

Fisheries Review



**Jeffrey A. Humphrey
Joan W. Stevens
Compilers**

*U.S. Fish and Wildlife Service
Office of Information Transfer
Data Base Section
1201 Oak Ridge Drive, Suite 200
Fort Collins, Colorado 80525-5589
Phone: (970) 223-9709
FAX: (970) 226-9455*

Fisheries Review is intended to furnish library biologists with abstracts of current literature to assist library research and management.

One volume, consisting of four numbers, is issued each year. Each number contains separate Author, Geographic, Taxonomic, and Subject indexes. Authors who publish in journals not screened for *Fisheries Review*, and who would like their publications included, should submit abstracts to the Editor.

The U.S. Fish and Wildlife Service assumes no responsibility for the accuracy of material from outside sources.



Fisheries Review

Vol. 38, No. 2

1993

Contents

AQUATIC PLANTS AND THEIR CONTROL	1
CULTURE AND PROPAGATION	
General Fish Culture	1
Trout and Salmon Culture	3
Warmwater Culture	6
Mariculture	10
Feeds, Feeding, and Nutrition	11
Transporting Fish	14
Aquariums	14
Miscellaneous Culture Techniques and Equipment	16
LIMNOLOGY AND OCEANOGRAPHY	
Physical	18
Chemical	18
MORPHOLOGY, PHYSIOLOGY, GENETICS AND BEHAVIOR	
Morphology	18
Physiology	25
Genetics, Variation Studies and Hybridization	49
Behavior	54
NATURAL HISTORY	
Life History—General Works	60
Population Studies, Production, Recruitment, etc.	63
Spawning Habits and Movements, Fecundity, etc.	66
Movements, Seasonal and Depth Distribution, etc.	69
Foods/Feeding	71
Age and Growth	76
Geographical Distribution, Fish Surveys, etc.	79
Abundance, Factors of Survival and Mortality	82
Identification, Keys, Classification	83
PARASITES AND DISEASES	
General	85
Bacterial	86
Fungal	90
Protozoan	90
Viral	92
Other	94
POLLUTION AND TOXICOLOGY	
Pollution	98
Fish Kills	101
Toxicology; Bioassays	101
RESEARCH AND MANAGEMENT	
General	114
Administration and Planning	119

Habitat Alterations	120
Harvest, Creel Census, etc	122
Regulations	124
Fish Control and Removal	124
Marking and Tagging	125
Stocking and Introductions	125
Fishing Gear and Techniques	126
Fishways, Fish Passage Through Dams, etc	129
Mathematics, Statistical Methods, and Modeling	130
Lake Management and Research	134
River and Stream Management and Research	130
Farm Ponds and Small Impoundment Management and Research	145
Large Impoundment Management and Research	145
Estuary Management and Research	146
Marine Management and Research	147
Utilization of Fishery Products	160
Misc. Techniques and Equipment	166
Miscellaneous	170
AUTHOR INDEX (Blue)	171
GEOGRAPHIC INDEX (White)	235
SYSTEMATIC INDEX (Blue)	249

AVAILABILITY OF REPRINTS AND PUBLICATIONS

Fisheries Review does not distribute any of the papers cited herein, nor can the editor of *Fisheries Review* obtain copies of these papers for anyone. A reprint of an article published in a journal may be available from the author, from the organization with which the author is affiliated, or from the publisher of the journal in which the article appeared. When an author's address is known, it is shown in square brackets following the citation. Addresses of most wildlife organizations can be obtained from the Conservation Directory, an annual publication available from the National Wildlife Federation, 1412 16th St., N.W., Washington, D.C. 20036. This directory lists more than 900 agencies and organizations concerned with natural resources use.

Camera-ready copy for this issue of *Fisheries Review* has been generated by computer programs developed by the Data Base Section, U.S. Fish and Wildlife Service, Office of Information Transfer, 1261 Oak Ridge Drive, Suite 200, Fort Collins, CO 80525-5288.

Fisheries Review Is Now Available On Compact Disc

For more information please contact:

National Information Services Corporation
 3100 St. Paul St.
 Suite 6, Wyman Towers
 Baltimore, MD 21218
 (410) 243-0797

FISHERIES REVIEW

AQUATIC PLANTS AND THEIR CONTROL

93-002192 Swierczynski, Marek and Izabela Czarnawska. IMPACT OF BLUET-GREENS FROM GENERA OF MICROCYSTIS ON SOME AQUATIC ANIMALS. *Acta Ichthyol Piscatorum* 22(2) 163-180. 1992. In English with Polish summ. FR 38(2)

[Wydział Biol. i Nauk o Morzu, Univ. Szczeciński, ul. Felczaka 3a, 71-412 Szczecin, Poland] *Caecius caecius*, *Gammarus aculeatus*, *Cyprinus carpio*, and *Anguilla anguilla* in Poland

GENERAL FISH CULTURE

93-002193 Alcantara Bocanegra, Fernando. [THE STATUS OF FISH CULTURE IN AMAZONIAN PERU AND A STRATEGY FOR ITS DEVELOPMENT]. *Folia Amazonica* Vol. 3 p. 83-95. 1991. In Spanish. FR 38(2)

93-002194 Alston, Dallas. RECOMMENDATIONS BY THE AQUACULTURE TASK FORCE - PRESENTED TO HON. GILBERTO RIVERA ORTIZ, PRESIDENT, SENATE CONSUMER AFFAIRS COMMISSION COMMONWEALTH OF PUERTO RICO, DECEMBER, 1987. *Proc. Gulf Caribb. Fish. Inst.* Vol. 42 p. 412-425. 1992. FR 38(2)

[Dep. Mar. Sci., Univ. Puerto Rico, Mayaguez 00709]

93-002195 Avasoli, James W., Jr. AQUACULTURE ENVIRONMENTAL AND CONSERVATION CONSIDERATIONS. *Aquacult. Mag.* 19(1) 64-67. 1993. FR 38(2)

[School For. Wildl. & Fish., Agric. Exp. Stn., La. State Univ., Agric. Cent., Baton Rouge 70803]

93-002196 Avasoli, James W., Jr. WATER MANAGEMENT IN PONDS, SOME BASICS REVIEWED. *OXYGEN Aquacult. Mag.* 19(2), 77-80. 1993. FR 38(2)

[School For. Wildl. & Fish., Agric. Exp. Stn., La. State Univ., Agric. Cent., Baton Rouge 70803]

93-002197 Baldregini, Paolo; Riccardo Santolini and Stefano Volponi. THE GREAT CORMORANT (*PHALACROCORAX CARBO SINENSIS*) IN ITALY. *Colom. Waterbird Soc. Bull.* 16(2) 64. 1992. Abstract only. FR 38(2)

[Inst. Zool., Univ. Bologna, I-40100 Bologna, Italy]

93-002198 Brugger, Kristin E. DOUBLE-CRESTED CORMORANTS AND FISHERIES IN FLORIDA. *Colom. Waterbird Soc. Bull.* 16(2):49. 1992. Abstract only. FR 38(2)

[U.S. Dep. Agric./APHIS/ADC Denver Wildl. Res. Cent., Field Stn., Gainesville, FL 32601]

93-002199 Coker, R.E. AQUICULTURE AND THE FUTURE OF THE WATERS. *World Aquacult.* 23(3):44-46. 1992. FR 38(2)

93-002200 Colt, John; Kris Orwicz and Gerald Bouck. WATER QUALITY CONSIDERATIONS AND CRITERIA FOR HIGH-DENSITY FISH CULTURE WITH SUPPLEMENTAL OXYGEN. *Am. Fish. Soc. Symp.* No. 10, p. 372-385. 1991. FR 38(2)

[James M. Montgomery, Consult. Eng., 2375 130th Ave., N.E., Suite 200, Bellevue, WA 98005]

93-002201 Costa-Pierce, Barry A. AQUACULTURE DEVELOPMENT AND LARGE-SCALE RESETTLEMENT IN INDONESIA. *World Aquaculture* 9(1), Halifax, Canada. Michelle Hibler, editor. *World Aquacult.* 23(1):33-39. 1992. FR 38(2)

[Aquacult. Proj., ICLARM, P.O. Box 229, Zomba, Malawi]

93-002202 DeVoe, M. Richard and Robert Pomeroy, editors. USE CONFLICTS IN AQUACULTURE: A WORLDWIDE PERSPECTIVE ON ISSUES AND SOLUTIONS, WORLD AQUACULTURE 90, HALIFAX, CANADA. *World Aquacult.* 23(2):13-35. 1992. FR 38(2)

[Sea Grant Consortium, Charleston, SC] Selected papers indexed in this issue of *Fisheries Review*.

93-002203 DeVoe, M. Richard; Robert S. Pomeroy and Alex W. Wypyszynski. AQUACULTURE CONFLICTS IN THE EASTERN UNITED STATES. *World Aquaculture* 9(1), Halifax, Canada. M. Richard DeVoe and Robert Pomeroy, editors. *World Aquacult.* 23(2):24-25. 1992. FR 38(2)

[Sea Grant Consortium, Charleston, SC]

93-002204 Gallagher, Gregory J., editor. STATUS OF WORLD AQUACULTURE 1992. *Aquacult. Mag.* 22nd Annu. Buyer's Guide p. 8, 10, 12, 14-16, 18, 20, 22-26. 1993. FR 38(2)

[P.O. Box 2320, Asheville, NC 28802] *Ictalurus*, *Tilapia*, and *Morone saxatilis*.

93-002205 Gomes, Luiz Antonio. ZEN AND THE ART OF AQUAFARMING. *World Aquacult.* 23(3):10-26. 1992. FR 38(2)

[Rua Dona Mariana 72/707 22280 Botafogo, Rio de Janeiro, Brazil]

93-002206 Hensen, Roberto R. DEVELOPMENT OF AQUACULTURE IN THE NETHERLANDS ANTILLES AND ARUBA. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40, p. 363-366. 1991. FR 38(2)

[Maricultura Found., P.O. Box 43, Bonaire, Netherlands]

FISHERIES REVIEW

GENERAL FISH CULTURE (Continued)

- 93-002207 Hibler, Michelle, editor USER PARTICIPATION IN AQUACULTURE RESEARCH AND DEVELOPMENT. TWELVE ARTICLES FROM A SYMPOSIUM AT WORLD AQUACULTURE 90, HALIFAX, CANADA. *World Aquacult.* 23(1):20-60. 1992. FR 38(2)
 [Selected papers indexed in this issue of Fisheries Review.]
- 93-002208 Holt, John K. AQUACULTURE SITE SELECTION IN THE CARIBBEAN. AN ENGINEERING VIEWPOINT. *Proc. Gulf Caribb. Fish. Inst.* Vol. 41, p. 570-578. 1992. FR 38(2)
 [Div. Appl. Biol., Harbor Branch Oceanogr. Inst., 5600 Old Dixie Hwy., Fort Pierce, FL 34946]
- 93-002209 Hopkins, Thomas A. and William E. Manscl. AQUACULTURE OPPORTUNITY NOW. PART 2 - THE POWER OF ECONOMICS. *Aquacult. Mag.* 19(1):30, 32, 34-38. 1993. FR 38(2)
 [Biometrics Inc., Boyds, MD]
- 93-002210 Hopkins, Thomas A. and William E. Manscl. AQUACULTURE OPPORTUNITY NOW, PART 3 - EDUCATION AND COOPERATION. *Aquacult. Mag.* 19(2):60-72. 1993. FR 38(2)
 [Biometrics Inc., Boyds, MD]
- 93-002211 Joyce, John. AQUACULTURE CONFLICTS AND THE MEDIA. WHAT ASSOCIATIONS CAN DO. *World Aquaculture* 90, Halifax, Canada. *M. Richard DeVoe and Robert Pomeroy, editors. World Aquacult.* 23(2):14-15. 1992. FR 38(2)
 [Irish Salmon Growers Assoc., Dun Laoghaire, Dublin Co., Ireland]
- 93-002212 Meade, James W. APPLICATION OF THE PRODUCTION CAPACITY ASSESSMENT BIOASSAY. *Am. Fish. Soc. Symp.* No. 10, p. 365-367. 1991. FR 38(2)
 [U.S. Fish & Wildl. Serv., Tunison Lab. Fish Nutr., 3075 Grade Rd., Corland, NY 13045]
- 93-002213 Moiseev, P. A. [CURRENT WORLD PRODUCTION OF AQUACULTURE.] *Biol. Morye (Vodsvot.)* 1991(5):83-91. 1991. In Russian with English summ. FR 38(2)
 [All Union Inst. Food Ind., Moscow 113149, Russia]
- 93-002214 Mural, Takeshi. AQUACULTURE CONFLICTS IN JAPAN. *World Aquaculture* 90, Halifax, Canada. *M. Richard DeVoe and Robert Pomeroy, editors. World Aquacult.* 23(2):30-31. 1992. FR 38(2)
 [Nat. Res. Inst. Fish. Sci., Tokyo, Japan]
- 93-002215 Murata, Akio. CONTROL OF FISH DISEASE IN JAPAN. *Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Ito, Mie Prefecture, Japan, 29-30 October 1990.* Ralph S. Svirjcek, editor. NOAA (Natl. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Natl. Mar. Fish. Serv.) No. 111, p. 135-143. 1992. FR 38(2)
 [Fish Agency, Res. Div., Kasumigaoki 1-2-1, Thyodai-ku, Tokyo, Japan]
- 93-002216 Petrocci, Charles. PEACE CORPS FISHERIES: THE MARINE CORPS OF THE PEACE CORPS. *Aquacult. Mag.* 19(2):28, 30, 32, 34, 36, 38, 40. 1993. FR 38(2)
- 93-002217 Pollnac, Richard B. MULTIUSE CONFLICTS IN AQUACULTURE. SOCIOCULTURAL ASPECTS. *World Aquaculture* 90, Halifax, Canada. *M. Richard DeVoe and Robert Pomeroy, editors. World Aquacult.* 23(2):16-19. 1992. FR 38(2)
 [Dep. Sociol. & Anthropol., Univ. RJ, Kingston]
- 93-002218 Pilon, Jolo M. and John G. Nickson. AQUACULTURE AND BIRDS: THE CONTEXT FOR CONTROVERSY. *Colon. Waterbird Soc. Bull.* 16(2):47. 1992. Abstract only. FR 38(2)
 [Dep. Fish. & Oceans, Ottawa, ON, Canada K1A 0B6]
- 93-002219 Purchase, H. Graham; Joe Glynn and John L. Pitts. OPPORTUNITIES FOR VETERINARIANS IN AQUACULTURE. *J. Am. Vet. Med. Assoc.* 202(5):734-737. 1993. FR 38(2)
 [Dep. Res. Coll. Vet. Med., Mississippi State, MS 39762]
- 93-002220 Singel Causey, Douglas. THE BIOLOGY OF DOUBLE-CRESTED CORMORANTS AND A HISTORY OF HUMAN-CORMORANT INTERACTIONS. *Colon. Waterbird Soc. Bull.* 16(2):47. 1992. Abstract only. FR 38(2)
 [Mus. Nat. Hist., Univ. Kans., Lawrence 66045-2454]
- 93-002221 Skladany, Mike. CONFLICTS IN SOUTHEAST ASIA: AN INSTITUTIONALIST PERSPECTIVE. *World Aquaculture* 90, Halifax, Canada. *M. Richard DeVoe and Robert Pomeroy, editors. World Aquacult.* 23(2):33-35. 1992. FR 38(2)
 [Dep. Sociol., Mich. State Univ., East Lansing]
- 93-002222 Thomas, Margaret G., project leader. A GUIDE TO RURAL ECONOMIC DEVELOPMENT THROUGH AGRICULTURE AND AQUACULTURE. In: *Recouple-Natural Resource Strategies for Rural Economic Development*, p. IV-1 - IV-37. Available at \$25.00 from Midwest Res. Inst., 425 Volker Blvd., Kansas City, MO 64110. FR 38(2)

FISHERIES REVIEW

GENERAL FISH CULTURE (Continued)

93-002223 Trapp, John L. and John F. Turner. MANAGEMENT RESPONSIBILITIES AND POLICY FOR CORMORANTS. UNITED STATES FISH AND WILDLIFE SERVICE. *Colon Waterbird Soc. Bull.* 16(2):51. 1992. Abstract only. FR 3B(2)
[U.S. Fish & Wildl. Serv., 1849 C St. N.W., Washington, DC 20240]

93-002224 Weeks, Priscilla. FISH AND PEOPLE. AQUACULTURE AND THE SOCIAL SCIENCES. *Soc. Nat. Resour.* 5(4):345-357. 1992. FR 3B(2)
[Anthropol. Program, Univ. Houston Clear Lake, Houston, TX 77058]

93-002225 Waseloh, D. V. and J. Casselman. CALCULATED FISH CONSUMPTION BY DOUBLE-CRESTED CORMORANTS IN EASTERN LAKE ONTARIO. *Colon Waterbird Soc. Bull.* 16(2):63-64. 1992. Abstract only. FR 3B(2)
[Canadian Wildl. Serv., Box 5050, Burlington, ON, Canada L7R 4A6] *Colinus macularius*, *Peleca flavescens*, and *Salvelinus namaycush*.

93-002226 Xiangke Lu, compiler. FISHERY MANAGEMENT APPROACHES IN SMALL RESERVOIRS IN CHINA. FAO Fish. Circ. No. 854. 69p. 1992. FR 3B(2)

TROUT AND SALMON CULTURE

93-002227 Binkowski, Fred P., J. James Sedmak and Setsuko O. Jolly. AN EVALUATION OF PHAFFIA YEAST AS A PIGMENT SOURCE FOR SALMONIDS. *Aquacult. Mag.* 19(2):54-59. 1993. FR 3B(2)
[Cont. Great Lakes Study, Univ. Wis., Milwaukee] *Oncorhynchus mykiss*.

93-002228 Cao Guanglin, Jin Xing and Zhang Mingzhi. APPLIED CALCULATION OF PROPELLER ABRATOR IN TROUT CULTURE. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989*. Wang Xing, editor. *Salmon Fish. 1990* [Spec. Issue], 1-6. 1990. FR 3B(2)
[Hefei Longling Fish. Res. Inst., Chinese Acad. Aquat. Sci., Harbin, China] *Oncorhynchus mykiss*.

93-002229 Carr, D. N. GREY HERON, ARDEA CANADA L., PREDATION AT CAGE FISH FARMS IN ARCYL, WESTERN SCOTLAND. *Aquacult. Fish. Manage.* 24(1):29-45. 1993. FR 3B(2)
[Inst. Terrestrial Ecol., Hill of Brathens, Banchory, Kincardineshire AB3 4BY, Scotland] *Salmo salar* and *Oncorhynchus mykiss*.

93-002230 Cartwright, Wilber F. ANNUAL REPORT WARM SPRINGS SALMON AND STEELHEAD HATCHERY, 1990-91. *Calif. Dep. Fish Game Inland Fish. Adm'n. Rep. No. 92-5*. 10p. 1992. FR 3B(2)
Oncorhynchus mykiss, *O. tshawytscha*, and *O. kisutch* in California.

93-002231 Cozart, Michael D. ANNUAL REPORT MERCED RIVER FISH FACILITY, 1989-90. *Calif. Dep. Fish Game Inland Fish. Adm'n. Rep. No. 92-3*. 14p. 1992. FR 3B(2)
Oncorhynchus tshawytscha in California.

93-002232 De Verga, Viktor and Helmut Kummer. [THE REARING OF WHITEFISH AND ARCTIC CHARR LARVAE IN AN ARTIFICIAL SURROUNDING AND AT DIFFERENT TEMPERATURES.] *Osterreich Fischerei* 45(11/12):277-282. 1992. In German with English summ. FR 3B(2)
[Abt. Hydrobiol., Fischereiwirtschaft & Aquakult., Inst. Wasserwirtschaft & Fischereiwirtschaft, Univ. Bodenkultur, A-1180 Vienna, Fetsmannstr. 4, Austria] *Coregonus lavaretus* and *Salvelinus alpinus*.

93-002233 Ducey, Ronald D. ANNUAL REPORT, NIMBUS SALMON AND STEELHEAD HATCHERY, 1991-92. *Calif. Dep. Fish Game Inland Fish. Adm'n. Rep. No. 92-11*. 11p. 1991. FR 3B(2)
Oncorhynchus mykiss and *O. tshawytscha* in California.

93-002234 Eriksson, T. SEA RELEASES OF BALTIC SALMON: INCREASED SURVIVAL WITH A DELAYED-RELEASE TECHNIQUE. *Am. Fish. Soc. Symp. No. 10*. p. 562-566. 1991. FR 3B(2)
[Dep. Aquacult., Swedish Univ. Agric. Sci., S-90103 Umea, Sweden] *Salmo salar* in Sweden.

93-002235 Estey, Don F. ANNUAL REPORT: MOKELUMNE RIVER HATCHERY, 1991-92. *Calif. Dep. Fish Game Inland Fish. Adm'n. Rep. No. 92-9*. 9p. 1992. FR 3B(2)
Oncorhynchus mykiss and *O. tshawytscha*.

93-002236 Folsom, William B. and Eleanor A. Sanborn. THE DIFFICULTIES OF SALMON CULTURE. *Aquacult. Mag.* 19(1):51-63. 1993. FR 3B(2)
[NOAA, NMFS, Silver Spring, MD]

93-002237 Fraser, Noel C. and Clyde W. Parks. FECLINDITY AND EGG SIZE OF BROOK TROUT AND BROWN TROUT BROOD STOCKS IN HEATED, RECIRCULATED WATER. *Am. Fish. Soc. Symp. No. 11*. p. 554-561. 1991. FR 3B(2)
[Parks: Allison Creek Brood Trout Sta., Fish & Wildl. Div., Alberta Dep. For., Lands & Wildl., P.O. Box 394, Coleman, AB, Canada T0K 0M0] *Salmo trutta* and *Salvelinus fontinalis*.

FISHERIES REVIEW

TROUT AND SALMON CULTURE (Continued)

93-002230 Cer Guochang, Zan Yanlan and Su Shidao. GROWTH OF DONALDSON'S SUPER RAINBOW TROUT IN CHINA. *Proceedings of the International Symposium on Coldwater Fish Culture*, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish*, 1990(Spec. Issue) 165. 1990. Abstract only. FR 38(2)

[Ocean Univ. Qingdao, Shandong, China] *Oncorhynchus mykiss*

93-002239 Crass, Alan F. ANNUAL REPORT: NOYO RIVER EGG COLLECTING STATION, 1989-90. *Calif. Dep. Fish Game Inland Fish Adm'n. Rep. No. 92-1*. 6p. 1992. FR 30(2)

Oncorhynchus kitchi and *O. mykiss* in California.

93-002240 Crass, Alan F. ANNUAL REPORT: NOYO RIVER EGG COLLECTING STATION, 1991-92. *Calif. Dep. Fish Game Inland Fish Adm'n. Rep. No. 92-14*. 5p. 1992. FR 30(2)

Oncorhynchus mykiss and *O. kitchi* in California.

93-002241 Crass, Alan F. ANNUAL REPORT: VAN ARSDALE FISHERIES STATION, 1990-91. *Calif. Dep. Fish Game Inland Fish Adm'n. Rep. No. 92-13*. 9p. 1992. FR 30(2)

93-002242 Crass, Alan F. ANNUAL REPORT: NOYO RIVER EGG COLLECTING STATION, 1990-91. *Calif. Dep. Fish Game Inland Fish Adm'n. Rep. No. 92-12*. 6p. 1992. FR 30(2)

Oncorhynchus mykiss and *O. kitchi* in California.

93-002243 Hall, Per O. J.; Ola Holby, Sven Kolberg and Mats-Olof Samuelsson. CHEMICAL FLUXES AND MASS BALANCES IN A MARINE FISH CAGE FARM. IV. NITROGEN. *Mar. Ecol. Prog. Ser.* 93(1):81-91. 1992. FR 38(2)

[Dep. Analytical & Mar. Chem., Univ. Goteborg, S-41296 Goteborg, Sweden] *Oncorhynchus mykiss* in Sweden.

93-002244 Haraldsson, H.; T. Sveinsson and S. Skulason. EFFECTS OF LHRHa TREATMENTS UPON THE TIMING OF OVULATION AND UPON EGG AND OFFSPRING QUALITY IN ARCTIC CHARR, *SALVELINUS ALPINUS* (L.). *Aquacult. Fish Manage.* 24(2):145-150. 1993. FR 38(2)

[Dep. Physiol., Univ. Iceland, Vatnsmýrarvegur 16, 101 Reykjavik, Iceland]

93-002245 Harris, Rod. THIS LITTLE PIGGY WENT TO MARKET: A CANADIAN PERSPECTIVE ON WORLD SALMON MARKETS. *World Aquacult.* 23(3):29-33. 1992. FR 38(2)

[Aquacult. Assoc., Vancouver, BC, Canada]

93-002246 Hiser, Curtis A. ANNUAL REPORT: IRON GATE SALMON AND STEELHEAD HATCHERY, 1990-91. *Calif. Dep. Fish Game Inland Fish Adm'n. Rep. No. 92-2*. 14p. 1992. FR 38(2)

Oncorhynchus mykiss in California.

93-002247 Ingaris, G. A. and M. A. Rimmer. INDUCED BREEDING AND LARVAL REARING OF THE ENDANGERED AUSTRALIAN FRESHWATER FISH TROUT COD, *MACCULLOCHELLA MACQUARIENSIS* (CLAUER) (PERCICHTHYIDAE). *Aquacult. Fish Manage.* 24(1):7-17. 1993. FR 38(2)

[Dep. Conserv. & Environ., Snobs Creek Freshwater Fish. Res. Stn & Hatchery, Private Bag 20, Alexandria, Vic. 3714, Australia]

93-002248 Jonasson, Jonas. SELECTION EXPERIMENTS IN SALMON RANCHING. I. GENETIC AND ENVIRONMENTAL SOURCES OF VARIATION IN SURVIVAL AND GROWTH IN FRESHWATER. *Aquaculture* 109(3-4):225-236. 1993. FR 38(2)

[Inst. Freshwater Fish., Vagnhofla 7, 112 Reykjavik, Iceland] *Salmo salar* in Iceland.

93-002249 Jørgensen, Even H.; Jørgen S. Christensen and Malcolm Jobling. EFFECTS OF STOCKING DENSITY ON FOOD INTAKE, GROWTH PERFORMANCE AND OXYGEN CONSUMPTION IN ARCTIC CHARR (*SALVELINUS ALPINUS*). *Aquaculture* 110(2):191-204. 1993. FR 38(2)

[Norwegian Coll. Fish. Sci., Univ. Tromsø, N-9000 Tromsø, Norway]

93-002250 Krise, William F. HATCHERY MANAGEMENT OF LAKE TROUT EXPOSED TO CHRONIC DISSOLVED GAS SUPERSATURATION. *Am. Fish. Soc. Symp. No. 10*, p. 360-371. 1991. FR 38(2)

[U.S. Fish & Wildl. Serv., Natl. Fish. Res. & Dev. Lab., Rural Delivery 4, Box 63, Wellsboro, PA 16901] *Salvelinus namaycush*

93-002251 Liaw, W. K. TROUT CAGE CULTURE AND WATER QUALITY IN BERNARD LAKE. *Sask. Parks Renewable Resour. Fish. Tech. Rep.* 88-3. 49p. 1989. FR 38(2)

[Saskatchewan Fish. Lab., Fish. Branch, Dep. Parks, Recreation & Culture, 15 Innovation Blvd., Saskatoon, SK, Canada S7K 2H6] *Oncorhynchus mykiss* in Canada.

93-002252 Liu Xing. A SUMMARY ON RAINBOW TROUT REARING TECHNIQUES IN CHINA. *Proceedings of the International Symposium on Coldwater Fish Culture*, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish*, 1990(Spec. Issue):15-19. 1990. FR 38(2)

[Helongjiang Fish. Res. Inst., Chinese Acad. Fish. Sci., Harbin, China] *Oncorhynchus mykiss*.

FISHERIES REVIEW

TROUT AND SALMON CULTURE (Continued)

- 93-002253 McLean, William E., Jørgen O. T. Jønsen and Donald F. Aldredge. OXYGEN CONSUMPTION RATES AND WATER FLOW REQUIREMENTS OF PACIFIC SALMON (*ONCORHYNCHUS* SPP.) IN THE FISH CULTURE ENVIRONMENT. *Aquaculture* 109(3-4): 261-313, 1993. FR 38(2)
[Dep. Fish. & Oceans, Enhancement Operations Branch, Quilnsam Salmon Hatchery, Box 467, Campbell River, BC, Canada V9W 5C1]
- 93-002254 McNeil, William J.; Ron Gowan and Richard Severson. OFFSHORE RELEASE OF SALMON SMOLTS. *Am. Fish. Soc. Symp.* No. 10, p. 548-553, 1991. FR 38(2)
[Harfield Mar. Sci. Cent., Oreg. State Univ., Newport 97365] *Oncorhynchus kisutch*, *O. tshawytscha* In Oregon, and *Salmo salar* in Sweden and Norway.
- 93-002255 McNeil, William J. FUTURE OF SALMON. *Am. Fish. Soc. Symp.* No. 10, p. 12-18, 1991. FR 38(2)
[Coop. Inst. Mar. Resour. Studies, Oreg. State Univ., Newport 97365] *Oncorhynchus* and *Salmo salar*
- 93-002256 Novotny, Jerry F. and Thomas L. Macy. PEN REARING OF JUVENILE FALL CHINOOK SALMON IN THE COLUMBIA RIVER: ALTERNATIVE REARING SCENARIOS. *Am. Fish. Soc. Symp.* No. 10, p. 539-547, 1991. FR 38(2)
[U.S. Fish & Wildl. Serv., Fish. & Fed. Aid, 911 Northeast 11th Ave., Portland, OR 97232-4181] *Oncorhynchus tshawytscha* in North America
- 93-002257 Novotny, Tony. THE FUTURE OF SALMON FARMING IN NORTH AMERICA. *World Aquacult.* 23(3):34-36, 1992. FR 38(2)
- 93-002258 Ocvirk, Jane. MAIN HEALTH PROBLEMS IN GRAYLING (*THYMALLUS THYMALLUS* LINNAEUS, 1758) CULTURE. *Ichtology* No. 11, p. 23-27, 1992. In Serbo-Croatian and English. FR 38(2)
[Fish. Res. Inst., Ljubljana, Slovenia]
- 93-002259 Parfitturst, James A.; Robert P. Brooks and Dean E. Arnold. ASSESSMENT OF PREDATION AT TROUT HATCHERIES IN CENTRAL PENNSYLVANIA. *Wildl. Soc. Bul.* 20(4):411-419, 1992. FR 38(2)
[Dep. For. & Wildl. Manage., Univ. Mass., Amherst 01003] *Salvelinus fontinalis*, *Salmo trutta*, and *Oncorhynchus mykiss*.
- 93-002260 Ritter, J. A., editor. REPORT OF THE WORKING GROUP ON ATLANTIC SALMON (*SALMO SALAR*) BROODSTOCK DEVELOPMENT AND CONSERVATION FOR THE SOUTHERN NEW BRUNSWICK AQUACULTURE INDUSTRY. *Can. Tech. Rep. Fish. Aquac. Sci.* No. 1678, 24p. 1990. In English with French summary. FR 38(2)
[Freshwater & Anadromous Div., Biol. Sci. Branch, Dep. Fish. & Oceans, Halifax, NS, Canada B3J 2S7]
- 93-002261 Saunders, Richard I. ENHANCING SMOLT PRODUCTION BY MANIPULATING LIGHT AND TEMPERATURE. A FARMER CAN INCREASE THE NUMBERS OF 1" ATLANTIC SALMON SMOLTS. *World Aquacult.* 23(3):37-39, 1992. FR 38(2)
[Dep. Fish. & Oceans, Fresh Aquacult. Sect., Biol. Stn., St. Andrews, NB, Canada E0G 2X0] *Salmo salar*.
- 93-002262 Shepherd, Bruce G. ON CHOOSING WELL: BIOENGINEERING RECONNAISSANCE OF NEW HATCHERY SITES. *Am. Fish. Soc. Symp.* No. 10, p. 354-364, 1991. FR 38(2)
[British Columbia Environ., 3547 Skaha Lake Rd., Penticton, BC, Canada V2A 7K2]
- 93-002263 Simon, Raymond C. MANAGEMENT TECHNIQUES TO MINIMIZE THE LOSS OF GENETIC VARIABILITY IN HATCHERY FISH POPULATIONS. *Am. Fish. Soc. Symp.* No. 10, p. 487-494, 1991. FR 38(2)
[5868 Old Hwy. 14, Box 341, Beulah, WY 82712]
- 93-002264 Soderberg, Richard W.; James W. Meade and Lori A. Redell. FIN CONDITION OF ATLANTIC SALMON REARED AT HIGH DENSITIES IN HEATED WATER. *J. Aquat. Anim. Health* 5(1):77-79, 1993. FR 38(2)
[Fish. Program, Mansfield Univ., Mansfield, PA 16833] *Salmo salar*
- 93-002265 Son, Joo Hag. PROSPECT OF COLDWATER FISH CULTURE IN KOREA. *Proceedings of the International Symposium on Coldwater Fish Culture*, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish.* 1990(Spec. Issue):25-27, 1990. FR 38(2)
- 93-002266 Sun Dajing. CAGE TROUT FARMING IN CHINA. *Proceedings of the International Symposium on Coldwater Fish Culture*, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish.* 1990(Spec. Issue):21-23, 1990. FR 38(2)
[Jiulongjiang Fish. Res. Inst., Harbin, China] *Oncorhynchus mykiss*
- 93-002267 Taranger, G. L. and T. Hinson. OVULATION AND EGG SURVIVAL FOLLOWING EXPOSURE OF ATLANTIC SALMON, *SALMO SALAR* L., BROODSTOCK TO DIFFERENT WATER TEMPERATURES. *Aquacult. Fish. Manage.* 24(2):151-156, 1993. FR 38(2)
[Dep. Fish. & Mar. Biol., Univ. Bergen, Bergen High Technol. Cent., N-5020 Bergen, Norway]

FISHERIES REVIEW

TROUT AND SALMON CULTURE (Continued)

93-002268 Wang Xing, editor. PROCEEDINGS OF THE INTERNATIONAL SYMPOSIUM ON COLDWATER FISH CULTURE, BEIJING, CHINA, 19-23 SEPTEMBER 1989. *Salmon Fish. 1990(Spec. Issue) 175p.* 1990. FR 30(2)
[Salmon Res. Assoc., China Soc. Fish., 150076, Harbin, China] Individual papers indexed in this issue of *Fisheries Review*.

93-002269 Wang Zhaoxing, Liu Xiong and Wang Dingqian. TROUT FARMING IN CHINA. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989.* Wang Xing, editor. *Salmon Fish. 1990(Spec. Issue) 29-31.* 1990. FR 30(2)
[Jilongjiang Fish. Res. Inst., Chinese Acad. Fish. Sci., Harbin, China] *Oncorhynchus mykiss*.

WARMWATER CULTURE

93-002270 Ali, Ahyaddin B. ON-FARM RESEARCH IN MALAYSIA. *World Aquaculture* 9(0), Halifax, Canada. Michelle Fahley, editor. *World Aquacult.* 23(1):56-57. 1992. FR 30(2)
[School Biol. Sci., Univ. Sains Malaysia, 11800 Minden, Penang, Malaysia]

93-002271 Arsenault, A.A. OPERATION AND EVALUATION OF SIX SASKATCHEWAN WALLEY REARING PONDS, 1988. *Sask. Parks Renewable Resour. Fish. Tech. Rep. 88-5: 65p.* 1988. FR 30(2)
[Saskatchewan Fish. Lab., Fish. Branch, Saskatchewan Parks, Recreation & Culture, 15 Innovation Blvd, Saskatoon, SK, Canada S7K 2H6] *Stizostedion vitreum* in Canada.

93-002272 Avnimelech, Yoram, Noam Mozes and Sarah Webber. EFFECTS OF AERATION AND MIXING OF NITROGEN AND ORGANIC MATTER TRANSFORMATIONS IN SIMULATED FISH PONDS. *Aquacult. Eng.* 11(3):157-169. 1992. FR 30(2)
[Fac. Agric. Eng., Technion, Israel Inst. Technol., Haifa 32000, Israel]

93-002273 Bacon, Michelle Lorette. A STUDY OF GEOSMIN-PRODUCING ACTINOMYCETES FROM CATFISH PONDS. M.S. thesis. *Mex. State Univ. Bjp.* 1992. From *Masters Abstr. Int.* 31(1):223. 1993. Order No. MA1349299. FR 30(2)
Ictalurus punctatus

93-002274 Bailey, Donald S.; John A. Hargreaves and James E. Rakocy. ENTERPRISE BUDGET ANALYSIS OF THREE STOCKING DENSITIES OF CAGED FLORIDA RED TILAPIA. *Proc. Gulf Caribb. Fish. Inst. Vol. 42.* p. 455-463. 1992. FR 30(2)
[Univ. Virgin Islands, Agric. Exp. Stn., R.R. 2, Box 10,000, Kingsthill, Virgin Islands 00850] *Tilapia mossambica* x *T. homonum*.

93-002275 Bayne, David R.; Ash K. Rai; Parushottam I. Joshi and John C. Williams. LIMNOLOGICAL FACTORS INFLUENCING GROWTH OF CAGE-CULTURED BIGHEAD CARP [FEMALE] X SILVER CARP [MALE] HYBRIDS. *J. Appl. Aquacult.* 1(4):29-50. 1992. FR 30(2)
[Dep. Fish & Allied Aquacult., Agric. Exp. Stn., Auburn Univ., Auburn, AL 36849] *Hypophthalmichthys molitrix* x *Aristichthys nobilis*.

93-002276 Behrendt, L. L.; J. B. Kingsley and A. H. Price III. HATCHERY PRODUCTION OF BLUE TILAPIA, *OREOCHROMIS AUREUS* [STEINDACHNER], IN SMALL SUSPENDED HAPA NETS. *Aquacult. Fish. Manage.* 24(2):237-243. 1993. FR 30(2)
[Agric. Inst., Tenn. Valley Authority, Muscle Shoals, AL 35660]

93-002277 Bills, Tony D., Leif L. Marking and George E. Hows. SENSITIVITY OF JUVENILE STRIPED BASS TO CHEMICALS USED IN AQUACULTURE. *US Fish Wildl. Serv. Resour. Publ. No. 192.* 11p. 1993. Available from Publ. Unit, U.S. Fish & Wildl. Serv., 1849 C St., N.W., Arlington Sq. Bldg., Mail Stop 130, Washington, DC 20240. FR 30(2)

[U.S. Fish & Wildl. Serv., Natl. Fish. Res. Cent., P. O. Box 810, La Crosse, WI 54602] *Morone saxatilis*, *Lepomis macrochirus*, *Oncorhynchus mykiss*, and *Ictalurus punctatus*.

93-002278 Brass, Jane L.; Borl L. Olla and Robert I. Wicklund. SOCIAL, ECONOMIC, AND CULTURAL CONSIDERATIONS FOR SALTWATER CAGE CULTURE OF FLORIDA RED TILAPIA IN NORTHEASTERN HAITI. *Proc. Gulf Caribb. Fish. Inst. Vol. 40.* p. 398-404. 1991. FR 30(2)
[Caribbean Mar. Res. Cent., 100 E. 17th St., Riviera Beach, FL 33404] *Tilapia mossambica* x *T. homonum*.

93-002279 Chaibati, B. and P. Noflega Curfs. TILAPIA FARMING IN JAMAICA. *Proc. Gulf Caribb. Fish. Inst. Vol. 41.* p. 545-568. 1992. FR 30(2)
Tilapia nilotica and *T. mossambica*.

93-002280 Cochran, Michael D. COMBINED ANNUAL REPORT CENTRAL VALLEYS STRIPED BASS HATCHERY, 1982, 1983, 1984, 1985. *Calif. Dep. Fish Game Inland Fish. Admin. Rep. No. 92-4.* 17p. 1992. FR 30(2)
Morone saxatilis in California.

FISHERIES REVIEW

WARMWATER CULTURE (Continued)

- 93-002281 Colesante, Richard T and John B. Brook. FINGERLING MUSKELLUNGE PRODUCTION IN AN INTENSIVE-EXTENSIVE CULTURE SYSTEM IN NEW YORK STATE. *Prog. Fish-Cult.* 54(4):243-246. 1992. FR 38(2)
[Dep. Environ. Conserv., Oneida State Fish Hatchery, Conestoga, NY 13044] *Cox maaqinonyg*
- 93-002282 Collins, Charles 'Bo'. CAN A CATFISH PRODUCER REDUCE PRODUCTION AND STILL REMAIN PROFITABLE? *Aquacult. Mag.* 19(1):73-74. 1993. FR 38(2)
[Fish Farming Exp. Lab., U.S. Fish & Wildl. Serv., Stuttgart, AR] *Ictalurus punctatus*
- 93-002283 Costa-Pierce, Barry A and Roger S. V. Pullin. DEVELOPMENT OF SMALLHOLDER AQUACULTURE IN MALAWI. *World Aquaculture* 90, Halifax, Canada. Michelle Hébert, editor. *World Aquacult.* 23(1):43-44, 47-48. 1992. FR 38(2)
[Aquacult. Proj., ICLARM, P.O. Box 220, Zomba, Malawi]
- 93-002284 Dambo, W. B. and K. J. Rana. EFFECT OF STOCKING DENSITY ON GROWTH AND SURVIVAL OF *OREOCHROMIS MOLOTICUS* (L.) FRY IN THE HATCHERY. *Aquacult. Fish. Manage.* 24(1):71-80. 1993. FR 38(2)
[Dep. Biol. Sci., Rivers State Univ. Sci. & Technol., PMB 5060, Port Harcourt, Nigeria]
- 93-002285 Dela Cruz, C. R.; C. Lightfoot and R. C. Sewilija. RICE-FISH FARMING IN THE PHILIPPINES- THE FARMERS' PERSPECTIVES. *World Aquaculture* 90, Halifax, Canada. Michelle Hébert, editor. *World Aquacult.* 23(1):52-55. 1992. FR 38(2)
[Rice-Fish Farming Syst. Res., ICLARM, MC P.O. Box 1501, Makati, Philippines]
- 93-002286 Doss, J. and R. Avissim. ULTRAVIOLET IRRADIATION OF TILAPIA SPERMATOZOA AND THE HERITAGE EFFECT: ELECTRON MICROSCOPIC ANALYSIS. *J. Fish Biol.* 42(1):1-14. 1993. FR 38(2)
[Dep. Life Sci., Bar Ilan Univ., Ramat-Gan 52900, Israel] *Tilapia nilotica*
- 93-002287 Fagi, Achmad M. and Sadeh Surlapermana. IMPROVING RICE-FISH IN INDONESIA. *World Aquaculture* 90, Halifax, Canada. Michelle Hébert, editor. *World Aquacult.* 23(1):40-42. 1992. FR 38(2)
- 93-002288 Frinako, Michael Oscar. AN EVALUATION OF SELECTED DIETARY LIPID SOURCES ON PHASE II HYBRID STRIPED BASS (*MORONE SAXATILIS* X *MORONE CHRYSOPLAS*). M.S. thesis, Miss. State Univ. 59p. 1992. From Masters Abstr. Int. 31(1):180. 1993. Order No. MA1349308. FR 38(2)
- 93-002289 Glahn, James F. and Allan R. Slickley, Jr. WINTERING DOUBLE-CRESTED CORMORANTS IN THE DELTA REGION OF MISSISSIPPI: POPULATION LEVELS, DIET AND THEIR IMPACT ON THE CATFISH INDUSTRY. *Color. Waterbird Soc. Bull.* 16(2):49. 1992. Abstract only. FR 38(2)
[U.S. Dep. Agric., Denver Wildl. Res. Cent., Res. Stn., Mississippi State, MS 39762-6099] *Ictalurus punctatus*
- 93-002290 Glahn, James F. and Kristin E. Bruggen. THE IMPACT OF DOUBLE-CRESTED CORMORANTS ON THE MISSISSIPPI DELTA CATFISH INDUSTRY- A BIOENERGETICS MODEL. *Color. Waterbird Soc. Bull.* 16(2):63. 1992. Abstract only. FR 38(2)
[U.S. Dep. Agric., Denver Wildl. Res. Cent., Res. Stn., Mississippi State, MS 39762-6099] *Ictalurus punctatus*
- 93-002291 Goussot, Bernard. EEL CULTURE IN JAPAN. *Bull. Inst. Oceanogr. (Monaco)* No. 10. p. 1-128. 1992. In English with French summary. Also available in book form at \$45.00 from Mus. Oceanogr., Serv. Publ., Ave. Saint-Martin, MC 98000, Monaco. FR 38(2)
Anguilla anguilla, *A. japonica*, and *A. marmorata*
- 93-002292 Grana-Raffucci, F. A. and D. E. Allison. DISTRIBUTION OF PREDATORY INSECTS IN PONDS STOCKED WITH TILAPIA AND *MACROBRACHIUM ROSENBERGERI*. *Proc. Gulf Caribb. Fish Inst.* Vol. 40. p. 413-421. 1992. FR 38(2)
[Dep. Mar. Sci., P.O. Box 5000, Univ. Puerto Rico, Mayaguez 00709] *Tilapia nilotica*
- 93-002293 Hall, Robin N. PRELIMINARY INVESTIGATIONS OF MARINE CAGE CULTURE OF RED HYBRID TILAPIA IN JAMAICA. *Proc. Gulf Caribb. Fish Inst.* Vol. 42. p. 440. 1992. Abstract only. FR 38(2)
[Sunfish Hatcheries Jamaica Ltd., 20 Melmac Ave., Kingston 5, Jamaica] *Tilapia mossambica* x *T. hornorum*
- 93-002294 Hall, Robin N. PRELIMINARY RESULTS OF ACCLIMATION OF JAMAICAN TILAPIA TO SEAWATER. *Proc. Gulf Caribb. Fish Inst.* Vol. 42. p. 448. 1992. Abstract only. FR 38(2)
[Sunfish Hatcheries Jamaica, Ltd., 20 Melmac Ave., Kingston 5, Jamaica] *Tilapia nilotica*, *T. mossambica* x *T. hornorum*
- 93-002295 Hargreaves, John A.; James E. Rakocy; Donald S. Bailey and Daniel J. Miller. AN EVALUATION OF THREE CAGE DESIGNS AND TWO TILAPIAS FOR MARICULTURE. *Proc. Gulf Caribb. Fish Inst.* Vol. 42. p. 103-113. 1992. FR 38(2)
[Univ. Virgin Islands, Agric. Exp. Stn., R.R. 2 - Box 10,000, Kinghill, St. Croix, Virgin Islands 00850] *Tilapia mossambica* and *T. mossambica* x *T. hornorum*

FISHERIES REVIEW

WARMWATER CULTURE (Continued)

