalescens*," by A. Booman and R. Paul Singh, 2:37
 Menhaden, Gulf
 potential market, 1:32
 Trawling Efficiency Device use, 1:1-9
Menticirrhus sp., ciguatera studies, 4:23
Metanephrops andamanicus, key to species, 2:9
Metanephrops binghami, key to species, 2:10
Metanephrops rubellus, key to species, 2:10
 "Microbiological Air Quality Assessment of Seafood Plants as Impacted by Solid Waste," by Donn R. Ward and Debra J. O. Hopson, 3:42
Micropogon undulatus, Trawling Efficiency Device use, 1:1-9
 Mitchell, John F.—see Watson et al.
 Mold, seafood plant air quality, 3:42,44,45
 Molligut—see Anglerfish
 Monkfish—see Anglerfish
 Moy, J. H.—see Premaratne et al.
- ## N-O
- National Health and Nutrition Examination Survey, 3:20-23
 "National Marine Fisheries Service Habitat Conservation Efforts in the Southeast Region of the United States From 1981 Through 1985," by Andreas Mager, Jr. and Gordon W. Thayer, 3:1
 Nellis, David W., and Geoffrey W. Barnard, "Ciguatera: A Legal and Social Overview," 4:1
 Nephropidae, 2:8
Nephrops norvegicus, key to species, 2:8
Nephropsis, key to species, 2:9
Nephropsis aculeata, key to species, 2:9
 NHANES I, II (National Health and Nutrition Examination Survey), 3:20-23
 Nip, W. K.—see Premaratne et al.
 Nocardiaceae, ciguatera studies, 4:57,59
Opisthonema oglinum, potential market, 1:32
Ostreopsis lenticularis, ciguatera studies, 4:23, 26,27,54,57-59
- ## P
- Pacific Islands region tuna industry
 development, 1:15-23
 investment opportunities, 1:15-23
 Pacific region, ciguatera review, 4:2
 Palinuridae, 2:10
Palinurus, key to species, 2:12,15
Palinurus charlestoni, key to species, 2:16
Palinurus delagoae, key to species, 2:15
Palinurus elephas, key to species, 2:16
Palinurus gilchristi, key to species, 2:15
Palinurus mauritanicus, key to species, 2:16
Palinurus, key to species, 2:11,12,17
Panulirus argus, key to species, 2:19
Panulirus cygnus, key to species, 2:18
Panulirus echinatus, key to species, 2:20
Panulirus gracilis, key to species, 2:24
Panulirus guttatus, key to species, 2:19
Panulirus homdrus, key to species, 2:17
Panulirus inflatus, key to species, 2:22
Panulirus interruptus, key to species, 2:21
Panulirus japonicus, key to species, 2:18,19
Panulirus laevicauda, key to species, 2:22
Panulirus longipes, key to species, 2:7
Panulirus marginatus, key to species, 2:20
Panulirus ornatus, key to species, 2:22
Panulirus pascuensis, key to species, 2:18,19
Panulirus penicillatus, key to species, 2:18
Panulirus polyphagus, key to species, 2:23
Panulirus regius, key to species, 2:21,24
Panulirus stimpsoni, key to species 2:20
Panulirus versicolor, key to species, 2:23
Paralithodes camtschatica, Kamaboko industry in Japan, 4:62
Parribacis antarcticus, key to species, 2:27
 Pawlyk, Perry W., and Kenneth J. Roberts, "Products and Markets for Small Louisiana Shrimp," 4:65
Penaeus aztecus, environmental effects on biological responses, 3:9-12
 ecological factors, 3:9-14
 environmental parameters, 3:9-14
Penaeus setiferus, environmental effects on biological responses, 3:9-12
 ecological factors, 3:9-14
 environmental parameters, 3:9-14
 juveniles, 3:12-16
 postlarvae, 3:12-16
 Penaeid shrimp, Trawling Efficiency Device use, 1:1-9
 Pen-rearing of Pacific salmon, 1:24-31
 disease, 1:26,27
 environment, 1:25
 management, 1:24
 procedures, 1:25
 "Pen Rearing Pacific Salmon, *Oncorhynchus* spp., in San Francisco Bay," by William S. Leet, Roger E. Green, and Daniel Ralph, 1:24
Peprilus burti, Trawling Efficiency Device use, 1:1-9
Peridinium balticum, ciguatera toxin, 4:46
Pleurogrammus monoptyerygius, surimi production in Japan, 4:61
Pleuroncodes, key to species, 2:31
Pleuroncodes monodon, key to species, 2:30
 Pole-and-line Pacific Islands tuna industry, 1:21
 Pollock, walleye, surimi manufacture, 4:60
Polydactylus octonemus, Trawling Efficiency Device use, 1:1-9
 Potassium sorbate and Atlantic cod, 3:38-41
 Prawn, freshwater, iced storage
Alteromonas putrefaciens, 2:46
 bacteria, 2:44-47
 collagenolytic bacteria, 2:44-47
 cytophaga, 2:46
 flavobacterium, 2:46
 proteolytic bacteria, 2:46
Pseudomonas putrefaciens, 2:46
Pseudomonas Type I, 2:46
Pseudomonas Type II, 2:46
 Premaratne, R. J., W. K. Nip, and J. H. Moy, "Characterization of Proteolytic and Collagenolytic, Psychrotrophic Bacteria of Ice-Stored Freshwater Prawn, *Macrobrachium rosenbergii*," 2:44
 Preservation studies
 cod, Atlantic, 3:38-41
 prawns, freshwater, 2:44-47
Prionace glauca, in Pacific Islands region fishery, 1:15-23
 Processing studies
 microbiological air quality assessment of seafood plants, 3:42-45
 squid, market, 2:37-43
 "Products and Markets for Small Louisiana Shrimp," by Perry W. Pawlyk and Kenneth J. Roberts, 4:65
Proreentrum cassubicum, ciguatera toxin, 4:46
 Proteolytic bacteria, freshwater prawns, 2:44-47
 Pseudomonadaceae, ciguatera studies, 4:57,59
Pseudomonas and *Alteromonas putrefaciens*, in ice-stored freshwater prawns, 2:46
Pseudomonas Type I, 2:44-47
Pseudomonas Type II, 2:44-47
Puerulus, key to species, 2:11,24