- 93-002296 Hastings, W. H. IN SEARCH OF HISTORY. MILKFISH IN INDONESIA. *Aquacult. Mag.* 19(2):49-53 1993. FR 38(2)
[Chanos chanos]
- 93-002297 Haylor, G. S. CONTROLLED HATCHERY PRODUCTION OF AFRICAN CATFISH, *CLARIAS GARMPINUS* (BURCHELL): AN OVERVIEW. *Aquacult. Fish Manage.* 24(2):245-252. 1993. FR 38(2)
[Inst. Aquacult., Univ. Stirling, Stirling FK9 4LA, Scotland]
- 93-002298 Hecht, Thomas; Peter J. Britz and Wynand Uys. AQUACULTURE IN SOUTH AFRICA. *World Aquacult.* 23(1):6-19. 1992. FR 38(2)
[Dep. Ichthyol. & Fish. Sci., Rhodes Univ., P.O. Box 94, Grahamstown 6140, South Africa]
- 93-002299 Howard, B. R. OPERATION AND EVALUATION OF FOUR SASKATCHEWAN WALLEYE REARING PONDS, 1989. *Sask. Parks Renewable Resour. Fish. Tech. Rep.* B9-3: 60p. 1989. FR 38(2)
[Saskatchewan Fish. Lab., Dep. Parks & Renewable Resour., 112 Research Dr., Saskatoon, SK, Canada S7K 2N6] Steered from vitreum in Canada.
- 93-002300 Howerton, Robert D. and Claude E. Boyd. MEASUREMENT OF WATER CIRCULATION IN PONDS WITH CYPSSUM BLOCKS. *Aquacult. Eng.* 11(3):141-155. 1992. FR 38(2)
[Dep. Fish. & Allied Aquacult., Auburn Univ., Auburn, AL 36849]
- 93-002301 Huazhu Yang, Yingxue Fang, and Zhonglin Chen. INTEGRATED FISH FARMING SYSTEMS IN CHINA AND THE ALLOCATION OF RESOURCES. *World Aquaculture* 90, Halifax, Canada. Michelle Hübner, editor. *World Aquacult.* 23(1):61-68. 1992. FR 38(2)
[Asian-Pac. Reg. Res. Training Cent. Integrated Fish Farming, Wuxi, China]
- 93-002302 Jhalil, M. S. and R. C. Chauhan. MONOCULTURE OF CAT FISH, *WALLAGO ATTA*. *Res. Bull. Panjab Univ. Sol.* 42(1-4):97-99. 1991. FR 38(2)
[Dep. Zool., Panjab Univ., Chandigarh-160 014, India]
- 93-002303 Johnson, Peter B. and Steven W. Lloyd. INFLUENCE OF FAT CONTENT ON UPTAKE AND DEPOSITION OF THE OFF-FLAVOR 2-METHYLYSOBORNEOL BY CHANNEL CATFISH (*ICTALURUS PUNCTATUS*). *Can. J. Fish. Aquat. Sci.* 49(11):2406-2411. 1992. In English with French summ. FR 38(2)
[U.S. ARS, South. Reg. Res. Cent., Food Flavor Quality Res. Unit, P.O. Box 19687, New Orleans, LA 70179]
- 93-002304 Kaur, Kamaldeep and Gurpreet K. Sehgal. EFFECT OF BIOGAS SLURRY ON OVARIAN MATURATION OF COMMON CARP, *Barramusa*. *Technol.* 44(1):89-91. 1993. FR 38(2)
[Fish Res. Complex, Dep. Zool., Panjab Agric. Univ., Ludhiana-141 004, India] *Cyprinus carpio*
- 93-002305 Kienruan, Henry, Walter Zislock and Upton Heich. RETURNS TO CATFISH ADVERTISING AND OPTIMAL SPENDING LEVELS. *Asi. Agric. Exp. Stn. Auburn Univ. Bull. No. 618*. 35p. 1992. FR 38(2)
- 93-002306 Kubaryk, John M. OXYCLIMATIC CLASSIFICATION SYSTEM AND ITS USE IN DETERMINING PRODUCTION CYCLES FOR TROPICAL AQUACULTURE SYSTEMS. *Proc. Gulf Caribb. Fish. Inst. Vol. 41*, p. 579-586. 1992. FR 38(2)
[Univ. Puerto Rico, Dep. Mar. Sci., P.O. Box 5000, Mayaguez 00709-5000]
- 93-002307 Leelapatra, W.; N. Tongpan, J. Sollows and G. Chapman. PARTICIPATORY RESEARCH AND EXTENSION IN THAILAND. *World Aquaculture* 90, Halifax, Canada. Michelle Hübner, editor. *World Aquacult.* 23(1):58-60. 1992. FR 38(2)
[Kasetsart Fish. Stn., P.O. Box 18, Amphur Muang Kasetsart 46000, Thailand]
- 93-002308 Ling Bo; Dan Ting-Xin, Lu Zhi-Ping, Min Lou-Wei, Wang Zhu-Xuan and Yuan An-Xiu. USE OF NIGHT SOIL IN AGRICULTURE AND FISH FARMING. *World Health Forum* 14(1):67-70. 1993. FR 38(2)
[Inst. Environ. Health & Eng., Chinese Acad. Preventive Med., 29 Nan Wei Rd., Beijing 100050, China]
- 93-002309 MacKay, Kenneth T. HOW TO BENEFIT SMALL PRODUCERS. *World Aquaculture* 90, Halifax, Canada. Michelle Hübner, editor. *World Aquacult.* 23(1):20-21, 24. 1992. FR 38(2)
[ICLARM, MC P.O. Box 1501, Makati, Metro Manila 1299, Philippines]
- 93-002310 Mak, G. C.; C. C. Esabillo, R. C. Sevilla and R. D. Reometa. SMALL-SCALE FRY PRODUCTION SYSTEMS FOR NILE TILAPIA, *Oreochromis niloticus* (L.). *Aquacult. Fish Manage.* 24(2):229-235. 1993. FR 38(2)
[Freshwater Aquacult. Cent., Cent. Luzon State Univ., Nueva Ecija 3120, Philippines]
- 93-002311 Masser, Michael P. and William A. Wurts. MANAGING RECREATIONAL FISH PONDS. *World Aquacult.* 23(2):41-42. 1992. FR 38(2)
[Ky. State Univ., Coop. Ext. Program, P.O. Box 460, Princeton 42445]

FISHERIES REVIEW

WARMWATER CULTURE (Continued)

- 93-002312 Mirin, Steven Douglas IMPROVING OF JUVENILE PADDLIFISH POLYODON SPATHULA PRODUCTION IN EARTHEN PONDS Ph.D. dissertation, Auburn Univ. 103p. 1992. From Diss. Abstr. Int. B 3d Eng. 53(7):3230. 1993. Order No. DA9237198. FR 38(2)
- 93-002313 Mondile, G. E. E., J. A. Mathias and N. L. Loadman. A COMPARISON OF TWO PRODUCTION-SCALE MODULES FOR THE INTENSIVE CULTURE OF LARVAL WALLEYE *Aquacult. Eng.* 11(3):171-182. 1992. FR 38(2)
[Dep. Biol. Univ. Winnipeg, Winnipeg, MB, Canada R3B 2E9] *Stizostedion vitreum*.
- 93-002314 Olmstead, Surajdeoan O.; Upton Hatch and Walter Ziback. POTENTIAL U.S. RETAIL GROCERY MARKETS FOR FARM-RAISED CATFISH. *J. Appl. Aquacult.* 1(4):51-72. 1992. FR 38(2)
[Dep. Agric. Econ. & Rural Sociol., Agric. Exp. Stn., Auburn Univ., Auburn, AL 36849-5405]
- 93-002315 Phelps, R. P. and G. Cerro. THE EFFECT OF CONFINEMENT IN HAPAS ON SEX REVERSAL AND GROWTH OF *CROECHROMIS MEOCHUS*. *J. Appl. Aquacult.* 1(4):73-81. 1992. FR 38(2)
[Dep. Fish & Allied Aquacult., Agric. Exp. Stn., Auburn Univ., Auburn, AL 36849]
- 93-002316 Rust, Michael B., Robert I. Wicklund and Ben L. Olla. ENVIRONMENTAL POTENTIAL FOR SALTWATER CAGE CULTURE OF THE FLORIDA RED HYBRID TILAPIA ALONG THE NORTHEAST COAST OF HAITI. *Proc. Gulf Caribb. Fish. Inst. Vol. 40*, p. 382-397. 1991. FR 38(2)
[Caribbean Mar. Res. Cent., 100 E. 17th St., Riviera Beach, FL 33404] *Tilapia mossambica* x *T. hornorum*.
- 93-002317 Siddiqui, Abdul Quyyum and Ahmed Rashed Al Najada. AQUACULTURE IN SAUDI ARABIA. *World Aquacult.* 23(2):6-9. 1992. FR 38(2)
[Fish Culture Prof., Inst. Nat. Resour. & Environ. Res., King Abdulaziz City Sci. & Technol., P.O. Box 6068 Riyadh 11442, Saudi Arabia] *Tilapia nilotica*, *T. aurea*, *T. mossambica*, *T. spilargenteus*, *T. zillii* and *T. hornorum*.
- 93-002318 Smith, S. J.; W. O. Watanabe; J. R. Chan; D. H. Ernst; R. I. Wicklund and B. L. Olla. HATCHERY PRODUCTION OF FLORIDA RED TILAPIA SEED IN BRACKISHWATER TANKS: THE INFLUENCE OF BROODSTOCK AGE AND PHOTOPERIOD. *Proc. Gulf Caribb. Fish. Inst. Vol. 42*, p. 464-468. 1992. FR 38(2)
[Caribbean Mar. Res. Cent., 100 E. 17th St., Riviera Beach, FL 33404] *Tilapia mossambica* x *T. hornorum*.
- 93-002319 Stedley, Allen R., Jr. ECONOMICS OF CORMORANT DEPREIDATIONS AT MISSISSIPPI CATFISH FARMS. *Colas. Waterbird Soc. Bull.* 16(2):50-51. 1992. Abstract only. FR 38(2)
[U.S. Dep. Agric., Downer Wildl. Res. Cent., Res. Stn., Mississippi State, MS 39762-6099] *Ictalurus punctatus*.
- 93-002320 Tave, Douglas. IMPROVING CHANNEL CATFISH [FEMALE] X BLUE CATFISH [MALE] SPAWNING SUCCESS. *Aquacult. Mng.* 19(2):83-86. 1993. FR 38(2)
Ictalurus punctatus and *I. furcatus*.
- 93-002321 Teshon-Coddington, David R. and Barthelmeow W. Green. INFLUENCE OF DAYLIGHT AND INCUBATION INTERVAL ON WATER COLUMN RESPIRATION IN TROPICAL FISH PONDS. *Hydrobiologia* 250(3):159-165. 1993. FR 38(2)
[Dep. Fish & Allied Aquacult., Agric. Exp. Stn., Auburn Univ., Auburn, AL 36849-5419] *Tilapia nilotica*.
- 93-002322 Tucker, Craig S.; James A. Steeby, John E. Waldrop and Anthony B. Gervard. EFFECTS OF CROPPING SYSTEM AND STOCKING DENSITY ON PRODUCTION OF CHANNEL CATFISH IN PONDS. *Miss. Agric. For. Exp. Stn. Bull. No. 98B*, 25p. 1992. FR 38(2)
[Delta Branch Exp. Stn., Stoneville, MS] *Ictalurus punctatus*.
- 93-002323 Watanabe, Wade O.; John H. Clark; Jason B. Dunham; Robert I. Wicklund and Ben L. Olla. CULTURE OF FLORIDA RED TILAPIA IN MARINE CAGES. THE EFFECT OF STOCKING DENSITY AND DIETARY PROTEIN ON GROWTH. *Proc. Gulf Caribb. Fish. Inst. Vol. 42*, p. 449-454. 1992. FR 38(2)
[Caribbean Mar. Res. Cent., c/o Fla. State Univ. Mar. Lab., Rt. 1, Box 456, Seppochy 32388] *Tilapia mossambica* x *T. hornorum*.
- 93-002324 Watanabe, Wade O.; Robert I. Wicklund, Ben L. Olla and Douglas H. Ernst. RECENT PROGRESS IN EXPERIMENTAL SALTWATER TILAPIA CULTURE IN THE BAHAMAS. *Proc. Gulf Caribb. Fish. Inst. Vol. 41*, p. 114-119. 1992. FR 38(2)
[Caribbean Mar. Res. Cent., Rt. 1, Box 184C, Covington, VA 24426] *Tilapia mossambica* x *T. hornorum*.
- 93-002325 Watanabe, Wade O.; Robert I. Wicklund; Ben L. Olla and Douglas H. Ernst. REARING EXPERIMENTS WITH FLORIDA RED TILAPIA FOR SALTWATER CULTURE. *Proc. Gulf Caribb. Fish. Inst. Vol. 40*, p. 405-412. 1991. FR 38(2)
[Caribbean Mar. Res. Cent., 100 E. 17th St., Riviera Beach, FL 33404] *Tilapia mossambica* x *T. hornorum*.
- 93-002326 Wohlfarth, Glara W. and Ram Moaw. GENETIC TESTING OF COMMON CARP IN CAGES. 2. INFLUENCE OF VARIATION IN INITIAL WEIGHT ON WEIGHT GAIN. *Aquaculture* 109(3-4):245-256. 1993. FR 38(2)
[Agric. Res. Organ., Fish & Aquacult. Res. Stn., Dox, D.N. Hof Hacarmel 30820, Israel] *Cyprinus carpio*.

FISHERIES REVIEW

WARMWATER CULTURE (Continued)

- 93-002327 Wurts, William A. AQUACULTURE OUTLOOK FOR KENTUCKY. *World Aquacult.* 23(2):36-37 1992. FR 3B(2)
[Ky. State Univ., Coop. Ext. Program, P.O. Box 469, Princeton 42445]
- 93-002328 Wynne, Forrest. HYBRID STRIPED BASS IN KENTUCKY. *World Aquacult.* 23(2):10-11 1992. FR 3B(2)
[Coop. Ext. Program, Ky. State Univ., Somerset 42501] *Morone saxatilis* M. chrysops
- 93-002329 Xu Fuxian and Tan Zhenbo. FISH OUTPUT EFFECTS ON RICE YIELD IN A RICE-FISH FARMING SYSTEM IN LUZHOU REGION, CHINA. *Int. Rice Res. News* 17(6):13. 1992. FR 3B(2)
[Rice Res. Inst., Sichuan Acad. Agric. Sci., Luzhou 646000, China]

MARICULTURE

- 93-002330 Baynes, S. M., B. R. Howell and T. W. Beard. A REVIEW OF EGG PRODUCTION BY CAPTIVE SOLE, *SOLEA SOLEA* (L.). *Aquacult. Fish. Manage.* 24(2):171-180. 1993. FR 3B(2)
[Mar. Fish. Res., Fish. Lab., Conwy, Gwynedd LL32 8UB, Wales]
- 93-002331 Brown, Joseph A.; Donna C. Somerton and David A. Methven. RECENT ADVANCES IN LUMPFISH *CYCLOPTERUS LUMPUS* AND OCEAN POUT *MACROZOMARCS AMERICANUS* LARVICULTURE. *J. World Aquacult. Soc.* 23(4):271-276. 1992. FR 3B(2)
[Ocean Sci. Cent., Memorial Univ. Newfoundland, St. John's, NF, Canada A1C 5S7]
- 93-002332 Dhert, Philippe, Patrick Lovens and Patrick Sorgeloos. STATE OF THE ART OF ASIAN SEABASS *LATEX CALCARIFER* LARVICULTURE. *J. World Aquacult. Soc.* 23(4):317-329. 1992. FR 3B(2)
[Lab. Aquacult. & Artemia Reference Cent., Fac. Agric. Sci., Univ. Ghent, Rozier 44, B-9000 Ghent, Belgium]
- 93-002333 Dickson, Francis. AQUACULTURE CONFLICTS IN PACIFIC CANADA: SHELLFISH AND MARINE PLANT AQUACULTURE IN BRITISH COLUMBIA - CONFLICTS AND SOLUTIONS. *World Aquaculture* 90, Halifax, Canada. *M. Richard DeVoe and Robert Pomeroy, editors. World Aquacult.* 23(2):28-29. 1992. FR 3B(2)
[Dep. Fish. & Oceans, Vancouver, BC, Canada]
- 93-002334 Durand, Jean René and François Verdeaux. [SMALL SCALE FISHERIES AND AQUACULTURE - ASSUMED COMPLEMENTARITIES AND POSSIBLE CONFLICTS] [Research and Small Scale Fisheries Symposium International, CRISTOM FREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 871-879. 1991. In French with English summary. FR 3B(2)
[FREMER, 1 rue F. Touleux, 56100 Lorient, France]
- 93-002335 Fridley, Robert B. MARICULTURE ISSUES IN THE UNITED STATES. *World Aquaculture* 90, Halifax, Canada. *M. Richard DeVoe and Robert Pomeroy, editors. World Aquacult.* 23(2):20-22. 1992. FR 3B(2)
[Mar. Board, Natl. Res. Council, Washington, DC]
- 93-002336 Ives, Brian and John Kearney. FISH FARMING IN LOBSTER BAY: A FEASIBILITY STUDY. *World Aquaculture* 90, Halifax, Canada. *Michelle Hébert, editor. World Aquacult.* 23(1):25-27. 1992. FR 3B(2)
[Nova Maricult., P.O. Box 106, Tusket, NS, Canada B0W 3M0]
- 93-002337 Marliave, Jeffrey D. PROGRESS IN THE CULTURE OF MARINE FISHES AAZ? (*Am. Assoc. Zool. Parks Aquarifers*) *Natl. Conf.* p. 233-240. 1992. FR 3B(2)
[Vancouver Aquarium, P.O. Box 3232, Vancouver, BC, Canada V6B 3X0]
- 93-002338 Miki, Kazuhiko and Masaki Sano. THE ROLES AND PROBLEMS OF COASTAL FISH CULTURE IN JAPAN. *Third Franco-Japan Conference in Oceanography, FREMER, Nantes, 2-5 July 1991. Economic Policy and Fisheries Management. D. Bally and K. Kato, coordinators. Oceanis* 18(4):385-395. 1992. In English with French summary. FR 3B(2)
[Natl. Res. Inst. Fish. Sci., Kanchidoki 5-5-1, Chuo-ku, Tokyo 104, Japan]
- 93-002339 Moir, Jonathan. NEWFOUNDLAND'S COD FARMS. *World Aquaculture* 90, Halifax, Canada. *Michelle Hébert, editor. World Aquacult.* 23(1):30. 1992. FR 3B(2)
[Canadian Cent. Fish. Innovation, P.O. Box 4920, St. John's, NF, Canada A1C 5R3] *Gadus morhua* and *Malotus villosus* in Canada.
- 93-002340 Raoora, Joseph. MARICULTURE DEVELOPMENT IN KENYA: ALTERNATIVES TO SITING PONDS IN THE MANGROVE ECOSYSTEM. *Hydrobiologia* 247(1-3):209-214. 1992. FR 3B(2)
[Mol. Univ., Zool. Dep., Box 3900, Eldoret, Kenya]
- 93-002341 Roberts, Daniel E. MARINE FINFISH CULTURE IN THE CARIBBEAN: A MODEL FOR DEVELOPMENT. *Proc. Gulf Caribb. Fish. Inst. Vol. 40*, p. 422-425. 1991. FR 3B(2)
[Mar. Res. Inst., 109 8th Ave., S.E., St. Petersburg, FL 33701]

FISHERIES REVIEW

CULTURE (Continued)

- 22342 Scott, Martin and Andrew Barbour INTER- AND INTRA-BATCH VARIABILITY IN ENERGY LEVELS OF EGGS AND LARVAE OF FARMED TURBOT, *SCOPHYLAIMUS MARMULUS* L. *World Aquacult.* 56-58 1992 FR 38(2)
[olden Sea Produce, Hunterton, West Kilbride, Ayrshire, Scotland]
- 22343 Salestchik, Patrick; Emmanuel Thouard, Emmanuel Goyard and Dominique Bainsce INQUIRIES USED FOR THE REARING OF LARVAL REDFISH (*SCIASOPIUS OCELLATUS*) IN INTENSIVE CONDITIONS IN MARTINIQUE: INITIAL RESULTS | *Proc. Gulf Caribb. Fish. Inst. Vol. 40*, p. 367-381, 1991 in 1 FR 38(2)
[REMER/France Aquacult. Point Fort, 97231 Le Robert, Martinique, France]
- 22344 Sredney, Robert R. COMMERCIAL FISHING AND NET-PEN SALMON AQUACULTURE: CONCEPTUAL/ANTAGONISM TOWARD A COMMON PURPOSE *Fisheries (Bethesda)* 13(4):9-13 FR 38(2)
[chool Fish, Univ. Wash., Seattle 98195]
- 22345 Sweetman, John W. LARVICULTURE OF MEDITERRANEAN MARINE FISH SPECIES: CURRENT PRACTICES AND FUTURE TRENDS | *World Aquacult. Soc.* 23(4):330-337 1992 FR 38(2)
[hthalmont Fish, S.A., Livadi, 28200 Livori, Cephalonia, Greece] *Sparus asotus*, *Dicentrarchus labrax*, *Scorpaenopsis diabolus*, *Parus pagrus*, and *P. major*
- 22346 Tande, K. S.; H. C. Ekensen; P. K. Kroppstad and S. Loken A CONCEPT FOR INTENSIVE REARING OF COD LARVAE. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 482-483 1989 Abstract R 38(2)
[uat. Biol. Group, Norwegian Coll. Fish. Sci., Univ. Tromsø, P. O. Box 3003 Guleng, 9001-Tromsø, Norway] *morhua*.
- 22347 Thomas, R. Glenn and William R. Wolcott FACTORS AFFECTING THE SURVIVAL OF REARING RED DRUM IN FRESHWATER PONDS. *Prog. Fish-Cult.* 54(4):215-219. 1992. FR 38(2)
[chool Fac. Wildl. & Fish., Agric. Exp. Sta., La. State Univ., Agric. Cent., Baton Rouge 70803] *Sciaenops ocellatus*.
- 22348 Tilseth, Sverre; Geir Blom and Kjell Naas. RECENT PROGRESS IN RESEARCH AND DEVELOPMENT OF MARINE COLD WATER SPECIES FOR AQUACULTURE PRODUCTION IN NORWAY. *J. Aquacult. Soc.* 23(4):277-285. 1992. FR 38(2)
[t. Myr. Res., Div. Aquacult., P. O. Box 1870, Hordnes, N-5024 Bergen, Norway] *Hippoglossus hippoglossus*, *morhua*, *Acanthaluteres lapus*, and *A. minckleyi*.
- 22349 Tucker, John W., Jr. GROUPER CULTURE FOR THE CARIBBEAN. *Proc. Gulf Caribb. Fish. Inst. Vol. 48*, 1992. FR 38(2)
[rbor Branch Oceanogr. Inst., 5600 Old Dixie Hwy., Fort Pierce, FL 34946] *Epinephelus striatus*.
- 22350 Wildsmith, Bruce H. AQUACULTURE CONFLICTS IN ATLANTIC CANADA: PRIVILEGE, COMMONS AND PRIVATE RIGHTS. *World Aquaculture* 90. Halifax, Canada. M. Richard DeVoe and Robert W. editors. *World Aquacult.* 23(2):26-27. 1992. FR 38(2)
[hool Law School, Dalhousie Univ., Halifax, NS, Canada]
- 22351 Yoshimatsu, Takao; Masayuki Furuchi and Chikara Kitajima. OPTIMUM LEVEL OF PROTEIN IN REARED EXPERIMENTAL DIETS FOR REDLIP MULLET. *Nippon Suisan Gakkaishi* 58(11):2111-2117 1992. In with Japanese summary. FR 38(2)
[h. Res. Lab., Kyushu Univ., Tsuyazaki, Munakata, Fukuoka 811-33, Japan] *Liza fuscata* *schlegelii*.
- . FEEDING, AND NUTRITION
- 22352 Aasend, Torbjorn; Roy M. Langaker; Karl O. Steinar; Erlend Austreng and Arne Klette. RATION ALIZATION TO REDUCE POTENTIAL POLLUTANTS - PRELIMINARY RESULTS. *Am. Fish. Soc. Symp. No. 10*-416. 1991. FR 38(2)
[t. Aquacult. Res. (AKVAFORSK), Agric. Res. Council, N 6600 Sunndalsora, Norway] *Salmo salar* and *Gasterosteus aculeatus*.
- 22353 Ashraf, Muhammad. FORMULATION OF FUNCTIONAL DIET FOR LARVAL FISH. Ph.D. thesis. Univ. RL 169p. 1992. From Obs. Abstr. Int. J. Sci. Eng. 53(8):3853. 1993. Order No. DA0239545. 1)
[one available].
- 22354 Awaki, A. [ECOPHYSIOLOGY, MASS PRODUCTION AND PROSPECTS OF LARVICULTURE OF THE FRESHWATER ROTIFER BRACHIONUS CALYCIPIORUS PALLAS] Ph.D. dissertation. Univ. Noto (Belgium) 231p. 1992. From *Tropicultura* 9(4):173. 1991. French abstract only. FR 38(2)
[erlin Ing. Agromome (Faix & For.), Univ. Niamey, Licence Biol. Appl. & Environ. (Univ. Catholique), Niamey, Niger] *Gobio gobio*, *Perca fluviatilis*, and *Clarias gariepinus*.

FISHERIES REVIEW

FEEDS, FEEDING, AND NUTRITION (Continued)

- 93-002355 Bakki, H. M., S. L. Melton and J. L. Wilson. FATTY ACID COMPOSITION, LIPIDS AND SENSORY CHARACTERISTICS OF WHITE AMUR (*CYPRINUS HYALINUS* DEBELA) FED DIFFERENT DIETS. *J. Food Sci.* 58(1):99-95. 1993. FR 38(2)
[Dep. Food Sci., Mar. Food Lab., Univ. Mass. Mar. Stn., Gloucester 01930]
- 93-002356 Baynes, S. M. and B. R. Howell. OBSERVATIONS ON THE GROWTH, SURVIVAL AND DISEASE RESISTANCE OF JUVENILE COMMON SOLE, *SOLEA SOLEA* (L.), FED *MYTILUS EDULIS* L. *Aquacult. Fish. Manage.* 24(1):95-100. 1993. FR 38(2)
[Minist. Agric., Fish. & Food, Div. Fish. Res., Fish. Lab., Bonarh Rd., Conwy, Gwynedd LL32 8UB, England]
- 93-002357 Caric, M.; J. Sanko-Njire and B. Skaramuca. DIETARY EFFECTS OF DIFFERENT FEEDS ON THE BIOCHEMICAL COMPOSITION OF THE ROTIFER (*BRACHIONUS PLECATIS* MÜLLER). *Aquaculture* 110(2):141-150. 1993. FR 38(2)
[Biol. Inst., P.O. Box 30, 50900 Dubrovnik, Croatia]
- 93-002358 Davis, Michael W. and Borl L. Olla. COMPARISON OF GROWTH, BEHAVIOR AND LIPID CONCENTRATIONS OF WALLEYE POLOLOCK *THERACRA CHALCOGRAMMA* LARVAE FED LIPID-ENRICHED, LIPID DEFICIENT AND FIELD COLLECTED PREY. *Mar. Ecol. Prog. Ser.* 90(1):23-30. 1992. FR 38(2)
[Coop. Inst. Mar. Resour. Studies, Alaska Fish. Sci. Cent., NMFS, Hatfield Mar. Sci. Cent., Newport, OR 97365]
- 93-002359 dos Santos, Jorge, Ivan C. Burkow and Malcolm Jobling. PATTERNS OF GROWTH AND LIPID DEPOSITION IN COD (*GADUS MORHUA* L.) FED NATURAL PREY AND FISH-BASED FEEDS. *Aquaculture* 110(2):173-189. 1993. FR 38(2)
[Jobling, Norwegian Coll. Fish. Sci., Univ. Tromsø, N-9037 Tromsø, Norway]
- 93-002360 Erhard, S.; H. Kratochvíl and M. Lodi. YELLOW TRAPS AS AN A/D IN FISH FARMING. *Aquacult. Fish. Manage.* 24(1):129-131. 1993. FR 38(2)
[Zool. Inst., Univ. Wien, Althanstr. 14, A-1090 Wien, Austria]
- 93-002361 Fargnoli, William Thomas, Jr. EFFECTS OF DIETARY HISTAMINE ON FISH MEAL PROTEIN QUALITY TO RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). Ph.D. dissertation, Univ. Wash. 229p. 1992. From *Obs. Abstr. Int. J. Sci. Eng.* 53(8):3853-3854. 1993. Order No. DA9239445. FR 38(2)
O. Knutts.
- 93-002362 Galin, Delbert M. III; Duncan S. MacKenzie; Steven R. Craig and William H. Neill. EFFECTS OF DIETARY SODIUM CHLORIDE ON RED DRUM JUVENILES IN WATERS OF VARIOUS SALINITIES. *Prog. Fish-Cult.* 54(4):220-227. 1992. FR 38(2)
[Dep. Wildl. & Fish. Sci., Tex. A&M Univ. Syst., College Station 77843] *Sciaenops ocellatus*
- 93-002363 Gunther, J. and J. Boza Abarca. GROWTH PERFORMANCE OF *COLOSSOMA MACROPOMLIN* (CUMER) JUVENILES AT DIFFERENT FEED RATIOS. *Aquacult. Fish. Manage.* 24(1):81-93. 1993. FR 38(2)
[Escuela Cienc. Biol., Univ. Nac., Apdo. 86, Heredia, Costa Rica]
- 93-002364 Hagleria, Atsushi; Kenichiro Hamada, Akiyumi Nishi; Keinosuke Imazumi and Kazutsugu Hirayama. DIETARY VALUE OF NEONATES FROM ROTIFER (*BRACHIONUS PLECATIS*) RESTING EGGS FOR RED SEA BREAM LARVAE. *Nippon Suisan Gakkaishi* 59(1):99-104. 1993. In English with Japanese summary. FR 38(2)
[Grad. School Mar. Sci. & Eng., Nagasaki Univ., Bunkyo, Nagasaki 852, Japan] *Pagrus major*.
- 93-002365 Hofnefjord, Ivan; Sylvi Bolla and Kjell Inge Reitan. START-FEEDING OF ATLANTIC HALIBUT (*HYPOGLOSSUS HYPOGLOSSUS* L.) ON ENRICHED ROTIFERS AND ARTEMA COMPARED WITH COLLECTED PLANKTON. *Rep. P-V Resour. Contr. Inst. Explor. Met.* Vol. 191. p. 479. 1989. Abstract only. FR 38(2)
[NLPV's Inst. Aquacult. Res. (AKVAFORSK), N-6600 Sunndalsøra, Norway]
- 93-002366 Hol, G. Jean. EXPERIMENTAL STUDIES OF FEEDING IN LARVAL RED DRUM. *J. World Aquacult. Soc.* 23(4):265-270. 1992. FR 38(2)
[Univ. Tex. Austin, Mar. Sci. Inst., P.O. Box 1267, Port Aransas 78373] *Sciaenops ocellatus*.
- 93-002367 Hughes, Steven G.; Carol A. Lemm and Roger L. Herman. DEVELOPMENT OF A PRACTICAL DIET FOR JUVENILE STRIPED BASS. *Trans. Am. Fish. Soc.* 121(6):802-809. 1992. FR 38(2)
[U.S. Fish & Wildl. Serv., Tunison Lab. Fish. Nutr., Philadelphia Field Stn., Mandel Chem. Senses Cent., 3500 Market St., Philadelphia, PA 19104] *Morone saxatilis*.
- 93-002368 Iwai, Thomas, Jr.; Harry Aki and Leslie E. Yasukochi. USE OF BEEF LIVER IN THE DIET OF JUVENILE MAHIMAH, *CORYPHAENA HIPPIURUS* L. *World Aquacult.* 23(3):49-51. 1992. FR 38(2)
[Avenue Fish. Res. Cent., Dep. Land & Nat. Resour., Div. Aquat. Resour., Honolulu, HI]

FEEDS, FEEDING, AND NUTRITION (Continued)

- 93-002369 Katola, H. George; Harry Westers; Walter Houghton and Charles Pecor. EFFECT OF DIET ON GROWTH AND SURVIVAL OF COHO SALMON AND ON PHOSPHORUS DISCHARGES FROM A FISH HATCHERY. *Am. Fish. Soc. Symp.* No. 10 p. 402-409. 1991. FR 30(2)
[U.S. Fish & Wildl. Serv., Tunison Lab. Fish Nutr., 3075 Grace Rd., Cortland, NY 13045] *Oncorhynchus kisutch*.
- 93-002370 Kohbara, Jun; Iwao Hidaka, Tatsuo Morishita and Toshiaki Miyajima. THE FEEDING-STIMULATORY EFFECTIVENESS OF L-LACTIC ACID ON THE YOUNG YELLOWTAIL *SERIOLA QUANQUERADIMATA*. *Nippon Suisan Gakkaishi* 59(1):183. 1993. In English with Japanese summ. FR 38(2)
[Fac. Okeanosci., Mie Univ., Kamihama, Tsu, Mie 514, Japan]
- 93-002371 Kraul, Syd; Allen Nelson, Karen Brittain, Harry Aho and Arty Ogasawara. EVALUATION OF LIVE FEEDS FOR LARVAL AND POSTLARVAL MAHIMAHIMA *CORYPHAEUA HIPPURUS*. *J. World Aquacult. Soc.* 23(4):299-306. 1992. FR 30(2)
[Larval Res. Dep., Waikiki Aquarium, 2777 Kalanianaʻahe Ave., Honolulu, HI 96815]
- 93-002372 Kummer, Helmut and Viktor De Verga. [THE EFFECTS OF DIFFERENT FEEDS ON THE REARING OF WHITEFISH AND ARCTIC CHARR LARVAE IN ARTIFICIAL SURROUNDINGS]. *Ostereitsch. Fischerei* 45(1/1/2):267-276. 1992. In German with English summ. FR 30(2)
[Abt. Hydrobiol., Fischereiwirtschaft & Aquakult., Inst. Wasservorrat, Gewässergüte & Fischereiwirtschaft, Univ. Bodenkult., A-1100 Vienna, Felstmanlestr. 4, Austria] *Coregonus lavaretus* and *Salvelinus alpinus*.
- 93-002373 Kurten, Gerald; Pat Hutson and Bobby Whiteside. INTENSIVE CULTURE OF PADOLEFISH FINGERLINGS. *Prog. Fish-Cult.* 54(4):240-243. 1992. FR 30(2)
[Parks & Wildl. Dep., Jasper Fish Hatchery, Rt. 2, Box 535, Jasper, TX 75951] *Polyodon spathula*.
- 93-002374 Leo, Julius Wit. THE EFFECT OF FEEDING CARP (*CYPRINUS CARPIO* L.) FRY WITH PELLETS OF VARYING PROTEIN CONTENT. *Acta Ichthyol. Pisciculta* 22(1):63-73. 1992. In English with Polish summ. FR 30(2)
[Guldbergsgade 126, 2th, Copenhagen N, Denmark]
- 93-002375 Lechmann, Rebecca Thoms. ESSENTIAL FATTY ACID REQUIREMENTS AND RELATED ASPECTS OF LIPID METABOLISM IN THE RED DRUM, *SCIAENOPS OCELLATUS*. Ph.D. dissertation, Tex. A&M Univ. 175p. 1992. From Diss. Abstr. Int. B Sci. Eng. 53(0):3855. 1993. Order No. DA9300470. FR 30(2)
- 93-002376 Lovell, Tom. FOLIC ACID AND VITAMIN C. *Aquacult. Mag.* 19(2):67-68. 1993. FR 30(2)
[Auburn Univ., Auburn, AL] *Ictalurus punctatus*.
- 93-002377 Lovell, Tom. FLUMONICINS, A "NEW" MYCOTOXIN IN FEEDSTUFFS. *Aquacult. Mag.* 19(1):75-76. 1993. FR 30(2)
[Auburn Univ., Auburn, AL]
- 93-002378 Margaritis, Anargyros. WHAT DO THEY EAT? SOME FEEDING HABITS OF CICHLIDS. *Trop. Fish Hobbyist* 41(4):120-125. 1992. FR 30(2)
- 93-002379 Messenger, Jean-Luc; Germaine Stephan, Claire Questel and Felix Baudin Lizaronch. EFFECTS OF DIETARY OXIDIZED FISH OIL AND ANTIOXIDANT DEFICIENCY ON HISTOPATHOLOGY, HAEMATOLOGY, TISSUE AND PLASMA BIOCHEMISTRY OF SEA BASS *DICENTRARCHUS LABRAX*. *Aquat. Living Resour.* 5(3):205-214. 1992. In English with French summ. FR 30(2)
[Cent. Natl. Etudes Vet. & Alimentaires, Lab. Pathol. Anim. Aquat., [CNEVAL/PAAL], B.P. 70, 29200 Plouzané, Brest, France]
- 93-002380 Mirra, S. K. and R. P. Phelps. A ZOOPLANKTON HARVESTER DESIGNED TO COLLECT ROTIFERS. *Prog. Fish Cult.* 54(4):267-269. 1992. FR 30(2)
[Dep. Biol., Coll. Fish., Orissa Univ. Agric. & Technol., Rangalunda, Berhampur 76007 Orissa, India]
- 93-002381 Mitchell, Andrew J. FEEDS AND FEEDING PRACTICES CAN AFFECT FISH HEALTH. *Aquacult. Mag.* 19(2):81-82. 1993. FR 30(2)
[Fish Farming Exp. Lab., U.S. Fish & Wildl. Serv., Stuttgart, AK]
- 93-002382 Mizokoshi, N. and T. Ramakrishna Rao. SURVIVAL AND GROWTH OF ROHU, *LABEO ROHITA* (HAM.) AND SINGHI, *HETEROPNEUSTES FOSSILUS* (BLOCH) LARVAE FED ON DIFFERENT LIVE FOOD ORGANISMS. *J. Fish Biol.* 41(Suppl. D):182. 1992. Poster abstract only. FR 30(2)
[Dep. Zool., Univ. Delhi, Delhi, India]
- 93-002383 Pongmaneeam, Juedee and Takeshi Watanabe. NUTRITIONAL EVALUATION OF SOYBEAN MEAL FOR RAINBOW TROUT AND CARP. *Nippon Suisan Gakkaishi* 59(1):157-163. 1993. In English with Japanese summ. FR 30(2)
[Natl. Inst. Coastal Aquacult., Kasong, Muang, Songkhla 90000, Thailand] *Oncorhynchus mykiss* and *Cyprinus carpio*.

FEEDS, FEEDING, AND NUTRITION (Continued)

93-002384 Przybył, Antoni; Maria Madzia; Mieczysław Kowalewski and Michał Iwaszkiewicz. [THE COMPLETE DRY FEED FOR GRAYLING, *THYMALLUS THYMALLUS* (L.) FINGERLINGS PRODUCTION.] *Roczn. Nauk. Pol. Związku Wodociągów* Vol. 3, p. 135-145 1991. In Polish with English and Russian sums. FR 38(2)

[Katedra Rybactwa Śródlądowego, Akad. Rolnicza i Poznań, ul. Wojska Polskiego 71c, 61-625 Poznań, Poland]

93-002385 Saito, Momoru; Tomoaki Mizui; Takao Miyawaki; Reiji Yoshikane and Motohiko Sakaguchi. EFFICACY OF DEHYDRO-L-ASCORBIC ACID AS A DIETARY VITAMIN C SOURCE IN RAINBOW TROUT. *Nippon Suisan Gakkaishi* 59(1):171-176, 1993. In English with Japanese sums. FR 38(2)

[Dep. Fish, Fac. Agric., Kyoto Univ., Kitashinaka, Sakyo, Kyoto 606-01, Japan] *Oncorhynchus mykiss*

93-002386 Saitoh, Shūichi; Yoonop Miyakami; Yoshie Yamazaki, Toshio Takeuchi and Takeshi Watanabe. A SIMPLE METHOD FOR DETERMINATION OF AVAILABLE PHOSPHORUS CONTENT IN FISH DIET. *Nippon Suisan Gakkaishi* 58(11):2095-2100 1992. In English with Japanese sums. FR 38(2)

[Lab. Fish Nutr., Tokyo Univ. Fish., Konan, Minato, Tokyo 108, Japan] *Oncorhynchus mykiss* and *Cyprinus carpio*

93-002387 Shiao, Shi-Yen; Bonnie Sun-Pai; Steve Cheng; Hao-Ling Yu and Shiao-Ling Lin. SUCCESSFUL USE OF SOYBEAN MEAL WITH A METHIONINE SUPPLEMENT TO REPLACE FISH MEAL IN DIETS FED TO MILKFISH *CHANOS CHANOS* FORSKAL. *J. World Aquacult. Soc.* 19(1):14-19 1988. FR 38(2)

[Dep. Mar. Food Sci., Natl. Taiwan Coll. Mar. Sci. & Technol., Keelung, Taiwan 20224]

93-002388 Shimeno, Sadao, Toshiro Masumoto; Taku Hujita, Takayoshi Mima and Shin-ichi Ueno. [ALTERNATIVE PROTEIN SOURCES FOR FISH MEAL IN DIETS OF YOUNG YELLOWTAIL.] *Nippon Suisan Gakkaishi* 59(1):137-143, 1993. In Japanese with English sums. FR 38(2)

[Lab. Fish Nutr., Fac. Agric., Kochi Univ., Monobe, Nankoku, Kochi 783, Japan] *Senioa quinqueradix*

93-002389 Sörgelose, Patrick and Philippe Leget. IMPROVED LARVICULTURE OUTPUTS OF MARINE FISH, SHRIMP AND PRAWN. *J. World Aquacult. Soc.* 23(4):251-264, 1992. FR 38(2)

[Lab. Aquacult. & Artemia Reference Cent., Univ. Ghent, Rozier 44, B-2000 Ghent, Belgium]

93-002390 Stottrup, Jøstine C and Y. Atramadal. THE INFLUENCE OF DIFFERENT ROTIFER AND ARTEMA ENRICHMENT DIETS ON GROWTH, SURVIVAL AND PIGMENTATION IN TURBOT (*SCOPHthalmus MAXIMILUS* L.) LARVAE. *J. World Aquacult. Soc.* 23(4):307-315 1992. FR 38(2)

[Danish Inst. Fish. & Mar. Res., North Sea Cent., DK-9850 Hirtshals, Denmark]

93-002391 Tidwell, James H.; Carl D. Webster and Julia A. Clark. GROWTH, FEED CONVERSION, AND PROTEIN UTILIZATION OF FEMALE GREEN SUNFISH X MALE BLUEGILL HYBRIDS FED ISOCALORIC DIETS WITH DIFFERENT PROTEIN LEVELS. *Prog. Fish-Cult.* 54(4):234-239 1992. FR 38(2)

[Community Res. Serv., Aquacult. Res. Cent., Ky State Univ., Frankfort 40501] *Lepomis cyanellus* x *L. macrochirus*

93-002392 Webster, Carl D.; James H. Tidwell; Laura S. Goodgame; Julia A. Clark and Daniel H. Yancov. WINTER FEEDING AND GROWTH OF CHANNEL CATFISH FED DIETS CONTAINING VARYING PERCENTAGES OF DISTILLERS GRAINS WITH SOLUBLES AS A TOTAL REPLACEMENT OF FISH MEAL. *J. Appl. Aquacult.* 1(4):1-14, 1992. FR 38(2)

[Aquacult. Res. Cent., Ky State Univ., Frankfort 40501] *Ictalurus punctatus*

93-002393 Wei Ulian and Sun Dajiang. THE PRESENT CONDITION AND PROSPECTS OF FEED FOR RAINBOW TROUT IN CHINA. Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish.* 1990(Spec. Issue):109-112, 1990. FR 38(2)

[Hailongjiang Fish Res. Inst., Chinese Acad. Fish. Sci., Harbin, China] *Oncorhynchus mykiss*

93-002394 Wiegand, M. D. A STUDY ON THE USE OF CANOLA OIL IN THE FEED OF LARVAL GOLDFISH *CARASSIUS AURATUS* L. *Aquacult. Fish. Manage.* 24(2):223-228, 1993. FR 38(2)

[Dep. Biol., Univ. Winnipeg, 515 Portage Ave., Winnipeg, MB, Canada R3B 2E9]

TRANSPORTING FISH

93-002395 Harel, Reginal M. STRESS MITIGATION BY USE OF SALT AND ANESTHETIC FOR WILD STRIPED BASS CAPTURED FOR BROOD STOCK. *Prog. Fish-Cult.* 54(4):228-233 1992. FR 38(2)

[Univ. Md. Cent. Environ. & Estuarine Studies, Horn Point Environ. Lab., Cambridge 21613] *Morone saxatilis*

AQUARIUMS

93-002396 Edmonds, Les. DOGFISHES AND THEIR CARE IN CAPTIVITY. *Trop. Fish Hobbyist* 41(4):56-57, 60, 62, 1992. FR 38(2)

Squalus acanthias, *Scyliorhinus caniculus*, and *S. steffens*

FISHERIES REVIEW

AQUARIUMS (Continued)

- 93-002397 Elias, Jaroslav REDISCOVERING AN OLD FAVORITE, THE TIGER BARB *Trop. Fish Hobbyist* 41(3):76-78, 80-81. 1993 FR 38(2)
Capoeta tetrazona
- 93-002398 Fong, Jack. THE TEN MOST AGGRESSIVE TRIGGERS. *Trop. Fish Hobbyist* 41(4):28-30, 32, 34, 36. 1992. FR 30(2)
Baltes vetula, *B. burzi*, *Balotapus undulatus*, *Balotolus conopodium*, *Pseudobaltes fuscus*, *Melichthys niger*, *Rhinocentrus aculeatus*, *R. rectangularis*, *Melichthys viola*, and *Colomes niger*.
- 93-002399 Fontana, Ray. A BEAUTIFUL CHECKERBOARD CICHLID, *ORENICARA MACULATA*. *Trop. Fish Hobbyist* 41(3):68, 70, 72-73. 1993. FR 38(2)
- 93-002400 Franke, Hanno-Joachim. BREEDING THE GOLDEN WHIPTAIL CATFISH, *RINELORICARIA MORROWI*. *Trop. Fish Hobbyist* 41(4):116-118. 1992. FR 30(2)
- 93-002401 Franke, Hanno-Joachim. THE CARE AND BREEDING OF *CORYDORAS AXELRODI*. *Trop. Fish Hobbyist* 41(3):16, 18, 20, 22-23. 1993. FR 38(2)
- 93-002402 Hunt, Philip. THE FIREFISHES. *Trop. Fish Hobbyist* 41(5):30, 40, 44-48, 48. 1993. FR 30(2)
Nematoleucis magnificus, *N. decora*, *N. splendida*, and *N. helrichi*
- 93-002403 Keppler, Dean. THE EXCEPTIONAL COOLIE LOACHES. *Trop. Fish Hobbyist* 41(3):82, 85-87. 1993. FR 38(2)
Acanthopoma kuhli
- 93-002404 Knechmer, Michael. THE LONG-HORNED COWFISH, *LACTORIA CORNUATA*. *Trop. Fish Hobbyist* 41(5):50, 52, 54. 1993. FR 38(2)
- 93-002405 Palicka, Jiri. BREEDING THE AFRICAN BUTTERFLY CICHLID, *ANOMALOCHEILIS THOMASI*. *Trop. Fish Hobbyist* 41(5):84-86, 88, 90-91. 1993. FR 38(2)
- 93-002406 Schreiber, Roland. THE AFRICAN DARTER TETRA, *MANMOCHARAY FASCIATUS*. *Trop. Fish Hobbyist* 41(4):132-135. 1992. FR 38(2)
- 93-002407 Stratton, Richard F. THE MANDARIN DRAGONET. *Trop. Fish Hobbyist* 41(5):56, 60, 62, 64. 1993. FR 38(2)
Synchiropus splendidus
- 93-002408 Stratton, Richard F. SECRETS OF THE SWORDTAIL. *Trop. Fish Hobbyist* 41(5):116-122, 124. 1993. FR 38(2)
Xiphophorus maculatus and *X. helleri*
- 93-002409 Stratton, Richard F. KEEPING THE CLOWN PLECOS. *Trop. Fish Hobbyist* 41(4):22, 24, 26-27. 1992. FR 38(2)
Hypostomus plecostomus
- 93-002410 Stratton, Richard F. *CICHLASOMA DONT* THE INTELLECTUAL ASSASSIN. *Trop. Fish Hobbyist* 41(3):88-90, 92, 94. 1993. FR 38(2)
- 93-002411 Sweetney, Mary. MEET *CYRHOTILAPIA IRONTOISA*. *Trop. Fish Hobbyist* 41(4):77-79. 1992. FR 38(2)
- 93-002412 Vlerks, Jorg. DWARF CICHLIDS IN THE AQUARIUM. *Trop. Fish Hobbyist* 41(4):90-94, 96, 98, 101-102, 104, 106, 108. 1992. FR 38(2)
- 93-002413 Wermolts, Douglas L. and Russ McAndrews. PROGRESS IN BREEDING FRESHWATER FISH. AAZP (Am. Assoc. Zool. Parks Aquarists) Natl. Conf. p. 223-232. 1992. FR 38(2)
 [Columbus Zool. Gard., P.O. Box 403, Powell, OH 43065-0400]
- 93-002414 Wilkling, Klaus. PLATIES FOR EVERYONE. *Trop. Fish Hobbyist* 41(4):8-10, 12-14, 18, 20-21. 1993. FR 38(2)
Xiphophorus maculatus and *X. variatus*

FISHERIES REVIEW

AQUARIUMS (Continued)

93-002415 Wrobel, David A. GALLERY OF TEMPERATE PACIFIC MARINE FISHES. *Trop. Fish. Fishbry/FAO* 41(5) 24-26, 28, 30-34, 36. 1993. FR 38(2)

MISCELLANEOUS CULTURE TECHNIQUES AND EQUIPMENT

93-002416 Billard, Robin, Christian Fauvel and Jacky Cosson. [REVIEW OF TECHNIQUES AND PROBLEMS FOR THE PRESERVATION OF GENITAL PRODUCTS AND EMBRYOS FROM MARINE ORGANISMS.] *Equivoque* No. 40 p. 27-30. 1992. In French. FR 38(2)

93-002417 Bird, Simon T. AQUATIC PLANTS FOR TREATMENT OF AQUACULTURE WASTEWATER. *R. Aquacult. Mag.* 19(1) 39-42. 1993. FR 38(2)

93-002418 Boyd, Claude E. EXPERIENCES IN EVALUATING SURFACE AND DIFFUSED-AIR AERATORS. *Am. Fish. Soc. Symp.* No. 10, p. 465-473. 1991. FR 38(2)
[Dep. Fish. & Allied Aquacult., Agric. Exp. Stn., Auburn Univ., Auburn, AL 36849]

93-002419 Brock, David, H. Randall Robinson and John M. Holmen. CULTURE SYSTEM FOR EVALUATING LIVE AND FORMULATED DIETS FOR LARVAL FISH. *Prog. Fish. Cult.* 54(4):270-273. 1992. FR 38(2)
[Rangen, Inc., 115 13th Ave. S., Oak, ID 83316-0706]

93-002420 Cadwallader, Mark W. and Craig B. Springer. LINER MATERIALS FOR WATER CONTAMINANT. *World Aquacult.* 23(2) 59-61. 1992. FR 38(2)
[Res. & Tech. Dev., Gundlach Syst. Inc., 19103 Gundlach Rd., Houston, TX 77073]

93-002421 Caulfield, James D. SPECIFYING AND MONITORING ULTRAVIOLET SYSTEMS FOR INTENSIVE DISINFECTION OF WATER. *Am. Fish. Soc. Symp.* No. 10 p. 421-426. 1991. FR 38(2)
[2075 SW First Ave., Suite 2N, Portland, OR 97201]

93-002422 Chen, Shulin, Michael B. Timmons, Daniel J. Aneshensley and James J. Binigel, Jr. BUBBLE SIZE DISTRIBUTION IN A BUBBLE COLUMN APPLIED TO AQUACULTURE SYSTEMS. *Aquacult. Eng.* 11(4):267-280. 1992. FR 38(2)
[Dep. Civil Eng., La. State Univ., Baton Rouge 70803]

93-002423 Dwyer, William P., Greg A. Kivitschi and Charle E. Smith. EVALUATION OF HIGH AND LOW-PRESSURE OXYGEN INJECTION TECHNIQUES. *Am. Fish. Soc. Symp.* No. 10 p. 428-436. 1991. FR 38(2)
[U.S. Fish & Wildl. Serv., Fish Technol. Cent., 4050 Bridger Canyon Rd., Bozeman, MT 59715]

93-002424 Fabregas, J., P. Nazcañito, E. Vecino, Y. Gamallo, A. Otero and C. Gonzalez. DEVELOPMENT OF AN ELECTROMECHANICAL SENSOR AND COMPUTER DATA ACQUISITION SYSTEM FOR MONITORING THE MOVEMENT OF CULTURED FISH. *Aquacult. Eng.* 12(1):55-62. 1993. FR 38(2)
[Lab. Microbiol., Fac. Farm., Univ. Santiago, Santiago 15706, Spain] *Oncorhynchus mykiss*.

93-002425 Ge, Guochang, Zan Yanfen, Lin Yinhui and Su Shipiao. EFFECT OF SOME DIFFERENT GROWTH PROMOTERS ON THE RAINBOW TROUT RINGLING. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989*, Wang Xing, editor. *Salmon Fish. 1990* [Spec. Issue] 97-101. 1990. FR 38(2)
[Ocean Univ. Qingdao, Shandong, China] *Oncorhynchus mykiss*.

93-002426 He Baisha. GENERAL INCUBATION SYSTEMS FOR SALMONID IN NORTH AMERICA. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989*, Wang Xing, editor. *Salmon Fish. 1990* [Spec. Issue] 171. 1990. Abstract only. FR 38(2)
[Nat. Res. Inst. Fish. Eng., Qingdao, China]

93-002427 Holtz, W. CRYOPRESERVATION OF RAINBOW TROUT (*ONCORHYNCHUS MYKISS*) SPERM. *PRACTICAL RECOMMENDATIONS Aquaculture* 110(1):97-100. 1993. FR 38(2)
[Inst. Anim. Husbandry & Conel., Univ. Göttingen, Albrecht-Thoes-Weg 3, 3400 Göttingen, Germany]

93-002428 Jensen, John D. T. and Erick P. Groot. THE EFFECT OF MOIST AIR INCUBATION CONDITIONS AND TEMPERATURE ON CHINOOK SALMON EGG SURVIVAL. *Am. Fish. Soc. Symp.* No. 10, p. 529-530. 1991. FR 38(2)
[Dep. Fish. & Ocean, Pac. Biol. Stn., Nanaimo, BC, Canada V9R 5K6] *Oncorhynchus tshawytscha*.

93-002429 Kaiser, G. Ellen, Fred W. Wheaton and Brian Wortman. AUTOMATED WATER QUALITY ANALYSIS AND CONTROL. *Am. Fish. Soc. Symp.* No. 10 p. 507-515. 1991. FR 38(2)
[Dep. Agric. Eng., Univ. Md., College Park 20742]

FISHERIES REVIEW

MISCELLANEOUS CULTURE TECHNIQUES AND EQUIPMENT (Continued)

93-002430 Kim, Jong-Min, Jung-Goo Myoung, Ryong-Kih Kim and Hyung-Tack Huh. EXPERIMENTAL CULTURE OF COHO SALMON, *Oncorhynchus kisutch*, IN KOREAN WATERS. *Proceedings of the International Symposium on Coldwater Fish Culture, Inyang, China, 19-23 September 1989* Wang Xing, editor. *Salmon Fish*, 1990(Spec. Issue) 7-13. 1990. FR 38(2)

[Korea Ocean Res. & Dev. Inst., KTST An San, P.O. Box 29, Seoul 425-600, Korea]

93-002431 Krise, William F., William J. Ridge and Leslie J. Mengel. SYSTEM FOR CONTINUOUSLY MONITORING DISSOLVED GAS IN MULTIPLE WATER SOURCES. *Am. Fish. Soc. Symp. No. 10* p. 495-506. 1991. FR 38(2)

[U.S. Fish & Wildl. Serv., Natl. Fish. Res. & Dev. Lab., Rural Delivery 4, Box 63, Wellborn, PA 16901]

93-002432 Le Gall, Jean-Yves; Joseph Assouhan, Pascal Azam, Karine Crouin and Nicolas Luong. [FISH PUMPS] *Equivoire* No. 40 p. 11-18. 1992. In French. FR 38(2)

[Ecole Natl. Supérieure Agron. Rennes, Dep. Halieutique, 65, rue Saint-Grieuc, 35042 Rennes Cedex, France]

93-002433 Ludwig, B. and G. Gale. EVALUATION OF TWO METHODS FOR OXYGENATING HATCHERY WATER SUPPLIES. *Am. Fish. Soc. Symp. No. 10* p. 437-444. 1991. FR 38(2)

[British Columbia Minist. Environ., Recreational Fish. Branch, Victoria, BC, Canada V8V 1X6]

93-002434 MacKenlay, Don D. BULK BOX AERATORS: ADVANTAGES AND DESIGN. *Am. Fish. Soc. Symp. No. 10*, p. 450-458. 1991. FR 38(2)

[Dep. Fish. & Oceans, 555 W. Hastings St., Vancouver, BC, Canada V6G 5G3]

93-002435 Manito, Don P. BIOLOGICAL ROCK FILTER DESIGN FOR CLOSED AQUACULTURE SYSTEMS. *Am. Fish. Soc. Symp. No. 10*, p. 306-392. 1991. FR 38(2)

[Manito & Assoc., 7725 E. Luke Lane, Scottsdale, AZ 85253]

93-002436 Marking, Leif L. DEVELOPMENT OF CARBON FILTRATION SYSTEMS FOR REMOVAL OF MALACHITE GREEN. *Am. Fish. Soc. Symp. No. 10*, p. 427. 1991. Abstract only. FR 38(2)

[U.S. Fish & Wildl. Serv., Natl. Fish. Res. Cent., P.O. Box 818, La Crosse, WI 54602]

93-002437 McCarter, Nigel. SEDATION OF GRASS CARP AND SILVER CARP WITH 2-PHENOXETHANOL DURING SPAWNING. *Prog. Fish-Cult.* 54(4):263-265. 1992. FR 38(2)

[Freshwater Fish. Cent., MAF, P.O. Box 6016, Rotorua, New Zealand] *Clonopharyngodon idella* and *Hypophthalmichthys molitrix*.

93-002438 McLean, William E., John O. T. Jensen and Peter J. Rombough. MICROCOMPUTER MODELS FOR SALMONID HATCHERIES. *Am. Fish. Soc. Symp. No. 10*, p. 516-520. 1991. FR 38(2)

[Dep. Fish. & Oceans, Enhancement Operations Branch, Quinsam Hatchery, Box 467, Campbell River, BC, Canada V9W 5C1] *Oncorhynchus tshawytscha*, *O. kisutch*, *O. tshawytscha*, *O. gorbuscha*, *O. neva*, and *O. mykiss*.

93-002439 Meade, James W.; Barnaby J. Watters; William F. Krise and Paul W. Haliburton. USE OF OXYGEN-FILLED ENCLOSURES FOR AERATION AND DEGASSING. *Am. Fish. Soc. Symp. No. 10*, p. 459-464. 1991. FR 38(2)

[Tunison Lab. Fish Nutr., 3075 Grade Rd., Cortland, NY 13045]

93-002440 Meade, James W.; William F. Krise; Dave Erdahl; Jill Ortiz and Anthony J. Becker, Jr. EFFECT OF OXYGEN VERSUS AIR ON FISH IN SERIAL PRODUCTION. *Am. Fish. Soc. Symp. No. 10*, p. 482-486. 1991. FR 38(2)

[Tunison Lab. Fish Nutr., 3075 Grade Rd., Cortland, NY 13045] *Salvelinus namaycush*.

93-002441 Miller, William J. AN INCUBATION SYSTEM ALLOWING MULTIPLE DISSOLVED OXYGEN AND TEMPERATURE COMBINATIONS FOR SALMONID EMERGENCE STUDIES. *Prog. Fish-Cult.* 54(4):259-263. 1992. FR 38(2)

[W. J. Miller & Assoc., 1904 Semindale Dr., Fort Collins, CO 80525]

93-002442 Moil, Donald F. and Frank L. Boyd. PREVENTING CORMORANT DEPREDACTIONS AT AQUACULTURE FACILITIES IN THE SOUTHEASTERN UNITED STATES. *Colon. Waterbird Soc. Bull.* 16(2):51. 1992. Abstract only. FR 38(2)

[U.S. Dep. Agric., Denver Wildl. Res. Cent., Res. Stn., Mississippi State, MS 39762-6099]

93-002443 Owsley, David E. OZONE FOR DISINFECTING HATCHERY REARING WATER. *Am. Fish. Soc. Symp. No. 10*, p. 417-420. 1991. FR 38(2)

[U.S. Fish & Wildl. Serv., Dworshak Natl. Fish Hatchery, P.O. Box 18, Alsatika, ID 83520] *Oncorhynchus mykiss*.

FISHERIES REVIEW

MISCELLANEOUS CULTURE TECHNIQUES AND EQUIPMENT (Continued)

93-002444 Park, Hong Yang and Jong Man Yoon. STUDIES ON GENETICS AND BREEDING IN RAINBOW TROUT (*Oncorhynchus mykiss*) (7): FERTILIZATION OF FRESH EGG WITH CRYO-PRESERVED SEMIN AND ULTRASTRUCTURAL CHANGES. *Bull Korean Fish Soc* 25(2):79-92, 1992. In Korean. From *Korean Sci Abst* 24(5):9205073, 1992. FR 38(2)

[Rutlis Island]

93-002445 Parker, Nick C. AN AERATION TOWER FOR AQUACULTURE. *Prog. Fish-Cult* 54(4):274-277, 1992. FR 38(2)

[U.S. Fish & Wildl. Serv., Coop. Fish & Wildl. Res. Unit, Tex. Tech. Univ., Lubbock 79409-2125]

93-002446 Prakash, A.; J. Craven; M. Fitzpatrick and E. Hay. RECENT ADVANCES IN OCEAN THERMAL ENERGY CONVERSION (OTEC) TECHNOLOGY AND OTEC-BASED AQUACULTURE. *Proc. Gulf Caribb. Fish. Inst. Vol. 42* p. 341-346, 1992. FR 38(2)

[Agrodev Canada, Inc., Suite 1730, 1176 W. Georgia St., Vancouver, BC, Canada V6E 4A2]

93-002447 Watten, Barnaby J., John Cole and Claude E. Boyd. MODELING THE EFFECT OF DISSOLVED NITROGEN AND CARBON DIOXIDE ON THE PERFORMANCE OF PURE OXYGEN ABSORPTION SYSTEMS. *Am. Fish. Soc. Symp. No. 10*, p. 474-481, 1991. FR 38(2)

[U.S. Fish & Wildl. Serv., Nat. Fish. Res. & Dev. Lab., Rural Delivery 4, Box 63, Wellsboro, PA 16901]

93-002448 Weeks, M. C.; M. B. Timmons and S. Chen. FEASIBILITY OF USING FOAM FRACTIONATION FOR THE REMOVAL OF DISSOLVED AND SUSPENDED SOLIDS FROM FISH CULTURE WATER. *Aquacult. Eng.* 11(4):251-265, 1992. FR 38(2)

[Stearns & Wheeler Environ. Eng. & Sci., Cazenovia, NY 13035]

93-002449 Westers, Harry; Gary Boonen and Vernon Bennell. DESIGN AND OPERATION OF SCALED COLUMNS TO REMOVE NITROGEN AND ADD OXYGEN. *Am. Fish. Soc. Symp. No. 10*, p. 445-449, 1991. FR 38(2)

[Dep. Nat. Resour., Fish. Div., P.O. Box 30028, Lansing, MI 48909]

93-002450 Wertz, William A. BASICS OF AQUACULTURE SITE SELECTION. *World Aquacult.* 23(3):42-43, 1992. FR 38(2)

[Ky. State Univ. Coop. Ext. Program, P.O. Box 469, Princeton 42445]

PHYSICAL LIMNOLOGY AND OCEANOGRAPHY

93-002451 Moss, Brian. POTENTIAL EFFECTS OF GREENHOUSE WARMING ON FRESH-WATER SYSTEMS IN THE U.K. WITH SPECIAL REFERENCE TO COASTAL LOWLANDS. *Wetland Ecol. Manage.* 2(1/2):51-53, 1992. FR 38(2)

[Dep. Environ. & Evol. Biol., Univ. Liverpool, Liverpool L69 3BX, England]

CHEMICAL LIMNOLOGY AND OCEANOGRAPHY

93-002452 Mosello, R.; B. M. Watfine and G. Giussani, editors. WORKSHOP ON: LIMNOLOGY ON GROUPS OF REMOTE MOUNTAIN LAKES: ONGOING AND PLANNED ACTIVITIES, PALLANZA, 15-03-1991. *Doc. Mt. Nat. Environ. Dist. Marco Marchi* No. 32. 129p, 1992. FR 38(2)

[CNR-Int. Istituto, Largo Tonello, 50-52, I-28048 Verbania Pallanza (NO), Italy]

MORPHOLOGY

93-002453 Agarwal, N. K.; N. Singh and H. R. Singh. POST-OVULATORY FOLLICLE (CORPUS LUTEUM) HISTOLOGY OF A SNOWTROUT *Schizothorax plagiostomus* (HECKEL) FROM GARHWAL HIMALAYA. *Acta Ichthyol. Piscicula* 22(1):141-147, 1992. In English with Polish summary. FR 38(2)

[Dep. Zool., Garhwal Univ., Srinagar Garhwal-246 176, India]

93-002454 Anata, G. DEVELOPMENT AND VARIATION OF THE SUSPENSORIUM OF PRIMITIVE CATFISHES (TELEOSTEI: OSEARIOPHYSD) AND THEIR PHYLOGENETIC RELATIONSHIPS. *Dev. Zool. Manage.* No. 32. 149p, 1992. In English with German and Spanish summary. FR 38(2)

93-002455 Bartsch, Peter. DEVELOPMENT OF THE SNOUT OF THE AUSTRALIAN LUNGFISH *Neoceratodus forsteri* (KREFFT, 1870), WITH SPECIAL REFERENCE TO CRANIAL NERVES. *Acta Zool. (Stockh.)* 74(1):15-29, 1993. FR 38(2)

[Eberhard-Karl-Universität, Tübingen, Lehrstuhl Spezielle Zool., Morgenstelle 28, D-7400 Tübingen 1, Germany]

93-002456 Bell, Michael A. CONVERGENT EVOLUTION OF NASAL STRUCTURE IN SEDENTARY ELASMOBRANCHS. *Copeia* 1993(1): 144-158, 1993. FR 38(2)

[Dep. Ecol. & Evol., SUNY, Stony Brook, NY 11794-5245]

FISHERIES REVIEW

MORPHOLOGY (Continued)

- 93-002457 Berjman, Michael THE DEVELOPMENT OF HYALINE-CELL CARTILAGE IN THE HEAD OF THE BLACK MULLY, *MUGILIA SPHENOPS* EVIDENCE FOR SECONDARY CARTILAGE IN A TELEOST / *Anat. Vol* 164 p 145-154 1999. FR 38(2)
[Dep. Anat., Univ. Coll., Cathays Park, Cardiff CF1 1XL, Wales]
- 93-002458 Boorluoglu, C., A. Martinez and P. Sozma. SOME PEPTIDE-LIKE COLOCALIZATIONS IN ENDOCRINE CELLS OF THE PYLORIC CAECA AND THE INTESTINE OF *ONCORHYNCHUS MYKISS* (TELEOSTEI). *Cell Tissue Res* 269(2):353-357 1992. FR 38(2)
[Dep. Histol. & Anat. Patol., Univ. Navarra, Arta 273, E-31000 Pamplona, Spain]
- 93-002459 Boltz, Jeffrey M and Jay R Stauffer, Jr SYSTEMATICS OF *APHREDOODERUS SAYANUS* (TELEOSTEI: APHREDOODERIDAE) *Copeia* 1993(1):81-93 1993. FR 38(2)
[Purza Eng. Co., 150 S. Wacker Dr., Chicago, IL 60606]
- 93-002460 Braun, C. B. and R. G. Northcutt. EVOLUTION OF THE HAGFISH LATERAL LINE SYSTEM: ANOTHER SLIMEY STORY. *Am. Zool.* 32(5):139A. 1992. Abstract only. FR 38(2)
[Univ. Calif., San Diego] *Epiplatys spilargyus*
- 93-002461 Brown, J. Anne and Carol Green. GLOMERULAR BYPASS SHUNTS AND DISTRIBUTION OF GLOMERULI IN THE KIDNEY OF THE LESSER SPOTTED GOCHFISH, *SCYRORHYNCHUS CANICULUS*. *Cell Tissue Res* 269(2):299-304. 1992. FR 38(2)
[Dep. Biol. Sci., Univ. Exeter, Prince of Wales Rd., Exeter EX4 4PS, England]
- 93-002462 Carlier, D. R., N. C. Heglund and C. G. Farmer. SPECULATION ON THE LOSS OF ELECTRORECEPTION IN NEOPTERYGIAN FISHES. *Am. Zool.* 32(5):156A. 1992. Abstract only. FR 38(2)
[Brown Univ., Providence, RI]
- 93-002463 Chapleau, Francois and J. Andrew Cooper. VARIATION IN THE PREOPERCULOMANDIBULAR CANAL OF THE JOHNNY DARTER, *ETHEOSTOMA NIGRUM*, WITH ASSOCIATED ZOOGEOGRAPHICAL CONSIDERATIONS. *Can. J. Zool.* 70(12):2315-2321 1992. In English with French summ. FR 38(2)
[Carleton Inst. Biol., Dep. Biol., Univ. Ottawa, Ottawa, ON, Canada K1N 6N5]
- 93-002464 Christenson, Johan; Oleg Shupliakov; Staffan Cullheim and Sten Grillner. POSSIBLE MORPHOLOGICAL SUBSTRATES FOR GABA-MEDIATED PRESYNAPTIC INHIBITION IN THE LAMPREY SPINAL CORD. *J. Comp. Neurol.* 328(4):463-472 1993. FR 38(2)
[Griffner: Nobel Inst. Neurophysiol., Box 604 00, S-104 01, Stockholm, Sweden] *Ichthyomyzon unicuspis*
- 93-002465 Collin, Shaun P. and David Frtzech. OBSERVATIONS ON THE SHAPE OF THE LENS IN THE EYE OF THE SILVER LAMPREY, *ICHTHYOMYZON UNICUSPIS*. *Can. J. Zool.* 71(1):34-41. 1993. In English with French summ. FR 38(2)
[Dep. Psychol., Univ. West. Australia, Nedlands, W.A. 6009, Australia]
- 93-002466 Cook, A. E. and G. V. Lauder. THE ANATOMY AND FUNCTION OF THE PHARYNGEAL JAW APPARATUS IN A PRIMITIVE TELEOST. *Am. Zool.* 32(5):140A. 1992. Abstract only. FR 38(2)
[Univ. Calif., Irvine] *Motopsetus chitale*
- 93-002467 Cook, R. D.; R. W. Hillard and I. C. Potter. ORAL PAPILLAE OF ADULTS OF THE SOUTHERN HEMISPHERE LAMPREY *GEOTRIA AUSTRALIS*. *J. Morphol.* 203(1):87-96. 1990. FR 38(2)
[School Vet. Studies, Murdoch Univ., Murdoch, W.A. 6150, Australia]
- 93-002468 Davidson, G. A.; A. E. Ellis and C. J. Secombes. NOVEL CELL TYPES ISOLATED FROM THE SKIN OF RAINBOW TROUT, *ONCORHYNCHUS MYKISS*. *J. Fish Biol.* 42(2):301-306 1993. FR 38(2)
[Dep. Zool., Aberdeen Univ., Aberdeen AB9 2TN, Scotland]
- 93-002469 Dymel-Erb, Suzanne; Yannick Bailly and Pierre Laurent. PATTERN OF GILL INNERVATION IN TWO TELEOSTS, THE PERCH AND THE TROUT. *Can. J. Zool.* 71(1):18-25. 1993. In English with French summ. FR 38(2)
[Morphol. Fonct. Ultrastruct. Adaptations, Cent. Ecol. Physiol. Energétique, Cent. Natl. Rech. Sci., 23 rue du Loess, BP20CR, 67037 Strasbourg Cedex, France] *Perca fluviatilis* and *Oncorhynchus mykiss*
- 93-002470 Feeney, Richard F. POST-YOLK SAC LARVAL DEVELOPMENT OF TWO SOUTHERN CALIFORNIA SCULPINS, *CLIMACOPTYLUS ANALIS* AND *ORTHOGNOMPHUS TRACIS* (PISCES: COTTIDAE). *U.S. Natl. Mar. Fish. Serv. Fish. Bull.* 90(3):454-468. 1992. FR 38(2)
[Scott. Fish. Nat. Hist. Mus. Los Angeles Cty., 900 Exposition Blvd., Los Angeles, CA 90007]
- 93-002471 Piles, T. and J. Lombardi. STRUCTURE AND PERMEABILITY CHARACTERISTICS OF THE EGG CAPSULE IN A VIVIPAROUS SHARK. *Am. Zool.* 32(5):87A. 1992. Abstract only. FR 38(2)
[Univ. N.C., Greensboro] *Mustelus canis*

FISHERIES REVIEW

MORPHOLOGY (Continued)

- 93-002472 Finerty, J. R. and B. A. Black. CONVERGENT EVOLUTION OF REGIONAL ENDOTHERMY IN TELEOSTS: DISSECTION OF THE BUTTERFLY MACKEREL. *Am. Zool.* 32(5):142A. 1992. Abstract only. FR 38(2)
[*Castrochima melanops*.]
- 93-002473 Forey, Peter and Philippe Janvier. AGNATHANS AND THE ORIGIN OF JAWED VERTEBRATES. *Nature (Lond.)* 361(6408):120-134. 1993. FR 38(2)
[Nat. Hist. Mus., Cromwell Rd., London SW7 5BD, England]
- 93-002474 Fritsch, Joachim and Claudia Lüsner. SEX CHARACTERISTICS IN THE EMPEROR ANGELFISH. *Trop. Fish Hobbyist* 41(3):50-52. 1993. FR 38(2)
[*Pomacanthus imperator*.]
- 93-002475 Fukusako, Hiroe, Futoshi Maeno and Sadao Kiyohara. TOPOGRAPHICAL PROJECTION OF FACIAL RECURRENT FIBERS TO THE MEDULLARY FACIAL LOBE OF THE CARP *CYPRINUS CARPIO*. *Nippon Suisan Gakkaishi* 59(1):29-33. 1993. In English with Japanese summ. FR 38(2)
[Dep. Biol., Coll. Liberal Arts & Sci., Kagoshima Univ., Korimoto, Kagoshima 890, Japan]
- 93-002476 Gibbs, A. C., B. C. Payne and G. V. Lauder. SPEED EFFECTS ON THE KINEMATICS OF PECTORAL FIN LOCOMOTION IN THE BLUEGILL SUNFISH. *Am. Zool.* 32(5):143A. 1992. Abstract only. FR 38(2)
[Univ. Calif., Irvine] *Lepomis macrochirus*
- 93-002477 Gillis, G. B. and G. V. Lauder. KINEMATICS OF AQUATIC PREY TRANSPORT. *Am. Zool.* 32(5):143A. 1992. Abstract only. FR 38(2)
[Univ. Calif., Irvine] *Lepomis macrochirus*.
- 93-002478 Gradivo, Adriana D. and Eliane Morin. [COMPARATIVE FUNCTIONAL ANATOMY OF THE BUCCOPHARYNGEAL CAVITY OF *ASYPIANAX FASCICATUS* (CLUVER, 1819) (OSTEOICHTHYES, CHARACIDAE, TETRAGONOPTERINAE) AND *TRIPORTHEUS GUENTHERI* (GARMAN, 1890) (OSTEOICHTHYES, CHARACIDAE, TRIPORTHEINAE)]. *Rev. Cienc.* 39(226):564-563. 1992. In Spanish with English summ. FR 38(2)
[Dep. Biol. Anim. UFV, 36570-000 Vicoso, MG, Brazil]
- 93-002479 Hale, M. E. and J. H. Long, Jr. SKIN, SCALES, AND SWIMMING: IN VIVO FUNCTIONS OF THE GAIT'S EXOSKELETON. *Am. Zool.* 32(5):144A. 1992. Abstract only. FR 38(2)
[Univ. Chicago, Chicago, IL] *Leposteus osseus*.
- 93-002480 Harold, Antony S. PHYLOGENETIC RELATIONSHIPS OF THE STERNOPTYCHID ARCHWOPLECIDAE (TELEOSTEI STOMIIFORMES). *Copeia* 1993(1):123-133. 1993. FR 38(2)
[Div. Fishes, Natl. Mus. Nat. Hist., Washington, DC 20560]
- 93-002481 Helms, Carlton E. MECHANICS OF FLAPPING FIN LOCOMOTION IN THE COWNOSE RAY, RHINOPTERA (BONASUS) (ELASMOBRANCHII: MYLIOBATIDAE). Ph.D. dissertation, Duke Univ. 130p. 1992. From Diss. Abstr. Int. 0 Sci. Eng. 53(7):3356. 1993. Order No. DA9237063. FR 38(2)
- 93-002482 Hernández, P. MORPHOLOGICAL VARIATION IN THE FEEDING APPARATUS OF SEVERAL ONTOGENETIC STAGES OF *ARCHOSARGUS PROBATOCEPHALUS*. *Am. Zool.* 32(5):145A. 1992. Abstract only. FR 38(2)
[Univ. S. Fla., Tampa]
- 93-002483 Hinder, Kjell and Bror Jonsson. ECOLOGICAL POLYMORPHISM IN ARCTIC CHARR. *Biol. J. Linn. Soc.* 48(1):63-74. 1993. FR 38(2)
[Inst. Nat. Res., Tungstøtta 2, N-7005 Trondheim, Norway] *Salvelinus alpinus*.
- 93-002484 Holt, R. J. and Q. Bone. ON BIPEDALISM IN SKATES AND RAYS. *Philos. Trans. R. Soc. Lond. B Biol. Sci.* 339(1287):105-100. 1993. FR 38(2)
[Dep. Human Biol. & Anat., Univ. West, Australia, Nedlands, W.A. 6005, Australia] *Raja montagu*, *R. microcellata*, *R. maevis*, *R. clavata*, and *R. brachyura*.
- 93-002485 Honkanen, Tapio and Peter Ekström. COMPARATIVE STUDY OF THE OLFACTORY EPITHELIUM OF THE THREE-SPINED STICKLEBACK (*GASTEROSTEUS ACULEATUS*) AND THE NINE-SPINED STICKLEBACK (*PUNGITILUS PUNGITILUS*). *Cell Tissue Res.* 269(2):267-273. 1992. FR 38(2)
[Dep. Zool., Univ. Lund, Helgonavägen 3, S-22362 Lund, Sweden]
- 93-002486 Hux, J. J. MORPHOLOGICAL CHARACTERISTICS OF OTOLITHS FOR SELECTED FISH IN THE NORTHWEST ATLANTIC. *J. Northwest Atl. Fish. Sci.* Vol. 13, p. 63-75. 1992. FR 38(2)
[Dep. Fish. & Oceans, Mar. Fish. Div., St. Andrews, NB, Canada] *Melanogrammus aeglefinus*, *Cadus morhua*, *Polachius virens*, *Mesobius whiteheadi*, *Hippoglossoides platessoides*, *Sebastes marinus*, *Scorpaenopsis scorborea*, and *Clupea harengus*.

FISHERIES REVIEW

MORPHOLOGY (Continued)

- 93-002487 Kjørsvik, E and I. Opstad MORPHOLOGICAL DEVELOPMENT OF THE DIGESTIVE SYSTEM IN LARVAL COD (*GADUS MORVUA* L.) DURING START-FEEDING ON ARTIFICIAL AND LIVE DIETS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol 191, p. 480, 1989. Abstract only. FR 30(2)
[Dep. Aquat. Biol., Norwegian Coll. Fish. Sci., Univ. Tromsø, P.O. Box 3003, Gulung, N-9001 Tromsø, Norway]
- 93-002488 Kjørsvik, E., A. Mangor Jensen and I. Holmejord. EGG QUALITY IN MARINE FISHES. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol 191, p. 442, 1989. Abstract only. FR 30(2)
[Dep. Aquat. Biol., Norwegian Coll. Fish. Sci., Univ. Tromsø, P.O. Box 3003 Gulung, N-9001 Tromsø, Norway]
- 93-002489 Koch, E. A. and R. H. Spitzer THREE-DIMENSIONAL VIEW OF THE MICROPYLAR END OF THE HACRISH EGG AT LATE DEVELOPMENTAL STAGES. *Am. Zool.* 32(5):82A, 1992. Abstract only. FR 30(2)
[Univ. Health Sci., Chicago Med. School, North Chicago, IL 60064] (*Citaretus abouit*).
- 93-002490 Koinchal, K. and A. Goldschmid. MORPHOLOGICAL EVIDENCE FOR THE BIOLOGICAL ROLE OF CANINIFORM TEETH IN COMITOOTH BLENNIES (BLFINIIDAE, TELEOSTEI). *J. Fish Biol.* 41(6):983-991, 1992. FR 30(2)
[Konrad-Lorenz-Forschungsstelle (Ethol.), A-4645 Grunau 11, Austria] Data for 14 species in the Mediterranean.
- 93-002491 Krzykawski, Stanislaw. MORPHOMETRY AND GROWTH OF GREENLAND HALIBUT *REINHARDTILUS HIPPOGLOSSOIDES* (WALBAUM, 1792) OFF LABRADOR. *Acta Ichthyol. Piscatoria* 21(2):87-106, 1991. In English with Polish summ. FR 30(2)
[Inst. Ichtiol., Akad. Rolnicza, ul. K. Krolewicza 4, 71-550 Szczecin, Poland]
- 93-002492 Krzykawski, Stanislaw. BIOMETRIC CHARACTERS AND GROWTH OF GREENLAND HALIBUT *REINHARDTILUS HIPPOGLOSSOIDES* (WALBAUM, 1792) FROM THE BARENTS SEA. *Acta Ichthyol. Piscatoria* 22(1):97-111, 1992. In English with Polish summ. FR 30(2)
[Zaklad Syst. Ryb, Akad. Rolnicza, ul. K. Krolewicza 4, 71-550 Szczecin, Poland]
- 93-002493 Lagardere, Francois; Michel Bouhlic and Toni Burgis. ANOMALIES IN THE CEPHALIC AREA OF LABORATORY-REARED LARVAE AND JUVENILES OF THE COMMON SOLE, *SOLEA SOLEA*; ORAL JAW APPARATUS, DERMAL PARIETAE AND PIGMENTATION. *Environ. Biol. Fishes* 36(1):35-46, 1993. FR 30(2)
[Cent. Rech. Ecol. Mar. & Aquacult. (CNRS-IFREMER), BP 5, F-17137 L'Hoimeau, France]
- 93-002494 Lohstainer, F.; R. A. Patzner and T. Weismann. THE SPERMATIC DUCTS OF SALMONID FISHES (SALMONIDAE, TELEOSTEI). MORPHOLOGY, HISTOCHEMISTRY AND COMPOSITION OF THE SECRETION. *J. Fish Biol.* 42(1):79-93, 1993. FR 30(2)
[Patzner, Zool. Inst., Univ. Salzburg, Hellbrunnerstr. 34, A-5020 Salzburg, Austria] *Coregonus*, *Oncorhynchus mykiss*, *Salvelinus alpinus* and *Thymallus thymallus*.
- 93-002495 Langecker, T. G. PERSISTENCE OF ULTRASTRUCTURALLY WELL-DEVELOPED PHOTORECEPTOR CELLS IN THE PINEAL ORGAN OF A PHYLOGENETICALLY OLD CAVE-DWELLING POPULATION OF *ASTYANAX FASCIATUS* CUVIER, 1819 (TELEOSTEI, CHARACIIDAE). *Z. Zool. Syst. Evolutionsforsch.* 30(4):287-296, 1992. In English with German summ. FR 30(2)
[Univ. Hamburg, Zool. Inst. & Zool. Mus., Martin-Luther-King-Platz 3, W-2000 Hamburg 13, Germany]
- 93-002496 Langille, Robert M. and Brian K. Hall. CALCIFICATION OF CARILAGE FROM THE LAMPREY *PETROMYZON MARINUS* (L.) IN VITRO. *Acta Zool. (Stockh.)* 74(1):31-41, 1993. FR 30(2)
[Dep. Anat., Univ. Ottawa, 451 Smyth Rd., Ottawa, ON, Canada K1H 0M5]
- 93-002497 Langdale, J. R. M. DEVELOPMENTAL CHANGES IN THE OPACITY OF LARVAL HERRING, *CLupea harengus*, AND THEIR IMPLICATIONS FOR VULNERABILITY TO PREDATION. *J. Mar. Biol. Assoc. U.K.* 73(1):225-232, 1993. FR 30(2)
[SOAFD Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen, AB9 8DB, Scotland]
- 93-002498 Lois, Jeffrey M.; Douglass F. Hoese and Thomas Teski. LARVAL DEVELOPMENT IN TWO GENERA OF THE INDO-PACIFIC COBIID FISH FAMILY XENISTIIMIDAE: *ALLOMICRODESMUS* AND *XENISTIIMUS* COPLEY 1993(1):186-196, 1993. FR 30(2)
[Soc. Fish., Div. Vertebr. Zool., Australian Mus., P.O. Box A235, Sydney South, N.S.W. 2000, Australia]
- 93-002499 Liu, W. S. DEVELOPMENT OF THE RESPIRATORY SWIMBLADDER OF *PANGASUS SUTCHI*. *J. Fish Biol.* 42(2):159-167, 1993. FR 30(2)
[Dep. Anim. Sci. & Husbandry, S. China Agric. Univ., Guangzhou, China]
- 93-002500 Melopodov, A. N. and G. A. Agapova. [A METHOD OF POPULATION-PHENETIC STUDY OF PINK SALMON BY DESIGN VARIANTS OF THE CAUDAL FIN.] *Bol. Morye (Morskoy)* 1991(5):92-94, 1991. In Russian with English summ. FR 30(2)
[Lab. Popul. Genet., Inst. Biol. Problems N., Far East Branch, Acad. Sci., Magadan 685000, USSR] *Oncorhynchus gorbuscha*.

MORPHOLOGY (Continued)

- 93-002501 Malinstrom, Torill HISTOLOGICAL EXAMINATION OF THE ABDOMINAL CAVITY OF LARVAL HALIBUT (*HIPPOGLOSSUS HIPPOGLOSSUS* L.) WITH SPECIAL REFERENCE TO THE MORPHOLOGY OF THE LIVER AND THE GUT. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 481. 1989 Abstract only. FR 38(2)
[NVLV's Inst. Aquacult. Res. (AKVAFORSK), Box 10, 1432 As-NLH, Norway]
- 93-002502 Meadows, Dwayne W. MORPHOLOGICAL VARIATION IN EYESPOTS OF THE FOUREYE BUTTERFLYFISH (*CHAETODON CAPISTRATUS*): IMPLICATIONS FOR EYESPOT FUNCTION. *Copeia* 1993(1):235-240. 1993. FR 38(2)
[Dep. Zool., 3020 Cordley Hall, Oreg. State Univ., Corvallis 97331-2914]
- 93-002503 Menin, Ellene and Olga Martins Minsora [FUNCTIONAL ANATOMY OF THE BUCCOPHARYNGEAL CAVITY OF *PROCHLODUS MARGGRAVI* (WALBAUM, 1792) AND *PROCHLODUS AFFINIS* REINHARDT, 1874 (CHARACIFORMES, PROCHLODONTIDAE)]. *Rev. Cienc.* 39(226):507-528. 1992. In Spanish with English summ. FR 38(2)
[Dep. Biol. Anim. UFV, 36570-000 Vicoso, MG, Brazil]
- 93-002504 Miyake, T.; Ione Hani von Heibing and B. K. Hall PLACODAL ORIGIN OF ECTO-EPITHELIAL LINING FOR THE EXTERNAL GILL CAVITY IN ATLANTIC COD (*GADUS MORHUA*). *Am. Zool.* 32(5):84A. 1992. Abstract only. FR 38(2)
[Dalhousie Univ., Halifax, NS, Canada]
- 93-002505 Munkh, J. S. Datta and G. M. Hughes AIR-BREATHING FISHES OF INDIA: THEIR STRUCTURE, FUNCTION AND LIFE HISTORY. A.A. Balkema Uitgevers B.V. 338p. 1992. Available at \$90.00 (cloth) from A.A. Balkema Uitgevers B.V., Postbus 1675, NL-3000 BR Rotterdam, Netherlands. FR 38(2)
[Post-Grad. Dep. Zool., Bhopalpur Univ., Bhopalpur, India] Data for 10 species
- 93-002506 Murray, H. M.; G. M. Wright and G. P. Goff CILIATED EPITHELIUM IN THE GUT OF LARVAL ATLANTIC HALIBUT, *HIPPOGLOSSUS HIPPOGLOSSUS*. *J. Fish Biol.* 42(2):314-316. 1993. FR 38(2)
[Dep. Anat. & Physiol., Atl. Vet. Coll., Univ. Prince Edward Island, Charlottetown, PE, Canada C1A 4P3]
- 93-002507 Murray, P. A. and E. A. Moore. SOME MORPHOMETRIC RELATIONSHIPS IN *ETEIS OCELLATUS* VALENCIENNES (QUEEN SNAPPER), LANDED IN ST. LUCIA, W.I. *Proc. Calif. Caribb. Fish. Inst.* Vol. 41, p. 416-417. 1992. FR 38(2)
[Biol. Dep., Univ. West Indies, Cave Hill, Barbados]
- 93-002508 Natanson, Lisa J. EFFECT OF TEMPERATURE ON BAND DEPOSITION IN THE LITTLE SKATE, *RAJA ERINACEA*. *Copeia* 1993(1):190-206. 1993. FR 38(2)
[NOAA/NMFS, 20 Tarzwell Dr., Narragansett, RI 02882]
- 93-002509 Navaluna, Noli Ariel N. STARVATION OF LARVAL WALLEYE POLLOCK (*THERRAGRA CHALCOGRAMMA*) BASED ON HISTOLOGICAL AND MORPHOLOGICAL EVALUATION. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 461. 1989 Abstract only. FR 38(2)
[School Fish. WH-10, Univ. Wash., Seattle 98195]
- 93-002510 Platt, Christopher. ZEBRAFISH INNER EAR SENSORY SURFACES ARE SIMILAR TO THOSE IN GOLDFISH. *Heur. Res.* 63(1/2):133-140. 1993. FR 38(2)
[Dep. Zool., Univ. Md., College Park 20742] *Brachydanio rerio* and *Carassius auratus*
- 93-002511 Quinn, T. P. and G. R. Blair MORPHOLOGICAL CHANGES IN SENESCING ADULT MALE SOCKEYE SALMON (*ONCORHYNCHUS MERKA* WALBAUM). *J. Fish Biol.* 41(6):1045-1047. 1992. FR 38(2)
[Fish. Res. Int., School Fish. WH-10, Univ. Wash., Seattle 98195]
- 93-002512 Raible, David W., Andrew Wood, Wendy Hodgson, Paul D. Heron, James A. Weston and Judith S. Eisen. SEGREGATION AND EARLY DISPERSAL OF NEURAL CREST CELLS IN THE EMBRYONIC ZEBRAFISH. *Dev. Dyn.* 195(1):29-42. 1992. FR 38(2)
[Inst. Neurosci., Univ. Oreg., Eugene 97403] *Brachydanio rerio*
- 93-002513 Rass, T. S. METAMERISM OF VERTEBRAL COLUMN, SIZE OF EGGS (GRAINS OF ROE), AND DIMENSIONS OF INDIVIDUAL FISH OF NORTHERN SEAS. *Dokl. Biol. Sci. (Engl. Transl. Dokl. Akad. Nauk SSSR)* 324(1-6):248-251. 1992. FR 38(2)
[P. Shinnov Inst. Oceanol., Russian Acad. Sci., Moscow, Russia]
- 93-002514 Riehl, Rudiger and Hartmut Grevan FINE STRUCTURE OF EGG ENVELOPES IN SOME VIVIPAROUS GOODEID FISHES, WITH COMMENTS ON THE RELATION OF ENVELOPE THINNESS IN VIVIPARITY. *Cave J. Zool.* 7(1):91-97. 1993. In English with French summ. FR 38(2)
[Inst. Zool. (Morphol. & Zellbiol.), Univ. Dusseldorf, Universitätsstr. 1, D-4030 Dusseldorf 1, Germany] *Acanthobola tomeri*, *Gambusia affinis holbrooki*, *G. viviparus*, *Hybomus tomeri*, *Nyodon naitati*, *Xenopeltus caplani*, *Ameiobola splendens*, and *Xenotoca vivipara*.

MORPHOLOGY (Continued)

- 93-002515 Sasagawa, Ichiro. THE FINE STRUCTURE OF INITIAL MINERALISATION DURING TOOTH DEVELOPMENT IN THE GUMMAY SHARK, *MUSTELUS MANAZO*, ELASMOBRANCHIA. *J. Anat.* Vol. 164 p. 175-187. 1989. FR 30(2)
[Dep. Cell & Structural Biol., School Biol. Sci., Univ. Manchester, Coupland III Bldg., Coupland St., Manchester M13 9PL, England]
- 93-002516 Schmitz, R. J. COMPARATIVE ULTRASTRUCTURE OF THE CELLS FOUND IN THE NOTOCHORD OF THE LINGFISH AND THE STURGEON. *Am. Zool.* 32(5):159A. 1992. Abstract only. FR 30(2)
[Univ. Wls., Stevens Point] *Acipenser brevirostrum* and *Protoperus annectens*
- 93-002517 Sekial, Tadahisa. ALBINISM OF HATCHERY-REARED FLOUNDER (*PARALICHTHYS OLIVACEUS*) AS A RESULT OF DEFORMATION OF ASYMMETRICAL DEVELOPMENT OF SKIN STRUCTURE. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191 p. 489. 1989. Abstract only. FR 30(2)
[Fish. Res. Stn., Fac. Agric., Kyoto Univ., Maituru, Kyoto 625, Japan]
- 93-002518 Shadwick, R. E., T. Knowler and M. Fonseca. THE MECHANICAL ORGANIZATION OF MUSCLE AND TENDON IN YELLOWFIN TUNA. *Am. Zool.* 32(5):159A. 1992. Abstract only. FR 30(2)
[Scripps Inst. Oceanogr., La Jolla, CA] *Thunnus albacares*
- 93-002519 Sherry, David M. and Stephen Yazulla. GOLDFISH BIPOLAR CELLS AND AXON TERMINAL PATTERNS: A COLGI STUDY. *J. Comp. Neurol.* 320(2):100-200. 1993. FR 30(2)
[Dep. Physiol. & Biophysics, Rm. C352, Cornell Univ. Med. Coll., 1300 York Ave., New York, NY 10021] *Carassius auratus*
- 93-002520 Shields, R. J.; J. Davenport, C. Young and P. L. Smith. OOCYTE MATURATION AND OVULATION IN THE ATLANTIC HALIBUT, *HYPOGLOSSUS HYPOGLOSSUS* (L.), EXAMINED USING ULTRASONOGRAPHY. *Aquacult. Fish. Manage.* 24(2):101-106. 1993. FR 30(2)
[Sea Fish Ind. Authority, Mar. Farming Unit, Ardnoe, Achawate, Argyll PH36 4LD, Scotland]
- 93-002521 Singh, N. and N. K. Agarwal. THE SEM SURFACE STRUCTURE OF THE ADHESIVE ORGAN OF PSEUDOCHEMIS SULCATUS McCLELLAND (TELEOSTEI: SISORIDAE), FROM GARHWAL HIMALAYAN HILLSTREAMS. *Acta Ichthyol. Piscicult.* 21(2):29-35. 1991. In English with Polish summ. FR 30(2)
[Zool. Dep., HND Garhwal Univ., Sringer Garhwal-246 174, U.P., India]
- 93-002522 Soto, Cristina G.; John F. Leatherland and David L. G. Noakes. GONADAL HISTOLOGY IN THE SELF-FERTILIZING HERMAPHRODITIC FISH *RIVULUS MARMORATUS* (PISCES, CYPRINODONTIDAE). *Can. J. Zool.* 70(12):2330-2347. 1992. In English with French summ. FR 30(2)
[Hooper Inst. Ichthyol., Dep. Zool., Univ. Guelph, Guelph, ON, Canada N1G 2W1]
- 93-002523 Stock, David Whalen. A MOLECULAR PHYLOGENY OF FISHES. Ph.D. dissertation, Univ. Ill. (Urbana-Champaign) 211p. 1992. From Diss. Abstr. Int. 0 Sci. Eng. 53(7):3357-3358. 1993. Order No. DA9236599. FR 30(2)
- 93-002524 Stockland, Robert George. DEEPSEA ODDITIES: THE FLASHLIGHT FISHES. *Trop. Fish. Hobbyist* 41(3):20-29. 1993. FR 30(2)
Kryptopteryx aliciae, *Anomalops katopmon*, and *Photoblepharus palpatus*
- 93-002525 Strehlow, David and Walter Gilbert. A FATE MAP FOR THE FIRST CLEAVAGES OF THE ZEBRAFISH. *Nature (Lond.)* 361(6411):451-453. 1993. FR 30(2)
[Boston Univ. Hospital, Dep. Biomed. Med., 80 E. Newton St., Boston, MA 02118-2393] *Brachydanio rerio*
- 93-002526 Tanaka, M.; J. O. Taniyama; M. Tagawa and T. Hirano. ONTOGENETIC CHANGES IN THYROID HORMONE CONCENTRATIONS RELATED TO MORPHOLOGICAL AND ECOLOGICAL EVENTS DURING THE EARLY LIFE HISTORY OF FISH. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191 p. 490. 1989. Abstract only. FR 30(2)
[Dep. Fish., Fac. Agric., Kyoto Univ., Kyoto 606, Japan]
- 93-002527 Tanuchi, Toru and Mikoto Shimizu. DENTAL DIMORPHISM AND FOOD HABITS IN THE STRINGRAY *CASYATIS AKAJI* FROM TOKYO BAY, JAPAN. *Nippon Suisan Gakkaishi* 59(1):53-60. 1993. In English with Japanese summ. FR 30(2)
[Dep. Fish., Fac. Agric., Univ. Tokyo, Yayoi, Bunkyo, Tokyo 113, Japan]
- 93-002528 Tresler, Joel C. GEOGRAPHIC VARIATION IN SIZE IN THE SALPIN MOLLY, *POECILIA LATIPinna*. Ph.D. dissertation, Fla. State Univ. 193p. 1986. From Diss. Abstr. Int. 0 Sci. Eng. 47(12):4755. 1987. Order No. DA8708215. FR 30(2)

MORPHOLOGY (Continued)

93-002529 Turling, Ralph G. and Peter C. Walmsright. MORPHOLOGICAL AND FUNCTIONAL BASES OF DIURONPHAGY IN THE QUEEN TRIGGERFISH, *BAKISTES VETULA* (PISCES, TETRAODONTIFORMES). *J. Morphol.* 215(2):101-118. 1993. FR 38(2)

[Walmsright, Dep. Biol. Sci., Fla. State Univ., Tallahassee 32306-3050]

93-002530 Vostyeva, Ye. D. CRANILOGICAL VARIABILITY AND DIVERGENCE OF SOME LABRID SPECIES (LABRIDAE, PERCIFORMES, PISCES) FROM THE BLACK SEA AND LIGURIAN SEA. *J. Ichtyol. (Engl. Transl. Vopr. Ichtyol.)* 32(7):1-13. 1992. FR 38(2)

[Zool. Mus., Moscow State Univ., Moscow, Russia] *Labrus viridis*, *Symphodus sciaen*, *Coris julis*, *Crenilabrus linea*, *C. cinereus*, *C. ocellatus*, *C. quinquefasciatus*, and *C. roissali*.