Puerulus angulatus, key to species, 2:25
Puerulus carinatus, key to species, 2:25
Puerulus sewelli, key to species, 2:25
Puerulus velutinus, key to species, 2:24
 Purse seining, Pacific Islands tuna industry, 1:15-23

R

Raizin, Myles, and Lloyd Regier, "Economic Aspects of the Japanese Kamaboko Industry," 4:60
 Ralph, Daniel—see Leet et al.
 Ravesi, E. M.—see Licciardello et al.
 Regier, Lloyd—see Myles and Regier
 Renaud, Maurice L.—see Zein-Eldin and Renaud
 "Resolution of Ciguatera-Associated Toxins using High-Performance Liquid Chromatography (HPLC)," by Thomas B. Higerd, John A. Babinchak, Paul J. Scheuer, and David J. Jollow, 4:22
 "Response of Mice to *Gambierdiscus toxicus* Toxin," by Bonnie A. Kelley, David J. Jollow, Edwin T. Felton, Michael S. Voegtline, and Thomas B. Higerd, 4:34
 "The Resurgence of the U.S. Swordfish Market," by Douglas W. Lipton, 3:24
 Roberts, Kenneth J.—see Pawlyk and Roberts

S

Salmon, Pacific
 Chinook, pen-rearing, 1:24-31
 Coho, pen-rearing, 1:24-31
 Saltwater net-pen culture, Pacific salmon, 1:24-31
 diet, 1:26,27
 disease, 1:26,27
 environment, 1:25
 fishery, 1:24
 growth, 1:28
 management, 1:24
 migration, 1:24
 mortality, 1:28
 procedures, 1:25-26
 tagging, 1:26,28-30
 Sardine, scaled
 potential market, 1:32-36
 Trawling Efficiency Device use, 1:1-9
 Sardine, Spanish
 exploitable resources, 1:32,36
 potential market, 1:32,36
 canning, 1:32,33,36
 demand, 1:32,34-36
 economic model, 1:33-35
 importers, 1:32,35
 industry structure, 1:32,33
 price analysis, 1:33-36
 producers, 1:33-36
Sardinella aurita, potential markets, 1:32-36
 Scad, potential market, 1:32
 Scaritoxin, ciguatera studies, 4:18
Scarus gibbus, ciguatera studies, 4:22
Scarus sordidus, ciguatera studies, 4:21,22
 Scheuer, Paul J.—see Higerd et al.
 Scheuer, Paul J.—see Joh and Scheuer
Sciaenidae, surimi production in Japan, 4:61
Scomberomorus maculatus, Trawling Efficiency Device use, 1:1-9
 Scyllaridae, key to genera, 2:26
Scyllarides, key to species, 2:26
Scyllarides aequinoctialis, key to species, 2:29
Scyllarides astori, key to species, 2:30
Scyllarides brasiliensis, key to species, 2:27
Scyllarides deceptor, key to species, 2:27
Scyllarides delfosi, key to species, 2:29
Scyllarides elisabethi, key to species, 2:29
Scyllarides haanii, key to species, 2:8,27
Scyllarides herklotsii, key to species, 2:28
Scyllarides latus, key to species, 2:30
Scyllarides nodifer, key to species, 2:28,29
Scyllarides rogeveeni, key to species, 2:30

Scyllarides squamosus, key to species, 2:28
Scyllarides tridacnophaga, key to species, 2:28
 Seafood waste disposal air quality assessment, 3:42-45
 "The 1985 Subsistence Harvest of Northern Fur Seals, *Callorhinus ursinus*, on St. Paul Island, Alaska," by Steven T. Zimmerman and James D. Letcher, 1:10
 Seal, Northern fur
 Interim Convention on Conservation of North Fur Seals, 1:10
 observations, 1:10-12
 regulations, 1:10
 St. Paul Island population, 1:13
 subsistence harvest (1985), Aleut, 1:10-14
 dietary requirements, 1:10
 methods, 1:10-11
 per capita consumption, 1:11
 preservation, 1:11
 Seatrout, Trawling Efficiency Device use, 1:1-9
 Shah, Arvind K.—see Watson et al.
 Sharks, fishing operations in Pacific Islands region, 1:15-23
 Shrimp, brown, environmental effects on
 biological responses, 3:9-12
 ecological factors, 3:9-14
 environmental parameters, 3:9-14
 juvenile, 3:12-14
 postlarval, 3:12-14
 Shrimp, Louisiana industry
 employment, 4:66
 firms, 4:66-70
 markets, 4:65,67-70
 products, 4:65,67-70
 Shrimp, penaeid, Trawling Efficiency Device use, 1:1-9
 Shrimp, white, environmental effects on
 biological responses, 3:9-12
 ecological factors, 3:9-16
 environmental parameters, 3:9-16
 juvenile, 3:12-16
 postlarval, 3:12-16
 Sick, L. V., D. C. Hansen, J. A. Babinchak, and T. B. Higerd, "An HPLC-Fluorescence Method for Identifying a Toxic Fraction Extracted from the Marine Dinoflagellate *Gambierdiscus toxicus*," 4:28
 Singh, R. Paul—see Booman and Singh
 Sponges, Trawling Efficiency Device use, 1:1-9
 Spot, Trawling Efficiency Device use, 1:1-9
 Squid, market
 fishery, 2:37
 mechanical device for sorting, 2:39
 packing, 2:38
 processing costs, 2:37,38
 sorting, 2:37,38,41
 tentacle:mantle length ratios, 2:39,41,42
 "Status of Data Sources on Fish Consumption in the United States," by D. J. Wagstaff, M. Meaburn, M. Bolger, S. Conrath, and B. Hackley, 3:20
Stemolophus sp., Trawling Efficiency Device use, 1:1-9
 Surgeonfish, ciguatera studies, 4:33,53
 Surimi
 economic aspects of Japanese kamaboko industry, 4:60-64
 manufacture of, 4:60-64
 Surume ika, 2:38
 Swordfish, U.S. market resurgence, 3:24
 consumption per capita, 3:25
 demand, 3:26
 domestic, 3:24
 fishery, 3:24
 imported, 3:24
 prices, 3:25
 world market, 3:25
Synodus lucioperca, surimi production in Japan, 4:61