93-002531 Verreth, Johan A. J.; Els Tourele; Eijliff Spazler; Ad Van der Sluisen; Jan H. W. M. Rombout; Ronald Booms and Helmut Segner. THE DEVELOPMENT OF A FUNCTIONAL DIGESTIVE SYSTEM IN THE AFRICAN CATFISH *CLARIAS GARIEPINUS* (BURCHELL). *J. World Aquacult. Soc.* 23(4):286-290. 1992. FR 38(2)

[Dep. Fish Culture & Fish., Wageningen Agric. Univ., P.O. Box 338, 6700 AH Wageningen, Netherlands]

93-002532 Walmsright, P. C. FUNCTIONAL MORPHOLOGY OF THE PUFFERFISH INFLATION MECHANISM. *Am. Zool.* 32(5):153A. 1992. Abstract only. FR 38(2)

[Fla. State Univ., Tallahassee]

93-002533 Wang Guoen and Li Guoyou. CHARACTERISTICS, ORIGIN AND MIGRATION OF PRIMITIVE GERM CELLS IN SALMO GARDNERI/RICHARDSONI. *Proceedings of the International Symposium on Coldwater Fish Culture*, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish. 1990* [Spec. Issue] 59-64. 1990. FR 38(2)

[Dalian Fish. Coll., Dalian, China]

93-002534 Wang Swan. BIOLOGICAL FEATURE AND DISTRIBUTIVE CHANGE OF FINE SCALE FISH IN NORTH CHINA. *Proceedings of the International Symposium on Coldwater Fish Culture*, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish. 1990* [Spec. Issue] 53-58. 1990. FR 38(2)

[Dep. Biol., Hebei Univ., Baoding, Hebei Province, China] *Brachymystax lenis*.

93-002535 Watson, William and H. J. Walker, Jr. LARVAL DEVELOPMENT OF SARCO (ANISOTREMUS DAVYSONII) AND SALEMA (XENISALMUS CALIFORNENSIS) (PISCES: HAMBULIDAE) FROM THE SOUTHERN CALIFORNIA BIGHT. *Bull. Mar. Sci.* 51(3):360-406. 1992. FR 38(2)

[NOAA, NMFS, Southwest Fish. Sci. Cent., P.O. Box 271, La Jolla, CA 92038-0271]

93-002536 Weinberg, Eric S. ANALYSIS OF EARLY DEVELOPMENT IN THE ZEBRAFISH EMBRYO. *Resuls. Probl. Cell Differ.* Vol. 18, p. 91-141. 1992. FR 38(2)

[Dep. Biol., Univ. Pa., Philadelphia 19104] *Brachydanio rerio*

93-002537 Westneat, M. W.; W. Hoese, C. A. Pell and S. A. Walmsright. THE HORIZONTAL SEPTUM. MECHANISMS OF FORCE TRANSFER IN THE LOCOMOTION OF SCOMBRID FISHES. *Am. Zool.* 32(5):154A. 1992. Abstract only. FR 38(2)

[Field Mus. Nat. Hist., Chicago, IL]

93-002538 Wetzel, J.; J. P. Wourms and S. G. Poss. COTYLEDONS OF THE GHOST PIPEFISH. SITES OF EGG ATTACHMENT AND MATERNAL-EMBRYONIC METABOLIC EXCHANGE. *Am. Zool.* 32(5):154A. 1992. Abstract only. FR 38(2)

[Presbyterian Coll., Clinton, SC]

93-002539 Wlaczek, Beata. BIOMETRIC CHARACTERISTICS OF BALTIC EEL-POLYDORUS VAMPILUS (L.) FROM THE POMERANIAN BAY. *Acta Ichthyol. Piscatoria* 22(2):39-57. 1992. In English with Polish summary. FR 38(2)

[Zaklad Syst. Ryb., Akad. Rolnicza, ul. K. Krolowicza 4, 71-530 Szczecin, Poland]

93-002540 Winterbottom, Richard. MYOLOGICAL EVIDENCE FOR THE PHYLOGENY OF RECENT GENERA OF SURGEONFISHES (PERCOMORPHA, ACANTHURIDAE), WITH COMMENTS ON THE ACANTHURIDAE. *Copeia* 1993(1):21-39. 1993. FR 38(2)

[Dep. Ichthyol. & Herpetol., Royal Ontario Mus., 100 Queen's Park, Toronto, ON, Canada M5S 2C6]

93-002541 Yang Maoshen and Duan Yihao. HISTOLOGICAL OBSERVATIONS ON *BULBUS OCLI* OF RAINBOW TROUT. *Proceedings of the International Symposium on Coldwater Fish Culture*, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish. 1990* [Spec. Issue] 73-77. 1990. FR 38(2)

[Dep. Bio., Shanxi Univ., Taiyuan, Shanxi, China] *Oncorhynchus mykiss*.

93-002542 Yang Maoshen and Yin Yuanhong. HISTOLOGICAL OBSERVATIONS ON DIGESTIVE TRACT OF RAINBOW TROUT. *Proceedings of the International Symposium on Coldwater Fish Culture*, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish. 1990* [Spec. Issue] 79-83. 1990. FR 38(2)

[Dep. Bio., Univ. Shanxi, Taiyuan, Shanxi, China] *Oncorhynchus mykiss*.

MORPHOLOGY (Continued)

93-002543 Yokoya, Sachiko and Osamu S Tamura FINE STRUCTURE OF THE SKIN OF THE AMPHIBIOUS FISHES, *BOLEOPHthalmus PECTINROSTRIS* AND *PEROPHTHALMUS CANTONENSIS*, WITH SPECIAL REFERENCE TO THE LOCATION OF BLOOD VESSELS. *J Morphol* 214(3):287-297 1992 FR 30(2)

[Div Cell Sci, Cont. Lab., Fukushima Med Coll, Fukushima 960-12, Japan]

93-002544 Zhao Weibin, Peng Shibing, Tan Yip and Liu Luyan DIFFERENTIATION OF GONADS IN RAINBOW TROUT (*SALMO GARDNERI*). Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989 Wang Xing, editor. *Salmon Fish 1990* [Spec Issue] 85-90 1990 FR 30(2)

[Shanghai Fish. Univ., 334 Jun Gong Rd., Shanghai, China]

93-002545 Zuniga, Humberto N. and Enzo S Acuna LARVAL DEVELOPMENT OF TWO SYMPATRIC MEDIAN AN ANOXIC VASOCONSTRICTORY RESPONSE IN FISH GILLS. *J Physiol (Camb)* Vol. 459 p. 22 1993 Abstract only FR 30(2)

[Dep Biol Mar., Univ. Catolica Norte, Sede Coquimbo, Casilla 117, Coquimbo, Chile]

PHYSIOLOGY

93-002546 Aclero, R., C. Agnola and B Tota PHARMACOLOGICAL EVIDENCE THAT EICOSANOIDS MEDIATE AN ANOXIC VASOCONSTRICTORY RESPONSE IN FISH GILLS. *J Physiol (Camb)* Vol. 459 p. 22 1993 Abstract only FR 30(2)

[Dep. Biol., Univ. Lecce, Lecce, Italy] *Conger conger*.

93-002547 Agarwal, N. K., N. Singh and H. R. Singh HISTOLOGICAL AND HISTOCHEMICAL STUDY ON THE STEROID SYNTHESIZING CELLULAR SITES IN THE TESTIS OF A HILLSTREAM FISH *SCHIZOTHORAX PLACOSTOMUS*. *Acta Ichthyol Piscator* 22(1):113-116. 1992 In English with Polish sum. FR 30(2)

[Dep. Zool., Gashwal Univ., Srinagar Garhwal-246 174, India]

93-002548 Al-Ahmed, A. Y. STUDIES ON THE RELATIONSHIP BETWEEN SOME HAEMATOLOGICAL PARAMETERS AND THE BIOLOGY OF THE FISH, *SILURUS PROSTEGUS*. *Acta Ichthyol Piscator* 22(2):197-201. 1992. In English with Polish sum. FR 30(2)

[Dep Biol, Coll. Sci., Univ. Basrah, Iraq]

93-002549 Alfred, Simon and Rejean Dubuc GLUTAMATE METABOTROPIC RECEPTOR MEDIATED DEPRESSION OF SYNAPTIC INPUTS TO LAMPREY RETICULOSPINAL NEURONES. *Brain Res* 605(1):175-179. 1993. FR 30(2)

[Dubuc Univ. Quebec Montreal, Dep. Kinanthropol., C.P. 0880 Succ. A, Montreal, PQ, Canada H3C 3P0]

93-002550 Alvarez, J. M. R.; M. Carillo; S. Zaruy; F. Prat and E. Maranon. PATTERN OF SEA BASS OOCYTE DEVELOPMENT AFTER OVARIAN STIMULATION BY LHRH. *J. Fish Biol.* 41(6):965-970. 1992. FR 30(2)

[Dep. Prod. Anim., ETSI Agronomos, 28040 Madrid, Spain] *Dicentrarchus labrax*

93-002551 Alvarez, J. M. R.; C. F. Randall and N. R. Bromage EFFECTS OF SKELETON PHOTOPERIODS ON MELATONIN SECRETION IN THE RAINBOW TROUT, *ONCORHYNCHUS MYKISS* (WALBAUM). *Aquacult. Fish. Manage.* 24(2):157-162. 1993. FR 30(2)

[Bromage: Inst. Aquacult., Univ. Stirling, Stirling FK9 4LA, Scotland]

93-002552 Anderson, Marilyn J DIFFERENCES IN GROWTH OF NEURONS FROM NORMAL AND REGENERATED TELEOST SPINAL CORD IN VITRO. *In Vitro Cell Dev. Biol.* 29(2):145-152 1993 FR 30(2)

[Dep. Anat. & Neurobiol., Colo State Univ., Fort Collins 80523] *Apteronotus albifrons*.

93-002553 Anderson, Trevor A. and Hal Braley APPEARANCE OF NUTRIENTS IN THE BLOOD OF THE GOLDEN PERCH *MACQUARIA AMBIGUA* FOLLOWING FEEDING. *Comp. Biochem Physiol A Comp. Physiol* 104(2):349-356. 1993. FR 30(2)

[Fac. Aquat. Sci., Deakin Univ., Geelong, Vic. 3217, Australia]

93-002554 Anki, Kazuko; Yoko Nakatsuru, Junko Sakurai; Ayumi Sato, Prince Masahito and Takatoshi Ishikawa. AGE DEPENDENCE OF *O*-METHYLGUANINE-DNA METHYLTRANSFERASE ACTIVITY AND ITS DEPLETION AFTER CARCINOGEN TREATMENT IN THE TELEOST MEDAKA (*ORYZIAS LATIPES*). *Mutat. Res.* 293(3):225-231. 1993. FR 30(2)

[Div. Biol., Natl. Inst. Radiat. Sci., Anagawa, Inage-ku, Chiba-shi, Chiba 263, Japan]

93-002555 Arinc, Emel and Alaitin Sen CHARACTERIZATION OF CYTOCHROME P450 DEPENDENT MIXED-FUNCTION OXIDASE SYSTEM OF GILT HEAD SEABREAM (*SPARUS AURATA*; SPARIDAE) LIVER. *Comp. Biochem Physiol. B Comp. Biochem.* 104(1):133-139. 1993. FR 30(2)

[Dep. Biol., Middle East Technical Univ., 06531, Ankara, Turkey]

FISHERIES REVIEW

PHYSIOLOGY (Continued)

- 93-002556 Armas, Carl L. EVALUATING TEMPERATURE REGIMES FOR PROTECTION OF SMALLMOUTH BASS U.S. Fish Wildl. Serv. Resour. Publ. No. 191, 26p. 1993. Available from Publ. Unit, U.S. Fish & Wildl. Serv. 1049 C St., N.W., Arlington Sq. Bldg., Mail Stop 130, Washington, DC 20240. FR 38(2)
[U.S. Fish & Wildl. Serv., Natl. Ecol. Res. Cent., 4512 McMurtry Ave., Fort Collins, CO 80525-3400. *Microperca dolosawa*]
- 93-002557 Armstrong, J. D.; I. G. Friedle and M. C. Lucas. THE LINK BETWEEN RESPIRATORY CAPACITY AND CHANGING METABOLIC DEMANDS DURING GROWTH OF NORTHERN PIKE, *ESOX LUCIUS*. *J. Fish Biol.* 41(Suppl. 8):65-75. 1992. FR 38(2)
[Scottish Off. Agric. & Fish. Dep., Freshwater Fish. Lab., Pitlochry, Perthshire PH16 5LB, Scotland]
- 93-002558 Asano, Masaya and Yuzo Mugiyu. BIOCHEMICAL AND CALCIUM BINDING PROPERTIES OF WATER-SOLUBLE PROTEINS ISOLATED FROM OTOLITHS OF THE TILAPIA, *OREOCHROMIS NILOTICUS*. *Comp. Biochem. Physiol. B Comp. Biochem.* 104(1):201-205. 1993. FR 38(2)
[Mugiyu Fac. Fish., Hokkaido Univ., Minato-3, Hakodate 041, Japan]
- 93-002559 Avello, M.; J. Berhaut and M. Bomanich. SALINITY TOLERANCE OF TWO TROPICAL FISHES, *OREOCHROMIS ALBUREUS* AND *O. NILOTICUS*, I. BIOCHEMICAL AND MORPHOLOGICAL CHANGES IN THE GILL EPITHELIUM. *J. Fish Biol.* 42(2):243-254. 1993. FR 38(2)
[Lab. Physiol. Cell. & Comp., URA CNRS 651, Fac. Sci., Parc Valrose, 06100 Nice Cedex 2, France]
- 93-002560 Aysen, Felix G.; Toyoji Kaneko; Masatomo Tagawa; Sanae Hasegawa; I. Coridon Grau; Richard S. Nishioka; David S. King; Howard A. Bern and Tetsuya Heato. EFFECTS OF ACCLIMATION TO HYPERTONIC ENVIRONMENT ON PLASMA AND PITUITARY LEVELS OF TWO PROLACTINS AND GROWTH HORMONE IN TWO SPECIES OF TILAPIA, *OREOCHROMIS MOSSAMBICUS* AND *O. NILOTICUS*. *Gen. Comp. Endocrinol.* 89(1):130-148. 1993. FR 38(2)
[Ocean Res. Inst., Univ. Tokyo, Nakano, Tokyo 164, Japan]
- 93-002561 Balmert, R. J. and Y. Takei. RENAL ACTIONS OF NATIVE CARDIAC NATRIURETIC PEPTIDES IN THE JAPANESE EEL, *ANGUILLA JAPONICA*. *J. Physiol. (Camb.)* Vol. 459 p. 26. 1993. Abstract only. FR 38(2)
[Dep. Physiol. Sci., Univ. Manchester, Manchester M13 9PT, England]
- 93-002562 Banerjee, Partha P.; Subhadra Banerjee; San-Tai Shun; Yung-Hsi Kao and John Yuh Lin-Yu. STUDIES ON ISOLATION AND PROPERTIES OF TWO ISOFORMS OF PITUITARY GONADOTROPIN FROM BLACK SILVER CARP, *ARISTICHTHYS NOBILIS*. *Comp. Biochem. Physiol. B Comp. Biochem.* 104(2):241-253. 1993. FR 38(2)
[Yu. Endocrinol. Lab., Inst. Zool., Acad. Sinica, Taipei, Taiwan]
- 93-002563 Bass, Andrew. DIMORPHIC MALE BRAINS AND ALTERNATIVE REPRODUCTIVE TACTICS IN A VOCALIZING FISH. *Trends Neurosci.* 15(4):139-145. 1992. FR 38(2)
[Neurobiol. & Behav., Cornell Univ., Ithaca, NY 14853] *Perichthys nativit*
- 93-002564 Beackam, Terry D. and Clyde B. Murray. ACCELERATION OF MATURITY OF PINK SALMON (*ONCORHYNCHUS GORBUSCHA*) USING PHOTOPERIOD CONTROL. *Aquaculture* 109(3-4):315-325. 1993. FR 38(2)
[Dep. Fish. & Oceans, Biol. Sci. Branch, Pac. Biol. Sta., Nanaimo, BC, Canada V9R 5K6]
- 93-002565 Beaudet, L. and C. W. Hawrylycz. ONTOGENETIC LOSS OF UV SENSITIVITY IN RAINBOW TROUT OPTIC FIBERS. *Am. Zool.* 32(5):164A. 1992. Abstract only. FR 38(2)
[Univ. Victoria, Victoria, BC, Canada] *Oncorhynchus mykiss*
- 93-002566 Bennett, Wayne A. and Frank W. Ludt. FACTORS AFFECTING THE LOW-TEMPERATURE TOLERANCE OF TEXAS PINTFISH. *Trans. Am. Fish. Soc.* 121(5):659-666. 1992. FR 38(2)
[Dep. Biol. Sci., Univ. N. Tex., P.O. Box 5218, Denton 76203] *Lepomis rhomboides*
- 93-002567 Berghahn, Rüdiger. ENVIRONMENTALLY INDUCED BIOLOGICAL TAGS IN OTOLITHS OF B-GROUP PLAICE (*Pleuronectes platessa* L.) CONFIRMED BY DAILY INCREMENT READINGS. *Repp. P.W. Res. Contr. Int. Explor. Mer.* Vol. 191, p. 464. 1989. Abstract only. FR 38(2)
[o/f Inst. Hydrobiol. & Fischereiwiss., Univ. Hamburg, Osterweg 24, 2000 Hamburg 50, Germany]
- 93-002568 Blanton, S. D.; J. C. Fenwick and S. F. Perry. THE EFFECT OF CHLORIDE CELL PROLIFERATION ON RESPIRATORY FUNCTION IN THE FISH GILL. *Am. Zool.* 32(5):32A. 1992. Abstract only. FR 38(2)
[Univ. Ottawa, Ottawa, ON, Canada]
- 93-002569 Blaugrené, E.; V. Lavie, I. Cohen; A. Solomon; D. J. Schwyer and M. Schwartz. AXONAL REGENERATION IS ASSOCIATED WITH GLIAL MIGRATION: COMPARISON BETWEEN THE INJURED OPTIC NERVES OF FISH AND RATS. *J. Comp. Neurol.* 330(1):105-112. 1993. FR 38(2)
[Schwartz, Dep. Neurobiol., Weizmann Inst. Sci., P.O. Box 26, 76100 Rehovot, Israel] *Carassius auratus*

PHYSIOLOGY (Continued)

- 93-002570 Bleckmann, H and R Zelick THE RESPONSES OF PERIPHERAL AND CENTRAL MECHANOSENSORY LATERAL LINE UNITS OF WEAKLY ELECTRIC FISH TO MOVING OBJECTS / *Comp Physiol A Sens Neural Behav Physiol* 172(1) 115-128 1993. FR 38(2)
[Inst. Zool., Tech. Hochschule Darmstadt, Schreierstr. 3, W-6100 Darmstadt, Germany] Eigenmannia vesecens and Apteronotus leptorhynchus
- 93-002571 Botschek, D. and M. Tang EMPIRICAL ANALYSIS OF THE INFLUENCE OF SWIMMING PATTERN ON THE NET ENERGETIC COST OF SWIMMING IN FISHES. / *Fish Biol* 42(2):169-183. 1993. FR 38(2)
[Univ. Montreal, Dep. Sci. Biol., C.P. 6128, Succursale 'A', Montreal, PQ, Canada H3C 3J7] Data for 10 species
- 93-002572 Bolker, J. A. COMPARISON OF GASTRULATION IN FROGS AND FISH. *Am. Zool* 32(5):172A. 1992. Abstract only. FR 38(2)
[Univ. Calif., Berkeley]
- 93-002573 Bolta, Sylvie FATTY ACID COMPOSITION OF ATLANTIC HALIBUT LARVAE FED ON ENRICHED BRACHIONUS, ARTEMIA, OR COLLECTED PLANKTON. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191. p. 475. 1989. Abstract only. FR 38(2)
[SINTEF, Cent. Aquacult., N-7034 Trondheim NTH, Norway] Hippoglossus hippoglossus
- 93-002574 Bolter, V.; M. A. Ali, M. Ancill and A. Zachmann MELATONIN SECRETION IN VITRO FROM THE PINEAL COMPLEX OF THE LAMPREY PETROMYZON MARINUS. *Gen. Comp. Endocrinol.* 89(1) 101-106. 1993. FR 38(2)
[Ali: Dep. Sci. Biol., Univ. Montreal, C.P. 6128, Succ. A, Montreal, PQ, Canada H3C 3J7]
- 93-002575 Bond, C.; C. R. Graham and J. Lombardi RAPID UTILIZATION OF GLUCOSE AND ARGININE BY PREGNANT SPARKS: A STUDY USING NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY. *Am. Zool* 32(5) 48A. 1992. Abstract only. FR 38(2)
[Univ. N.C., Greensboro] Mustelus canis
- 93-002576 Boulik, Michel and Jacques Gabaudan. HISTOLOGICAL CRITERIA FOR DETERMINING STARVATION IN LAIRVE OF DOVER SOLE (SOLEA VULGARIS QUELSEL). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191. p. 476. 1989. Abstract only. FR 38(2)
[F. Hoffmann-La Roche & Co., 4002 Basel, Switzerland]
- 93-002577 Brauer, C. J.; J. M. Shrimpton and D. J. Randall EFFECT OF SHORT-DURATION SEAWATER EXPOSURE ON PLASMA ION CONCENTRATIONS AND SWIMMING PERFORMANCE IN COHO SALMON (ONCORHYNCHUS KISUTCH) PARR. *Can. J. Fish. Aquat. Sci.* 49(11):2399-2405. 1992. In English with french sum. FR 38(2)
[Dep. Zool., Univ. British Columbia, Vancouver, BC, Canada V6T 1Z4]
- 93-002578 Buddington, Randal K.; Jeffrey R. Hazen; Serge I. Doroshov and Joel Van Eenennaam. ONTOGENY OF THE CAPACITY FOR HOMEOVISCOUS ADAPTATION IN WHITE STURGEON (ACIPENSER TRANSMONTANUS). *J. Exp. Zool.* 265(1):18-28. 1993. FR 38(2)
[Dep. Biol. Sci., Mississippi State Univ., Mississippi State 39762-5799]
- 93-002579 Budworth, P. R.; M. D. Griswold and P. L. Senger. PROLIFM MESSNER RIBONUCLEIC ACID EXPRESSION IN GONADOTROPIN-TREATED RAINBOW TROUT TESTES. *Biol. Reprod.* 46(1):310. 1992. Abstract only. FR 38(2)
[Dep. Anim. Sci. & Biochem., Wash. State Univ., Pullman 99164] Oncorhynchus kisutch
- 93-002580 Busch, M. C. and M. Morgan STANDARD OXYGEN CONSUMPTIONS AND CRITICAL OXYGEN TENSIONS IN RELATION TO SIZE DURING EARLY DEVELOPMENT OF TELEOSTS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191. p. 476. 1989. Abstract only. FR 38(2)
[Plymouth Polytech, Drake Circus, Plymouth PL4 8AA, England] Oncorhynchus mykiss and Scophthalmus maximus
- 93-002581 Butler, Ann B. and R. Glenn Northcutt THE DIENCEPHALON OF THE PACIFIC HERRING, CLUPEA HARENCLAS-CYTOARCHITECTONIC ANALYSIS. *J. Comp. Neurol.* 328(4):527-546. 1993. FR 38(2)
[I.T.N.J., 4433 N. 33rd St., Arlington, VA 22207]
- 93-002582 Canfield, J. G. and G. J. Rose ACTIVITY OF THE MAUTHNER CELL DURING FEEDING BEHAVIORS IN FISH. *Am. Zool.* 32(5):131A. 1992. Abstract only. FR 38(2)
[Univ. Utah, Salt Lake City] Carassius auratus and Micropterus salmoides
- 93-002583 Carroghan, J. F. and N. W. Pankhurst. PLASMA LEVELS OF SEX STEROIDS DURING SEXUAL MATURATION OF SNAPPER, PAGRUS AUARATUS (SPARIDAE), CAUGHT FROM THE WILD. *Aquaculture* 109(3-4):375-388. 1993. FR 38(2)
[Fac. Aquat. Sci., Deakin Univ., Geelong, Vic. 3217, Australia]

PHYSIOLOGY (Continued)

- 93-002584 Chambers, R. Christopher and Wilam C. Leggett. PARENTAL INFLUENCE ON LARVY EFFICIENCY TRAITS OF WINTER BLOUNDER (*PSUEDOPLEURONECTES AMERICANUS*) Rapp P-V Reun. Conf. Int. Explor. Mar. Vol. 191 p. 477. 1990. Abstract only. FR 38(2)
[Dep. Biol., McGill Univ., 1205 Ave. Dr. Penikese, Montreal, PQ, Canada H3A 1B1]
- 93-002585 Chang, Gen-Dong, Shu Chuan Tsai and Fore-Ulin Huang. GONADOTROPIN RELEASE FROM CARPITUITARY, SEASONAL CHANGES AND NORADRENALINE EFFECT. Proc. Natl. Sci. Council, Republic of China. Part B. Life Sci. 16(3) 111-118. 1992. In English with Chinese summary. FR 38(2)
[Grad. Inst. Biochem. Sci., Natl. Taiwan Univ., Taipei, Taiwan] *Cyprinus carpio*
- 93-002586 Chang, W. and C. A. Lorez. MECHANICAL EFFECTS ON Na^+ AND Cl^- TRANSPORT ACROSS GOBY POSTERIOR INTESTINE. Am. Zool. 32(5) 49A. 1992. Abstract only. FR 38(2)
[SUNY, Buffalo, NY]
- 93-002587 Chen Shaolan, Liu Xiaofang, Hu Chuanli, Zhang Shuyuan and Su Zeguo. NUTRITION AND ENERGETICS OF THE CHINESE HERBIVOROUS FISHES OF IMPORTANT FOOD VALUE. I. CHEMICAL COMPOSITION AND ENERGY CONTENT OF *CTENOPHARYNGODON IDELLUS*, *MICROGILIBRAHA ANGIPEPHALA* AND *PARABRAMUS PERINENSIS*. Oceanol. Limnol. Sin. 23(2) 193-205. 1992. In Chinese with English summary. FR 38(2)
[Inst. Hydrobiol., Acad. Sinica, Wuhan 430072, China]
- 93-002588 Chen Song-Urc, Bernard Breton and Pierre-Yves Le Bail. SEPARATION AND PURIFICATION OF PITUITARY GLYCOPROTEIC THYROTROPIN AND GONADOTROPIN OF CHINOOK SALMON (*Oncorhynchus tshawytscha*). Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989, Wang Xing, editor. Salmon Fish. 1990(Spec. Issue), 159-160. 1990. Abstract only. FR 38(2)
[Yangtze River Fish. Inst., Shashi, Hubei, China]
- 93-002589 Ciereszko, A. and K. Dabrowski. ESTIMATION OF SPERM CONCENTRATION OF RAIBOW TROUT, WHITEFISH AND YELLOW PERCH USING A SPECTROPHOTOMETRIC TECHNIQUE. Aquaculture 109(3-4) 367-373. 1993. FR 38(2)
[Dabrowski School Nat. Resour., Ohio State Univ., 2021 Colley Rd., Columbus 43210-1085] *Oncorhynchus mykiss*, *Coregonus clupeaformis*, and *Perca flavescens*
- 93-002590 Claiborne, J. B. and E. Perry. ACID-BASE BALANCE IN A MARINE FISH FOLLOWING ACID INFUSION: EFFECT OF AMBIENT SALINITY. J. Physiol. (Camb.) Vol. 459, p. 20. 1993. Abstract only. FR 38(2)
[Dep. Biol., Ga. South Univ., Statesboro 30460] *Myoxocephalus octodecemspinosus*
- 93-002591 Cohen, Avi H.; G. Bard Ementrou, Tim Klamer; Nancy Kapell; Karen A. Sligovski and Terhisa L. Williams. MODELLING OF INTERSEGMENTAL COORDINATION IN THE LAMPREY CENTRAL PATTERN GENERATOR FOR LOCOMOTION. Trends Neurosci. 15(11) 434-438. 1992. FR 38(2)
[Dep. Zool., Univ. Md., College Park 20770]
- 93-002592 Coughlin, D. J. and C. W. Hawyns. UV AND SHORT-WAVELENGTH (S) SENSITIVE SINGLE UNITS IN THE VISUAL SYSTEM OF RAINBOW TROUT. Am. Zool. 32(5) 164A. 1992. Abstract only. FR 38(2)
[Univ. Victoria, Victoria, BC, Canada] *Oncorhynchus mykiss*
- 93-002593 Crockett, E. L. and B. D. Sidall. HEPATIC MITOCHONDRIAL AND PEROXISOMAL β -OXIDATION IN AN ANTARCTIC FISH: SUBSTRATE SELECTIVITY AND METABOLIC PARTITIONING. Am. Zool. 32(5) 50A. 1992. Abstract only. FR 38(2)
[Univ. Maine, Orono] *Notothenia gibberifrons*
- 93-002594 Curtin, N. A. and R. C. Woledge. ENERGETIC PROPERTIES OF THE RED MUSCLE FIBRES ISOLATED FROM DOGFISH, *SCYLIORHINUS GANGLIA*. J. Physiol. (Camb.) Vol. 459, p. 7. 1993. Abstract only. FR 38(2)
[Dep. Physiol., Charing Cross & Westminster Med. School, London W6 8RT, England]
- 93-002595 Curtis, B. James and Chris M. Wood. KIDNEY AND URINARY BLADDER RESPONSES OF FRESHWATER RAINBOW TROUT TO ISOSMOTIC NaCl AND NaHCO_3 INFUSION. J. Exp. Biol. Vol. 173, p. 181-203. 1992. FR 38(2)
[Wood: Dep. Biol., McMaster Univ., 1280 Main St. W., Hamilton, ON, Canada L8S 4K1] *Oncorhynchus mykiss*
- 93-002596 Cytino, Jose Eurico. POISSON. CULTURE OF CATFISH MYOGENIC CELLS: ISOLATION, CHARACTERIZATION AND CONTROL OF PROLIFERATION. Ph.D. dissertation, Auburn Univ. 124p. 1992. From Diss. Abstr. Int. B. Sci. Eng. 53(7) 3257-3258. 1993. Order No. DA9237182. FR 38(2)
Ictalurus punctatus

PHYSIOLOGY (Continued)

- 93-002597 Czeczuga, B.; K. Dabrowski, R. Rosch and A. Champagneuille CAROTENOIDS IN FISH. 48. CAROTENOIDS IN *CORIGONUS LAURETUS* L. INDIVIDUALS OF VARIOUS POPULATIONS. *Acta Ichthyol. Piscatoria* 21(2):3-16 1991. In English with Polish summ. FR 38(2)
[Zaklad Biol. Ogólnej, Akad. Med., Kilińskiego 1, 15-230 Białystok, Poland]
- 93-002598 Czeczuga, Bazyli CAROTENOIDS IN FISH. 49. CYPRINIDAE - BENTHOSOPHAGES *CARASSIUS CARASSIUS*, *CARASSIUS AURATUS* GIBELIO, *TINCA TINCA*, *VIMBA VIMBA*, *BARBUS BARBUS* AND *BARBUS MERIDIONALIS* PETERSI. *Acta Ichthyol. Piscatoria* 22(2):25-38. 1992. In English with Polish summ. FR 38(2)
[Zaklad Biol. Ogólnej, Akad. Med., ul. Kilińskiego 1, 15-230 Białystok, Poland]
- 93-002599 Daniel, E. S.; C. C. Parkisi; D. C. Somerton and J. A. Brown LIPIDS IN EGGS FROM FIRST-TIME AND REPEAT SPAWNING ATLANTIC HALIBUT, *HYPOGLOSSUS HYPOGLOSSUS* (L.). *Aquacult. Fish Manage.* 24(2):187-191 1993. FR 38(2)
[Parish. Ocean Sci. Cent., Memorial Univ. Newfoundland, St. John's, NT, Canada A1C 5S7]
- 93-002600 Davenport, John THE PRECARIOUS LIFE OF HIGH-LATITUDE MARINE FISH. *Biology* 39(5):218-221 1992. FR 38(2)
[Univ. Mar. Biol. Stn., Millport, Isle Cumbria KA28 0TG, Scotland] *Fluoreocetes americana*, *Myoxocephalus scorpius*, *Melotus villosus*, *Boreogadus*, and *Liparis turris*
- 93-002601 Davies, Melissa and I. A. Johnston MUSCLE FIBRES IN ROSTRAL AND CAUDAL MYOTOMES OF THE ATLANTIC COD HAVE DIFFERENT CONTRACTILE PROPERTIES. *J. Physiol. (Camb.)* Vol. 459, p. 8. 1993. Abstract only. FR 38(2)
[Catty Mar. Lab., School Biol. & Med. Sci., Univ. St. Andrews, St. Andrews, Fife KY16 9LB, Scotland] *Gadus morhua*
- 93-002602 De Pedro, Nuritz Angel Luis Alonso-Gomez; Begoña Gancedo, María Jesús Delgado and Mercedes Alonso-Berbate. ROLE OF CORTICOTROPIN-RELEASING FACTOR (CRF) AS A FOOD INTAKE REGULATOR IN GOLDFISH. *Physiol. Behav.* 53(3):517-520 1993. FR 38(2)
[Alonso-Berbate Dep. Biol. Anim., I (Fisiol. Anim.), Fac. Cienc. Biol., Univ. Complutense, 28040 Madrid, Spain] *Carassius auratus*
- 93-002603 Dehn, Paula F. SEASONAL CHANGES IN ADENYLATE ENERGY METABOLISM IN THE MUSCLE AND LIVER OF THE REDDAR SUNFISH, *LEPOMIS MICROCHYRUS*. *Aquat. Living Resour.* 5(3):197-204. 1992. In English with French summ. FR 38(2)
[Dep. Biol., Carleton Coll., Buffalo, NY 14208]
- 93-002604 Desautels, N. T. and B. D. Sidell HIGH LIPID CONTENT ENHANCES THE RATE OF OXYGEN DIFFUSION IN FISH SKELETAL MUSCLE. *Am. Zool.* 32(5):50A. 1992. Abstract only. FR 38(2)
[Univ. Maine, Orono] *Morone saxatilis*
- 93-002605 Dewar, H. THE SWIMMING ENERGETICS OF YELLOWFIN TUNA. *Am. Zool.* 32(5):34A. 1992. Abstract only. FR 38(2)
[Storps Ins. Oceanogr., La Jolla, CA] *Thunnus albacares* and *Oncorhynchus*
- 93-002606 Dickhoff, W., P. Swanson; G. A. Larsen and Y. Zohar. REGULATION OF SALMONID REPRODUCTION BY CONTROLLED RELEASE OF GONADOTROPIN-RELEASING HORMONE ANALOGUE (GnRH). *Am. Zool.* 32(5):22A. 1992. Abstract only. FR 38(2)
[Northwest Fish. Sci. Cent., NMFS, Seattle, WA 98195] *Oncorhynchus klutchii* and *O. mykiss*
- 93-002607 Doggett, Teresa A., Annette B. Wrathmell and Jack E. Harris. TRANSPORT OF FERRITIN AND HORSERADISH PEROXIDASE INTO THE SYSTEMIC CIRCULATION OF THREE SPECIES OF TELEOST FISH FOLLOWING ORAL AND ANAL INTUBATION. *Fish. Shellfish Immunol.* 3(1):1-11. 1993. FR 38(2)
[Harris: Dep. Biol. Sci., Polytechnic Southwest, Drake Circus, Plymouth, Devon PL4 8AA, England] *Tilapia mossambica*, *Oncorhynchus mykiss*, and *Cyprinus carpio*
- 93-002608 Drolin, S. I. PHOSPHOLIPIDS AND FATTY ACIDS OF PHOSPHOLIPIDS OF SPERM FROM SEVERAL FRESHWATER AND MARINE SPECIES OF FISH. *Comp. Biochem. Physiol. B Comp. Biochem.* 104(2):423-428. 1993. FR 38(2)
[Inst. Problems Cryobiol. & Cryomed., Ukrainian Acad. Sci., 23 Perymislavskaya Str., Kharkov 310015, Ukraine] *Cyprinus carpio*, *Ctenopharyngodon idella*, *Tilapia mossambica*, *Centrarchus macropterus*, *Idelobus cyprinellus*, *Psetta maxima*, *Mullus barbatus porticus*, *Neogobius melanostomus*, *Oploderm annulatus*, and *Symphodus tetta*
- 93-002609 Dunn, C., S. J. Duguay and E. M. Piletskaya. HORMONAL REGULATION OF INSULIN-LIKE GROWTH FACTOR I (IGF-I) mRNA EXPRESSION IN COHO SALMON. *Am. Zool.* 32(5):13A. 1992. Abstract only. FR 38(2)
[Univ. Wash., Seattle] *Oncorhynchus klutchii*

FISHERIES REVIEW

PHYSIOLOGY (Continued)

- 93-002610 Duxson, J. and R. L. Saunders. EFFECT OF 6-, 12-, AND 18-MONTH PHOTOPERIOD CYCLES ON SMOLTING AND SEXUAL MATURATION IN JUVENILE ATLANTIC SALMON (*SALMO SALAR*). *Can. J. Fish. Aquat. Sci.* 49(11):2273-2280. 1992. In English with French sum. FR 38(2)
[Connors Bros, Ltd, Aquacult. Div., Blacks Harbor, NB, Canada E0G 1H0]
- 93-002611 Edy-Schillo, Jackie and Rami Rahamimoff. THE VOLTAGE DEPENDENCE OF THE BURSTING POTASSIUM CHANNEL IN FUSED TORPEDO SYNAPTOSONES IN VITRO. *J. Physiol. (Camb.)* Vol. 459, p. 264. 1993. Abstract only. FR 38(2)
[Dep. Physiol., Hebrew Univ-Hadassah Med. School, P.O. Box 1172, Jerusalem 91010, Israel]
- 93-002612 Egginton, S. CHANGES IN BLOOD CHEMISTRY OF ANTARCTIC TELEOSTS DURING RECOVERY FROM CAPTURE AND SURGERY. *J. Physiol. (Camb.)* Vol. 459, p. 21. 1993. Abstract only. FR 38(2)
[Dep. Physiol., Univ. Birmingham Med. School, Birmingham B15 2TJ, England] *Nototheris neglecta* and *Chaenocephalus aceratus*.
- 93-002613 Epple, August, Isabel Navarro, Pavel Horak and Sydney Spector. ENDOGENOUS MORPHINE AND CODEINE. RELEASE BY THE CHROMAFFIN CELLS OF THE EEL. *Life Sci.* 52(16):PL-117-121. 1993. FR 38(2)
[Dep. Anat. & Dep. Biol., Thomas Jefferson Univ., Philadelphia, PA 19107] *Anguilla rostrata*.
- 93-002614 Estepa, A. and J. M. Coll. PROPERTIES OF BLAST COLONIES OBTAINED FROM TROUT HEAD-KIDNEY IN FIBRIN CLOT CULTURES. *Fish Shellfish Immunol.* 3(1):71-75. 1993. FR 38(2)
[CITA-INIA, Sanidad Anim., Embajadores, 6B, 28012 Madrid, Spain] *Oncorhynchus mykiss*.
- 93-002615 Evans, David H.; Tes Toop; John Donald and John N. Forrest, Jr. C-TYPE NATRIURETIC PEPTIDES ARE POTENT DILATORS OF SHARK VASCULAR SMOOTH MUSCLE. *J. Exp. Zool.* 265(1):64-67. 1993. FR 38(2)
[Dep. Zool., Univ. Fla., Gainesville 32611] *Squalus acanthias*.
- 93-002616 Fagbunro, O. A.; A. A. Salam and D. H. J. Sydenham. INDUCED OVULATION AND SPAWNING IN THE CATFISH, *CLARIAS FIFERENSIS*, USING PITUITARY EXTRACTS FROM NON-PISCINE SOURCES. *J. Appl. Aquacult.* 1(4):15-20. 1992. FR 38(2)
[Inst. Aquacult., Univ. Stirling, Stirling FK9 4LA, Scotland]
- 93-002617 Fago, Angela; Rossana D'Avino and Guido di Prisco. THE HEMOGLOBINS OF NOTOTHEMIA ANGLUSTATA, A TEMPERATE FISH BELONGING TO A FAMILY LARGELY ENDEMIC TO THE ANTARCTIC OCEAN. *Eur. J. Biochem.* 210(3):963-970. 1992. FR 38(2)
[di Prisco: Inst. Protein Biochem. & Enzymol., C.N.R., Via Marconi 10, I-80125 Naples, Italy]
- 93-002618 Falk-Petersen, Inge-Britt; Stig Falk-Petersen; Tore Haug; Bih Klorsvik and John Sargent. UPTAKE IN ATLANTIC HALIBUT (*HYPOGLOSSUS HYPOGLOSSUS* L.) EGGS FROM PLANKTONIC SAMPLES IN NORTHERN NORWAY. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 440. 1988. Abstract only. FR 38(2)
[Norwegian Coll. Fish. Sci., Univ. Tromsø, P.O. Box 3083, C/eng, N-9001 Tromsø, Norway]
- 93-002619 Ferguson, R. A.; M. Sehdere; B. Bagatto and B. L. Tufts. IN VITRO INTERACTIONS BETWEEN OXYGEN AND CARBON DIOXIDE TRANSPORT IN THE BLOOD OF THE SEA LAMPREY (*PELOMYZON MARINUS*). *J. Exp. Biol.* Vol. 173, p. 25-41. 1992. FR 38(2)
[Tufts: Dep. Biol., Queen's Univ., Kingston, ON, Canada K7L 3N6]
- 93-002620 Fine, Mira; Edna Sakal, Dorit Vashdi; Violet Daniel; Avgdor Levonir; Ofir Ushitz and Arish Gertler. RECOMBINANT CARP (*CYPRINUS CARPIO*) GROWTH HORMONE EXPRESSION, PURIFICATION, AND DETERMINATION OF BIOLOGICAL ACTIVITY IN VITRO AND IN VIVO. *Gen. Comp. Endocrinol.* 89(1):51-61. 1993. FR 38(2)
[Gertler, Dep. Biochem. & Human Nutr., Fac. Agric., Hebrew Univ. Jerusalem, Rehovot 76100, Israel]
- 93-002621 Flächer, P.; K. Rademacher and U. Kils. IN SITU INVESTIGATIONS ON THE RESPIRATION AND BEHAVIOUR OF THE EELPOUT ZOARCES VIMPARUS UNDER SHORT-TERM HYPOXIA. *Mar. Ecol. Prog. Ser.* 88(2/3):181-184. 1992. FR 38(2)
[Limnol. Inst., Univ. Konstanz, Molnaustr. 212, W-7750 Konstanz 1, Germany]
- 93-002622 Flük, Gerit; Joan A. Van Der Veldere; Koen J. Decher; J. Peter; M. Verbois; Theo J. M. Schoenwaars; Zvonimir I. Kolar and Joerd E. Wendelaar Bonga. Ca^{2+} AND Mg^{2+} TRANSPORT IN GILLS AND GUT OF TILAPIA, *OREOCHROMIS MOSSAMBICUS*. A REVIEW. *J. Exp. Zool.* 265(4):356-366. 1993. FR 38(2)
[Dep. Anim. Physiol., Fac. Sci., Univ. Nijmegen, 6525 ED Nijmegen, Netherlands]
- 93-002623 Folmar, L. C.; T. Moody; S. Bonomelli and J. Gibson. ANNUAL CYCLE OF BLOOD CHEMISTRY PARAMETERS IN STRIPED MULLET (*MULIG CEPHALUS* L.) AND PINFISH (*LACONOCERHOMUS* L.) FROM THE GULF OF MEXICO. *J. Fish Biol.* 41(6):999-1011. 1992. FR 38(2)
[U.S. Environ. Prot. Agency, Environ. Res. Lab., Sabine Island, Gulf Breeze, FL 32561]

FISHERIES REVIEW

PHYSIOLOGY (Continued)