T

TED—see Trawling Efficiency Device
 TLC—see Thin-layer chromatography, 4:44-46
 Tagging, pen-reared Pacific salmon
 Carlin tagged, 1:26-28-30
 freeze branded, 1:26
 plastic dart tags, 1:26
 Thayer, Gordon W.—see Mager, Jr., and Thayer
 "Thecal Analysis of the Tropical Benthic Dinoflagellate *Gambierdiscus toxicus*," by Alfred R. Loeblich III and Stephen R. Indelicato, 4:37
Thenus orientalis, key to species, 2:26
Thunnus alalunga
 Pacific Islands, fisheries, 1:15-23
 U.S. tuna trade summary, 3:28-37
Thunnus albacares
 Pacific Islands fisheries, 1:15-23
 U.S. tuna trade summary, 3:28-37
Thunnus atlanticus, U.S. tuna trade, 3:28-37
Thunnus obesus
 Pacific Islands fisheries, 1:15-23
 U.S. tuna trade summary, 3:28-37
Thunnus thynnus, U.S. tuna trade summary, 3:28-37
Todarodes pacificus, 2:38
 Tosteson, C. G.—see Tosteson et al.
 Tosteson, T. R., D. L. Ballantine, C. G. Tosteson, A. T. Bardales, H. D. Durst, and T. B. Higerd, "Comparative Toxicity of *Gambierdiscus toxicus*, *Ostreopsis cf. lenticularis*, and Associated Microflora," 4:55
 "Toxin Production by *Gambierdiscus toxicus* Isolated From the Florida Keys," John A. Babinchak, David J. Jollow, Michael S. Voegtline, and Thomas B. Higerd, 4:51
 Toxin studies, ciguatera studies, 4:2-59
Trachurus symmetricus, surimi production in Japan, 4:61
 "Trawling Efficiency Device: A New Concept for Selective Shrimp Trawling Gear," by John W. Watson, John F. Mitchell, and Arvind K. Shah, 1:1
 Trawls, shrimp
 panel-type, 1:1
 selective development
 Europe, 1:1
 NW U.S., 1:1
 Canada, 1:1
 Trawling Efficiency Device, 1:1-9
Trichiurus lepturus, Trawling Efficiency Device use, 1:1-9
 Tuna, U.S. trade summary
 albacore fishery, 3:30,31
 catch, 3:28-37
 consumption, 3:32,35
 exports, 3:29,30,33,35
 foreign, 3:30
 imports, 3:29,32-35
 market, 3:37
 prices, 3:31,32,34
 production, 3:30,31
 supply of canned tuna, 3:28
 tropical tuna industry, 3:32,37
 Tuna, albacore—see albacore
 Tuna, big-eye
 Pacific Islands fisheries, 1:15-23
 U.S. trade summary, 3:28-37
 Tuna, blackfin, U.S. trade summary, 3:28-37
 Tuna, bluefin, U.S. trade summary, 3:28-37
 Tuna, skipjack
 Pacific Islands fisheries, 1:15-23
 U.S. trade summary, 3:28-37
 Tuna, yellowfin
 Pacific Islands, fisheries, 1:15-23
 U.S. trade summary, 3:28-37
 Tuna industry, Pacific Islands Region 1:15-23
 development, 1:19
 exclusive economic zones, 1:15

Tuna industry, Pacific Islands (continued)
 fishery, 1:15-23
 government objectives, 1:19,20
 investment opportunities, 1:20
 processing facilities, 1:22
 transshipment facilities 1:21,22
 "The Tuna Industry in the Pacific Islands Region: Opportunities for Foreign Investment," by David J. Doullman, 1:15
 Tuna trade summary, U.S. 1984, 3:28-37

U-V

Urophycis tenuis
 fishery, 3:46
 length estimations, 3:46-49
 species identification, 3:47
 statistical analysis, 3:48
 "U.S. Tuna Trade Summary, 1984," by Samuel F. Herrick, Jr., and Steven J. Koplin 3:28-37
 Vibronaceae, ciguatera studies, 4:57,59
 Voegtline, Michael S.—see Babinchak et al.

Voegtline, Michael S.—see Kelley et al.

W

Wagstaff, D. J., M. Meaburn, M. Bolger, S. Conrath, and B. Hackley, "Status of Data Sources on Fish Consumption in the United States," 3:20
 Ward, Donn R., and Debra J. O. Hopson, "Microbiological Air Quality Assessment of Seafood Plants as Impacted by Solid Waste," 3:42
 Watson, David A.—see Indelicato and Watson
 Watson, John W., John F. Mitchell, and Arvind K. Shah, "Trawling Efficiency Device: A New Concept for Selective Shrimp Trawling Gear," 1:1
 Williams, Austin B., "Lobsters-Identification, World Distribution, and U.S. Trade," 2:1

X-Y-Z

Xiphias gladius, U.S. market

Xiphias gladius, U.S. market (continued)
 consumption per capita, 3:25
 demand, 3:26
 domestic, 3:24
 fishery, 3:24
 fishing operations in the Pacific Islands region, 1:15-23
 imported, 3:24
 prices, 3:25
 resurgence in market, 3:24-27
 Yari ika, 2:38
 Yeast, seafood plants air quality, 3:42,44, 45
 Zein-Elden, Zoula P., and Maurice Renaud, "Inshore Environmental Effects on Brown Shrimp, *Penaeus aztecus*, and White Shrimp, *P. setiferus*, Populations in Coastal Waters, Particularly of Texas," 3:9
 Zimmerman, Steven T., and James D. Letcher, "The 1985 Subsistence Harvest of Northern Fur Seals, *Callorhinus ursinus*, on St. Paul Island, Alaska," 1:10

List of Papers

Papers in The Marine Fisheries Review in 1986

48(1)

"Trawling Efficiency Device: A New Concept for Selective Shrimp Trawling Gear," John W. Watson, John F. Mitchell, and Arvind K. Shah, 1:1-9.
 "The 1985 Subsistence Harvest of Northern Fur Seals, *Callorhinus ursinus*, on St. Paul Island, Alaska," Steven T. Zimmerman and James D. Letcher, 1:10-14.
 "The Tuna Industry in the Pacific Islands Region: Opportunities for Foreign Investment," David J. Doullman, 1:15-23.
 "Pen Rearing Pacific Salmon, *Oncorhynchus* spp., in San Francisco Bay," William S. Leet, Roger E. Green, and Daniel Ralph, 1:24-31.
 "Impact of U.S. Wholesale Demand for Canned Sardines on Market Accessibility of Potential Gulf of Mexico Products," Myles Raizin and Lloyd Regier, 1:32-36.

48(2)

"Lobsters—Identification, World Distribution, and U.S. Trade," Austin B. Williams, 2:1-36
 "A Mechanical Device to Sort Market Squid, *Loligo opalescens*," A. Booman and R. Paul Singh, 2:37-43.
 "Characterization of Proteolytic and Collagenolytic Psychrotrophic Bacteria of Ice-Stored Freshwater Prawn, *Macrobrachium rosenbergii*," R. J. Premaratne, W. K. Nip, and J. H. Moy, 2:44-47.

48(3)

"National Marine Fisheries Service Habitat Conservation Efforts in the Southeast Region of the United States From 1981 Through 1985," Andreas Mager, Jr., and Gordon W. Thayer, 3:1-8.