- 93-002624 Fossum, Peder. THE CONDITION OF HERRING LARVAE OFF WESTERN NORWAY DURING THE PERIOD 1985-1987. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191 p. 45B. 1989. Abstract only. FR 38(2)
[Inst. Mar. Res., P.O. Box 1870, N-5042 Bergen, Norway] *Clupea harengus*
- 93-002625 Franklin, Craig E., William Davison and Ian C. McKenzie. THE ROLE OF THE SPLEEN DURING EXERCISE IN THE ANTARCTIC TELEOST, *PAGOTHENIA BORCIACREVINKI* J. *Exp. Biol.* Vol. 174 p. 381-386. 1993. FR 38(2)
[Gatty Mar. Lab., School Biol. & Med. Sci., Univ. St. Andrews, Fife KY16 8LB, Scotland]
- 93-002626 Fraser, Angus J. and John H. Vandermulen. A LIPID-BASED CONDITION INDEX FOR THE LARVAE OF MARINE FISH AND LOBSTER. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191 p. 477. 1989. Abstract only. FR 38(2)
[Dep. Fish. & Oceans, Mar. Chem. Div., Physical & Chem. Sci., Bedford Inst. Oceanogr., Dartmouth, NS, Canada B2Y 4A2] *Clupea harengus*
- 93-002627 Fritsche, Regina, Serge Thomas and Steve F. Perry. EFFECTS OF SEROTONIN ON CIRCULATION AND RESPIRATION IN THE RAINBOW TROUT *ONCORHYNCHUS MYKISS* J. *Exp. Biol.* Vol. 173 p. 59-73. 1992. FR 38(2)
[Univ. Goteborg, Dep. Zoophysikal., Box 250 59, 40031 Goteborg, Sweden]
- 93-002628 Galloway, P.; H. Thorarson and A. P. Farrell. HEMATOOCRIT (HCT) AFFECTS OXYGEN UPTAKE AND TRANSPORT IN RAINBOW TROUT (*ONCORHYNCHUS MYKISS*) *Am. Zool.* 32(5):52A. 1992. Abstract only. FR 38(2)
[Simon Fraser Univ., Burnaby, BC, Canada]
- 93-002629 Gelfon, A. J. and O. Troyer. RETENTION OF SPERM MOTILITY IN TURBOT, *SCOPHTHALMUS MAXIMUS* L. - THE EFFECTS OF TIME FROM ACTIVATION, THERMAL SHOCK AND ADENOSINE TRIPHOSPHATE LEVELS. *Aquacult. Fish. Manage.* 24(2):203-209. 1993. FR 38(2)
[Univ. Liverpool, Port Erin Mar. Lab., Port Erin, Isle of Man, United Kingdom]
- 93-002630 Govers, Petra, Anthony J. M. Coenen, Henk Schipper, Henri W. J. Stroland and Lucy P. M. Timmermans. INVOLVEMENT OF FIBRONECTIN DURING EPIBOLY AND GASTRULATION IN EMBRYOS OF THE COMMON CARP, *CYPRINUS CARPIO*. *Roux's Arch. Dev. Biol.* 202(3):152-158. 1993. FR 38(2)
[Dep. Anim. Morphol. & Cell Biol., Agric. Univ., Marijkeweg 40, 6709 PG, P.O. Box 338, Wageningen, Netherlands]
- 93-002631 Girard, Stephane S. and C. Louise Milligan. THE METABOLIC FATE OF BLOOD-BORNE LACTATE IN WINTER FLOUNDER (*PLEUROPELURONECTES AMERICANUS*) DURING RECOVERY FROM STRENUOUS EXERCISE. *Physiol. Zool.* 65(6):1114-1134. 1992. FR 38(2)
[Milligan: Dep. Zool., Univ. West. Ontario, London, ON, Canada N6A 5B7]
- 93-002632 Godwin, John and Peter Thomas. STEROID HORMONE PATTERNS AND SEX CHANGE IN THE PROTANDROUS ANEMONEFISH, *AMPHIPRION MELANOPUS*. *Am. Zool.* 32(5):14A. 1992. Abstract only. FR 38(2)
[Univ. Tex., Austin]
- 93-002633 Godwin, John Robert. THE BEHAVIOR AND PHYSIOLOGY OF PROTANDROUS SEX CHANGE IN THE CINNAMON ANEMONEFISH, *AMPHIPRION MELANOPUS*. Ph.D. dissertation, Univ. Hawaii 150p. 1992. From *Dis. Abstr. Int. B Sci. Eng.* 53(8):3973. 1993. Order No. DA9300320. FR 38(2)
- 93-002634 Goetz, Frederick William. INVOLVEMENT OF PROTEIN KINASE C IN AGONIST-STIMULATED GOLDFISH OVULATION. *Biol. Reprod.* 48(4):846-850. 1993. FR 38(2)
[Univ. Notre Dame, Dep. Biol. Sci., Notre Dame, IN 46556] *Carassius auratus*
- 93-002635 Godfish, Edward Michael. TISSUE-SPECIFIC PARTITIONING OF ENERGY USE IN FISH. Ph.D. dissertation, Univ. Minn. 105p. 1986. From *Dis. Abstr. Int. B Sci. Eng.* 47(12):4794. 1987. Order No. DA8706923. FR 38(2)
Micropterus salmoides
- 93-002636 Graham, C. R., Jr., J. Lombardi, C. Bond and V. P. Chacko. HIGH FIELD MAGNETIC RESONANCE SPECTROSCOPY OF ALANINE METABOLISM IN THE PLACENTAL VIVIPAROUS SHARK, *MUSTELUS CANIS*. *Am. Zool.* 32(5):53A. 1992. Abstract only. FR 38(2)
[Loyola Coll., Baltimore, MD]
- 93-002637 Gruber, S. J. THE EFFECTS OF ENOURANCE TRAINING ON THE LEOPARD SHARK (*TRIAKUS SEMIFASCIATA*). *Am. Zool.* 32(5):36A. 1992. Abstract only. FR 38(2)
[Calif. State Univ., Fullerton]

FISHERIES REVIEW

PHYSIOLOGY (Continued)

- 93-002638 Gu, Uya. REGULATION OF THE DISPERSION OF CAROTENOID DROPLETS IN GOLDFISH XANTHOPHORES BY THE PHOSPHORYLATION OF AN ORGANIC PROTEIN-P57. Ph.D. dissertation, Wayne State Univ. 159p. 1992. From Diss. Abstr. Int. B Sci. Eng. 53(4) 167B. 1992. Order No. DA9225686. FR 38(2)
- 93-002639 Gunn, J. M.; D. L. C. Noakes and G. F. Westlake. BEHAVIOURAL RESPONSES OF LAKE CHARR (*SALVELINUS ALPINUS*) EMBRYOS TO SIMULATED ACID RAIN/OFF CONDITIONS. Proceedings of the 21st Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1985. J. S. S. Lakshminarayana, editor. Can. Tech. Rep. Fish. Aquat. Sci. No. 1575. p. 4-10. 1987. English and french abstract only. FR 38(2)
- [Fish Branch, Ontario Minist. Nat. Resour., Toronto, ON, Canada M7A 1W3]
- 93-002640 Hakanson, John I. THE CONDITION OF LARVAL ANCHOVY (*ENGRANULUS MORDAX*) IN THE SOUTHERN CALIFORNIA BIGHT, AS MEASURED THROUGH LIPID ANALYSIS. Rapp. P.-V. Reun. Cons. Int. Explor. Mer. Vol. 191, p. 459. 1989. Abstract only. FR 38(2)
- [Scripta Inst. Oceanogr., La Jolla, CA 92093]
- 93-002641 Han Xifu and Wang Suzan. THE STUDIES ON THE GROWTH AND ENERGY METABOLISM OF HINE SCALE FISH. Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989. Wang Xiang, editor. Salmon Fish. 1990(Spec. Issue)103-107. 1990. FR 38(2)
- [Dep. Biol., Hebei Univ., Baoding, Hebei Province, China] (*Brachymystax lenok* in China).
- 93-002642 Hannaman, Eric H. LOCALIZATION AND ROLE OF ACETYLCHOLINESTERASE IN ZEBRAFISH DEVELOPMENT. Ph.D. dissertation, Univ. Oreg. 158p. 1986. From Diss. Abstr. Int. B Sci. Eng. 47(7):277B. 1987. Order No. DA8622499. FR 38(2)
- [Brachydanio rerio]
- 93-002643 Hamahan, J. W.; Z. Grzelczak; S. Sanson, F. Durgatz, T. J. Jenson and J. R. Riordan. CI CHANNELS IN THE RECTAL GLAND OF THE SHARK *SQUALUS ACANTHIAS* AND IN CELLS EXPRESSING SHARK CTR. Am. Zool. 32(5):36A. 1992. Abstract only. FR 38(2)
- [Dep. Physiol., McGill Univ., Montreal, PQ, Canada]
- 93-002644 Hao, R.; R. F. Pfeiffer and M. Ebad. PURIFICATION AND CHARACTERIZATION OF METALLOTHIONEIN AND ITS ACTIVATION OF PYRIDOXAL PHOSPHOKINASE IN TROUT (*SALMO GARDNERI*) BRAIN. Comp. Biochem. Physiol. B Comp. Biochem. 104(2):293-298. 1993. FR 38(2)
- [Ebad: Dep. Pharmacol., Univ. Nebr. Coll. Med., 600 S. 42nd St., Omaha 68198-6260]
- 93-002645 Harmon, J. S.; L. M. Rierkes and M. A. Sheridan. GLUCAGON AND INSULIN REGULATE HEPATIC LIPOLYSIS IN RAINBOW TROUT BY PHOSPHORYLATION OF TRIACYLGLYCEROL LIPASE. Am. Zool. 32(5):14A. 1992. Abstract only. FR 38(2)
- [N.D. State Univ., Fargo] (*Oncorhynchus mykiss*).
- 93-002646 Hartmund, T. and H. Gesser. TEMPERATURE, CONTRACTILITY AND HIGH ENERGY PHOSPHATES IN ANOXIC FISH HEART MUSCLE. J. Comp. Physiol. B Biochem. Syst. Environ. Physiol. 162(8):714-721. 1992. FR 38(2)
- [Gesser: Inst. Biol. Sci., Dep. Zoophysiol., Univ. Aarhus, DK-8000 Aarhus, Denmark] (*Oncorhynchus mykiss*).
- 93-002647 Hashimoto, Y.; S. Hidaka; M. Maehara; Y. Lu and N. Koyama. UV-SENSITIVE NEURONS IN THE DACE RETINA. Am. Zool. 32(5):162A. 1992. Abstract only. FR 38(2)
- [Tokyo Women's Med. Coll., Tokyo, Japan]
- 93-002648 Hawryshyn, C. W. NEUROETHOLOGICAL PERSPECTIVES ON ULTRAVIOLET-POLARIZATION SENSITIVITY IN PACIFIC SALMONIDS. Am. Zool. 32(5):165A. 1992. Abstract only. FR 38(2)
- [Lab. Semary Biol., Dep. Biol., Univ. Victoria, Victoria, BC, Canada]
- 93-002649 Haylor, G. and O. Oyegunwa. ONSET OF AIR BREATHING AND DEVELOPMENT OF ACCESSORY BREATHING ORGANS IN RELATION TO TEMPERATURE IN THE AFRICAN CATFISH, *CLARIAS CAREIFINUS* (BURCHELL). Aquacult. Fish. Manage. 24(2):253-260. 1993. FR 38(2)
- [Inst. Aquacult., Univ. Stirling, Stirling FK9 4LA, Scotland]
- 93-002650 Hopkema, F. W.; W. T. Melvin and C. J. Secombes. PARTIAL PURIFICATION OF FISH MACROPHAGE ACTIVATING FACTOR. Third International Veterinary Immunology Symposium, August 17-20, 1992, Budapest, Hungary. Vet. Immunol. Immunopathol. 35(Suppl.):170. 1993. Abstract only. FR 38(2)
- [Dep. Zool., Univ. Aberdeen, Tillydrone Ave., Aberdeen AB9 2TN, Scotland] (*Oncorhynchus mykiss*).
- 93-002651 Hoppel, S. A.; C. V. Sullivan; Y. Tao and J. F. Robson. AN EVOLUTIONARILY CONSERVED REGION ON THE VITELLOGENIN MOLECULE OF OVIPAROUS VERTEBRATES. Am. Zool. 32(5):15A. 1992. Abstract only. FR 38(2)
- [N.C. State Univ., Raleigh] (*Morone saxatilis* and *Oncorhynchus mykiss*).

PHYSIOLOGY (Continued)

93-002652 Hickie, B. E.; D. A. Holdway; B. D. Sloley; R. C. H. Downer and D. G. Dixon. THE USE OF BRAIN MONOAMINE METABOLISM AS AN INDICATOR OF TOXICANT IMPACT ON FISH. *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986*. J. S. S. Lakshminarayana, editor. Can. Tech. Rep. Fish. Aquat. Sci. No. 1575. p. 101-102. 1987. English and French abstract only. FR 30(2)

[Dep. Biol., Univ. Waterloo, Waterloo, ON, Canada N2L 3G1] Jovanielle Pando.

93-002653 Hill, Kevin T. INTERACTIVE EFFECTS OF TEMPERATURE AND BODY SIZE ON FLUORESCENT AGE/REGULATION VARIABILITY IN FISH. *Seventeenth Annual Albert L. Tester Memorial Symposium, 15-16 April 1992*. Pac. Sci. 47(1):89-90. 1993. Abstract only. FR 30(2)

[Dep. Zool., Univ. Hawaii Manoa, Honolulu 96822] Patrick Conrath

93-002654 Himes, G. A. and S. A. Watts. *IN VIVO* ANALYSIS OF STEROID METABOLISM IN THE TELEOST FRY, *TILAPIA NILOTICUS*, AT DIFFERENT DEVELOPMENTAL STAGES. *Am. Zool.* 32(5):15A. 1992. Abstract only. FR 30(2)

[Univ. Ala., Birmingham]

93-002655 Holmgren, S.; P. Karlä; A.-C. Jonsson and J. Jensen. GALANIN IN THE GUT OF THE ATLANTIC COD, *GADUS MORHUA*. DISTRIBUTION AND EFFECTS. *J. Physiol. (Camb.)* Vol. 459. p. 10. 1993. Abstract only. FR 30(2)

[Dep. Zoophysiol., Univ. Göteborg, Box 250 59, S-400 31 Göteborg, Sweden]

93-002656 Holt, G. Joan and Michael A. Banks. SALINITY TOLERANCE AND DEVELOPMENT OF OSMOREGULATION IN LARVAL SCIAENIDS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191. p. 409. 1989. Abstract only. FR 30(2)

[Univ. Tex. Austin, Mar. Sci. Inst., Port Aransas] *Cynoscion nebulosus*, *Mikropogonias undulatus*, and *Sciaenops ocellatus*.

93-002657 Houlihan, D. F.; W. Waiser; A. Foster and J. Brechin. *IN VIVO* PROTEIN SYNTHESIS RATES IN LARVAL NASE (*CHONDROSTOMA NASUS* L.). *Can. J. Zool.* 70(12):2436-2440. 1992. In English with French summ. FR 30(2)

[Dep. Zool., Univ. Aberdeen, Aberdeen, Scotland]

93-002658 Howell, B. R.; A. R. Child and R. G. Houghton. FERTILIZATION RATE IN A NATURAL POPULATION OF THE COMMON SOLE (*SOLEA SOLEA* L.). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191. p. 441. 1989. Abstract only. FR 30(2)

[MAFF, Dir. Fish. Res., Fish. Lab., Lowestoft, Suffolk NR33 5HT, England]

93-002659 Huber, Maria and Helga Guderley. THE EFFECT OF THERMAL ACCLIMATION AND EXERCISE UPON THE BINDING OF GLYCOLYTIC ENZYMES IN MUSCLE OF THE GOLDFISH *CARRASUS AURATUS*. *J. Exp. Biol.* Vol. 175. p. 195-209. 1993. FR30(2)

[Guderley: Dep. Biol., Univ. Laval, Sainte Foy, PQ, Canada G1K 7P4]

93-002660 Hull, Eugene. THE ROLE OF LIGHT IN CONTROLLING THE ONSET AND DURATION OF EMBRYONIC DIAPAUSE IN *NOTEMBRANCHIUS CUNEIFRONS*. Ph.D. dissertation, N.Y. Univ. 169p. 1986. From Diss. Abstr. Int. 0 Sci. Eng. 47(12):4735-4736. 1987. Order No. DA0706747. FR 30(2)

93-002661 Huet, Annette and Patsy A. Thompson. THE INFLUENCE OF HYDROGEN AND ALUMINIUM IONS ON EGGS AND FRY OF LAND LOCKED SALMON (*SALMO SALAR QUAINAWICHE*). *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986*. J. S. S. Lakshminarayana, editor. Can. Tech. Rep. Fish. Aquat. Sci. No. 1575. p. 11-12. 1987. English and French abstract only. FR 30(2)

[Tech. Millieu Nat., Cegep St-Felicien, PQ, Canada G0W 2N0]

93-002662 Huisaert, F.; P. Vandewalle and B. Focant. POLYMORPHISM OF WHITE MUSCLE MYOSIN AND PARVALBUMINS IN THE GENUS *BARBUS* (TELEOSTEI: CYPRINIDAE). *J. Fish Biol.* 41(6):873-882. 1992. FR 30(2)

[Lab. Biol. Cell. et Tissulaire, Univ. Liege, rue Pittetras 20, B-4020 Liege, Belgium] *B. barbus*, *B. meridionalis*, *B. conchonus*, *B. haasi*, *B. sachii*, and *B. steya*.

93-002663 Ishiyashi, Yasunori; Kaitaro Kato; Shinzou Ikeda; Osamu Murata; Toshiro Masu and Hiromi Kuroki. EFFECTS OF DIETARY ASCORBIC ACID ON TOLERANCE TO INTERMITTENT HYPOXIC STRESS IN JAPANESE PARROT FISH. *Nippon Suisan Gakkaishi* 58(11):2147-2152. 1992. In English with Japanese summ. FR 30(2)

[Dep. Fish., Fac. Agric., Kinki Univ., Nakamachi, Nara 631, Japan] *Oryzias latipes*.

PHYSIOLOGY (Continued)

- 93-002664 Ishioka, Hiroko, Ryo Kusagi, Kazuomi Ouchi, Akiko Hara, Takesuki Nigamitsu, Shigeo Mihara and Hideo Ogas. EFFECT OF RECOMBINANT RED SEA BREAM GROWTH HORMONE ON GROWTH OF YOUNG RED SEA BREAM. *Nippon Suisan Gakkaishi* 58(12):2335-2340. 1992. In English with Japanese summary. FR 38(2)
[Nansei Natl. Fish Res. Inst., Ono, Sase, Hiroshima 739-04, Japan] *Pagrus major*.
- 93-002665 Jayaram, Mahanasa G. and F. W. H. Beamish. INFLUENCE OF DIETARY PROTEIN AND LIPID ON NITROGEN AND ENERGY LOSSES IN LAKE TROUT, *Salvelinus namaycush* L. *Can. J. Fish. Aquat. Sci.* 49(11):2267-2272. 1992. In English with French summary. FR 38(2)
[Dep. Zool., Univ. Guelph, ON, Canada N1G 2W1]
- 93-002666 Jeffery, S. E. L., R. J. M. Jones and K. H. Ruddock. DIURNAL VARIATIONS IN ELECTROPHYSIOLOGICAL ACTIVITY IN THE ISOLATED RETINA OF A CYPRINID FISH (*Roadia*). *J. Physiol. (Camb.)* Vol. 459 p. 61. 1993. Abstract only. FR 38(2)
[Cunnam Suaritchan Lab., Dep. Physics & Biol., Imperial Coll., Silwood Park, Ascot, Berkshire SL5, England] *Roadia raiata*.
- 93-002667 Johnston, Sheila A. and Leonard Maler. ANATOMICAL ORGANIZATION OF THE HYPOPHYSIOTROPIC SYSTEMS IN THE ELECTRIC FISH, *Apteronotus leptorhynchus*. *J. Comp. Neurol.* 317(4):421-437. 1992. FR 38(2)
[Maler, Dep. Anat., Fac. Med., Univ. Ottawa, Ottawa, ON Canada K1H 8M5]
- 93-002668 Johnstone, A. D. F., C. S. Wardle and S. M. Almatov. ROUTINE RESPIRATION RATES OF ATLANTIC MACKEREL, SCOMBR SCOMBRUS L., AND HERRING, *Clupea harengus* L., AT LOW ACTIVITY LEVELS. *J. Fish Biol.* 42(1):149-151. 1993. FR 38(2)
[Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen, Scotland]
- 93-002669 Josefsson, Szondi and Mary F. Tainer. HISTOGENESIS OF THE LYMPHOID ORGANS IN SEA BREAM (*SPARUS AURATA* L.) FISH. *Shellfish Immunol.* 3(1):35-49. 1993. FR 38(2)
[Inst. Exp. Pathol., Fish Dis. Lab., Univ. Iceland, Keldur, 112 Reykjavik, Iceland]
- 93-002670 Karlä, Paul, Ann-Cathrine Gustafson, Jorgen Jøsson and Susanne Holmgren. GALANIN-LIKE IMMUNOREACTIVITY IN EXTRINSIC AND INTRINSIC GASTRIC NERVES TO THE GUT OF THE ATLANTIC COD, *GADUS MORHUA*, AND THE EFFECT OF GALANIN ON THE SMOOTH MUSCLE OF THE GUT. *Cell Tissue Res* 271(3):537-544. 1993. FR 38(2)
[Comp. Neurosci. Unit, Dep. Zoophysiol., Univ. Göteborg, Medicinaregatan 18, S-41330 Göteborg, Sweden]
- 93-002671 Kawa, J. E., D.-M. Vanuzan, A. P. Farrell and G. F. Tibbits. INFLUENCE OF TEMPERATURE, STIMULATION FREQUENCY AND TEMPERATURE ACCLIMATION ON RYANODINE SENSITIVITY OF RAINBOW TROUT VENTRICULAR TISSUE. *Am. Zool.* 32(5):55A. 1992. Abstract only. FR 38(2)
[Simon Fraser Univ., Burnaby, BC, Canada] *Oncorhynchus mykiss*.
- 93-002672 Kikuchi, Kotaro, Shigenobu Tokuda, Haruo Honda and Michiyasu Kiyono. NITROGENOUS EXCRETION OF JUVENILE AND YOUNG JAPANESE FLOUNDER. *Nippon Suisan Gakkaishi* 58(12):2329-2333. 1992. In English with Japanese summary. FR 38(2)
[Abiko Res. Lab., Cent. Res. Inst. Electric Power Ind., Abiko, Chiba 270-11, Japan] *Paralichthys olivaceus*.
- 93-002673 King, L.A. and A. J. Asp. ADULT AND FETAL HEMOGLOBINS IN THE SHARK *CETORHYNCHUS MAXIMUS*. *Am. Zool.* 32(5):55A. 1992. Abstract only. FR 38(2)
[San Francisco State Univ., San Francisco, CA]
- 93-002674 Kinkiad, R. S., Aota, S. F., Perry and D. J. Randall. PROPRANOLOL IMPAIRS THE HYPERVENTILATORY RESPONSE TO ACUTE HYPERCAPNIA IN RAINBOW TROUT. *J. Exp. Biol.* Vol. 175, p. 115-126. 1993. FR 38(2)
[Dep. Zool., Univ. British Columbia, 6270 University Blvd., Vancouver, BC, Canada V6T 1Z4] *Oncorhynchus mykiss*.
- 93-002675 Kirk, Karen, J. Clive Elroy and James D. Young. EVIDENCE FOR A VOLUME-ACTIVATED CHANNEL WITH A HIGH PERMEABILITY TO ORGANIC SUBSTRATES IN FLOUNDER ERYTHROCYTES. *J. Physiol. (Camb.)* Vol. 459, p. 306. 1993. Abstract only. FR 38(2)
[Univ. Lab. Physiol., Parks Rd., Oxford OX1 3PT, England] *Platichthys stellatus*.
- 93-002676 Kishida, M. and J. L. Specker. VITELLOGENIN IN THE SURFACE MUCUS OF TILAPIA: POSSIBILITY FOR NUTRIENT UPTAKE BY THE LARVAE. *Am. Zool.* 32(5):16A. 1992. Abstract only. FR 38(2)
[Univ. RI, Kingston] *Tilapia mossambica*.
- 93-002677 Knowler, T. N. C., R. E. Shadwick, J. B. Crohanc, R. Shabalov and V. Bhargava. BIOMECHANICAL PROPERTIES OF THE ELASTIC BRANCH PERICARDIAL SEPTUM. *Am. Zool.* 32(5):56A. 1992. Abstract only. FR 38(2)
[Scripps Inst. Oceanogr., Univ. Calif., La Jolla] *Heterostichus francisci*.

PHYSIOLOGY (Continued)

- 93-002670 Knox, C. J.; S. K. Boyland & S. A. Sower. CHARACTERIZATION OF GONADOTROPIN RELEASING HORMONE BINDING SITES IN THE PITUITARY OF THE SEA LAMPREY (*PETROMYZON MARINUS*). *Am Zool* 32(5):16A. 1992. Abstract only. FR 30(2)
[Univ. N.H., Durham]
- 93-002679 Koch, E. A., L. C. Lockridge and R. H. Spitzer. EPIDERMAL CLUB CELLS OF TELEOSTS BEAR STRUCTURAL AND FUNCTIONAL SIMILARITY TO GLAND THIREAD CELLS IN THE HAGFISHES. *Am Zool* 32(5):82A. 1992. Abstract only. FR 30(2)
[Univ. Health Sci., Chicago Med. School, North Chicago, IL 60064] *Acanthopneustes*, *I. furcatus*, *Anguilla rostrata*, *Megrimus anguillicaudatus*, *Acanthopneustes kawai*, and *Neoceratodus forsteri*
- 93-002680 Kolok, A. S. CORRELATIONS BETWEEN THE SWIMMING PERFORMANCE OF JUVENILE LARGEMOUTH BASS AND PHYSIOLOGICAL AND MORPHOLOGICAL TRAITS CHANGE SEASONALLY. *Am Zool* 32(5):56A. 1992. Abstract only. FR 30(2)
[Simon Fraser Univ., Burnaby, BC, Canada] *Micropterus salmoides*
- 93-002681 Kormanik, G. A. TOTAL NITROGEN, TRIMETHYLAMINE N-OXIDE AND UREA CONTENT DURING DEVELOPMENT OF ELASMOBRANCH LMBRYOS. *Am Zool* 32(5):56A. 1992. Abstract only. FR 30(2)
[Univ. N.C., Asheville] *Raja erinacea* and *Squalus acanthias*
- 93-002682 Korsgaard, Bodil and Thomas P. Mørmann. GLUCONEOGENESIS IN HEPATOCYTES OF IMMATURE RAINBOW TROUT (*ONCORHYNCHUS MYKISS*) CONTROL BY ESTRADIOL. *Gen Comp Endocrinol* 89(1):17-27. 1993. FR 30(2)
[Inst. Biol., Odense Univ., Campusvej 55, 5230 Odense M, Denmark]
- 93-002683 Kosmeyer, K. E.; J. B. Graham and R. E. Shadwick. CARDIAC PERFORMANCE IN SWIMMING YELLOWFIN TUNA. *Am Zool* 32(5):57A. 1992. Abstract only. FR 30(2)
[Scrpps Inst. Oceanogr., La Jolla, CA] *Thunnus albacares*
- 93-002684 Kramer, C. R.; M. T. Costello and L. Dubostelmer-Ulvost. sGnRH- α [D-Arg⁶, Pro⁹, NDEHRH] IN COMBINATION WITH DOMPERIDONE INDUCES GONAD REVERSAL IN A PROTOGYNOUS FISH, THE BLUEHEAD WRASSE, *THALASSOMA BIVASCATUM*. *J. Fish Biol.* 42(2):185-195. 1993. FR 30(2)
[Biol. Dep., Coll. Staten Island, 130 Suzyvasant Pl., Staten Island, NY 10301]
- 93-002685 Kroese, Aileen B. A. and Nico A. M. Schothals. VELOCITY- AND ACCELERATION-SENSITIVE UNITS IN THE TRUNK LATERAL LINE OF THE TROUT. *J. Neurophysiol.* (Bethesda) 68(6):2212-2221. 1992. FR 30(2)
[Lab. Med. Physics, Univ. Amsterdam, Acad. Med. Cent., Meibergdreef 15, 1105 AZ Amsterdam, Netherlands] *Oncorhynchus mykiss*
- 93-002686 Kuz'mina, Y. I. Goodrich and G. Wiklerburg. FATE OF ULTRAVIOLET RECEPTORS IN THE EYE OF THE ATLANTIC SALMON. *Am Zool* 32(5):167A. 1992. Abstract only. FR 30(2)
[Univ. Coll. Dublin, Ireland]
- 93-002687 Kur'mina, V. V. ACTIVITY OF THE DIGESTIVE ENZYMES OF THE INTESTINAL MUCOUS MEMBRANE IN BLACK SEA FISHES OF DIFFERENT ECOLOGY. *J. Ichthyol.* (Engl. Transl. Vopr. Ichtyol.) 32(7):71-79. 1992. FR 30(2)
[Inst. Biol. Inland Waters, USSR Acad. Sci., Borok, Yaroslavl Region, USSR] Data for 16 species.
- 93-002688 Kwon, H. C.; S. Hayashi and Y. Mughya. VITELLOGENIN INDUCTION BY ESTRADIOL-17 β IN PRIMARY HEPATOCYTE CULTURE IN THE RAINBOW TROUT, *ONCORHYNCHUS MYKISS*. *Comp. Biochem. Physiol. B Comp. Biochem.* 104(2):381-386. 1993. FR 30(2)
[Fac. Fish., Hokkaido Univ., Minato-3, Hakodate 041, Japan]
- 93-002689 Lahnsteiner, F., B. Hussbauer and R. A. Putzner. UNUSUAL TESTICULAR ACCESSORY ORGANS, THE TESTICULAR BLIND POUCHES OF BLENNIES (TELEOSTE, BLENNIDAE): FINE STRUCTURE, [ENZYME]-HISTOCHEMISTRY AND POSSIBLE FUNCTIONS. *J. Fish Biol.* 42(2):227-241. 1993. FR 30(2)
[Zool. Inst., Univ. Salzburg, Hellbrunnstr. 34, A-5020 Salzburg, Austria] *Blenius canescens* and *B. pavo*.
- 93-002690 Lai, N. C., B. L. Klein, T. Knowler, J. B. Graham and R. Shadwick. ATRIAL-PRESSURE RECORDINGS VERIFY VIS-A-TERGO CARDIAC FILLING IN THE ELASMOBRANCH HEART. *Am Zool* 32(5):10A. 1992. Abstract only. FR 30(2)
[WAMC, La Jolla, CA]
- 93-002691 Laidley, C. W. and P. Thomas. EVIDENCE FOR INTRA-OVARIAN REGULATION OF OVARIAN STEROIDOGENESIS IN FISH. *J. Biol. Reprod.* 46(1):223. 1992. Abstract only. FR 30(2)
[Mar. Sci. Inst., Univ. Tex. Austin, Port Aransas 78373] *Cynoscion nebulosus*
- 93-002692 Lane, Hugo C. and Tanang Dai. EFFECT OF HYPOXIA AND HYPEROXIA ON RAINBOW TROUT RED CELLS. *Am Zool* 32(5):57A. 1992. Abstract only. FR 30(2)
[Wake Forest Univ., Winston-Salem, NC] *Oncorhynchus mykiss*

PHYSIOLOGY (Continued)

- 93-002693 Larsen, D. A. and P. Swanson. EFFECTS OF GONAECTOMY ON PLASMA GONADOTROPINS AND IIN IN COHO SALMON (*Oncorhynchus kisutch*). *Am. Zool.* 32(5):24A. 1992. Abstract only. FR 38(2)
[Northwest Fish. Sci. Cent., Seattle, WA 98195]
- 93-002694 Larsen, Donald A. and Penny Swanson. EFFECTS OF GONAECTOMY ON PLASMA GONADOTROPINS AND IIN IN COHO SALMON (*Oncorhynchus kisutch*). *Biol. Reprod.* 46(1):26. 1992. Abstract only. FR 38(2)
[Northwest Fish. Sci. Cent., NMFS, Seattle, WA 98195]
- 93-002695 Laurendeau, Jacques. [FORMULATION OF NUTRITIONAL SYSTEM FOR THE LAKE WHITEFISH (*Coregonus clupeaformis*): STUDY OF DIGESTIBILITY.] *M.S. thesis, Univ. Laval (Canada)* 122p. 1991. In French. From *Masters Abstr. Int.* 31(1):105. 1993. Order No. MAMM60359. FR 38(2)
- 93-002696 Lauve, Anita and Sigbj. H. Dannevig. FLUID PHASE ENDOCYTOSIS BY RAINBOW TROUT HEAD-KIDNEY MACROPHAGES. *Fish. Shellfish Immunol.* 3(2):79-87. 1993. FR 38(2)
[Dannevig, NVH/Nad. Vet. Inst., P.O. Box 8156 Dep., 0033 Oslo 1, Norway] *Oncorhynchus mykiss*.
- 93-002697 Lee, Robert K. K., Robert C. Eaton and Steven J. Zottoli. SEGMENTAL ARRANGEMENT OF RETICULOSPINAL NEURONS IN THE GOLDFISH HINDBRAIN. *J. Comp. Neurol.* 329(4):539-556. 1993. FR 38(2)
[Harvard Med. School, Gen. Hospital-E, Cardiovascular Res. Cent., 4th floor, 149 13th St., Charlestown, MA 02129] *Carassius auratus*.
- 93-002698 Leges, R. and R. Lallier. DEVELOPMENT OF MULTIRESTANCE PATTERNS IN THE BACTERIAL FLORA OF TROUT FOLLOWING AN ANTI-BIOTIC THERAPY. *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986*. J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci. No.* 1575, p. 115-117. 1987. English and French abstract only. FR 38(2)
[Cent. Mar., C.P. 1010, Shippagan, NB, Canada E0B 2P0]
- 93-002699 Lemke, M., M. MacKay, M. Chiu, D. Katak and H. E. Kasinsky. VARIABILITY OF TESTIS-SPECIFIC BASIC PROTEINS IN THE THREE-SPINED STICKLEBACK *Gasterosteus aculeatus* AND RELATED SPECIES. *Am. Zool.* 32(5):57A. 1992. Abstract only. FR 38(2)
[Univ. British Columbia, Vancouver, BC, Canada] *C. ulazalandi*, *Aulorhynchus flavidus*, and *Pungitius pungitius*.
- 93-002700 Lin, J.-J. and G. N. Somero. THERMAL ADAPTATION OF CYTOPLASMIC MALATE DEHYDROGENASES IN THE WHITE MUSCLE OF EASTERN PACIFIC BARRACUDA (GENUS *Sphyraena*). *Am. Zool.* 32(5):58A. 1992. Abstract only. FR 38(2)
[Scripps Inst. Oceanogr., Univ. Calif., La Jolla] *S. argentea*, *S. ensa*, *S. tiburo*, and *S. lucasana*.
- 93-002701 Lin, Xin-Wu, Hao-Ren Lin and Richard E. Peter. GROWTH HORMONE AND GONADOTROPIN SECRETION IN THE COMMON CARP (*CYPRINUS CARPIO* L.): IN VITRO INTERACTIONS OF GONADOTROPIN-RELEASING HORMONE, SOMATOSTATIN, AND THE DOPAMINE AGONIST APOMORPHINE. *Gen. Comp. Endocrinol.* 89(1):62-71. 1993. FR 38(2)
[Dep. Biol., Zhongshan Univ., Guangzhou, China]
- 93-002702 Lowe, Christina Wehl. RETINAL DEGENERATION PATTERNS OF ULTRAVIOLET CONES IN SOME FRESHWATER FISHES. *Am. Zool.* 32(5):166A. 1992. Abstract only. FR 38(2)
[Dep. Anat., Cornell Coll. Vet. Med., Ithaca, NY 14853] *Lepomis* and *Perca flavescens*.
- 93-002703 Lowe, Christina Wehl. DIEL CHANGES IN CONE PHOTORECEPTORS OF THE WALLYE, *STIZOSTEDION VITREUM*. *Am. Zool.* 32(5):67A. 1992. Abstract only. FR 38(2)
[Dep. Anat., Cornell Coll. Vet. Med., Ithaca, NY 14853]
- 93-002704 Londavilla, R. L. and B. D. Sidell. ISOLATION AND CHARACTERIZATION OF INTRACELLULAR FATTY ACID-BINDING PROTEIN IN FISH AEROBIC MUSCLE. *Am. Zool.* 32(5):58A. 1992. Abstract only. FR 38(2)
[Univ. Maine, Orono] *Alosa saxatilis*.
- 93-002705 Long, J. H., Jr.; M. J. Mohrwy and N. Boettcher. MAKING WAVES: ELECTRICALLY STIMULATED SWIMMING IN PLUMPKIN-EED SUNFISH *LEPOMIS GIBBOSUS*. *Am. Zool.* 32(5):46A. 1992. Abstract only. FR 38(2)
[Water Coll., Poughkeepsie, NY]
- 93-002706 Lovejoy, D. A.; C. S. Nakomlek; R. E. Peter; J. E. River and N. M. Sherwood. STIMULATION OF GONADOTROPIN-H AND GROWTH HORMONE RELEASE BY NOVEL STRUCTURES OF GONADOTROPIN-RELEASING HORMONE. *Biol. Reprod.* 46(1):30. 1992. Abstract only. FR 38(2)
[Dep. Zool., Univ. Alberta, Edmonton, AB, Canada]

PHYSIOLOGY (Continued)

- 93-002707 Lucas, M. C., A. D. F. Johnstone and J. Tang. AN ANNUAL RESPIROMETER FOR MEASURING AEROBIC METABOLIC RATES OF LARGE, SCHOOLING FISHES. *J. Exp. Biol.* Vol. 175, p. 325-331, 1993. FR 38(2)
[Univ. Durham, Dep. Biol. Sci., South Rd., Durham DH1 3LE, England]
- 93-002708 Luke, G., C. P. Cudde, I. Sanders, N. Hazen and G. Cram. Na-K-ATPase EXPRESSION IN THE EURYHALINE EUROPEAN EEL (*ANGUILLA ANGUILLA*) DURING ACCLIMATION TO SEAWATER. *J. Physiol. (Camb.)* Vol. 459, p. 105. 1993. Abstract only. FR 38(2)
[School Biol. & Med. Sci., Univ. St. Andrews, St. Andrews, Fife KY16 9TS, Scotland]
- 93-002709 Mackay, M. E. and C. B. Lazler. ESTROGEN RESPONSIVENESS OF VITELLOGENIN GENE EXPRESSION IN RAINBOW TROUT (*ONCORHYNCHUS MYKISS*) KEPT AT DIFFERENT TEMPERATURES. *Can. Comp. Endocrinol.* 89(2) 255-266, 1993. FR 38(2)
[Lazler: Dep. Biochem., Dalhousie Univ., Halifax, NS, Canada B3H 4P7]
- 93-002710 Magliolo Capriano, L. and M. P. Schreibman. VARIANT FORMS OF GnRH IN THE PLATYFISH FROM BIRTH TO SEXUAL MATURITY. *Am. Zool.* 32(5) 17A. 1992. Abstract only. FR 38(2)
[Biol., Brooklyn Coll., CUNY, Brooklyn, NY 11210] *Xenopus*
- 93-002711 Magor, B., N. W. Allier, L. W. Clem, D. L. Middleton and G. W. Warr. DIVERGENT AND CONSERVED ASPECTS OF IMMUNOGLOBULIN mRNA PROCESSING IN CATFISH AND MURINE B CELLS. *Am. Zool.* 32(5):30A. 1992. Abstract only. FR 38(2)
[Univ. Miss. Med. Cent., Jackson] *Acanthopoma punctatus*
- 93-002712 Maillou, Julia and I. A. Nimmo. 8-ANILINO-1-NAPHTHALENE SULPHONATE BINDS TO A HIGH-DENSITY LIPOPROTEIN IN THE SERUM OF RAINBOW TROUT (*SALMO GARDNERI*). *Comp. Biochem. Physiol. B Comp. Biochem.* 104(2):395-400, 1993. FR 38(2)
[Nimmo: Dep. Biochem., Univ. Edinburgh Med. School, Hugh Robson Bldg., George Sq., Edinburgh EH8 9XD, Scotland]
- 93-002713 Maillou, Julia and I. A. Nimmo. ALBUMIN-LIKE PROTEINS IN THE SERUM OF RAINBOW TROUT (*SALMO GARDNERI*). *Comp. Biochem. Physiol. B Comp. Biochem.* 104(2):387-393, 1993. FR 38(2)
[Nimmo: Dep. Biochem., Univ. Edinburgh Med. School, Hugh Robson Bldg., George Sq., Edinburgh EH8 9XD, Scotland]
- 93-002714 Maillou, Julia and I. A. Nimmo. IDENTIFICATION AND SOME PROPERTIES OF AN ALBUMIN-LIKE PROTEIN IN THE SERUM OF PRE-SPAWNING ATLANTIC SALMON (*SALMO SALAR*). *Comp. Biochem. Physiol. B Comp. Biochem.* 104(2):401-405, 1993. FR 38(2)
[Nimmo: Dep. Biochem., Univ. Edinburgh Med. School, Hugh Robson Bldg., George Sq., Edinburgh EH8 9XD, Scotland]
- 93-002715 Marchant, Tracy A. IDENTIFICATION OF INSULIN-LIKE GROWTH FACTOR (IGF) ACTIVITY IN SERUM FROM TWO CYPRINID TELEOSTS. *Am. Zool.* 32(5):25A. 1992. Abstract only. FR 38(2)
[Univ. Saskatchewan, Saskatoon, SK, Canada] *Carassius auratus* and *C. correntinus*
- 93-002716 Marinho, Maria Grazia. REGULATION OF GROWTH HORMONE AND INSULIN-LIKE GROWTH FACTOR II GENE EXPRESSION AND CENTRAL DISTRIBUTION OF MELATONIN BINDING SITES IN THE RAT AND GOLDFISH. Ph.D. dissertation, Univ. Laval (Canada) 23 Apr. 1991. *Form. Diss. Abstr. Int. B Sci. Eng.* 53(7):3346. 1993. Order No. QAN66380. FR 38(2)
Carassius auratus.
- 93-002717 Matsuda, Hidaki, Richard C. Coris and Reji Kishida. AFFERENT AND EFFERENT PROJECTIONS OF THE GLOSSOPHARYNGEAL-VAGAL NERVE IN THE HAGFISH. *J. Comp. Neurol.* 311(4):528-530. 1991. FR 38(2)
[Kishida, Dep. Anat., Yamaguchi Univ. School Med., Kogushi 1144, Ube-shi 755, Japan] *Epiplatys burgeri*
- 93-002718 McCormick, J. Howard, Kathleen M. Jensen and Richard L. Leino. SURVIVAL, BLOOD OSMOLALITY AND GILL HISTOLOGY RESPONSES OF YELLOW PERCH, ROCK BASS, BLACK CRAPPIE AND LARGemouth BASS TO ACIDIFIED SOFT WATER. *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Montreal, New Brunswick, November 72-14, 1986*. J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 2-3. 1987. English and French abstract only. FR 38(2)
[U.S. Environ. Prot. Agency, Environ. Res. Lab., 6201 Congdon Blvd., Duluth, MN 55804] *Percis burtonii*, *Pomoxis nigromaculatus*, *Micropetrus salmoides*, and *Ambloplites rupestris*
- 93-002719 McDonald, C. G.; C. W. Hawryshyn and T. E. Ralmchan. ULTRAVIOLET PHOTOSENSITIVITY AND SPECTRAL TUNING IN THE THREESPINE STICKLEBACK, *GASTEROSTEUS ACULEATUS*. *Am. Zool.* 32(5):163A. 1992. Abstract only. FR 38(2)
[Univ. Victoria, Victoria, BC, Canada]

FISHERIES REVIEW

PHYSIOLOGY (Continued)

- 93-002720 McFarland, W. N. and E. R. Loew. ULTRAVIOLET VISUAL PIGMENTS IN MARINE FISHES. *Am. Zool.* 32(5):168A. 1992. Abstract only. FR 38(2)
[Wrigley Mar. Sci. Cent., Univ. South Calif., Catalina Island]
- 93-002721 McMenis, M. G. EXPERIMENTAL RESOURCE ALLOCATION IN OVERWINTERING *POECILIA LATIPINNIS* (PISCES: POECILIIDAE). *Am. Zool.* 32(5):95A. 1992. Abstract only. FR 38(2)
[Fla. State Univ., Tallahassee]
- 93-002722 McWilliams, P. G. ENVIRONMENTAL INDUCTION OF Na⁺ TRANSPORTER AFFINITY IN ATLANTIC SALMON EMBRYOS. *J. Fish Biol.* 42(1):119-130. 1993. FR 38(2)
[Zool. Lab., Univ. Bergen, 5007 Bergen, Norway] *Salmo salar*.
- 93-002723 Meek, J.; H. W. J. Joosten and T. G. M. Hafmans. DISTRIBUTION OF NORADRENALINE-IMMUNOREACTIVITY IN THE BRAIN OF THE MORMYRID TELEOST *GNATHONEMUS PETERSI*. *J. Comp. Neurol.* 326(1):145-160. 1993. FR 38(2)
[Dep. Anat. & Embryol., Univ. Nijmegen, P.O. Box 9101, 6500 HB Nijmegen, Netherlands]
- 93-002724 Meek, J.; T. G. M. Hafmans, L. Mäler and R. Hawkes. DISTRIBUTION OF ZEBRIN II IN THE GIGANTOCEREBELLUM OF THE MORMYRID FISH *GNATHONEMUS PETERSI* COMPARED WITH OTHER TELEOSTS. *J. Comp. Neurol.* 316(1):17-31. 1992. FR 38(2)
[Dep. Anat. & Embryol., Fac. Med., Univ. Nijmegen, P.O. Box 9101, 6500 HB Nijmegen, Netherlands] *Xenopus*.
- 93-002725 Mendez, Gabriela and Wolfgang Wieser. METABOLIC RESPONSES TO FOOD DEPRIVATION AND REFEEDING IN JUVENILES OF *RUTILUS RUTILUS* (TELEOSTI: CYPRINIDAE). *Environ. Biol. Fishes* 36(1):73-81. 1993. FR 38(2)
[Wieser Inst. Zool. Univ. Technikerstr. 25, A-6020 Innsbruck, Austria]
- 93-002726 Millzer, C. S.; C. D. Moyes and G. F. Tibbits. TEMPERATURE DEPENDENCE OF Ca²⁺-STIMULATED MYOFIBRILLAR ATPase ACTIVITY IN THE HEARTS OF RAY AND RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). *Am. Zool.* 32(5):59A. 1992. Abstract only. FR 38(2)
[Simon Fraser Univ., Burnaby, BC, Canada]
- 93-002727 Miles, N. W.; M. Ryczczyn; L. W. Clem; F. van Ginkel; B. G. Magno; D. L. Middleton; M. R. Wilson and G. W. Wain. ROLE OF mb-1 IN THE EXPRESSION OF MEMBRANE Igm IN THE CHANNEL CATFISH. *Am. Zool.* 32(5):30A. 1992. Abstract only. FR 38(2)
[Univ. Miss. Med. Cent., Jackson] *Ictalurus punctatus*.
- 93-002728 Miyasaka, Takao, Mamoru Sato, Reiji Yoshizuka and Morihiko Sakaguchi. CONVERSION OF ASCORBIC-2-PHOSPHATE TO ASCORBIC ACID IN RAINBOW TROUT *NIPPON SALMO GAKKAIKI* 58(1):2181-2184. 1992. In English with Japanese summary. FR 38(2)
[Dep. Fish., Fac. Agric., Kyoto Univ., Kitashirakawa, Sakyo, Kyoto 606-01, Japan] *Oncorhynchus mykiss*.
- 93-002729 Molist, P.; S. Muelam; E. Velasco and B. L. Roberts. THE ORGANIZATION OF CHOLINERGIC NEURONS IN THE MESENCEPHALON OF THE EEL, *ANGUILLA ANGUILLA*, AS DETERMINED BY CHOLINE ACETYLTRANSFERASE IMMUNOHISTOCHEMISTRY AND ACETYLCHOLINESTERASE ENZYME HISTOCHEMISTRY. *Cell Tissue Res.* 271(3):555-566. 1993. FR 38(2)
[Dep. Fund. Biol., Univ. Vigo, Apdo. 874, Vigo, Spain]
- 93-002730 Moore, Karen S.; Suzanne Wöhrl; Heinrich Redar, Mark Rogens; John N. Forrest, Jr.; Donald McCrimmon and Michael Zaslouf. SQUALAMINE: AN AMINOSTEROL ANTIARTHROTIC FROM THE SHARK. *Proc. Natl. Acad. Sci. USA* 90(4):1354-1358. 1993. FR 38(2)
[Zaslouf Magalini Res. Inst., Magalini Pharm., 5110 Campus Dr., Plymouth Meeting, PA 19642] *Squalus acanthias*.
- 93-002731 Moore, L. E. and James T. Buchanan. THE EFFECTS OF NEUROTRANSMITTERS ON THE INTEGRATIVE PROPERTIES OF SPINAL NEURONS IN THE LAMPREY. *J. Exp. Biol.* Vol. 175, p. 89-114. 1993. FR 38(2)
[Dep. Physiol. & Biophysics, Univ. Tex. Med. Branch, Galveston 77550] *Ictalomyzon unicuspis*.
- 93-002732 Morgan, J. A. W.; T. G. Postinger and P. Rippon. EVALUATION OF FLOW CYTOMETRY AS A METHOD OF QUANTIFICATION OF CIRCULATING BLOOD CELL POPULATIONS IN SALMONID FISH. *J. Fish Biol.* 42(1):131-141. 1993. FR 38(2)
[Freshwater Biol. Assoc., Ferry House, Ambleside, Cumbria LA22 0LP, England] *Salmo trutta* and *Oncorhynchus mykiss*.
- 93-002733 Moriyama, S.; P. Swanson; H. Kawachi and W. Dickhoff. PURIFICATION AND CHARACTERIZATION OF COHO SALMON THYROID STIMULATING HORMONE. *Am. Zool.* 32(5):17A. 1992. Abstract only. FR 38(2)
[Univ. Wash., Seattle] *Oncorhynchus kisutch*.

PHYSIOLOGY (Continued)

93-002734 MCarthy, C. K.; R. E. Peter, J. E. Rivier and W. Vale. INHIBITION OF GONADOTROPIN-RELEASING HORMONE [GnRH]-STIMULATED GONADOTROPIN RELEASE BY A GnRH-1 ANTAGONIST BOTH IN VITRO AND IN VIVO IN GOLDFISH. *Biol. Reprod.* 46(1):31. 1992. Abstract only. FR 30(2)

[Dep. Zool., Univ. Alberta, Edmonton, AB, Canada] *Carassius auratus*

93-002735 Atutungi, G. and J. A. Johnston. INFLUENCE OF STRAIN ON THE POWER OUTPUT OF FAST AND SLOW MYOTOMAL MUSCLE FIBRES IN TROPICAL FISH. *J. Physiol. (Camb.)* Vol. 459, p. 9. 1993. Abstract only. FR 30(2)

[Dep. Anim. Physiol., Univ. Nairobi, Nairobi, Kenya] *Tilapia nilotica*

93-002736 Nagler, James J.; Faye Murin and David R. Jøller. LOCALIZATION OF VITELLOGENIN RELATED PROTEIN IN THE DEVELOPING OOCYTES OF WINTER FLOUNDER (*PLEURONectes AMERICANUS*) BY PROTEIN A-GOLD IMMUNOCYTOCHEMISTRY. *Cell Tissue Res.* 271(3):567-570. 1993. FR 30(2)

[Jøller: Dep. Biol., Memorial Univ. Newfoundland, St. John's, NF, Canada A1C 5S7]

93-002737 Nakano, Toshiko; Katsumi Ono and Masaki Takeuchi. LEVELS OF ZINC, IRON, AND COPPER IN THE SKIN OF ABNORMALLY PIGMENTED JAPANESE FLOUNDER. *Nippon Suisan Gakkaishi* 58(11):2207. 1992. In English with Japanese summ. FR 30(2)

[Lab. Mar. Biochem., Fac. Agric., Tohoku Univ., Aoba, Sendai 981, Japan]

93-002738 Nash, Gerard B. and Stuart Egginton. COMPARATIVE RHEOLOGY OF HUMAN AND TROUT RED BLOOD CELLS. *J. Exp. Biol.* Vol. 174, p. 109-122. 1993. FR 30(2)

[Dep. Haematol. & Dep. Physiol., Med. School, Univ. Birmingham, Birmingham B15 2TT, England] *Oncorhynchus mykiss*

93-002739 Navarro, I., M. N. Camaró, M. Parizás, J. L. Maestro, J. Planas and J. Gutierrez. POST-FEEDING LEVELS OF INSULIN AND GLUCAGON IN TROUT (*SALMO TRUTTA FARIO*). *Comp. Biochem. Physiol. A Comp. Physiol.* 104(2):389-393. 1993. FR 30(2)

[Dep. Biología. Fisiol., Fac. Biol., Univ. Barcelona, Spain]

93-002740 Nikkinmaa, Mikko. HAEMOGLOBIN FUNCTION IN INTACT LAMPRETTA *FLAVATILIS* ERYTHROCYTES. *Respir. Physiol.* 91(2-3):283-293. 1993. FR 30(2)

[Div. Physiol., Dep. Zool., PB 17, SF-00014, Univ. Helsinki, Finland]

93-002741 Nolan, Carice V.; Scott W. Fowler and Jean-Louis Teyssie. COBALT SPECIATION AND BIOAVAILABILITY IN MARINE ORGANISMS. *Mar. Ecol. Prog. Ser.* 88(2/3):105-116. 1992. FR 30(2)

[Comm. European Communities, Dir.-Gen. XII Sci., Res. & Dev., 200 rue de la Loi, B-1049 Brussels, Belgium] *Semulus scabrus*

93-002742 Nonnotte, G.; V. Maxime; J. P. Truchot; P. Willot and C. Peyraud. RESPIRATORY RESPONSES TO PROGRESSIVE AMBIENT HYPOXIA IN THE STURGEON, *ACIPENSER BAERI*. *Respir. Physiol.* 91(1):71-82. 1993. FR 30(2)

[Lab. Neurobiol. & Physiol. Comp., P. Dr. Peyraud, 33120 Arcachon, France]

93-002743 Northcutt, R. Glenn and Ann B. Butler. THE DIENCEPHALON OF THE PACIFIC HERRING, *CLUPEA HARENCLUS*. RETINOFLUGAL PROJECTIONS TO THE DIENCEPHALON AND OPTIC TECTUM. *J. Comp. Neurol.* 328(4):547-561. 1993. FR 30(2)

[Neurobiol. Unit, Scripps Inst. Oceanogr., La Jolla, CA 92093]

93-002744 Ntiba, M. J. and V. Jaccarini. THE EFFECT OF OOCYTIC ATRESIA ON FEEDING ESTIMATES OF THE RABBIT FISH *SIGANUS SUTOR* (PISCES: SIGANIDAE) OF KENYAN MARINE INSHORE WATERS. *Hydrobiologia* 247(1-3):215-222. 1992. FR 30(2)

[Dep. Zool., Univ. Nairobi, P.O. Box 30197, Nairobi, Kenya]

93-002745 O'Brien, John and Barbara A. Block. THE FASTEST CONTRACTING MUSCLES OF FISH EXPRESS ONLY ONE ISOTFORM OF THE RYANODINE RECEPTOR. *Am. Zool.* 32(5):60A. 1992. Abstract only. FR 30(2)

[Dep. Organismal Biol. & Anat., Univ. Chicago, Chicago, IL] *Oreochromis*

93-002746 O'Connor, P. K.; B. J. Reich and M. A. Sheridan. EFFECTS OF GROWTH HORMONE ON HEPATIC CARBOHYDRATE METABOLISM OF RAINBOW TROUT. *Am. Zool.* 32(5):18A. 1992. Abstract only. FR 30(2)

[N.D. State Univ., Fargo] *Oncorhynchus mykiss*

93-002747 Ogas, Miko. DISTRIBUTION OF JUXTAGLOMERULAR CELLS IN THE KIDNEY OF THE RED BAITFISH. *Nippon Suisan Gakkaishi* 59(1):35-38. 1993. In English with Japanese summ. FR 30(2)

[Lab. Fish Biol., Fac. Agric., Nagoya Univ., Nagoya 464-01, Japan] *Haibortata scabata*

PHYSIOLOGY (Continued)

- 93-002748 Okawa, Yujō, David Koy, Steven D. Morley, Otfemar Richter and Karl P. Lederis. IN SITU HYBRIDIZATION OF CORTICOTROPIN-RELEASING FACTOR-ENCODING MESSENGER RNA IN THE HYPOTHALAMUS OF THE WHITE SUCKER, *CATOSTOMUS COMMERCERSONI*. *Cell Tissue Res* 267(3):545-549. 1992. FR 38(2)
[Lederis: Dep Pharmacol Univ Calgary, 147 Carthew St., Corcor, BC, Canada V9N 5C9]
- 93-002749 Oliver, A. S., C. V. Sullivan and P. Thomas. HORMONAL MEDIATION OF MATING BEHAVIOR IN THE HERMAPHRODITIC SEABASS, *SERRANUS SUBLIGARIUS*. *Am Zool* 32(5) 18A. 1992. Abstract only. FR 38(2)
[Duke Univ, Mar Lab, Beaufort, NC]
- 93-002750 Olsen, K. H. and N. R. Lilley. THE SIGNIFICANCE OF OLFACTION AND SOCIAL CLUES IN MILT AVAILABILITY, SEXUAL HORMONE STATUS, AND SPAWNING BEHAVIOR OF MALE RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). *Gen. Comp. Endocrinol* 89(1):107-118. 1993. FR 38(2)
[Dep Zoophysiol, Uppsala Univ, Box 566, S-751 22 Uppsala, Sweden]
- 93-002751 Omejariú, R. J. DOPAMINE/NEUROLEPTIC RECEPTOR IN THE PITUITARY OF THE RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). *Am Zool* 32(5) 18A. 1992. Abstract only. FR 38(2)
[Dep Biol, Lakehead Univ, Thunder Bay, ON, Canada]
- 93-002752 Oros Garrido, M. V.; M. V. Nunez Torres and M. A. Abusmea Equibola. LIPID ABSORPTION BY ENTEROCYTES OF THE RAINBOW TROUT, *ONCORHYNCHUS MYKISS*. DIET-INDUCED CHANGES IN THE ENDOMEMBRANOUS SYSTEM. *Aquaculture* 110(2):161-171. 1993. FR 38(2)
[Dep. Biol. Col., Fac. Cienc., Univ. Granada, E-18071 Granada, Spain]
- 93-002753 Parizi, D. C. and C. W. Hawryshyn. ULTRAVIOLET LIGHT AND ITS ROLE IN THE PERCEPTION OF THE PLANE OF POLARIZATION IN JUVENILE SALMONIDS. *Am Zool* 32(5) 131A. 1992. Abstract only. FR 38(2)
[Univ. Victoria, Victoria, BC, Canada]
- 93-002754 Part, P.; L. Norgren; E. Bengtsson and P. Stöberg. PRIMARY CULTURES OF EPITHELIAL CELLS FROM RAINBOW TROUT GILLS. *J. Exp. Biol.* Vol. 175, p. 219-232. 1993. FR 38(2)
[Dep. Zoophysiol, Uppsala Univ, Box 566, S-751 22 Uppsala, Sweden] *Oncorhynchus mykiss*.
- 93-002755 Part, Peter, Juhani Saarikoski; Heikki Tuusula and Karl Hawala. THE ABSORPTION OF HYDROPHOBIC CHEMICALS ACROSS PERFUSED RAINBOW TROUT GILLS: METHODOLOGICAL ASPECTS. *Ecotoxicol. Environ. Sci.* 24(3):275-286. 1992. FR 38(2)
[Dep. Zoophysiol, Uppsala Univ, Box 566, S-751 22 Uppsala, Sweden] *Oncorhynchus mykiss*
- 93-002756 Pastor, Angel M.; Rosa R. De La Cruz and Robert Baker. CHARACTERIZATION AND ADAPTIVE MODIFICATION OF THE GOLDFISH VESTIBULOOCULAR REFLEX BY SINUSIDAL AND VELOCITY STEP VESTIBULAR STIMULATION. *J. Neurophysiol. (Bethesda)* 68(6) 3033-3045. 1992. FR 38(2)
[Lab. Neurocienc., Dep. Fisiol. & Biol. Anim., Univ. Sevilla, 41012 Sevilla, Spain] *Carassius auratus*
- 93-002757 Pedersen, Benedikte Hedegaard. SECRETION OF PROTEASES INTO THE GUT OF HERRING LARVAE DIGESTING COPEPODS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 402. 1989. Abstract only. FR 38(2)
[Mar. Biol. Lab., DK-3000 Helsingør, Denmark] *Clupea harengus*.
- 93-002758 Pelster, Bernd and Peter Scheidel. THE INFLUENCE OF GAS GLAND METABOLISM AND BLOOD FLOW ON GAS DEPOSITION INTO THE SWIMBLADDER OF THE EUROPEAN EEL, *ANGUILLA ANGUILLA*. *J. Exp. Biol.* Vol. 173, p. 205-216. 1992. FR 38(2)
[Inst. Physiol., Ruhr-Univ. Bochum, Universitätsstr. 150, 4630 Bochum, Germany]
- 93-002759 Perry, K. A. and S. A. Sower. EFFECT OF ESTRADIOL ON BRAIN GNRH IN ADULT FEMALE SEA LAMPREY. *Am Zool* 32(5) 26A. 1992. Abstract only. FR 38(2)
[Univ. NH., Durham] *Petromyzon marinus*.
- 93-002760 Pillai, Manisharan C.; Tammy S. Shields; Ryuzo Yanagimachi and Gary M. Cherr. ISOLATION AND PARTIAL CHARACTERIZATION OF THE SPERM MOTILITY INITIATION FACTOR FROM EGGS OF THE PACIFIC HERRING, *CLUPEA PALLASII*. *J. Exp. Zool.* 265(3):336-342. 1993. FR 38(2)
[Cherr. Univ. Calif., Bodega Mar. Lab., P.O. Box 247, Bodega Bay 94923]
- 93-002761 Pisan, M., B. Auperin; P. Prunet; F. Renier-Delrus; J. Mantal and A. Rambourg. EFFECTS OF PROLACTIN ON α and β CHLORIDE CELLS IN THE GILL EPITHELIUM OF THE SALTWATER ADAPTED TILAPIA *OREOCHROMIS NILOTICUS*. *Ann. Rec.* 235(2):275-284. 1993. FR 38(2)
[Dep. Biol. Cell & Mol., Cent. Etudes Saclay, 91191 Gif-sur-Yvette Cedex, France]

FISHERIES REVIEW

PHYSIOLOGY (Continued)

- 93-002762 Planas, J. V.; P. Swanson and W. W. Dickhoff. GONADOTROPIN REGULATION OF TESTICULAR STEROIDOGENESIS IN VITRO DURING SEXUAL MATURATION IN COHO SALMON. *Am. Zool.* 32(5):26A. 1992. Abstract only. FR 38(2)
[Univ. Wash., Seattle] *Oncorhynchus kisutch*
- 93-002763 Planas, Josep V. and Penny Swanson. SOMATOLACTIN, A NEW MEMBER OF THE PROLACTIN FAMILY, STIMULATES IN VITRO GONADAL STEROIDOGENESIS IN A TELEOST. *Biol. Reprod.* 46(1):44. 1992. Abstract only. FR 38(2)
[School Fish., Univ. Wash., Seattle 98195] *Oncorhynchus kisutch*
- 93-002764 Plesenkaya, E. M. and C. Duan. IGF-1 mRNA IN THE LIVER OF COHO SALMON TREATED WITH STREPTOZOTOCIN. *Am. Zool.* 32(5):26A. 1992. Abstract only. FR 38(2)
[Univ. Wash., Seattle] *Oncorhynchus kisutch*
- 93-002765 Power, D. M. and A. V. M. Canario. IMMUNOCYTOCHEMISTRY OF SOMATOTROPHS, GONADOTROPHS, PROLACTIN AND ADRENOCORTICOTROPIN CELLS IN LARVAL SEA BREAM (*SPARUS ALBATUS*) PITUITARIES. *Cell Tissue Res.* 269(2):341-346. 1992. FR 38(2)
[Univ. Clin. Tecnol. Recur. Aquat., Univ. Algarve, 8000 Faro, Portugal]
- 93-002766 Prej, S. T. EFFECT OF VOLTAGE GRADIENT IN AN ELECTRICAL FIELD ON THRESHOLD INDICES OF FISH RESPONSE. *Acta Ichthyol. Piscatoria* 21(2):37-44. 1991. In English with Polish summary. FR 38(2)
[Tech. Inst. Fish., Astrakhan, USSR]
- 93-002767 Quattro, J. M., H. A. Woods and D. A. Powers. SEQUENCE ANALYSIS OF TELEOST RETINA-SPECIFIC LACTATE DEHYDROGENASE C: EVOLUTIONARY IMPLICATIONS FOR THE VERTEBRATE LACTATE DEHYDROGENASE GENE FAMILY. *Proc. Natl. Acad. Sci. U.S.A.* 90(1):242-246. 1993. FR 38(2)
[Hopkins Mar. Stn., Stanford Univ., Pacific Grove, CA 93950] *fundulus heteroclitus*
- 93-002768 Ramin, Francisco Tadeu; Mogens L. Glass; Ana Lucia Kalinin; Roberto M. M. Verzola and Maria N. Fernandes. CARDIO-RESPIRATORY RESPONSES IN TWO ECOLOGICALLY DISTINCT ERYTHRINIDS (*HOPLIS MILABARICUS* AND *HOPLIS LACORDAE*) EXPOSED TO GRADIENT ENVIRONMENTAL HYPOXIA. *Environ. Biol. Fishes* 36(1):93-97. 1993. FR 38(2)
[Dep. Physiol. Sci., Fed. Univ. Sao Carlos, 13560 Sao Carlos, SP, Brazil]
- 93-002769 Raymond, J. A. OSMOREGULATION AND GLYCEROL EFFLUX IN A NEAR-ISOSMOTIC TELEOST, WINTER-ACCLIMATIZED RAINBOW SMELT. *Am. Zool.* 32(5):42A. 1992. Abstract only. FR 38(2)
[Univ. S. Ala., Mobile] *Osmerus mordax dentex*
- 93-002770 Ringo, E. DOES DIETARY LINOLEIC ACID AFFECT INTESTINAL MICROFLORA IN ARCTIC CHARR, *SALVELINUS ALPINUS* L. *J. Aquacult. Fish. Manage.* 24(1):133-135. 1993. FR 38(2)
[Univ. Tromsø, Inst. Biol. & Geol., Drammensveien 201, N-9007 Tromsø, Norway]
- 93-002771 Rolfe, A. P. CHANGES IN THE GALL BLADDER OF WHITING (*MERLANGIUS MERLANGIUS*) IN RELATION TO RECENT FEEDING HISTORY. *J. Cons. Cons. Int. Explor. Mer* 49(4):431-436. 1992. FR 38(2)
[Scottish Off. Agric. & Fish. Dep. Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen AB9 8DB, Scotland]
- 93-002772 Robson, Paul; Glenda M. Wright; Eva Silerz; Arpita Mall; Maria Rawit; John H. Youson and Fred W. Keelley. CHARACTERIZATION OF LAMPBRIN, AN UNUSUAL MATRIX PROTEIN FROM LAMPREY CARTILAGE: IMPLICATIONS FOR EVOLUTION, STRUCTURE, AND ASSEMBLY OF ELASTIN AND OTHER FIBRILLAR PROTEINS. *J. Biol. Chem.* 268(2):1440-1447. 1993. FR 38(2)
[Keelley, Div. Cardiovascular Res., Hospital Sick Children, 555 University Ave., ON, Canada M5G 1X8] *Petromyzon marinus*
- 93-002773 Rodnick, K. J. and B. D. Siskel. EFFECTS OF TEMPERATURE ACCLIMATION ON CARNITINE PALMITOYLTRANSFERASE (CPT) ACTIVITY IN RED MUSCLE FROM STRIPED BASS. *Am. Zool.* 32(5):63A. 1992. Abstract only. FR 38(2)
[Univ. Maine, Orono] *Morone saxatilis*
- 93-002774 Ronnestad, Ivar; Roderick Nigel Eftax; Erick P. Croot and Hans Jørgen Fyhn. UTILIZATION OF FREE AMINO ACIDS RELATED TO ENERGY METABOLISM OF DEVELOPING EGGS AND LARVAE OF LEWON SOLE *MICROSTOMUS KITZ* REARED IN THE LABORATORY. *Mar. Ecol. Prog. Ser.* 88(2/3):195-205. 1992. FR 38(2)
[Zool. Lab., Univ. Bergen, Allég. 41, N-5007 Bergen, Norway]
- 93-002775 Rose, Gary J. and Susan J. Cell. TEMPORAL FILTERING PROPERTIES OF MIDBRAIN NEURONS IN AN ELECTRIC FISH: IMPLICATIONS FOR THE FUNCTION OF DENDRITIC SPINES. *J. Neurosci.* 13(3):1178-1189. 1993. FR 38(2)
[Dep. Biol., Univ. Utah, Salt Lake City 84112] *Eigenmannia*

PHYSIOLOGY (Continued)

- 93-002776 Rosenblum, P. M. and R. E. Peter. TISSUE DISTRIBUTION AND *IN VITRO* SECRETION OF SALMON AND CHICKEN GONADOTROPIN-RELEASING HORMONES FROM BRAIN AND PITUITARY OF JUVENILE AND ADULT GOLDFISH. *Am. Zool.* 32(5):27A. 1992. Abstract only. FR 38(2)
[Southwest Tex. State Univ., San Marcos] *Carassius auratus*.
- 93-002777 Roth, Anton. REGENERATIVE OUTGROWTH AND DISTRIBUTION OF THE ELECTRORECEPTIVE NERVE FIBERS IN THE CATFISH *MYXOPLERUS*. *J. Comp. Neurol.* 328(4):473-484. 1993. FR 38(2)
[Zool. Inst. Univ., Luisenstr. 14, 8000 Munchen 2, Germany] *K. bicinctus*.
- 93-002778 Rottiers, Donald V. ELEMENTAL COMPOSITION OF A MIGRATORY AND A LANDLOCKED STRAIN OF ATLANTIC SALMON *SALMO SALAR*. *Comp. Biochem. Physiol. A Comp. Physiol.* 104(1):93-100. 1993. FR 38(2)
[Natl. Fish. Res. & Dev. Lab., U.S. Fish & Wildl. Serv., Rural Delivery #4, Box 63, Wellsboro, PA 16901]
- 93-002779 Rozemeljer, M. J. C. and I. Plaut. REGULATION OF NITROGEN EXCRETION OF THE AMPHIBIOUS BLENNIDAE *ALCIUS KRAI* (GÜNTHER, 1858) DURING EMERSION AND IMMERSION. *Comp. Biochem. Physiol. A Comp. Physiol.* 104(1):57-62. 1993. FR 38(2)
[Environ. & Toxicol. Chem., Nieuwe Achtergracht 156, 1018 W. Amsterdam, Netherlands]
- 93-002780 Ruzicka, James J. GROWTH AND DEVELOPMENT OF ANTARCTIC LARVAL FISH: COMPARING TWO STRATEGIES. Seventeenth Annual Albert L. Tester Memorial Symposium, 15-16 April 1992. *Proc. Sci.* 47(1):95-96. 1993. Abstract only. FR 38(2)
[Dep. Oceanogr., Univ. Hawaii Manoa, Honolulu 96822] *Nototothenia gibberifrons* and *Nototothenia larsoni*.
- 93-002781 Safford, Susan Ellen. PURIFICATION AND CHEMICAL AND BIOLOGICAL CHARACTERIZATION OF PROLACTIN AND SOMATOLACTIN, AND PARTIAL CHEMICAL CHARACTERIZATION OF GROWTH HORMONE FROM TWO MARINE TELEOSTS, RED DRUM (*SCIAENOPS OCELLATUS*) AND THE ATLANTIC CROAKER (*MICROPOGONIAS UNDULATUS*). Ph.D. dissertation, Univ. Tex. (Austin) 132p. 1992. From *Dis. Abstr. Int. B Sci. Eng.* 53(4):1748-1749. 1992. Order No. DA9225717. FR 38(2)
- 93-002782 Sainbury, R. J.; M. N. Perrott and R. J. Balment. THE RENAL ACTION OF ARGININE VASOTOCIN (AVT) IN RAINBOW TROUT, *ONCORHYNCHUS MYKISS*, *IN VITRO*. *J. Physiol. (Camb.)* Vol. 459, p. 96. 1993. Abstract only. FR 38(2)
[Dep. Physiol. Sci., Univ. Manchester, Manchester M13 9PT, England]
- 93-002783 Sakamoto, Tatsuya and Tetsuya Hirano. EXPRESSION OF INSULIN-LIKE GROWTH FACTOR I GENE IN OSMOREGULATORY ORGANS DURING SEAWATER ADAPTATION OF THE SALMONID FISH: POSSIBLE MODE OF OSMOREGULATORY ACTION OF GROWTH HORMONE. *Proc. Natl. Acad. Sci. USA* 90(5):1912-1916. 1993. FR 38(2)
[Ocean Res. Inst., Univ. Tokyo, 1-15-1, Minamidai, Nakano-ku, Tokyo 164, Japan] *Oncorhynchus mykiss*.
- 93-002784 Sapiro, N.; E. Ribes; C. Buesa; F. Garcia-Hegori and M. Chiva. DIFFERENCES IN CHROMATIN CONDENSATION DURING SPERMIOGENESIS IN TWO SPECIES OF FISH WITH DISTINCT PROTAMINES. *J. Exp. Zool.* 263(2):185-194. 1993. FR 38(2)
[Chiva: Dep. Eng. Quim., ETSEIB, UPC, Diagonal 647, 08028 Barcelona, Spain] *Mullus surmuletus* and *Dicentrarchus labrax*.
- 93-002785 Sasayama, Yuichi; Ken-ichi Ukawa; Hiroyuki Kai-Ya; Chitara Oguro; Yoshio Takei; Takashi X. Watanabe; Kichiro Nakajima and Shunpei Sakakibara. GOLDFISH CALCITONIN: PURIFICATION, CHARACTERIZATION, AND HYPOCALCEMIC POTENCY. *Gen. Comp. Endocrinol.* 89(2):189-194. 1993. FR 38(2)
[Taki, Lab. Physiol., Ocean Res. Inst., Univ. Tokyo, Nakano, Tokyo 164, Japan] *Carassius auratus*.
- 93-002786 Scheidt, John I. A DIEL RHYTHM OF THE SHORT-CIRCUIT CURRENT EXPRESSED BY THE OPERCULAR EPITHELIUM OF THE KILLIFISH, *FUNDULUS HETEROCITUS*. *J. Exp. Zool.* 263(1):88-91. 1993. FR 38(2)
[Dep. Biol., Cent. Mich. Univ., Mt. Pleasant 48859]
- 93-002787 Schiavo, T.; F. Trischitta; M. G. Denaro; C. Faggio and I. Fucile. REQUIREMENT OF HCO₃⁻ FOR Cl⁻ ABSORPTION IN SEAWATER-ADAPTED EEL INTESTINE. *Pflügers Arch. Eur. J. Physiol.* 421(2-3):145-154. 1992. FR 38(2)
[Dip. Biol., Lab. Fisiol., Univ. Lecce, Via Prox. le, Lecce-Monteroni, I-73100 Lecce, Italy] *Anguilla anguilla*.
- 93-002788 Schultz, R. Jack; Urs A. E. Kaplan and Mary E. Schultz. HEAT INDUCED LIVER CELL PROLIFERATION IN THE LIVER-BEARING FISH *POECILIOPSIS*. *Environ. Biol. Fishes* 36(1):83-91. 1993. FR 38(2)
[NIH-15 Mar. & Freshwater Biomed. Sci. Cent., Univ. Conn., Storrs 06269-3042] *P. monacha*, *P. lucida*, and their hybrids.

PHYSIOLOGY (Continued)

- 93-002789 Schurmann, H and J F Steffensen. LETHAL OXYGEN LEVELS AT DIFFERENT TEMPERATURES AND THE PREFERRED TEMPERATURE DURING HYPOXIA OF THE ATLANTIC COD, *GADUS MORHUA* L. *J Fish Biol* 41(5):927-934 1992. FR 38(2)
[Mar Biol Lab, Univ Copenhagen, Strandpromenaden 5, DK-3000 Helsingør, Denmark]
- 93-002790 Schwartzentruber, R S and R J Ormolanuk. THYROTROPIN-RELEASING HORMONE (TRH) RECEPTORS IN THE PITUITARY OF THE RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). *Am Zool* 32(5):19A. 1992. Abstract only. FR 38(2)
[Dep Biol, Lakehead Univ., Thunder Bay, ON, Canada]
- 93-002791 Serelby, K. R. and B A Weeks-Perkins. PRELIMINARY CHARACTERISATION OF THE NON-SPECIFIC CYTOTOXIC CELLS OF THE OYSTER TOADFISH (*OPSANUS TAU*, L.) *Fish Shellfish Immunol* 3(2):131-141. 1993. FR 38(2)
[Weeks-Perkins Inst Mar Sci., Coll. William & Mary, Gloucester Point, VA 23062]
- 93-002792 Serrano, Augusto L., Jr., and Fumio Nagayama. ACTIVITY AND PARTIAL PURIFICATION OF LIVER TRYPTOPHAN PYRROLASE IN RAINBOW TROUT *Nippon Suisan Gakkaishi* 58(12):2367-2371. 1992. In English with Japanese summary. FR 38(2)
[Inst Aquacult., Coll. Fish., Univ Philippines Visayas, Mactaan, Iloilo, Philippines] *Oncorhynchus mykiss*.
- 93-002793 Sharma, N P., C. D. Eliseo and V S Mukulov. CHANGES IN THE ACTIVITY OF TWO FORMS OF DNA POLYMERASE α DURING EMBRYOGENESIS OF THE TILACOST FISH *MISGURNUS FOSSILIS* L. *Biochemistry (Engl. Transl. Biokhimiya)* 57(6):644-649. 1992. FR 38(2)
[N K Koltsov Inst. Dev Biol., Russian Acad. Sci., Moscow, Russia]
- 93-002794 Shi Qianfang. [AN OUTLINE OF ADVANCES ON REPRODUCTIVE PHYSIOLOGY OF FISH IN CHINA.] *Oceanol. Limnol. Sin.* 23(3):325-333. 1992. In Chinese with English summary. FR 38(2)
[Wuhan Documentation & Inform. Cent. Chinese Acad. Sci., Wuhan 430071, China] *Ctenopharyngodon tobi*, *Hypophthalmichthys molitrix*, *H. nobilis*, and *Mykopharyngodon plicatus*.
- 93-002795 Shields, R. J. GROWTH AND CONDITION OF LARVAL SPRAT (*SPRATTUS SPRATTUS* L.) IN THE IRISH SEA. *Rapp. P-V Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 463. 1989. Abstract only. FR 38(2)
[School Ocean Sci., Menai Bridge, Anglesey, Gwynedd, North Wales]
- 93-002796 Shields, R. A. and G. Falk. ON-BIPOHAR CELLS IN DOGFISH RETINAL SLICES CONTAIN A NITRIC OXIDE-SENSITIVE SOLUBLE GUANYLATE CYCLASE. *J. Physiol. (Camb.)* Vol. 459, p. 138. 1993. Abstract only. FR 38(2)
[Biophysics Unit, Physiol. Dep., Univ. Coll. London, Gower St., London WC1E 6BT, England] *Squalus acanthias*.
- 93-002797 Siharath, K., K. M. Kelley and H. A. Born. INSULIN-LIKE GROWTH FACTOR-BINDING PROTEINS (IGFBP) IN STRIPED BASS. *Am. Zool.* 32(5):19A. 1992. Abstract only. FR 38(2)
[Univ. Calif., Berkeley 94720] *Morone saxatilis*.
- 93-002798 Sikket, Paul C. CHANGES IN PLASMA ANDROGEN LEVELS ASSOCIATED WITH CHANGES IN MALE REPRODUCTIVE BEHAVIOR IN A BROOD CYCLING MARINE FISH. *Gen. Comp. Endocrinol.* 89(2):229-237. 1993. FR 38(2)
[Friday Harbor Lab., 620 University Rd., Friday Harbor, WA 98250] *Hypopops rubicundus*.
- 93-002799 Silva, Patricia and Franklin H. Epstein. SECRETION OF NITRATE BY RECTAL GLAND OF *SQUALUS ACANTHIAS*. *Comp. Biochem. Physiol. A Comp. Physiol.* 104(2):255-259. 1993. FR 38(2)
[New England Deaconess Hospital, 110 Francis St., Boston, MA 02215]
- 93-002800 Singh, Sarda and Ajit K. Shrivastav. EFFECTS OF CALCITONIN ADMINISTRATION ON SERUM CALCIUM AND INORGANIC PHOSPHATE LEVELS OF THE FISH, *HETEROPNEUSTES FOSSILIS*, MAINTAINED EITHER IN ARTIFICIAL FRESHWATER, CALCIUM-RICH FRESHWATER, OR CALCIUM-DEFICIENT FRESHWATER. *J. Exp. Zool.* 265(1):35-39. 1993. FR 38(2)
[Dep. Zool., Univ. Gorakhpur, Gorakhpur-273 009, India]
- 93-002801 Sivertsen, Arne; Leif Jørgensen; Grothe Rosenlund and Olav Vachstein. NUCLIC ACID CONTENT OF PLACE EGGS (*PLEURONCTES VITTESSA* L.) AT FIVE DIFFERENT DEVELOPMENTAL STAGES. *Rapp. P-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 445. 1989. Abstract only. FR 38(2)
[SINTEF - Cent. Aquacult., Univ. Trondheim, N-7034 Trondheim, Norway]
- 93-002802 Slatov, Crleb H. and Carl B. Schrock. TESTOSTERONE ALTERS THE IMMUNE RESPONSE OF CHINOOK SALMON, *ONCORHYNCHUS Tshawytscha*. *Gen. Comp. Endocrinol.* 89(2):291-298. 1993. FR 38(2)
[Coop. Fish Res. Unit, Dep. Fish. & Wildl., 104 Nash Hall, Oreg. State Univ., Corvallis 97331-3803]

PHYSIOLOGY (Continued)

93-002803 Small, Kathy; Carey Kraus and R. Ellis. METABOLIC FLUX OF 14-C IN LOBSTER AND STEEL HEAD AS A FUNCTION OF FEEDING LEVEL AND AGE OF ANIMAL. *J. Idaho Acad. Sci.* 28(1):6. 1992. Abstract only. FR 38(2)

[Dep. Chem., Boise State Univ., Boise, ID 83702] *Oncorhynchus mykiss*

93-002804 Smedsrød, B.; T. Gjøen; B. Sveinhjortsson and T. Berg. CATABOLISM OF CIRCULATING COLLAGEN IN THE ATLANTIC SALMON (*SALMO SALAR*). *J. Fish Biol.* 42(2):279-291. 1993. FR 38(2)

[Inst. Med. Biol., Univ. Tromsø, Tromsø, Norway]

93-002805 Smith, S. A., D. H. Gebhard, J. M. Houman, M. G. Levy and E. J. Noga. ISOLATION, PURIFICATION, AND MOLECULAR-WEIGHT DETERMINATION OF SERUM IMMUNOGLOBULIN FROM *OREOCYTHROMYS AUREUS*. *J. Aquat. Anim. Health* 5(1):23-35. 1993. FR 38(2)

[Dep. Patholol., Va.-Md. Res. Coll. Vet. Med., VPI&SU, Blacksburg 24061]

93-002806 Soongas, J. L.; P. Bastieba, J. Fuentes; J. Otero; M. D. Andres and M. Aldegunde. CHANGES IN MUSCLE CARBOHYDRATE METABOLISM IN DOMESTICATED ANDREW TROUT (*ONCORHYNCHUS MYKISS*) AFTER TRANSFER TO SEAWATER. *Comp. Biochem. Physiol. B Comp. Biochem.* 104(1):173-179. 1993. FR 38(2)

[Aldegunde; Dep. Fisiol., Lab. Fisiol. Anim., Fac. Biol., Univ. Santiago Compostela, 15796 Santiago Compostela, Spain]

93-002807 Solemstad, Per and Olav S. Kjesbu. BUOYANCY OF COD EGGS FROM INDIVIDUALLY SPAWNING COD (*GADUS MORHUA* L.). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 495. 1989. Abstract only. FR 38(2)

[Inst. Mar. Res., P.O. Box 1070, N-5024 Bergen, Norway]

93-002808 Sourdaine, P. and D. H. Gamler. STAGE-DEPENDENT MODULATION OF SERTOLI CELL STEROID PRODUCTION IN DOGFISH (*SCYLIORHINUS CANICOLA*). *J. Reprod. Fert.* 97(1):133-142. 1993. FR 38(2)

[Groupe Etude Reprod. Male (INSERM C)F 91-04], Univ. Rennes I, Campus de Beaulieu, F-35042 Rennes Cedex, France]

93-002809 Sower, Stacia A., Yueh-Chin Chiang, Sándor Lovas and J. Michael Conlon. PRIMARY STRUCTURE AND BIOLOGICAL ACTIVITY OF A THIRD GONADOTROPIN-RELEASING HORMONE FROM LAMPREY BRAIN. *Endocrinology* 132(3):1125-1131. 1993. FR 38(2)

[Dep. Biochem. & Mol. Biol., Spaulding Life Sci. Bldg., Univ. NH, Durham 03824] *Petromyzon marinus*

93-002810 Specker, Jennifer L.; Mitsuyo Kishida; Uiyue Huang; David S. King, Yoshitaka Nagahama; Hiroshi Ueda and Thomas R. Anderson. IMMUNOCYTOCHEMICAL AND IMMUNOCYTOLOCALIZATION OF TWO PROLACTIN ISOFORMS IN THE SAME PITUITARY CELLS AND IN THE SAME GRANULES IN THE TILAPIA (*OREOCYTHROMYS MOSSAMBICUS*). *Gen. Comp. Endocrinol.* 89(1):28-38. 1993. FR 38(2)

[Dep. Zool., Univ. R.I., Kingston 02881-0816]

93-002811 Srivastava, Rakesh K. and Joseph A. Brown. ASSESSMENT OF EGG QUALITY IN ATLANTIC SALMON, *SALMO SALAR*, TREATED WITH TESTOSTERONE: BIOCHEMICAL COMPOSITION. *Can. J. Zool.* 71(1):109-115. 1993. In English with French sum. FR 38(2)

[Dep. Zool., Coll. Biol. Sci., Univ. Guelph, Guelph, ON, Canada N1G 2W1]

93-002812 Stefánsson, Sigurd O.; Arne E. Berg, Tom Hansen and Richard I. Saunders. THE POTENTIAL FOR DEVELOPMENT OF SALINITY TOLERANCE IN UNDERYEARLING ATLANTIC SALMON (*SALMO SALAR*). *World Aquacult.* 23(2):52-55. 1992. FR 38(2)

[Inst. Mar. Res., Dep. Aquacult., Mjøse Aquacult. Res. Stn., N-5198 Malmø, Norway]

93-002813 Strohman, H. W. J.; G. de Kromie and W. van Gestel. DIFFERENTIAL SUSCEPTIBILITY OF EARLY STEPS IN CARP (*CYPRINUS CARPIO*) DEVELOPMENT TO α -AMANTADINE. *Russ. J. Arch. Dev. Biol.* 202(1):61-65. 1992. FR 38(2)

[Agric. Univ., Dep. Exp. Anim. Morphol. & Cell Biol., P.O. Box 338, 6700 AH Wageningen, Netherlands]

93-002814 Suzuki, Yuzuro. BASOPHILIC MIGRATION IN ACUTE INFLAMMATION IN THE PUFFER FISH *Nippon Sulan Gakkai* 58(11):2005-2007. 1992. In English with Japanese sum. FR 38(2)

[Dep. Fish., Fac. Agric., Univ. Tokyo, Yayoi, Bunkyo, Tokyo 113, Japan] *Fugu niphobius*

93-002815 Swanson, P. EFFECTS OF GONADOTROPIN-RELEASING HORMONE ON IN VITRO SECRETION OF GONADOTROPINS BY PITUITARY CELLS FROM COHO SALMON AT DIFFERENT STAGES OF SEXUAL MATURATION. *Am. Zool.* 32(5):20A. 1992. Abstract only. FR 38(2)

[Univ. Wash., Seattle] *Oncorhynchus kisutch*

PHYSIOLOGY (Continued)

- 93-002816 Taguchi, Tomohiko, Akira Seko, Ken Kiojima, Sadako Inoue, Takashi Iwanawa, Kay-Hool Khoo, Howard R. Morris, Anne Dall and Yasuo Inoue. STRUCTURAL STUDIES OF A NOVEL TYPE OF TETRAANTENNARY SIALOGLYCAN UNIT IN A CARBOHYDRATE-RICH GLYCOPROTEIN ISOLATED FROM THE FERTILIZED EGGS OF INDIAN MEDAKA FISH, *ORYZIAS MELASTIGAMA* / *Biol. Chem.* 268(4):2353-2362. 1993. FR 38(2)
[Y. Inoue, Dep. Biophysics & Biochem., Fac. Sci., Univ. Tokyo, Hongo-7, Tokyo 113, Japan]
- 93-002817 Takai, Y and D. E. Amold-Roed. EFFECT OF NATIVE CARDIAC PEPTIDES ON PLASMA CORTISOL IN THE JAPANESE EEL, *ANGUILLA JAPONICA* / *Physiol. (Camb.)* Vol. 459, p. 95. 1993. Abstract only. FR 38(2)
[Dep. Physiol., Kitazato Univ. School Med., Monaka, Iwate 020, Japan]
- 93-002818 Tanuchi, Toru, Hiroyuki Tachikawa, Makoto Shimizu and Yukio Nose. GEOGRAPHICAL VARIATIONS IN REPRODUCTIVE PARAMETERS OF SHORTSPINE SPURDOG IN THE NORTH PACIFIC. *Nippon Suisan Gakkaishi* 59(1):45-51. 1993. In English with Japanese summ. FR 38(2)
[Dep. Fish., Fac. Agric., Univ. Tokyo, Yayoi, Bunkyo, Tokyo 113, Japan] *Squalus melanocephalus*.
- 93-002819 Taylor, S. E., S. Egginton and E. W. Taylor. RESPIRATORY AND CARDIOVASCULAR RESPONSES IN RAINBOW TROUT (*ONCORHYNCHUS MYKISS*) TO AEROBIC EXERCISE OVER A RANGE OF ACCLIMATION TEMPERATURES / *J. Physiol. (Camb.)* Vol. 459, p. 19. 1993. Abstract only. FR 38(2)
[School Biol. Sci. & Dep. Physiol., Univ. Birmingham, Birmingham B15 2TT, England]
- 93-002820 Teo, Leng Hong and Ti-Wen Chen. A STUDY OF METABOLIC RATES OF *POECILIA RETICULATA* PETERS UNDER DIFFERENT CONDITIONS. *Aquacult. Fish Manage.* 24(1):109-117. 1993. FR 38(2)
[Dep. Zool., Natl. Univ. Singapore, Singapore 0511]
- 93-002821 Thomas, M. J.; B. N. Hamman and G. F. Tibbits. CARDIAC RYANODINE RECEPTOR (RyR) DENSITIES IN RAT, TROUT, DOGFISH, AND HAGFISH. *Am. Zool.* 32(5):67A. 1992. Abstract only. FR 38(2)
[Simon Fraser Univ., Burnaby, BC, Canada] *Aphelichthys carib.*
- 93-002822 Thorsrud, H.; P. E. Gallagher and A. P. Farrell. CARDIAC OUTPUT (Q) AND INTESTINAL BLOOD FLOW (q) IN FED AND EXERCISED CHINOOK SALMON (*ONCORHYNCHUS Tshawytscha*). *Am. Zool.* 32(5):67A. 1992. Abstract only. FR 38(2)
[Simon Fraser Univ., Burnaby, BC, Canada]
- 93-002823 Tibbits, G. F.; B. J. Murphy and B. S. Tuina. CHARACTERIZATION OF CARDIAC DIHYDROPYRIDINE RECEPTOR (DHPR) FROM TROUT SARCOLEMMMA (SL). *Am. Zool.* 32(5):68A. 1992. Abstract only. FR 38(2)
[Simon Fraser Univ., Burnaby, BC, Canada] *Oncorhynchus mykiss*.
- 93-002824 Tierney, Mary G. Luke and N. Hazen. THE ROLE OF THE RENIN-ANGIOTENSIN IN DRINKING IN THE EUROPEAN EEL (*ANGUILLA ANGUILLA*). *J. Physiol. (Camb.)* Vol. 459, p. 25. 1993. Abstract only. FR 38(2)
[School Biol. & Med. Sci., Univ. St. Andrews, St. Andrews, Fife KY16 8LL, Scotland]
- 93-002825 Torres, B.; A. M. Pastor, B. Cabrera; C. Selas and J. M. Delgado-García. AFFERENTS TO THE OCULOMOTOR NUCLEUS IN THE GOLDFISH (*CARRASUS AURATUS*) AS REVEALED BY RETROGRADE LABELING WITH HORSERADISH PEROXIDASE / *J. Comp. Neurol.* 324(3):449-461. 1992. FR 38(2)
[Lab. Neuroanat., Dep. Fisiol. & Biol. Anim., Fac. Biol., Univ. Sevilla, 41012-Sevilla, Spain]
- 93-002826 Tzivinos, J. P. THE YOLK SYNCYTIAL LAYER OF FLINDLUS: ITS ORIGIN AND HISTORY AND ITS SIGNIFICANCE FOR EARLY EMBRYOGENESIS. *J. Exp. Zool.* 265(3):258-284. 1993. FR 38(2)
[Dep. Biol., Yale Univ., New Haven, CT 06511]
- 93-002827 Trudeau, V. L.; B. D. Soley, A. O. L. Wong and R. L. Peter. INTERACTIONS OF GONADAL STEROIDS WITH BRAIN DOPAMINE AND GONADOTROPIN-RELEASING HORMONE IN THE CONTROL OF GONADOTROPIN SECRETION IN THE GOLDFISH. *Gen. Comp. Endocrinol.* 89(1):39-50. 1993. FR 38(2)
[Neurosci. Unit, Clinical Study Bldg., Rm. 9, Ottawa Civic Hospital, Univ. Ottawa, 1053 Carling Ave., Ottawa, ON, Canada K1Y 4G9] *Carassius auratus*.
- 93-002828 Trunzel, Donald Eugene. THE RELATIONSHIP BETWEEN A SPECIFIC ANTIGEN ON RAINBOW TROUT SPERMATOZOEA AND FERTILITY. Ph. D. dissertation, Univ. Idaho 78p. 1992. From Diss. Abstr. Int. B. Sci. Eng. 53(7):3264. 1993. Order No. DA9234770. FR 38(2)
Oncorhynchus mykiss.
- 93-002829 Tucker, C. S. and J. R. MacMillan. EFFECT OF SHORT-TERM STARVATION ON METHEMOGLOBIN LEVELS IN NITRITE-EXPOSED CHANNEL CATFISH. *J. Appl. Aquacult.* 1(4):21-27. 1992. FR 38(2)
[Agric. & For. Exp. Sta., Delta Branch Exp. Sta., Box 197, Stonewalla, MS 38776] *Ictalurus punctatus*.