"Inshore Environmental Effects on Brown Shrimp, *Penaeus aztecus*, and White Shrimp, *P. setiferus*, Populations in Coastal Waters, Particularly of Texas," Zoula P. Zein-Eldin and Maurice L. Renaud, 3:9-19.
 "Status of Data Sources on Fish Consumption in the United States," D. J. Wagstaff, M. Meaburn, M. Bolger, S. Conrath, and B. Hackley, 3:20-23.
 "The Resurgence of the U.S. Swordfish Market," Douglas W. Lipton, 3:24-27.
 "U.S. Tuna Trade Summary, 1984," Samuel F. Herrick, Jr., and Steven J. Koplin, 3:28-37.
 "Irradiation and Potassium Sorbate Compared as Preservation Treatments for Atlantic Cod, *Gadus morhua*," J. J. Licciardello, E. M. Ravesi, and D. L. D'Entremont, 3:38-41.
 "Microbiological Air Quality Assessment of Seafood Plants as Impacted by Solid Waste," Donn R. Ward and Debra J. O. Hopson, 3:42-45.
 "Estimating Total Length of Headless White Hake, *Urophycis tenuis*, Landed in Maine," Edwin P. Creaser and Kerry M. Lyons, 3:46-49.
 "Estimating Total Length of Headless Anglerfish, *Lophius americanus*, Landed in Maine," Kerry M. Lyons and Edwin P. Creaser, 3:50-53.

48(4)

"Ciguatera: A Legal and Social Overview," David W. Nellis and Geoffrey W. Barnard, 4:2-5.
 "Epidemiology and Impact of Ciguatera in the Pacific: A Review," Nancy Davis Lewis, 4:6-13.
 "Identification and Epidemiological Analysis of Ciguatera Cases in Puerto Rico," G. Escalona de Motta, J. F. Feliu, and A. Izquierdo, 4:14-18.
 "The Chemical Nature of Scaritoxin," Yong-Goe Joh and Paul J. Scheuer, 4:19-22.
 "Resolution of Ciguatera-Associated Toxins using

High-Performance Liquid Chromatography (HPLC)," Thomas B. Higerd, John A. Babinchak, Paul J. Scheuer, and David J. Jollow, 4:23-28.
 "An HPLC-Fluorescence Method For Identifying a Toxic Fraction Extracted From the Marine Dinoflagellate *Gambierdiscus toxicus*," L. V. Sick, D. C. Hansen, J. A. Babinchak, and T. B. Higerd, 4:29-34.
 "Response of Mice to *Gambierdiscus toxicus* Toxin," Bonnie A. Kelley, David J. Jollow, Edwin T. Felton, Michael S. Voegtline, and Thomas B. Higerd, 4:35-37.
 "Thecal Analysis of the Tropical Benthic Dinoflagellate *Gambierdiscus toxicus*," Alfred R. Loeblich III and Stephen R. Indelicato, 4:38-43.
 "Identification of the Photosynthetic Pigments of the Tropical Benthic Dinoflagellate *Gambierdiscus toxicus*," Stephen R. Indelicato and David A. Watson, 4:44-47.
 "*Gambierdiscus toxicus* from the Caribbean: A Source of Toxins Involved in Ciguatera," Joseph P. McMillan, Patricia A. Hoffman, and H. Ray Granade, 4:48-52.
 "Toxin Production by *Gambierdiscus toxicus* Isolated From the Florida Keys," John A. Babinchak, David J. Jollow, Michael S. Voegtline, and Thomas B. Higerd, 4:53-56.
 "Comparative Toxicity of *Gambierdiscus toxicus*, *Ostreopsis* cf. *lenticularis*, and Associated Microflora," T. R. Tosteson, D. L. Ballantine, C. G. Tosteson, A. T. Bardales, H. D. Durst, and T. B. Higerd, 4:57-59.
 "Economic Aspects of the Japanese Kamaboko Industry," Myles Raizin and Lloyd Regier, 4:60-64.
 "Products and Markets for Small Louisiana Shrimp," Perry W. Pawlyk and Kenneth J. Roberts, 4:65-70.