PHYSIOLOGY (Continued)

- 93-002830 Telle, A. and H. A. Block. ON THE ORIGIN OF THE BILLFISH HEATER CELL PHENOTYPE. *Am. Zool.* 32(5):68A. 1992. Abstract only. FR 38(2)
[Dep. Organismal Biol. & Anat., Univ. Chicago, Chicago, IL]
- 93-002831 Tyler, Peter and Michael V. Bell. A STUDY OF DIFFUSIONAL PERMEABILITY IN MARINE FISH LARVAE. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 491. 1989. Abstract only. FR 38(2)
[Dep. Biol. Sci., Univ. Stirling, Stirling FK9 4LA, Scotland] *Gadus morhua* and *Clupea harengus*.
- 93-002832 Uchida, Naoyuki; Masayuki Yamada, Kohji Yamamoto, Hiroshi Anzai and Eichi Nishide. OCCURRENCE OF HIRONECTIN IN THE PLASMA OF RAINBOW TROUT. *Nippon Suisan Gakkaishi* 58(12):2399. 1992. In English with Japanese summ. FR 38(2)
[Dep. Fish., Coll. Agric. & Vet. Med., Nihon Univ., Shizuoka, Setagaya, Tokyo 154, Japan] *Oncorhynchus mykiss*
- 93-002833 Ushio, Hideki and Shugo Watabe. EFFECTS OF TEMPERATURE ACCLIMATION ON Ca^{2+} -ATPase OF THE CARP SARCOPLASMIC RETICULUM. *J. Exp. Zool.* 265(1):9-17. 1992. FR 38(2)
[Watabe: Lab. Mar. Biochem., Fac. Agric., Univ. Tokyo, Bunkyo, Tokyo 113, Japan] *Cyprinus carpio*.
- 93-002834 Uva, Bianca Maria; Maria Angela Masini, Laura Napoli and Monica Devecchi. IMMUNOREACTIVE ATRIAL Natriuretic-Like PEPTIDE IN ANTARCTIC TELEOSTS. *Comp. Biochem. Physiol. A Comp. Physiol.* 104(2):291-297. 1993. FR 38(2)
[Inst. Anat. Comp. Univ. Genova, Italy] *Chionodraco hamatus* and *Psigotlenia bismacchi*.
- 93-002835 Vallarino, Mauro; Denis Tranchard Buel and Hubert Vaudry. ALPHA-MELANOCYTE-STIMULATING HORMONE (α -MSH) IN THE BRAIN OF THE AFRICAN LUNGFISH, *PROPTERUS ANNETENS*: IMMUNOHISTOCHEMICAL LOCALIZATION AND BIOCHEMICAL CHARACTERIZATION. *J. Comp. Neurol.* 322(2):266-274. 1992. FR 38(2)
[Inst. Anat. Comp., Univ. Degli Studi Genova, 16132 Genova, Italy]
- 93-002836 Vellotte, P. A.; R. J. White; S. C. Cornell; D. Portel and J. L. Specker. INTESTINAL FLUID TRANSPORT IN ATLANTIC SALMON, *Salmo salar* L.: DEVELOPMENTAL CHANGES AND EFFECTS OF CORTISOL. *Am. Zool.* 32(5):21A. 1992. Abstract only. FR 38(2)
[Univ. RL, Kingston]
- 93-002837 Vijayan, M. M. and T. W. Moon. ACUTE HANDLING STRESS ALTERS HEPATIC GLYCOGEN METABOLISM IN FOOD-DEPRIVED RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). *Can. J. Fish. Aquat. Sci.* 49(11):2260-2266. 1992. In English with French summ. FR 38(2)
[Dep. Biol., Univ. Ottawa, ON, Canada K1N 6N5]
- 93-002838 Wadlo, Mike and Glen Van Der Kraak. BICOSANONIDS STIMULATE TESTOSTERONE PRODUCTION BY GOLDFISH TESTIS IN VITRO. *Bull. Reprod.* 46(1):41. 1992. Abstract only. FR 38(2)
[Dep. Zool., Univ. Guelph, Guelph, ON, Canada] *Carassius auratus*.
- 93-002839 Wallace, Jeff C.; Anil D. Antle and Andre M. Gudmundsson. THE HISTOLOGY AND PHYSIOLOGY OF THE TRANSFER FROM YOLK ABSORPTION TO EXOGENOUS FEEDING IN ARCTIC CHARR (*SALVELINUS ALPINUS* [L.]). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 403. 1989. Abstract only. FR 38(2)
[Univ. Tromsø, Blamannsveik Res. Stn., N-9105 Eldfjosen, Norway]
- 93-002840 Wallen, Petter; Orjan Ekberg, Anders Lanneg; Lennart Brodtkj; Hans Traven and Siss Gröfner. A COMPUTER-BASED MODEL FOR REALISTIC SIMULATIONS OF NEURAL NETWORKS. II. THE SEGMENTAL NETWORK GENERATING LOCOMOTOR RHYTHMICITY IN THE LAMPREY. *J. Neurophysiol. (Bethesda)* 68(6):1939-1950. 1992. FR 38(2)
[Nobel Inst. Neurophysiol., Karolinska Inst., S-104 01 Stockholm, Sweden]
- 93-002841 Wang, Jeng-Hwan and Shann-Tzong Jang. PROPERTIES OF CALPAIN II FROM *TILAPIA MUSCLE* (*TILAPIA NILOTICA* X *TILAPIA AUREA*). *Agric. Biol. Chem.* 55(2):339-345. 1991. FR 38(2)
[Jang: Grad. School Mar. Food Sci., Natl. Taiwan Ocean Univ., Keelung, Taiwan 20224]
- 93-002842 Wanzenböck, J. and S. Wanzenböck. TEMPERATURE EFFECTS ON INCUBATION TIME AND GROWTH OF JUVENILE WHITEFIN GOUGEON, *GOBIO ALBIPINNATUS* LUKASCH. *J. Fish Biol.* 42(1):35-46. 1993. FR 38(2)
[Inst. Zool., Univ. Vienna, Althanstr. 14, A-1090 Vienna, Austria] *G. gobicus* in Austria.
- 93-002843 Washburn, Barbara Shayne, Michael L. Bruns; Ernest H. Avey and Richard A. Freedland. EFFECTS OF ESTROGEN ON WHOLE ANIMAL AND TISSUE GLUCOSE USE IN FEMALE AND MALE RAINBOW TROUT. *Am. J. Physiol.* 263(5 pt 2):R1241-R1242. 1992. FR 38(2)
[Dep. Physiol. Sci., School Vet. Med., Univ. Calif., Davis 95616] *Oncorhynchus mykiss*.

PHYSIOLOGY (Continued)

93-002844 Watabe, Shugo; Kiyoshi Ikuchi and Katsumi Aida. COLD- AND WARM-TEMPERATURE ACCLIMATION INDUCES SPECIFIC CYTOSOLIC PROTEINS IN GOLDFISH AND CARP. *Nippon Suisan Gakkaishi* 59(1) 151-156 1993. In English with Japanese sum. FR 38(2)

[Lab. Mar. Biochem., Fac. Agric., Univ. Tokyo, Yayoi, Bunkyo, Tokyo 113, Japan] *Cyprinus carpio* and *Carrasius auratus*

93-002845 Weber, D. N., A. C. Russo, D. B. Szele and R. E. Spiller. SHORT-TERM, SUBLETHAL LEVELS OF WATERBORNE LEAD ALTER FAT-HEAD MINNOW (*PIMEPHALES PROMELAS*) PHYSIOLOGY. *Am. Zool.* 32(5):68A 1992. Abstract only. FR 38(2)

[Univ. Wis., Milwaukee]

93-002846 Weber, Gregory M.; Buel D. Rodgers and E. Gordon Grau. AN ANALOG OF GONADOTROPIN-RELEASING HORMONE STIMULATES RELEASE OF PROLACTIN AND INHIBITS RELEASE OF GROWTH HORMONE FROM PITUITARY TISSUES OF THE TILAPIA, *OREOCHROMIS MOSSAMBICUS*, IN VITRO. Seventeenth Annual Albert I. Tester Memorial Symposium, 15-16 April 1992. *Pac. Sci.* 47(1):96 1993. Abstract only. FR 38(2)

[Dep. Zool., Univ. Hawaii Manoa, Honolulu 96822]

93-002847 White, Stephanie A. and Russell D. Fernald. GONADOTROPIN-RELEASING HORMONE-CONTAINING NEURONS CHANGE SIZE WITH REPRODUCTIVE STATE IN FEMALE *MALLOCHROMIS BURTONI*. *J. Neurosci.* 13(2):434-441 1993. FR 38(2)

[Dep. Psychol., Jordan Hall, Bldg. 420, Stanford Univ., Stanford, CA 94305-2130]

93-002848 Whyte, J. N. C., W. C. Clarke, N. G. Ginter and J. O. T. Jensen. BIOCHEMICAL CHANGES DURING EMBRYOGENESIS OF THE PACIFIC HALIBUT, *HYPOGLOSSUS STENOLEPIS* (SCHMIDT). *Aquacult. Fish. Manage.* 24(2):193-201. 1993. FR 38(2)

[Fish & Oceans, Biol. Sci. Branch, Pac. Biol. Stn., Nanaimo, BC, Canada V9R 5K6]

93-002849 Wickramasinghe, S. N. ERYTHROPOIETIN AND THE HUMAN KIDNEY: EVIDENCE FOR AN EVOLUTIONARY LINK FROM STUDIES OF SALMO GARDINERII. *Comp. Biochem. Physiol. A Comp. Physiol.* 104(1):63-65. 1993. FR 38(2)

[Dep. Haematol., St. Mary's Hospital Med. School, Imperial Coll. Sci., Technol. & Med., Norfolk Pl., London W2 1PG, England]

93-002850 Wilkie, Michael P., Patricia A. Wright, George K. Iwama and Chris M. Wood. THE PHYSIOLOGICAL RESPONSES OF THE LAHONTAN CUTTHROAT TROUT (*ONCORHYNCHUS CLARKI HENSHAWI*), A RESIDENT OF HIGHLY ALKALINE PYRAMID LAKE (pH 9.4), TO CHALLENGE AT pH 10. *J. Exp. Biol.* Vol. 175, p. 173-194. 1993. FR 38(2)

[Dep. Biol., McMaster Univ., Hamilton, ON, Canada L8S 4K1]

93-002851 Williams, E. Eugene and Jeffrey R. Hazel. RAPID CELLULAR RESPONSE TO COLD IN ISOLATED, INTACT TROUT HEPATOCYTES. *Am. Zool.* 32(5):46A. 1992. Abstract only. FR 38(2)

[Ariz. State Univ., Tempe 85287]

93-002852 Winnicki, Aleksander; Krzysztof Formicki and Andrzej Sobocinski. WATER UPTAKE BY TROUT (*SALMO TRUTTA L.*) EGGS EXPOSED AFTER ACTIVATION TO MAGNETIC FIELD. *Acta Ichthyol. Piscatoris* 22(2):155-161. 1992. In English with Polish sum. FR 38(2)

[Zaklad Anat. Ryb., Akad. Rolnicza, ul. K. Krolowicza 4, 71-550 Szczecin, Poland]

93-002853 Woods, L. Curry III and C. V. Sullivan. REPRODUCTION OF STRIPED BASS, *MORONE SAXATILIS* (WALBAUM), BROODSTOCK: MONITORING MATURATION AND HORMONAL INDUCTION OF SPAWNING. *Aquacult. Fish. Manage.* 24(2):211-222 1993. FR 38(2)

[Sullivan: Dep. Zool., Campus Box 7617, N.C. State Univ., Raleigh 27695-7617]

93-002854 Wright, Patricia A.; George K. Iwama and Chris M. Wood. AMMONIA AND UREA EXCRETION IN LAHONTAN CUTTHROAT TROUT (*ONCORHYNCHUS CLARKI HENSHAWI*) ADAPTED TO THE HIGHLY ALKALINE PYRAMID LAKE (pH 9.4). *J. Exp. Biol.* Vol. 175, p. 153-172. 1993. FR 38(2)

[Dep. Pathol., Univ. Guelph, Guelph, ON, Canada N1G 2W1]

93-002855 Xie, X. J. and R. Sun. PATTERN OF ENERGY ALLOCATION IN THE SOUTHERN CATFISH (*MILIRUS MERIDIONALIS*). *J. Fish Biol.* 42(2):197-207. 1993. FR 38(2)

[Dep. Biol., Southwest China Teachers Univ., Chongqing, 630715, China]

93-002856 Yager, Timothy K. and Robert C. Summerfelt. EFFECTS OF FISH SIZE AND FEEDING FREQUENCY ON METABOLISM OF JUVENILE WALLEYE. *Aquacult. Eng.* 12(1):19-36. 1993. FR 38(2)

[Dep. Anim. Ecol., Iowa State Univ., Ames 50011-3221] *Stizostedion vitreum*.

FISHERIES REVIEW

PHYSIOLOGY (Continued)

- 93-002857 Yamada, Akiko; Katsumi Takano and Ikuzo Kamoi. PURIFICATION AND PROPERTIES OF α -GLUCOSIDASES FROM TILAPIA INTESTINE. [Nippon Suisan Gakkaishi 50(11):2189-2195, 1992. In Japanese with English summ. FR 38(2)]
[Dep. Agric. Chem., Tokyo Univ. Agric., Saiuraoka, Setagaya, Tokyo 156, Japan] Tilapia nilotica.
- 93-002858 Yamashita, Eijand Takao Matsuno. A SERIES OF NEW APOCAROTENOIDS FROM THE BLACK BASS *Nippon Suisan Gakkaishi* 58(12):2277-2282, 1992. In English with Japanese summ. FR 38(2)
[Dep. Nat. Prod. Res., Kyoto Pharmaceutical Univ., Misasagi, Yamashina, Kyoto 607, Japan] *Micropogonias undulatus*.
- 93-002859 Yan, L. and P. Swanson. CHARACTERISTICS OF SALMON GONADOTROPIN RECEPTORS. *Am. Zool.* 32(5):22A, 1992. Abstract only. FR 38(2)
[Northwest Fish. Sci. Cent., Seattle, WA 98195]
- 93-002860 Yang, T. H. and G. N. Somero. STARVATION CAUSES REDUCTIONS IN PROTEIN AND MESSENGER RNA CONCENTRATIONS FOR LACTATE DEHYDROGENASE BUT NOT FOR ACTIN IN FISH WHITE MUSCLE. *Am. Zool.* 32(5):69A, 1992. Abstract only. FR 38(2)
[Univ. Calif., San Diego] *Scorpaena pinnata*.
- 93-002861 Yang, T.H.; N. C. Lai; J. B. Graham and G. N. Somero. RESPIRATORY, BLOOD, AND HEART ENZYMIC ADAPTATIONS OF SEBASTOLOBIUS ALASCANUS (SCORPAENIDAE, TELEOSTEI) TO THE OXYGEN MINIMUM ZONE: A COMPARATIVE STUDY. *Biol. Jol. (Woods Hole)* 18(3):450-495, 1992. FR 38(2)
[Somero: Dep. Zool., 3029 Cordley Hall, Oregon State Univ., Corvallis 97331-2914]
- 93-002862 Yoshida, Tetsuoy; Masahiko Sakai; Tadatoshi Kitao; Sohman M. Khil; Seichi Arai; Raita Saito; Toshinao Inoue and Valerie Inglis. IMMUNOMODULATORY EFFECTS OF THE FERMENTED PRODUCTS OF CHICKEN EGG, EF203, ON RAINBOW TROUT, *Oncorhynchus mykiss*. *Aquaculture* 109(3-4):207-214, 1993. FR 38(2)
[Dep. Fish., Fac. Agric., Miyazaki Univ., Miyazaki 889-16, Japan]
- 93-002863 Yoshikawa, Joanne S. M.; Russel J. Borski and E. Gordon Grau. ENVIRONMENTAL SALINITY AND SYNTHESIS OF THE TWO PROLACTINS OF THE TILAPIA, *Oreochromis mossambicus*. *Southeastern Annual Albert L. Tester Memorial Symposium*, 15-16 April 1992. *Pac. Sci.* 47(1):95-97, 1993. Abstract only. FR 38(2)
[Dep. Zool., Univ. Hawai'i Manoa, Honolulu 96822]
- 93-002864 Young, M. J.; F. W. Taylor and P. J. Butler. CENTRAL ELECTRICAL STIMULATION OF THE RESPIRATORY NERVES OF THE ANAESTHETIZED, DECEBRATE DOGFISH (*Scyliorhinus*), AND ITS EFFECT ON FICTIVE RESPIRATION. *J. Physiol. (Camb.)* Vol. 459 p. 104, 1993. Abstract only. FR 38(2)
[School Biol. Sci., Univ. Birmingham, Birmingham B15 2TT, England]
- 93-002865 Youngson, A. F. and J. H. Webb. THYROID HORMONE LEVELS IN ATLANTIC SALMON (*Salmo salar*) DURING THE RETURN MIGRATION FROM THE OCEAN TO SPAWN. *J. Fish Biol.* 42(2):293-300, 1993. FR 38(2)
[SOAFD Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen AB9 8DB, Scotland]
- 93-002866 Zahir, Muhammad, Jr.; Kiyoshi Furukawa and Kazumi Aida. CHANGES IN OVARIAN MATURITY IN THE TROPICAL WALKING CATFISH, *Clarias batrachus* REARED UNDER 23-25°C. *Nippon Suisan Gakkaishi* 50(11):2033-2037, 1992. In English with Japanese summ. FR 38(2)
[Dep. Fish., Fac. Agric., Univ. Tokyo, Yayoi, Bunkyo, Tokyo 113, Japan]
- 93-002867 Zapponi, Maria Carla; Giuseppe Zanotti; Monica Stoppi and Rodolfo Berni. THE PRIMARY STRUCTURE OF PISCINE (*Oncorhynchus mykiss*) RETINOL-BINDING PROTEIN AND A COMPARISON WITH THE THREE-DIMENSIONAL STRUCTURE OF MAMMALIAN RETINOL-BINDING PROTEIN. *Eur. J. Biochem.* 210(3):937-943, 1992. FR 38(2)
[Berni: Ist. Sci. Biochem., Fac. Sci., Univ. Parma, Via delle Scienze, I-43100 Parma, Italy]
- 93-002868 Zhou Hongqi and Peter B. Johnson. GUSTATORY SENSITIVITY OF TILAPIA ZILLI. *Oceanol. Limnol. Sin.* 23(2):206-210, 1992. In Chinese with English summ. FR 38(2)
[Shanghai Fish. Univ., Shanghai 200090, China]
- 93-002869 Zhu Caibao; Zhang Hui; Shi Jianxin; Wang Mengfang; Liu Xilai; Liu Lixin and Li Jiaohua. HISTOLOGICAL OBSERVATIONS ON THE EFFECTS OF THE GONADAL DEVELOPMENT AND SEX DIFFERENTIATION IN THE FRY OF RAINBOW TROUT (*Salmo gairdneri* *Richardson*) AFTER SWIM-LIP BY ADMINISTRATION OF EXOGENOUS STEROID HORMONES. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China*, 19-23 September 1989. Wang Xing, editor. *Salman Fish.* 1990(Spec. Issue):91-96, 1990. FR 38(2)
[Dep. Biol., Univ. Shanxi, Taiyuan, Shanxi, China]

PHYSIOLOGY (Continued)

93-002870 Zietana, Marek S. LACTATE DEHYDROGENASE ISOENZYMES EXPRESSION IN STICKLEBACKS. *Biochem Syst Ecol* 21(1):95. 1993. Abstract only. FR 38(2)

[Gdańsk Univ. Biol. Stn., 80-680 Gdańsk-Gocik Wschodnie, Poland] *Pungitius pungitius* and *Gasterosteus aculeatus*

93-002871 Zippel, H. P., M. Hofmann, D. L. Meyer and S. Zeman. FUNCTIONAL AND MORPHOLOGICAL REGENERATION OF OLFACTORY TRACTS AND SUBTRACTS IN GOLDFISH. *J. Comp Physiol A Sens. Neural Behav. Physiol.* 172(1):91-99. 1993. FR 38(2)

[Physiol. Inst. Univ., Humboldtallee 23, W-3400 Göttingen, Germany] *Carassius auratus*

GENETICS, VARIATION STUDIES AND HYBRIDIZATION

93-002872 Adams, C. E., F. A. Huntington, R. B. Greer and A. F. Walker. THE ONTOGENY OF SYMPATRIC MORPHS OF ARCTIC CHARR, *SALVELINUS ALPINUS* (L.) FROM LOCH RANNOCH, SCOTLAND. *J. Fish Biol.* 41(Suppl. 8):180. 1992. Poster abstract only. FR 38(2)

[Univ. Glasgow, Glasgow, Scotland]

93-002873 Aoyagi, Kazuhiko, Yutaka Kojima and Mineo Saneyoshi. DEVELOPMENTAL CAPACITY OF NON-NUCLEATED EMBRYOS OF COHO SALMON, *ONCORHYNCHUS KISUTOKI*, INDUCED BY γ -IRRADIATION. *Can. J. Zool.* 71(1):185-188. 1993. In English with French summ. FR 38(2)

[Grad. School Environ. Sci., Hokkaido Univ., Sapporo 060, Japan]

93-002874 Baumgartner, Jeffrey Vance. PHENOTYPIC AND GENETIC ASPECTS OF MORPHOLOGICAL DIFFERENTIATION IN THE THREESPINE STICKLEBACK, *GASTEROSTEUS ACULEATUS*. Ph.D. dissertation, State Univ. N.Y. 179p. 1996. From Diss. Abstr. Int. B Sci. Eng. 47(12):4733. 1987. Order No. DA0707051. FR 38(2)

93-002875 Ite, Raphael and Volker Daniel. SEQUENCE ANALYSIS SUGGESTS A RECENT DUPLICATION OF THE GROWTH HORMONE-ENCODING GENE IN *TILAPIA NILOTICA*. *Gene (Amst.)* 125(2):143-150. 1993. FR 38(2)

[Daniel: Dep. Biochem., Woltzmann Inst. Sci., Rehovot 76100, Israel]

93-002876 Blanc, J. M., H. Polsson, A. M. Scalfaro, P. Aguilon and F. Vallee. INHERITANCE OF FERTILIZING ABILITY IN MALE TETRAPLOID RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). *Aquaculture* 110(1):61-70. 1993. FR 38(2)

[Stn. Hydrobiol., INRA, F-64310 Saint-Pees-sur-Niveelle, France]

93-002877 Cai Guowang, Igor I. Soler and Edward M. Donaldson. COMPARISON BETWEEN HEAT AND HYDROSTATIC PRESSURE SHOCKS IN THE INDUCTION OF TRIPLOIDY IN STEELHEAD TROUT (*SALMO GYALISS*). Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish.* 1990(Spec. Issue):141-145. 1990. FR 38(2)

[Exp. Biol. Lab., S. China Sea Inst. Oceanol., Acad. Sinica, 164 Xin Gang Xi Rd., Guangzhou, China]

93-002878 Carman, Odang Takashi, Oshiro and Fumio Takashima. VARIATION IN THE MAXIMUM NUMBER OF NUCLEOLI IN DIPLOID AND TRIPLOID COMMON CARP. *Nippon Suisan Gakkaishi* 58(12):2303-2309. 1992. In English with Japanese summ. FR 38(2)

[Takashima: Dep. Aquat. Biosci., Tokyo Univ. Fish., Kanon, Minato, Tokyo 108, Japan] *Cyprinus carpio*

93-002879 Chen, K. and D. Morlock. ALLOZYME CHARACTERS AND PHYLOGENY OF NORTHERN MEXICO PLATYFISHES XIPHOPTORUS. *Am. Zool.* 32(5):134A. 1992. Abstract only. FR 38(2)

[Univ. Tex., Austin] *X. xiphoideus*, *X. varietus*, *X. coueslanus*, *X. gordoni*, and *X. meyeri*

93-002880 Clarke, W. C.; R. E. Withler and J. E. Shelbourn. TWO SMOLTING PHENOTYPES IN CHINOOK SALMON, *ONCORHYNCHUS Tshawytscha*, PRODUCED BY DISJUNCTIVE PHOTOPERIOD RESPONSES. *Am. Zool.* 32(5):49A. 1992. Abstract only. FR 38(2)

[Dep. Fish. & Oceans, Pac. Biol. Stn., Nanaimo, BC, Canada V9R 5K6]

93-002881 Davies, Catherine Pons and Marie A. Simovich. GENETIC STRUCTURE OF DISCONTINUOUS POPULATIONS OF TWO COBIIDAE FISHES, *GILICHTHYS MIRABILIS* AND *GILICHTHYS SETA*. *Am. Zool.* 32(5):100A. 1992. Abstract only. FR 38(2)

[Univ. San Diego, San Diego, CA]

93-002882 Domeley, Michael L. SPECIATION IN THE SERRANID FISH *HYPOMECTRUS*. Ph.D. dissertation, Univ. Miami 121p. 1992. From Diss. Abstr. Int. B Sci. Eng. 53(6):3891. 1993. Order No. DA9239654. FR 38(2)

93-002883 Epifanio, John Michael. GENE LINKAGE, ONTOGENY OF GENE EXPRESSION, AND REPRODUCTIVE ISOLATION IN *POMOXIS ANNUALIS*, *P. NIGROMACULATUS*, AND THEIR HYBRIDS. Ph.D. dissertation, Univ. Ill. (Urbana-Champaign) 160p. 1992. From Diss. Abstr. Int. B Sci. Eng. 53(7):3201. 1993. Order No. DA9236451. FR 38(2)

GENETICS, VARIATION STUDIES AND HYBRIDIZATION (Continued)

- 93-002884 Ermolenko, I. N. GENETIC DIVERGENCE OF THE THREE GENERA OF COREOGNID FISH (COREOGNIDAE). *Sov Genet (Engl Transl Genetika)* 20(6):773-778. 1992. FR 38(2)
[Inst. Biol. Problems N., Far East. Branch, Russian Acad. Sci., Magadan, Russia] *Stenodus leucostichus* selen *Prosopium cyathaceum*, and *Coregonus*
- 93-002885 Fan Zhaoting and D. P. Fox. A NEW METHOD FOR FISH CHROMOSOME PREPARATION. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1981* Wang Xing, editor. *Salmon Fish. 1990(Spec. Issue)*:163. 1990. Abstract only. FR 38(2)
[Hefei Jiang Fish Res. Inst., Chinese Acad. Fish. Sci., 20 Huaxing 5th St., Daok, Harbin 150076, China] *Oncorhynchus mykiss*
- 93-002886 Fielding, Eileen. METABOLIC AND BEHAVIORAL RESPONSES TO TEMPERATURE IN THE ALL-FEMALE HYBRID TOPMINNOW, *POECILIPSIS MONACHA-LUCIDA*. Ph.D. dissertation, Univ. Conn. 140p. 1992. From *Diss. Abstr. Int. B Sci. Eng.* 53(B):3892. 1993. Order No. DA9300931. FR 38(2)
- 93-002887 Flajsh, M.; D. Avila; A. Carriazo; A. Greenberg; I. Salas-Cid; K. Sato; B. Shum; E. C. McKinney; L. Du Pasquier and M. Kaashari. EVOLUTION OF GENE FAMILIES INVOLVED IN IMMUNITY: IMPLICATIONS FROM STUDIES IN SHARK AND FROG. *Third International Veterinary Immunology Symposium, August 17-20 1992, Budapest, Hungary. Vet. Immunol. Immunopathol.* 35(Suppl):30. 1993. Abstract only. FR 38(2)
[Dep. Microbiol., Univ. Miami, Miami, FL] *Ginglymostoma cirratum*
- 93-002888 Flajshans, M.; P. Rab and S. Dobosz. FREQUENCY ANALYSES OF ACTIVE NODS IN NUCLEI OF ARTIFICIALLY INDUCED TRIPLOID FISHES. *Theor. Appl. Genet.* 85(1):68-72. 1992. FR 38(2)
[Res. Inst. Fish Culture & Hydrobiol., Dep. Fish Genet. & Breeding, CS-389 25 Vodnany, Czechoslovakia] *Oncorhynchus mykiss*, *Cyprinus carpio*, and *Trina trina*
- 93-002889 Fleming, Ian Andrew. NATURAL AND SEXUAL SELECTION DURING SALMONID BREEDING, AND RAMIFICATIONS FOR ARTIFICIAL PROPAGATION. Ph.D. dissertation, Univ. Toronto (Canada) 261p. 1991. From *Diss. Abstr. Int. B Sci. Eng.* 53(B):3973. 1993. Order No. DANN69297. FR 38(2)
Oncorhynchus kisutch
- 93-002890 Franck, Jane P. C. and Jonathan M. Wright. CONSERVATION OF A SATELLITE DNA SEQUENCE (SATB) IN THE TILAPINE AND HALLOCHROMINE GENOME (PISCES: CICHLIDAE). *Genome* 36(1):187-194. 1993. In English with french summ. FR 38(2)
[Dep. Biol., Oshouse Univ., Halifax, NS, Canada B3H 4E1] *Aplocheilichthys similis*, *Cichlasoma meeki*, *Tilapia homonum*, *T. nilotica*, and *Etroplus maculatus*
- 93-002891 Erakov, S. V. and A. A. Maksimovitch. KARYOTYPE ANALYSIS OF PINK SALMON *ONCORHYNCHUS GORBUSCHA* (WALBAUM) AND MASU SALMON *O. MASOU* (SREVOORT) HYBRIDS. *Sov. Genet. (Engl Transl Genetika)* 20(6):770-784. 1992. FR 38(2)
[Inst. Mar. Biol., Far East. Branch, Russian Acad. Sci., Vladivostok, Russia]
- 93-002892 Fujio, Yoshihisa and Masanichi Nakatama. DETECTION OF HEREDITARY DWARFISM IN THE GUPPY. *Nippon Suisan Gakkaishi* 59(1):23-27. 1993. In English with Japanese summ. FR 38(2)
[Fac. Agric., Taihoku Univ., Tsutsunodori-amemiyu, Aobe, Sendai, Miyagi 981, Japan] *Poecilia reticulata*
- 93-002893 Garcia-Vazquez, E.; P. Moran; A. M. Pendas; A. R. Linde and J. L. Izquierdo. STUDIES IN INDIVIDUAL SPAWNING OF SALMO SALAR: A MODEL TO EXPLAIN CHROMOSOME POLYMORPHISM PATTERNS. *Theor. Appl. Genet.* 85(1):61-67. 1992. FR 38(2)
[Dep. Biol. Func. (Genet.), Univ. Oviedo, 33071-Oviedo, Spain]
- 93-002894 Graves, John E.; Ian R. McDowell and M. Lisa Jones. A GENETIC ANALYSIS OF WAKASHI CYNOSOMON REIGALIS STOCK STRUCTURE ALONG THE MID-ATLANTIC COAST U.S. *Natl. Mar. Fish. Serv. Fish. Bull.* 90(3):469-475. 1992. FR 38(2)
[Inst. Mar. Sci., School Mar. Sci., Coll. William & Mary, Gloucester Point, VA 23062]
- 93-002895 Grimholt, U.; I. Horstvik; V. M. Fosse; O. Bergersen; M. Syed; I. Olsaker; C. Endresen and O. Lin. CLONING OF MHC CLASS I AND CLASS II GENES IN ATLANTIC SALMON (*SALMO SALAR*). *Third International Veterinary Immunology Symposium, August 17-20, 1992, Budapest, Hungary. Vet. Immunol. Immunopathol.* 35(Suppl.):136. 1993. Abstract only. FR 38(2)
[Norwegian Coll. Vet. Med., Oslo, Norway]
- 93-002896 Grunwald, David Jonah and George Streisinger. INDUCTION OF RECESSIVE LETHAL AND SPECIFIC LOCUS MUTATIONS IN THE ZEBRAFISH WITH ETHYL NITROSOUREA. *Genet. Res.* 59(2):103-116. 1992. FR 38(2)
[Dep. Human Genet., Eccles Inst. Human Genet., Univ. Utah, Salt Lake City 84112] *Brachydanio rerio*

FISHERIES REVIEW

GENETICS, VARIATION STUDIES AND HYBRIDIZATION (Continued)

- 93-002897 Cronwald, David Jonah and George Strelinger. INDUCTION OF MUTATIONS IN THE ZEBRAFISH WITH ULTRAVIOLET LIGHT. *Genet. Res.* 59(2):93-101, 1992. FR 38(2)
[Dep. Human Genet., Eccles Inst. Human Genet., Univ. Utah, Salt Lake City 84112] *Brachydanio rerio*.
- 93-002898 Guyonard, R. [GENETIC DIVERSITY AND MANAGEMENT OF NATURAL POPULATIONS OF COMMON TROUT.] In: *[The Trout: Biology and Ecology]*, J. L. Sugiñero and G. Masse, editors. p. 215-235. 1991. In French. FR 38(2)
[INRA, Lab. Genet. Poissons, 78352 Jouy-en-Josas Cedex, France] *Salmo trutta*.
- 93-002899 Han, Hyeon-Sob, Hideyuki Mannen, Akio Tsuchida and Nobuhiko Taniguchi. APPLICATION OF DNA FINGERPRINTING TO CONFIRMATION OF CLONE IN AYU *Nippon Salmo Caldasi* 56(11):2027-2031, 1992. In English with Japanese sums. FR 38(2)
[Dep. Culture Fish., Fac. Agric., Kochi Univ., Nankoku, Kochi 783, Japan] *Plecoglossus altivelis*.
- 93-002900 Hartley, S. E., C. McCowan, R. B. Greer and A. F. Walker. THE GENETICS OF SYMPATRIC ARCTIC CHARR [*SALVELINUS ALPINUS* (L.)] POPULATIONS FROM LOCH RANNOC, SCOTLAND. *J. Fish Biol.* 41(6):1621-1631, 1992. FR 38(2)
[Dep. Biol. & Mol. Sol., School Nat. Sci., Univ. Stirling, Stirling FK9 4LA, Scotland]
- 93-002901 Haughton, Milton O. and David P. F. King. POTENTIAL FOR MARICULTURE IN JAMAICA. *Proc. Gulf Caribb. Fish. Inst.* Vol. 42. p. 429-439. 1992. FR 38(2)
[Grace, Kennedy & Co., Ltd., Kingston, Jamaica] *Tilapia nilotica*, *T. mossambica* x *T. homorum*, *Chanos chanos*, *Epiplatys*, *Coryphaena hippurus*, and *Sciaenops ocellatus*.
- 93-002902 Holiday, Danielle Linnert. A POPULATION STUDY OF THE WINTER FLOUNDER *PSEUDOPLEUROCTES AMERICANUS* ALONG THE NORTHEAST ATLANTIC COASTLINE OF THE UNITED STATES. M.S. thesis, Am. Univ. 49p. 1992. From Masters Abstr. Int. 31(1):236. 1993. Order No. MA1349420. FR 38(2)
- 93-002903 Hurro, R. H. and D. J. Pile. GENETIC VARIATION IN ATLANTIC SALMON, *SALMO SALAR* L., WITHIN THE TAMAR CATCHMENT IN SOUTH-WEST ENGLAND. *J. Fish Biol.* 42(1):153-156, 1993. FR 38(2)
[Price: Dep. Biol. Sci., Univ. Plymouth, Drake Circus, Plymouth, Devon PL4 8AA, England]
- 93-002904 Ihssen, Peter E. GENETICS. Strategies for Rehabilitation of Lake Trout in the Great Lakes: Proceedings of a Conference on Lake Trout Research, August 1983. Randy L. Eshenroder, Thomas P. Poe, and Charles F. Ober, editors. *C. Lake Fish. Comm. Tech. Rep. No. 40*. p. 15-21. 1984. FR 38(2)
[Ontario Minist. Nat. Resour., Fish. Branch, Maple, ON, Canada L0J 1E0] *Salvelinus namaycush* in the Great Lakes.
- 93-002905 Jones, Ronald D. and Leo Lantsch. MAINTENANCE OF GENETIC DIVERSITY AMONG NATIVE AND NONNATIVE TROUT AND CHAR IN YELLOWSTONE NATIONAL PARK. *Proc. Conf. Sci. Natl. Parks* Vol. 6. p. 70-74. 1986. FR 38(2)
[U.S. Fish & Wildl. Serv., Yellowstone National Park, WY 82190] *Oncorhynchus clarkii bouvieri*, *O. c. lewisi*, and *Salvelinus namaycush* in Wyoming.
- 93-002906 King, D. P. F., S. J. Hovey, D. Thompson and A. Scott. MITOCHONDRIAL DNA VARIATION IN ATLANTIC SALMON, *SALMO SALAR* L., POPULATIONS. *J. Fish Biol.* 42(1):25-33, 1993. FR 38(2)
[Natl. Rivers Authority, Anglian Reg., East. Area Off., Colham Rd., Ipswich, Suffolk IP3 9JE, England]
- 93-002907 King, T. L. and E. G. Zislerman. CLINAL VARIATION AT ASPARTATE AMINOTRANSFERASE-2 IN SPOTTED SEATROUT, *CYNOSCION NEBULOSUS* (CLAWER), INHABITING THE NORTH-WESTERN GULF OF MEXICO. *Am. Genet.* 24(1):59-61, 1993. FR 38(2)
[Perry R. Bass Mar. Fish. Res. Stn., Parks & Wildl. Dep., HC 2, Box 385, Palacios, TX 77465]
- 93-002908 King, Tim L.; Rocky Ward and Ivonne R. Blanton. GENE MARKING: A VIABLE ASSESSMENT METHOD. *Fisheries* (Bethesda) 18(2):4-5, 1993. FR 38(2)
[Perry R. Bass Mar. Fish. Res. Stn., Parks & Wildl. Dep., Coastal Fish. Branch, HC 2, Box 385, Palacios, TX 77465]
- 93-002909 Krzykowski, Stanislaw and Jadwiga Wierzbicka. AN ATTEMPT TO DETERMINE SYSTEMATIC POSITION OF GREENLAND HALIBUT, *REINWARDIUS HIPPOGLOSSOIDES* (WALLBÄUM, 1792), FROM LABRADOR REGION AND BARENTS SEA ON THE BASIS OF MORPHOMETRIC, BIOLOGIC, AND PARASITOLOGICAL STUDIES. *Acta Ichthyol. Piscatoria* 22(2):59-75, 1992. In English with Polish sums. FR 38(2)
[Zaklad Syst. Ryb, Akad. Rolnicza, ul. K. Krolewicza 4, 71-550 Szczecin, Poland]
- 93-002910 Kummer, Helmut and Beate Dorfner. [THE REARING OF WHITEFISH LARVAE FROM VARIOUS LAKES IN AUSTRIA.] *Osterreichs Fischerei* 45(1):10-16, 1993. In German with English sums. FR 38(2)
[Abt. Hydrobiol., Fischereiwirtschaft & Aquakult., Inst. Wasserwirtschaft, Gwässergüte & Fischereiwirtschaft, Univ. Bodenkultur, A-1180 Vienna, Feltsmanlestr. 4, Austria] *Coregonus lavaretus*.

GENETICS, VARIATION STUDIES AND HYBRIDIZATION (Continued)

- 93-002911 Kurita, Jun; Mitsuru Sakatazumi and Fumio Takahara [PRODUCTION OF TRIGONOMIC ALLOTRIPLOID MEDAKA, *ORYZIAS LATIPES SINENSIS CURVINOOTUS-CELEBENSIS*] *Mappon Seisan Gakkaishi* 50(12):2311-2314, 1992. In Japanese with English summary. FR 30(2)
[Dep. Aquat. Biosci., Tokyo Univ. Fish., Konan, Minato, Tokyo 106, Japan] *O. melastigma* and *O. javanicus*
- 93-002912 Izuh, P.A. and J.D. McPhail. PARAPATRIC LAKE AND STREAM STICKLEBACKS ON NORTHERN VANCOUVER ISLAND. DISJUNCT DISTRIBUTION OR PARALLEL EVOLUTION? *Can. J. Zool.* 71(1):11-17, 1993. In English with French summary. FR 30(2)
[McPhail: Ecol. Group, Dep. Zool., Univ. British Columbia, 6270 University Blvd., Vancouver, BC, Canada V6T 1Z4] *Gasterosteus aculeatus* in Canada
- 93-002913 Lim, Joo Yeoul and Sung Chul Kim. A REPORT ON TRIPLOID CHERRY SALMON (*ONCORHYNCHUS MYOSU* VAR. *ISPAKAWA* (JORDAN ET MCGREGOR) PRODUCTION IN KOREA. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989* Wang Xing, editor. *Salmon Fish. 1990(Spec. Issue):147-152, 1990. FR 30(2)*
[Yangpyng Inland Fish. Res. Lab., Natl. Fish. Res. & Dev. Agency, Yangpyng, Korea]
- 93-002914 Ma, Tao. USE OF ERYTHROCYTE MEASUREMENTS TO IDENTIFY TETRAPLOID RAINBOW TROUT (*SALMO GARDNERI* RICHARDSON). *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989* Wang Xing, editor. *Salmon Fish. 1990(Spec. Issue):153-156, 1990. FR 30(2)*
[Fish. Res. Inst., Shanxi Province, China]
- 93-002915 Malme, E. L. F. Foresti, C. Oliveira and L. F. de Almeida Toledo. OCCURRENCE OF MACRO B CHROMOSOMES IN *ASTYANAX SCABRIPINNIS PARANAENSE* (PISCES, CHARACIFORMES, CHARACIDAE). *Genetica (Domg.)* 87(2):101-106, 1992. FR 30(2)
[Foresti: Dep. Model., Inst. Bioclim., UNESP, Campus Botucatu, CEP. 18610-000, Botucatu, SP, Brazil]
- 93-002916 Martin, Andrew P.; Robert Huxphreys and Stephen R. Columb. POPULATION GENETIC STRUCTURE OF THE ARMORHEAD, *PSUEDOPENTACERUS WHEELERI*, IN THE NORTH PACIFIC OCEAN: APPLICATION OF THE POLYMERASE CHAIN REACTION TO FISHERIES PROBLEMS. *Can. J. Fish. Aquat. Sci.* 49(1):2386-2391, 1992. In English with French summary. FR 30(2)
[Brimstonian Trop. Res. Inst., Naas Mar. Lab., Unit 0940, NPO, AA, Miami, FL 34002-0940]
- 93-002917 Maier, P. B. and W. A. Ruseon. USE OF CELLULOSE ACETATE (ELECTROPHORESIS AND NONDESTRUCTIVE SAMPLING PROCEDURES FOR IDENTIFICATION OF POTENTIAL GENE MARKERS). *Reg. Fish. Cult.* 54(4):246-249, 1992. FR 30(2)
[Cent. Biol. Popul. Manage., Queensland Univ. Technol., Gen. P.O. Box 2434, Brisbane 4001, Qld, Australia] *Macquaria ambigua*, *Bleynus blynnus*, *Leopotherapon unicolor*, *Maccullochella peelii*, and *Tandanus tandanus*.
- 93-002918 Matilainen, A.; E. Telesmaa and J. A. Levy. BIOCHEMICAL CHARACTERIZATION FOR THE GENETIC INTERPRETATION OF ESTERASE ISOZYMES IN MICROPOGONIAS (TURNIER) (PISCES, SCOMBRIDAE) IN SOUTH BRAZIL. *Comp. Biochem. Physiol. B Comp. Biochem.* 104(2):349-352, 1993. FR 30(2)
[Levy: Lab. Biogen. Marinha, Dep. Quim., Fundacao Univ. Rio Grande, CP 474, Rio Grande 96200, RS, Brazil]
- 93-002919 McIlroy, Douglas M. GENETIC AND DEVELOPMENTAL ANALYSIS OF TROPHIC DIFFERENTIATION IN TWO LAKE MALAWI CICHLID FISHES AND THEIR HYBRIDS. Ph.D. dissertation, Univ. Maine (Orono) 93p. 1992. From Diss. Abstr. Int. D Sci. Eng. 53(8):3976, 1993. Order No. DA0239529. FR 30(2)
Pseudotropheus zebra and *Labeotropheus fuelleborni*.
- 93-002920 McCaer, J. C. and C. K. Iwama. SOME PHYSIOLOGICAL DIFFERENCES BETWEEN STRAINS OF COHO SALMON. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989* Wang Xing, editor. *Salmon Fish. 1990(Spec. Issue):47-52, 1990. FR 30(2)*
[Dep. Anim. Sci., Fac. Agric., Univ. British Columbia, Suite 240, 2357 Main Mall, Vancouver, BC, Canada V6T 2A2] *Oncorhynchus mykiss* in North America
- 93-002921 Nanda, Indrajit; Manfred Schart; Jorg T. Eppelen; Wolfgang Feichtinger and Michael Schald. PRIMITIVE SEX CHROMOSOMES IN POECILIID FISHES: HARBOR SIMPLE REPETITIVE DNA SEQUENCES. *J. Exp. Zool.* 263(3):301-308, 1993. FR 30(2)
[Schald: Dep. Human Genet., Univ. Wurzburg Biozentrum, Am Hubland, W-8700 Wurzburg, Germany] *Poecilia reticulata*, *P. sphenops*, and *P. velifera*
- 93-002922 Ngai, John; Andrew Chess; Michael M. Dowling; Nicholas Necker; Eduardo R. Macagno and Richard Axel. CODING OF OLFACTORY INFORMATION. TOPOGRAPHY OF ODORANT RECEPTOR EXPRESSION IN THE CATFISH OLFACTORY EPITHELIUM. *Cell* 72(5):667-680, 1993. FR 30(2)
[Div. Neurobiol., Dep. Mol. & Cell Biol., Univ. Calif., Berkeley 94720] *Ictalurus punctatus*

GENETICS, VARIATION STUDIES AND HYBRIDIZATION (Continued)

- 93-002921 Ngai, John, Michael M. Dowling, Liselo Buck, Richard Axel and Andrew Chess. THE FAMILY OF GENES ENCODING ODORANT RECEPTORS IN THE CHANNEL CATFISH. *Gen* 72(5):657-666, 1993. FR 30(2)
[Div. Neurobiol., Dep. Mol. & Cell Biol., Univ. Calif., Berkeley 94720] *Ictalurus punctatus*
- 93-002924 Nishikubo, Richard S.; Evelyn Grace T. de Jesus and Susumu Hyodo. LOCALIZATION OF mRNAs FOR A PAIR OF PROLACTINS AND GROWTH HORMONE IN THE TILAPIA PITUITARY USING *IN SITU* HYBRIDIZATION WITH OLIGONUCLEOTIDE PROBES. *Gen. Comp. Endocrinol.* 89(1):72-81, 1993. FR 30(2)
[Dep. Integrative Biol. & Cancer Res. Lab., Univ. Calif., Berkeley 94720] *Tilapia* and *T. mossambica*
- 93-002925 Overden, J. R., R. W. G. White and M. Adams. MITOCHONDRIAL AND ALLOZYME GENETICS OF TWO TASMANIAN GALAXIDS (GALAXIAS AURATUS AND G. ZANYPHEHALUS, PISCES: GALAXIIDAE) WITH RESTRICTED LACUSTRINE DISTRIBUTIONS. *Hereditas* 70(3):223-230, 1993. FR 30(2)
[Fish Res. Group, Dep. Zool., Univ. Tasmania, G.P.O. Box 252C, Hobart, Tasmania]
- 93-002926 Paragiotaki, P. and A. J. Geffen. PARENTAL EFFECTS ON SIZE VARIATION IN FISH LARVAE. *J. Fish Biol.* 41(Suppl. B):37-42, 1992. FR 30(2)
[Geffen: Port Erin Mar. Lab., Port Erin, Isle of Man, United Kingdom] *Clupea harengus* and *Solea solea*
- 93-002927 Phillips, Ruth D.; Kay A. Pleya and Michael R. Brown. SALMONID PHYLOGENY INFERRED FROM RIBOSOMAL DNA RESTRICTION MAPS. *Can. J. Fish. Aquat. Sci.* 49(11):2345-2353, 1992. In English with French sum. FR 30(2)
[Dep. Biol. Sci., Univ. Wis., Box 413, Milwaukee 53201] *Salvelinus*, *Oncorhynchus*, *Hucho*, and *Salmo*
- 93-002928 Plets, C. S. and I. G. Curw. HYBRIDIZATION AND INTROGRESSION BETWEEN THE BREAM, *ABRAMIS BRAMA* (L.) AND THE ROACH, *RUTILUS RUTILUS* (L.). *J. Fish Biol.* 41(Suppl. B):102, 1992. Poster abstract only. FR 30(2)
[Univ. Hull, Hull, England]
- 93-002929 Pustovolt, S. P. and A. N. Makoslov. GENETIC AND PHENETIC VARIABILITY OF *ONCORHYNCHUS NERKA* WALBAUM SOCKEYE SALMON POPULATIONS OF THE KAMCHATKA RIVER. *Sov. Coner. (Engl. Transl. Genetica)* 20(6):780-795, 1992. FR 30(2)
[Inst. Biol. Problems N. Far East Branch, Russian Acad. Sci., Magadan, Russia]
- 93-002930 Reed, Knut H., Hans Jørgen S. Larsen, Ralph D. Under and Terje Røstle. GENETIC VARIATION IN LYSOZYME ACTIVITY IN RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). *Aquaculture* 109(3-4):237-244, 1993. FR 30(2)
[Dep. Anim. Genet., Norwegian Coll. Vet. Med./Natl. Vet. Inst., Postbox 8146, Dep. N-0033 Oslo 1, Norway]
- 93-002931 Snowdon, R. J. and K. D. Adams. ALLOZYME VARIATION IN RAINBOW TROUT FROM CENTRAL NORTH ISLAND, NEW ZEALAND. *Trans. Am. Fish. Soc.* 121(6):810-814, 1992. FR 30(2)
[Dep. Biol. Sci., Univ. Waikato, Private Bag, Hamilton, New Zealand] *Oncorhynchus mykiss*
- 93-002932 Sola, Luciana, Simona Bressanillo, Ellen M. Raach and Paul J. Monaco. CYTOGENETICS OF BISEXUAL/UNISEXUAL SPECIES OF POECILIA. IV. SEX CHROMOSOMES, SEX CHROMATIN COMPOSITION AND A_{450} POLYMORPHISMS IN *POECILIA LATIPINNIS*: A POPULATION FROM MEXICO. *Hereditas* 70(1):67-71, 1993. FR 30(2)
[Dip. Biol. Anim. Uomo, via A. Borelli 50, 00161 Rome, Italy]
- 93-002933 Stott, Wendyloo. GENETIC POPULATION STRUCTURE AND GENE FLOW IN AMERICAN PLACE, *HYPOGLOSSOIDES PLATESSOIDES*, FABR., FROM THE GULF OF ST. LAWRENCE. M.S. thesis, Univ. Guelph (Canada) 104p, 1991. From Masters Abstr. Int. 31(1):221, 1993. Order No. MAMM67936. FR 30(2)
- 93-002934 Stromsheln, A.; D. M. Dide; K. Holmyr; P. Hofgaard; K. H. Reed and H. J. Larsen. GENETIC VARIATION OF THE ANTIBODY RESPONSE IN ATLANTIC SALMON (*SALMO SALAR*) TO *AEROMONAS SALMONICIDA* LAYLOR. Third International Veterinary Immunology Symposium, August 17-20, 1992, Budapest, Hungary. *Vet. Immunol. Immunopathol.* 35(Suppl.):175, 1993. Abstract only. FR 30(2)
[Norwegian Coll. Vet. Med., Dep. Microbiol. & Immunol., Oslo, Norway]
- 93-002935 Tingling Wu; Dequan Xia and Hai Wang. PURIFICATION AND IMMUNOCHEMICAL ANALYSIS OF LACTATE DEHYDROGENASE (LDH) ISOZYME(S) OF GRASS CARP (*CITINOPHARYNGODON IDELLA*). *Aquaculture* 110(1):41-50, 1993. FR 30(2)
[freshwater Fish. Res. Cent., Chinese Acad. Fish. Sci., Wuxi 214081, China]
- 93-002936 Turner, T. F.; J. E. Ahlquist; M. M. White and R. Kelsey. VARIATION IN GENOME ORGANIZATION AND COMPOSITION OF REPEATED DNA AMONG THREE SPECIES OF FISH (FAMILY: PERCIDAE). *J. Hered.* 84(1):70-73, 1993. FR 30(2)
[Dep. Biol. Sci., Fla. Int. Univ., Miami 33199] *Percia flavescens*, *Silzostictodon vibreus*, and *S. canadense*

GENETICS, VARIATION STUDIES AND HYBRIDIZATION (Continued)

93-002937 Valcarlos, Alberto; Paula Brunner and Maria Christina Maggese. B-CHROMOSOME POLYMORPHISM IN THE SOUTH AMERICAN CATFISH, *RHAPHIA SAPO*. *Aquaculture* 110(2):111-118 1993. FR 30(2)

[Magister Semblosa 666, PB 'C' (1424) Buenos Aires, Argentina]

93-002938 van der Walt, L. O., F. H. van der Bank and C. J. Steyn ALLOZYME VARIATION IN DOMESTICATED AFRICAN CATFISH (*CLARIAS GAREPINUS*) FROM THE NETHERLANDS. *Comp Biochem Physiol. B Comp Biochem* 104(1):15-18, 1993. FR 30(2)

[Res. Unit Aquat. & Terrestrial Ecosyst., Rand Afrikaans Univ., P.O. Box 524, Auckland Park 2006, South Africa]

93-002939 Vittori, R.; E. Catalano and D. Colombara. KARYOTYPE ANALYSES OF THE TELEOSTEAN FISH *BALISTES CAROLINENSIS* AND *LOPHILUS PISCATORILUS* SUGGEST THE OCCURRENCE OF TWO DIFFERENT KARYOEVOLUTIONAL PATHWAYS. *Biol. Zentralbl.* 113(4):215-222, 1992. In English with German sum. FR 30(2)

[Inst. Zool. 'Giuseppe Reverberi', Univ. Palermo, Via Archiafi 18, I-90123 Palermo, Italy]

93-002940 Vrijenhoek, Robert C.; Edward Pfaffler and Jeffrey D. Wetherington. BALANCING SELECTION IN A DESERT STREAM DWELLING FISH: *POECILACOPSIS MOGNACHA*. *Evolution* 46(6):1642-1657 1992. FR 30(2)

[Cont. Theoretical & Appl. Genet., Rutgers Univ., New Brunswick, NJ 08903-0237]

93-002941 Yamazaki, Fumio and John Goodler. CYTOGENETIC EFFECTS OF HYDROSTATIC PRESSURE TREATMENT TO SUPPRESS THE FIRST CLEAVAGE OF SALMON EMBRYOS. *Aquaculture* 110(1):51-59 1993. FR 30(2)

[Fac. Fish., Hokkaido Univ., Hakodate 041, Japan] *Oncorhynchus tshawytscha* and *O. keta*.

BEHAVIOR

93-002942 An, Young Il and Yong Rhim Yang. RESPONSE OF STING FISH AND BLACK PORGY TO THE ATTRACTION LAMP. *Bull. Korean Fish Technol. Soc.* 20(1):1-9, 1992. In Korean. From Korean Sci. Abstr. 24(5):59205072, 1992. FR 30(2)

[Natl. Fish. Univ. Pusan, Pusan, Korea] *Sebastes inermis* and *Acanthopagrus schlegelii*.

93-002943 Batty, R. S. RESPONSES OF MARINE FISH LARVAE TO VISUAL STIMULI. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 484, 1989. Abstract only. FR 30(2)

[Scottish Mar. Biol. Assoc., Dunstaffnage Mar. Res. Lab., P.O. Box 3, Oban, Argyll PA34 4AD, Scotland] *Clupea harengus*, *Plurinctes platessa*, and *Gadus morhua*.

93-002944 Beall, Edward and Claude Marty. DISPERSAL PATTERNS OF ATLANTIC SALMON Fry AT EMERGENCE UNDER DIFFERENT CONDITIONS OF STOCKING DENSITIES. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 447, 1989. Abstract only. FR 30(2)

[Ecol. Poissons, INRA, Stn. Hydrobiol. BP3, St. Pie-sur-Nivelle, 6431 Ascain, France] *Salmo salar*.

93-002945 Belles-Isles, Jean-Claude. [ON THE ADAPTIVE VALUE OF EGG CANNIBALISM IN THREESPINE STICKLEBACK (*GASTEROSTEUS ACULEATUS*).] Ph.D. dissertation, Univ. Laval (Canada) 98p, 1991. From Diss. Abstr. Int. B Sci. Eng. 53(8):3090-3091, 1993. French text. Order No. DIANN6484. FR 30(2)

93-002946 Blaxter, J. H. S. and L. A. Fulman. THE ROLE OF THE SENSORY SYSTEMS OF HERRING LARVAE IN PREDATOR AVOIDANCE. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 484, 1989. Abstract only. FR 30(2)

[Dunstaffnage Mar. Res. Lab., P.O. Box 3, Oban, Argyll, Scotland] *Clupea harengus*

93-002947 Brahnard, E. L.; B. N. Page and F. E. Fish. FAST-START PERFORMANCE AND OPERCULAR JETTING IN FLATFISHES: OVERCOMING A STICKY PROBLEM? *Am. Zool.* 32(5):135A, 1992. Abstract only. FR 30(2)

[Harvard Univ., Cambridge, MA] *Plurinctes americanus*.

93-002948 Barnes, E. and A. Alanara. MONITORING THE FEEDING ACTIVITY OF INDIVIDUAL FISH WITH A DEMAND FEEDING SYSTEM. *J. Fish Biol.* 42(2):209-215, 1993. FR 30(2)

[Dep. Aquacult., Swedish Univ. Agric. Sci., S-901 83 Umeå, Sweden] *Salvelinus alpinus*.

93-002949 Brannas, Eva. EFFECTS OF PREDATION AND TERRITORY ON SURVIVAL OF EARLY AND LATE EMERGING BALTIC SALMON (*SALMO SALAR* L.): A LABORATORY STUDY. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 405, 1989. Abstract only. FR 30(2)

[Dep. Anim. Ecol., Univ. Umeå, S-901 87 Umeå, Sweden]

93-002950 Brown, G. E.; J. A. Brown and R. K. Selvanaya. THE EFFECT OF STOCKING DENSITY ON THE BEHAVIOUR OF ARCTIC CHARR (*SALVELINUS ALPINUS* L.). *J. Fish Biol.* 41(6):955-963, 1992. FR 30(2)

[Ocean Sci. Cent., Biopsychol. Programme, Memorial Univ. Newfoundland, St. John's, NF, Canada A1C 5S7]

FISHERIES REVIEW

BEHAVIOR (Continued)

- 93-002951 Brownell, Charles L. FACTORS AFFECTING AGONISTIC BEHAVIOUR IN REARED JUVENILE DOLPHIN (*CORYPHAENA LIPPARIUS*) *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol 191, p. 485 1989. Abstract only. FR 38(2)
[Oceanic Inst., P.O. Box 25288, Honolulu, HI 96825]
- 93-002952 Champalbert, G., C. Castelbon, L. Le Drosch Boursier and A. Bourdillon. LOCOMOTORY ACTIVITY RHYTHMS IN JUVENILE *SOLEA VULGARIS* AND *SCOPHYTHALMUS MAXIMUS* L. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol 191, p. 486 1989. Abstract only. FR 38(2)
[Sen. Mar. Endoume, Rue Batterie Liras, 13007 Marseille, France]
- 93-002953 Christensen, B. and L. Persson. SPECIES-SPECIFIC ANTI-PREDATORY BEHAVIOURS EFFECTS ON PREY CHOICE IN DIFFERENT HABITATS. *Behav. Ecol. Sociobiol.* 32(1):1-9 1993. FR 38(2)
[Dep. Anim. Ecol., Univ. Umeå, S-901 Umeå, Sweden] *Rutilus rutilus*, *Perca fluviatilis*, and *Coregonus albula*.
- 93-002954 Clutton-Brock, T. H. and G. A. Parker. POTENTIAL REPRODUCTIVE RATES AND THE OPERATION OF SEXUAL SELECTION. *Q. Rev. Biol.* 67(4):437-456 1992. FR 38(2)
[Large Anim. Res. Group, Dep. Zool., Univ. Cambridge, Downing St., Cambridge CB2 3E, England] *Cyrtopithecus ameyus*, *Macropus opalium*, and *Syngnathus typhle*.
- 93-002955 Debray, Mark A. and Calvin M. Keya. LAKEWARD AND DOWNSTREAM MOVEMENTS OF AGE-0 ARCTIC GRAYLING (*THYMALLUS ARCTICUS*) ORIGINATING BETWEEN A LAKE AND A WATERFALL. *Great Basin Nat.* 52(4):344-351 1992. FR 38(2)
[Kays. Biol. Dep., Mont. State Univ., Bozeman 59717]
- 93-002956 Doad, C. E. and M. E. Clarke. AN EXPERIMENTAL INVESTIGATION OF CANNIBALISM IN HATCHERY-REARED JUVENILE REDFISH (*SCAENOPS OCELLATA*) AND SNOOK (*CENTROPOMUS UNDECIMRALLUS*) *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol 191, p. 486 1989. Abstract only. FR 38(2)
[Rosenstiel School Mar. & Atmos. Sci., Univ. Miami, 4600 Rickenbacker Causeway, Miami, FL 33149]
- 93-002957 Elliott, J. K. HOST LOCATION AND ASSOCIATION BEHAVIORS OF SETTLEMENT-AGE ANEMONEFISHES IN FIELD EXPERIMENTS. *Am. Zool.* 32(5):9A 1992. Abstract only. FR 38(2)
[Fla. State Univ., Tallahassee]
- 93-002958 Englund, Goran, Frank Johansson and Tommy I. Olsson. ASYMMETRIC COMPETITION BETWEEN DISTANT TAXA: POECILID FISHES AND WATER STRIDERS. *Oecologia (Fisiol.)* 92(4):498-502 1992. FR 38(2)
[Johansson Dep. Anim. Ecol., Univ. Umeå, S-901 87 Umeå, Sweden] *Pisipichthys annectans*.
- 93-002959 Ezouat, G.; Françoise Fournel, A. Richard and J. L. Figard. [SEA TROUT (*SALMO TRUTTA* L.) IN NORMANDY/PICADRY.] In: *The Trout: Biology and Ecology*, J. L. Bagliniere and G. Makse, editors, p. 183-213, 1991. In French. FR 38(2)
[Conseil Supérieur Pêche, Délégation Reg. n° 1, 3 rue Sainte-Marie, 60200 Compiègne, France]
- 93-002960 FitzGerald, Gerard J. THE REPRODUCTIVE BEHAVIOR OF THE STICKLEBACK. *Sci. Am.* 268(4):80-85 1993. FR 38(2)
[Laval Univ., Québec City, PQ, Canada] *Gasterosteus aculeatus*.
- 93-002961 Fletcher, Dean E. NEST ASSOCIATION OF DUSKY SHINERS (*NOTEMPS CUMMINGSAE*) AND REDBREAST SUNFISH (*LEPOMIS ALBIFRONS*), A POTENTIALLY PARASITIC RELATIONSHIP. *Capela* 1993(1):159-167, 1993. FR 38(2)
[Savannah River Ecol. Lab., Drawer E, Aiken, SC 29802]
- 93-002962 Fromel, Krzysztof. RESPIRATORY MOVEMENTS OF TROUT (*SALMO TRUTTA* L.) LARVAE DURING EXPOSURE TO MAGNETIC FIELD. *Acta Ichthyol. Piscator.* 22(2): 149-154, 1992. In English with Polish summ. FR 38(2)
[Zakład Anat. Ryb, Akad. Rolnicza, ul. K. Krolewicza 4, 71-550 Szczecin, Poland]
- 93-002963 Foster, Neal R. PHYSIOLOGY AND BEHAVIOR. Strategies for Rehabilitation of Lake Trout in the Great Lakes. *Proceedings of a Conference on Lake Trout Research*, August 1983, Randy L. Eshenroder, Thomas P. Poe, and Charles H. O'yer, editors. *Gr. Lakes Fish. Comm. Tech. Rep. No. 40*, p. 22-27, 1984. FR 38(2)
[U.S. Fish & Wildl. Serv., Great Lakes Fish. Lab., Ann Arbor, MI 48105] *Salvelinus namaycush* in the Great Lakes.
- 93-002964 Furevik, Dag M.; Armund Bjørndal; Ingvær Huse and Anders Ferno. SURFACE ACTIVITY OF ATLANTIC SALMON (*SALMO SALAR* L.) IN NET PENS. *Aquaculture* 110(2):119-128, 1993. FR 38(2)
[Inst. Mar. Res., Fish Capture Div., P.O. Box 1870, N-5024 Bergen, Norway]

BEHAVIOR (Continued)

- 93-002955 Class, C. W.; A. D. F. Johnstone; G. W. Smith and W. R. Alojlewicz. THE MOVEMENTS OF SAITE (POLYCHLUS VIRENS L.) IN THE VICINITY OF AN UNDERWATER REEF. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*, Inmanu George Friede and Susan M. Swift, editors, p. 328-341. 1992. FR 38(2)
[SOMFD, Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen AB9 8DB, Scotland]
- 93-002966 Clava, G. J., P. M. Sagar and I. Naisand. INTERACTION FOR FOOD AND SPACE BETWEEN POPULATIONS OF GALAXIAS VULGARIS STOCKELL AND JUVENILE SALMO TRUTTA L. IN A NEW ZEALAND STREAM. *J. Fish Biol.* 41(6):909-925. 1992. FR 38(2)
[Natl. Inst. Water & Atmos. Res., Freshwater Div., P.O. Box 8602, Riccarton, Christchurch, New Zealand]
- 93-002967 Helpin, P. M. THE ROLE OF PREDATION AND PHYSIOLOGICAL COSTS IN POPULATION SIZE STRUCTURE AND HABITAT USE OF THE MUMMICHOG, *FUNDULUS HETEROCLETIS*. *Am. Zool.* 32(5):92A. 1992. Abstract only. FR 38(2)
[Brown Univ., Providence, RI]
- 93-002968 Harrington, Michael E. AGGRESSION IN DAMSELFISH. ADULT-JUVENILE INTERACTIONS. *Copeia* 1993(1):67-74. 1993. FR 38(2)
[Div. Mar. Biol. & Fish., Rosenstiel School Mar. & Atmos. Sci., Univ. Miami, 4600 Rickenbacker Cswy., Miami, FL 33149] *Pomacentrus partitus*, *P. plaxidion*, *P. fasciatus*, and *P. viridulus*.
- 93-002969 Haynes, Jody L. ANNUAL REESTABLISHMENT OF MOSQUITOFISH POPULATIONS IN NEBRASKA. *Copeia* 1993(1):232-235. 1993. FR 38(2)
[Dep. Biol. Sci., Mississippi State Univ., Mississippi State 39762] *Gambusia affinis*.
- 93-002970 Heggø, Ola; Trygve Hesthagen and Jostein Skurdal. VERTICAL DISTRIBUTION AND SUBSTRATE PREFERENCE OF BROWN TROUT IN A LITTORAL ZONE. *Environ. Biol. Fishes* 36(1):17-24. 1993. FR 38(2)
[Oppland Cty. Environ. Admin., Statsetatenes hus, N-2600 Lillehammer, Norway] *Salmo trutta* in Norway.
- 93-002971 Helprin, Daniel Joseph. THE ROLE OF OLFACTION IN THE HOMING ABILITY OF THE BLUE ROCKFISH, *SEBASTES MYSTINUS*, IN CARMEL BAY, CALIFORNIA. *MS Thesis*, San Jose State Univ. 71 p. 1992. From *Masters Abstr. Int.* 31(1):230. 1993. Order No. MA1348687. FR 38(2)
- 93-002972 Hoins, David C. and Matthew D. Machado. SPAWNING SEASON, CLUTCH CHARACTERISTICS, SEXUAL DIMORPHISM AND SEX RATIO IN THE REDFIN DARTER *ETHEOSTOMA WHIMPLEI*. *Am. Midl. Nat.* 129(1):161-171. 1993. FR 38(2)
[Dep. Ecol., Evol. & Organismal Biol., Tulane Univ., New Orleans, LA 70118]
- 93-002973 Heland, M. [SOCIAL ORGANIZATION AND TERRITORIALITY OF JUVENILE COMMON TROUT DURING ONTOGENY.] In: [The Trout: Biology and Ecology.] J. L. Saglinere and G. Abolins, editors, p. 121-149. 1991. In French. FR 38(2)
[INRA, Lab. Ecol. Hydrobiol., Stn. Phytol. & Ecol. Polonsa, 65 rue de St. Brieu, 35042 Rennes Cedex, France] *Salmo trutta*.
- 93-002974 Hixon, Mark A. and James P. Beets. PREDATION, PREY REFUGES, AND THE STRUCTURE OF CORAL-REEF FISH ASSEMBLAGES. *Ecol. Monogr.* 63(1):77-101. 1993. FR 38(2)
[Dep. Zool. & Coll. Oceanogr., Oreg. State Univ., Corvallis 97331-2914]
- 93-002975 Hofzetter, Cathi and Paul I. Ward. POPULATION AND SEX DIFFERENCES IN COLOUR VISION IN THE EUROPEAN MINNOW *PHOXINUS PHOXINUS* (CYPRINIDAE). *Behaviour* 122(1-2):78-87. 1993. FR 38(2)
[Zool. Mus. Univ. Zurich, Winterthurerstr. 190, 8057 Zurich, Switzerland]
- 93-002976 Hoss, Donald E.; David M. Checkley, Jr. and Lawrence R. Settle. DIURNAL BUOYANCY CHANGES IN LARVAL ATLANTIC MENHADEN (*BREVOORTIA TYRANNUS*). *Rapp. P-V Reun. Cons. Int. Explor. Mer. Vol.* 191, p. 105-111. 1989. FR 38(2)
[NOAA, Southeast Fish. Cent., Beaufort Lab., Beaufort, NC 28516-9722] *B. patronus*.
- 93-002977 Hughes, R. N.; M. J. Kaiser; P. A. Mackney and K. Warburton. OPTIMIZING FORAGING BEHAVIOUR THROUGH LEARNING. *J. Fish Biol.* 41(Suppl. B):77-91. 1992. FR 38(2)
[Funct. & Evol. Biol. Group, School Biol. Sci., Univ. Wales, Bangor, Gwynedd LL57 2UW, Wales]
- 93-002978 Huntingford, Felicity A. and Peter J. Wright. INHERITED POPULATION DIFFERENCES IN AVOIDANCE CONDITIONING IN THREE-SPINED STICKLEBACKS, *GASTEROSTEUS ACULEATUS*. *Behaviour* 122(3-4):264-273. 1992. FR 38(2)
[Dep. Zool., Univ. Glasgow, Glasgow G12 8QQ, Scotland]
- 93-002979 Huntingford, Felicity Ann. BEHAVIOURAL MECHANISMS IN EVOLUTIONARY PERSPECTIVE. *Trends Ecol. Evol.* 8(3):81-84. 1993. FR 38(2)
[Dep. Zool., Univ. Glasgow, Glasgow G12 8QQ, Scotland]

BEHAVIOR (Continued)

- 93-002980 Jayne, B. C. and G. V. Lauder. AN ELECTROMYOGRAPHIC STUDY OF THE STARTLE RESPONSE DURING STEADY SPEED SWIMMING OF FISH. *Am. Zool.* 32(5):146A. 1992. Abstract only. FR 38(2)
[Univ. Cincinnati, Cincinnati, OH] *Lepomis macrochirus*
- 93-002981 Johnstone, A. D. F., M. C. Lucas, P. Boylan and T. J. Carter. TELEMETRY OF TAIL-BEAT FREQUENCY OF ATLANTIC SALMON (*Salmo salar* L.) DURING SPAWNING. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 456-465. 1992. FR 38(2)
[SQAFC, Mar. Lab., P. O. Box 101, Victoria Rd., Aberdeen AB9 8DB, Scotland]
- 93-002982 Kaszpi, M. A., P. Domenici, R. W. Blake and D. Harper. THE KINEMATICS AND PERFORMANCE OF ESCAPE RESPONSES OF THE KNIFEFISH *XENOMYSTUS NIGRI*. *Can. J. Zool.* 71(1):189-195. 1993. In English with French summary. FR 38(2)
[Dep. Zool., Univ. British Columbia, Vancouver, BC, Canada V6T 2A9]
- 93-002983 Keats, Derek W. and Donald H. Steele. DIURNAL FEEDING OF JUVENILE COD (*GADUS MORhua*) WHICH MIGRATE INTO SHALLOW WATER AT NIGHT IN EASTERN NEWFOUNDLAND. *J. Northwest Atl. Fish. Sci.* Vol. 13. p. 7-14. 1992. FR 38(2)
[Bot. Dep., Univ. West. Cape, P. Bag X17, Bellville 7535, South Africa]
- 93-002984 Kemp, A. UNUSUAL OVIPOSITION SITE FOR *NEOCERATODUS FORSTERI* (OSTEICHTHYES DIPNOI). *Copeia* 1993(1):240-242. 1993. FR 38(2)
[Dep. Anat., Univ. Queensland, St. Lucia, Qld 4072, Australia]
- 93-002985 Kieller, James David. LEARNING AND INDIVIDUAL VARIATION IN THE FORAGING BEHAVIOUR OF SUNFISH. M.S. thesis, Queen's Univ. Kingston (Canada) 113p. 1991. From Masters Abstr. Int. 31(1):236. 1993. Order No. MAMM57188. FR 38(2)
Lepomis gibbosus and *L. macrochirus*.
- 93-002986 Kulling, David and Marlene Milinski. SIZE-DEPENDENT PREDATION RISK AND PARTNER QUALITY IN PREDATOR INSPECTION OF STICKLEBACKS. *Anim. Behav.* 44(5):949-955. 1992. FR 38(2)
[Abt. Verhaltensökol., Zool. Inst., Univ. Bern, Wohlenstr. 50a, CH-3032 Hünikerkappelen, Switzerland] *Cyprinichthys nyzelus* and *Gasterosteus aculeatus*
- 93-002987 L'Abée-Lund, Jan Henning; Arnlinn Langeland; Bror Jonsson and Ola Ugedal. SPATIAL SEGREGATION BY AGE AND SIZE IN ARCTIC CHARR: A TRADE-OFF BETWEEN FEEDING POSSIBILITY AND RISK OF PREDATION. *J. Anim. Ecol.* 62(1):160-168. 1993. FR 38(2)
[Dep. Zool., Univ. Trondheim, N-7055 Dragvoll, Norway] *Salvelinus alpinus* and *Salmo trutta* in Norway
- 93-002988 Lagardere, J.-P.; I. Favre; J. Monneron Dupin and D. Sureau. ORIENTATION BY OLFACTORY PERCEPTION IN THE COMMON SOLE (*SOLEA SOLEA* L.) EVALUATED USING ULTRASONIC TELEMETRY. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 367-375. 1992. FR 38(2)
[CNRS-IFREMER, Centre-L'Isle-aux-Bois, BP 5, 17137 L'Isle-aux-Bois, France]
- 93-002989 Larson, E. CONTRIBUTION OF MARINE SNOW TO THE DIET OF JUVENILE WHITE MULLET. *Am. Zool.* 32(5):94A. 1992. Abstract only. FR 38(2)
[Univ. Charleston, Charleston, SC] *Mugil curema*.
- 93-002990 Levin, P. S. PATCH STRUCTURE AND THE IMPORTANCE OF PRE- AND POST- SETTLEMENT PROCESSES IN A TEMPERATE FISH. *Am. Zool.* 32(5):94A. 1992. Abstract only. FR 38(2)
[Univ. N.H., Durham] *Tautoglabrus adspersus*.
- 93-002991 Urmata, Diego. HABITAT SEGREGATION BETWEEN ADULT AND JUVENILE THREE-SPOT DAMSEL FISH, *STEGASTES PLANIFRONS*, IN ROATAN ISLAND, HONDURAS. M.S. thesis, Calif. State Univ. (Long Beach) 55p. 1992. From Masters Abstr. Int. 31(1):215. 1993. Order No. MA1349501. FR 38(2)
- 93-002992 Macquart-Moulin, Claude, Gilbert Patriot, G. Champolbert and D. Chéhi. LOCOMOTORY REACTIONS OF JUVENILE SOLE (*SOLEA VULGARIS*) TO LIGHT. *J. Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191. p. 487-488. 1989. French abstract only. FR 38(2)
[Cent. Oceanol. Marseille, Fac. Sci. Luminy, Case 901, 13288 Marseille, France]
- 93-002993 Magnhagen, Carin. PARENTAL CARE AND PREDATION RISK IN FISH. *Am. Zool.* Febr. 29(4):227-232. 1992. FR 38(2)
[Swedish Univ. Agric. Sci., Dep. Aquacult., S-901 83 Umeå, Sweden]
- 93-002994 Mäntin, L. K.; V. I. Kijasko and P. L. Vuorinen. BEHAVIOUR AND DISTRIBUTION OF BREAM (*ABRAMIS BRAMA*) IN OXYGEN DEFICIT REGIONS. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 297-306. 1992. FR 38(2)
[Inst. Biol. Inland Waters, Acad. Sci., Borok, Nekouz, Yaroslavl, SU-152742, Russia]

BEHAVIOR (Continued)

- 93-002995 Martin, D. J.; D. Ian Austin; C. J. Whitman; Len A. Brocklehurst, Ahmed E. Nevial and Nicha Bax. TRACKING THE RESPONSE OF ADLET SALMON TO AN OIL SPILL IN THREE DIMENSIONS. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Friede and Susan M. Swift, ed. p. 410-422. 1992. FR 38(2)
[Pentac Environ. Inc., 120 W. Gayton, Suite A7, Edmonds, WA 98020] *Oncorhynchus tshawytscha*, *O. goriscus*, *O. tshawytscha*, and *O. tshawytscha* in Alaska.
- 93-002996 Matsushita, Katsumi. THE MICRO DISTRIBUTION OF FOOD ORGANISMS IN LARVAE OF FRESHWATER SALMON. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 460. 1989. Abstract only. FR 38(2)
[Dep. Fish., Fac. Agric., Univ. Tokyo, 1-1, Yayoi 1, Bunkyo-ku, Tokyo 113, Japan]
- 93-002997 McDowall, R. M. PARTICULAR PROBLEMS FOR THE CONSERVATION OF DIADROMIC FISH. *Aquat. Conserv. Mar. Freshwater Ecosyst.* 2(4) 351-355. 1992. FR 38(2)
[Freshwater Div., Natl. Inst. Water & Atmos. Res., P.O. Box 8140, Christchurch, New Zealand]
- 93-002998 McGovern, P. and T. K. McCarthy. LOCAL MOVEMENTS OF FRESHWATER LITLS (ANGRA ANGLICULA) IN WESTERN IRELAND. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Friede and Susan M. Swift, editors, p. 314-327. 1992. FR 38(2)
[Zool. Dep., Univ. Coll. Galway, Ireland]
- 93-002999 Mlinski, Manfred and Theo C. M. Bakker. COSTS INFLUENCE SEQUENTIAL MATE CHOICE STRATEGIES IN *GASTROSTEUS ACULEATUS*. *Proc. R. Soc. Lond. B Biol. Sci.* 250(1329):229-233. 1992. FR 38(2)
[Abteilung Verhaltensökol., Zool. Inst., Univ. Bern, Wohlenstr. 50 a, CH-3032 Hinterkappelen, Switzerland] *Gastrosteus aculeatus*.
- 93-003000 Moore, A. J. E. C. E. Potter and A. A. Buckley. ESTUARINE BEHAVIOUR OF MIGRATING ATLANTIC SALMON (*SALMO SALAR* L.) SMOLTS. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Friede and Susan M. Swift, editors, p. 389-399. 1992. FR 38(2)
[MAFF, Dir. Fish. Res., Pikefield Rd., Lowestoft, Suffolk NR33 0HT, England]
- 93-003001 Mowad, Mohamed Hassan. EFFECTS OF WATER TEMPERATURE AND pH ON SWIMMING PERFORMANCE OF CARP (*CYPRINUS CARPIO*). *Acta Ichthyol. Piscicult.* 21(2):59-64. 1991. In English w. Polish summs. FR 38(2)
[Inst. Oceanogr. & Fish., Alexandria, Egypt]
- 93-003002 Nagata, M. DISPERSAL OF WILD AND DOMESTIC MASU SALMON, *ONCORHYNCHUS MASU* (BREVOORT) FRY IN AN ARTIFICIAL CHANNEL. *J. Fish. Biol.* 41(Suppl. B):180. 1992. Poster abstract or FR 38(2)
[Hokkaido Fish Hatchery, Hokkaido, Japan]
- 93-003003 Neilson, John D. and R. Ian Perry. DIEL VERTICAL MIGRATIONS IN YOUNG FISH: FACULTATIVE OR OBLIGATE PHENOMENON? *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 452. 1992. Abstract only. FR 38(2)
[Mar. Fish. Div., Canada Dep. Fish. & Oceans, St. Andrews, NB, Canada E0G 2X0] *Merluccius bilinearis*, *Coregonus nasus*, and *Melanogrammus aeglefinus*.
- 93-003004 Nelson, P. A. KELP ROCKFISH AND GIANT KELP. BEHAVIORAL ECOLOGY AND HABITAT STRUCTURE. *Am. Zool.* 32(5):95A. 1992. Abstract only. FR 38(2)
[Univ. Calif., Santa Cruz] *Sebastes atrovirens*.
- 93-003005 Nemeth, D. Henrique. KINEMATICS OF PREY CAPTURE IN THE KELP GREENLING. *Am. Zool.* 32(5):144A. 1992. Abstract only. FR 38(2)
[Harvard Univ., Cambridge, MA] *Hiraganaus oblongus* in the Pacific Ocean.
- 93-003006 Potter, E. C. E.; D. J. Solomon and A. A. Buckley. ESTUARINE MOVEMENTS OF ADULT ATLANTIC SALMON (*SALMO SALAR* L.) IN CHRISTCHURCH HARBOUR, SOUTH ISLAND ENGLAND. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Friede and Susan M. Swift, editors, p. 400-409. 1992. FR 38(2)
[MAFF, Dir. Fish. Res., Pikefield Rd., Lowestoft, Suffolk NR33 0HT, England]
- 93-003007 Preezyakov, V. V. and E. S. Borisenko. THE STUDY OF FISH BEHAVIOUR UNDER THE USE OF LAKE GLUBOKOE BY MEANS OF SCANNING SONAR. *Fish. Res. (Amst.)* 15(4):323-329. 1993. FR 38(2)
[ul. Kravtchenko, d. 10, kv. 46, Moscow 117331, Russia] *Rutilus rutilus* and *Perca fluviatilis* in Russia.
- 93-003008 Re, Pedro; Anabela Farinha and Isabel Meneses. SARDINE DIEL SPAWNING TIME OF PORTUGAL. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 444-445. 1989. Abstract only. FR 38(2)
[Dep. Zool. & Antropol., Fac. Cienc., Univ. Lisboa, Bloco C3-Piso 3-Campo Grande, 1700 Lisbon, Portugal] *Sardinia pilchardus*.

FISHERIES REVIEW

BEHAVIOR (Continued)

- 93-003009 Reavis, R. H. IS MONOGAMY AN ESS FOR THE CORALREEF FISH *VALGENBINEA STRIGATUS* (BROUSONNET)? *Am. Zool.* 32(5):6A. 1992. Abstract only. FR 38(2)
[Univ. Calif., Berkeley]
- 93-003010 Reynolds, John D.; Mun R. Gross and Mark J. Coovils. ENVIRONMENTAL CONDITIONS AND MALE MORPHOLOGY DETERMINE ALTERNATIVE MATING BEHAVIOUR IN TRINIDADIAN GUPIES. *Anim. Behav.* 45(1):145-152. 1993. FR 38(2)
[School Biol. Sci., Univ. East Anglia, Norwich NR4 7T], England] *Poecilia reticulata*
- 93-003011 Sabaj, Mark Henry. SPAWNING CLASPS AND GAMETE DEPOSITION IN PEBBLE NESTING-BUILDING MINNOWS (PISCES: CYPRINIDAE). *M.S. thesis, Univ. Richmond* 1992. From Masters Abstr. Int. 34(1):237. 1993. FR 38(2)
Rhamphichthys aratoca, *Engelosteus laevis*, *Semotilus atromaculatus*, *Nocomis biguttatus* and *N. macropogon* in Virginia and Maryland.
- 93-003012 Sargent, R. C. ECOLOGY OF FILIAL CANNIBALISM IN FISHES. *Am. Zool.* 32(5):168A. 1992. Abstract only. FR 38(2)
[Univ. Ky., Lexington]
- 93-003013 Schlupp, Ingo, Jakob Parzefall, Jörg T. Eppien, Indrjit Nanda, Michael Schmidt and Manfred Scharf. PSEUDOMALE BEHAVIOR AND SPONTANEOUS MASCULINIZATION IN THE ALL-FEMALE TELEOST *POECILIA FORMOSA* (TELEOSTI: POECILIIDAE). *Behaviour* 122(1-2):88-104. 1992. In English with German summ. FR 38(2)
[Univ. Tex., Dep. Zool., Austin 78712] *P. mexicana* and *P. latipinna*.
- 93-003014 Tesch, F.-W.; T. Wendt and L. Karlsson. INFLUENCE OF GEOMAGNETISM ON THE ACTIVITY AND ORIENTATION OF THE EEL, *ANGUILLA ANGUILLA* (L.), AS EVIDENT FROM LABORATORY EXPERIMENTS. *Ecol. Freshwater Fish* 1(1):52-60. 1992. In English with Spanish summ. FR 38(2)
[Biol. Anstalt Helgoland, Notkestr. 31, W-D-2000 Hamburg, Germany]
- 93-003015 Tsuno, S. and J. C. Holm. INFLUENCE OF SEXUAL MATURATION ON FEEDING MOTIVATION OF SALMON, *Salmo salar* L., IN NET PENS. *J. Fish Biol.* 41(Suppl. 0):179. 1992. Poster abstract only. FR 38(2)
[Inst. Mar. Res., Austevoll, Norway]
- 93-003016 Utne, Anne Christine W.; Dag L. Aksnes and Jarl Giske. FOOD, PREDATION RISK AND SHELTER: AN EXPERIMENTAL STUDY ON THE DISTRIBUTION OF ADULT TWO-SPOTTED GORY *GOBIUSCULUS FLAVESCENS* (FABRICIUS). *J. Exp. Mar. Biol. Ecol.* 166(2):203-216. 1993. FR 38(2)
[Dep. Fish. & Mar. Biol., Univ. Bergen, Høyteknologiserenter, 5020 Bergen, Norway]
- 93-003017 Vives, Stephen P. CHOICE OF SPAWNING SUBSTRATE IN RED SHINER WITH COMMENTS ON CREVICE SPAWNING IN CYPRINELLA. *Copeia* 1993(1):229-232. 1993. FR 38(2)
[Dep. Biol., Landrum Box 8042, Ga. South Univ., Statesboro 30460] *C. atremis*.
- 93-003018 von der Emde, Gerhard. ELECTROLOCATION OF CAPACITIVE OBJECTS IN FOUR SPECIES OF PULSE-TYPE WEAKLY ELECTRIC FISH II. ELECTRIC SIGNALLING BEHAVIOUR. *Ethology* 92(3):177-192. 1992. FR 38(2)
[Zool. Inst., Univ. Regensburg, W-8400 Regensburg, Germany] *Mastomys litoralis*, *Gnathionemus petrosi*, *Mormyrus rufo*, and *M. caschive*.
- 93-003019 Waas, Joseph R. and Patrick W. Colgan. CHEMICAL CLUES ASSOCIATED WITH VISUALLY ELABORATE AGGRESSIVE DISPLAYS OF THIRTEEN SPINE STICKLEBACKS. *J. Chem. Ecol.* 18(12):2277-2284. 1992. FR 38(2)
[Dep. Biol., Queen's Univ., Kingston, ON, Canada K7L 3N6] *Gasterosteus aculeatus*.
- 93-003020 Whoriskey, F. C. CANNIBALISM AND STICKLEBACK DISTRACTION DISPLAYS. *Am. Zool.* 32(5):171A. 1992. Abstract only. FR 38(2)
[McDonald Campus, McGill Univ., Ste-Anne-de-Bellevue, ON, Canada] *Gasterosteus*.
- 93-003021 Wiegmann, Daniel D.; Jeffrey R. Baylis and Michael H. Hoff. SEXUAL SELECTION AND FITNESS VARIATION IN A POPULATION OF SMALLMOUTH BASS, *Micropterus dolomieu* (PISCES: CENTRARCHIDAE). *Evolution* 46(6):1740-1753. 1992. FR 38(2)
[Dep. Zool., Univ. Wis., Madison 53706]
- 93-003022 Williams, P. James and Joseph A. Brown. DEVELOPMENT CHANGES IN THE ESCAPE RESPONSE OF LARVAL WINTER FLOUNDER *PLEURONECTES AMERICANUS* FROM HATCH THROUGH METAMORPHOSIS. *Mar. Ecol. Prog. Ser.* 88(2/3):185-193. 1992. FR 38(2)
[Biol. Dep., Ocean Sci. Cent., Memorial Univ., Newfoundland, St. John's, NF, Canada A1B 3X9]

BEHAVIOR (Continued)

93-003023 Yowell, Douglas W. and Gary L. Vinyard AN ENERGY-BASED ANALYSIS OF PARTICULATE-FEEDING AND FILTER-FEEDING BY BLUE TILAPIA, *TILAPIA AUREA*. *Environ. Biol. Fish.* 36(1):65-72. 1993. FR 38(2)

[Vinyard: Dep. Biol., Univ. Nev., Reno 89557-0015]

LIFE HISTORY-GENERAL WORKS

93-003024 Ahrenholz, Dean W. POPULATION BIOLOGY AND LIFE HISTORY OF THE NORTH AMERICAN MENHADENS, *BREVOORTIA* SPP. *Mar. Fish. Rev.* 53(4):3-19. 1991. FR 38(2)

[Beaufort Lab., Southeast Fish. Sci. Cent., NMFS, NOAA, Beaufort, NC 28516-9722] *B. gairdneri*, *B. tyrannus*, *B. patronus*, and *B. smithi*.

93-003025 Aspinwall, Nevin; Douglas Carpenter and Judy Bramble. THE ECOLOGY OF HYBRIDS BETWEEN THE PEAMOUTH, *MYXOCELLUS CAURINUS*, AND THE REDSIDE SHINER, *RICHARDSONIUS BALZATUS*, AT STAVE LAKE, BRITISH COLUMBIA, CANADA. *Can. J. Zool.* 71(1):83-90. 1993. In English with French summ. FR 38(2)

[Dep. Biol. & Res. Biol. Stn., St. Louis Univ., St. Louis, MO 63103]

93-003026 Bagliniere, J. L. and G. Malesse, editors. [TROUT: BIOLOGY AND ECOLOGY.] *Int. Nat. Rech. Agron.* 303p. 1991. In French. Available from INRA Editions, Rt. de Saint Cyr, 78026 Versailles Cedex, France. FR 38(2)

[INRA-ENSA, Sta. Physiol. & Ecol. Poissons, 65 rue de St. Brieuc, 35042 Rennes Cedex, France] Individual chapters indexed in this issue of *Fisheries Review*. *Salmo trutta* in Europe.

93-003027 Baxter, J. H. S.; J. C. Gamble and H. v. Westenhagen, editors. THE EARLY LIFE HISTORY OF FISH: THE THIRD ICES SYMPOSIUM, BERGEN, 3-5 OCTOBER 1988. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191. 497p. 1989. FR38(2)

Individual papers indexed in this issue of *Fisheries Review*

93-003028 Buxton, Colin G. LIFE-HISTORY CHANGES IN EXPLOITED REEF FISHES ON THE EAST COAST OF SOUTH AFRICA. *Environ. Biol. Fishes* 36(1):47-63. 1993. FR 38(2)

[Dep. Ichthyol. & Fish. Sci., Rhodes Univ., P.O. Box 94, Grahamstown 6140, South Africa] *Chrysoleptus fallax* and *C. criniticeps*.

93-003029 Campbell, R. E. STATUS OF THE PIXIE POACHER, *OCELLA IMP*, IN CANADA. *Can. Fish. Acc.* 106(1):24-26. 1992. In English with French summ. FR 38(2)

[2880 Carling Ave. #1410, Ottawa, ON, Canada K2B 7Z1]

93-003030 Campbell, R. E. STATUS OF THE MOUNTAIN SUCKER, *CATOSTOMUS PLATYRHYNCHUS*, IN CANADA. *Can. Fish. Acc.* 106(1):27-35. 1992. In English with French summ. FR 38(2)

[2880 Carling Ave. #1410, Ottawa, ON, Canada K2B 7Z1]

93-003031 Carlson, Bruce Allan. THE LIFE HISTORY AND REPRODUCTIVE SUCCESS OF THE CORAL BLENNY, *EXALLIAS BREVIS* (KNER, 1868). Ph.D. dissertation, Univ. Hawaii 353p. 1992. From *Ots. Alask. Int. J. Sci. Eng.* 53(8):3972. 1993. Order No. DA9300316. FR 38(2)

93-003032 Champagnolle, A.; B. Buttler; P. Durand and M. Melhaoui. [PRINCIPLE CHARACTERISTICS OF THE BIOLOGY OF TROUT (*SALMO TRUTTA* L.) IN THE LEMAN AND SEVERAL TRIBUTARIES.] *In: [The Trout. Biology and Ecology.]* J. L. Bagliniere and G. Malesse, editors. p. 153-182. 1991. In French. FR 38(2)

[INRA, Sta. Hydrobiol. Lacustre, BP 511, 75 av. de Corzent, 74203 Thonon-les-Bains Cedex, France] *Salmo trutta* and *Oncorhynchus mykiss* in Switzerland and France.

93-003033 Chappaz, René and Guy Brun. [NEW DATA ON THE BIOLOGY AND ECOLOGY OF A CYPRIND FISH FROM SOUTHERN EUROPE: *LEUCISCUS (TELESTES) SOURA* (ROSSO, 1826)] *C.R. Acad. Sci. Ser. V. Sci. Vie* 316(1):35-41. 1993. In French with English summ. FR 38(2)

[Univ. Provence, Cent. Saint-Charles, Hydrobiol., 1, Pl. Victor-Hugo, 13331 Marseille Cedex 3, France]

93-003034 Chelkowski, Zygmunt. BIOLOGICAL CHARACTERISTICS OF SALMON (*SALMO SALAR* L.) FROM THE FIRTH OF SZCZECIN AND LOWER ODER. *Acta Ichthyol. Piscicult.* 21(2):107-122. 1991. In English with Polish summ. FR 38(2)

[Wydział Rybactwa Morskiego & Technol. Żywności, Akad. Rolnicza, ul. K. Krolewicza 4, 71-550 Szczecin, Poland]

93-003035 Chelkowski, Zygmunt. BIOLOGICAL CHARACTERISTICS OF SEA TROUT (*SALMO TRUTTA* L.) SMOLTS OF KNOWN AGE FROM OSOWKA STREAM. *Acta Ichthyol. Piscicult.* 22(2):107-122. 1992. In English with Polish summ. FR 38(2)

[Inst. Akwakult. & Tech. Rybactwa, Akad. Rolnicza, ul. K. Krolewicza 4, 71-550 Szczecin, Poland]

LIFE HISTORY-GENERAL WORKS (Continued)

- 93-003026 Chesheva, Z. A. DATA ON THE BIOLOGY OF THE MAGELLAN HAKE, *MACRURUS MAGELLANICUS*, FROM THE SOUTHWESTERN ATLANTIC. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):137-141. 1992. FR 30(2)
[All Inst. Fish. & Oceanogr., Kaliningrad, USSR]
- 93-003027 Chesney, Edward J. and Manuel Alonso-Novat. COASTAL UPWELLING AND THE EARLY LIFE HISTORY OF SARDINES (*SARDINA PICHARDUS*) ALONG THE GALICIAN COAST OF SPAIN. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol 191 p. 63-69. 1989. FR 30(2)
[La. Univ. Mar. Consortium, Star Rt. Box 541, Chauvin 70344]
- 93-003038 Clarke, W. Craig; Ruth E. Withler and John F. Shelbourn. GENETIC CONTROL OF JUVENILE LIFE HISTORY PATTERN IN CHINOOK SALMON (*ONCORHYNCHUS Tshawytscha*). *Can. J. Fish. Aquat. Sci.* 49(11):2300-2306. 1992. In English with French summ. FR 30(2)
[Dep. Fish. & Oceans, Biol. Sci. Branch, Pac. Biol. Stn., Nanaimo, BC, Canada V9R 5K6]
- 93-003039 Cunjak, R. A. COMPARATIVE FEEDING, GROWTH AND MOVEMENTS OF ATLANTIC SALMON (*SALMO SALAR*) PARR FROM RIVERINE AND ESTUARINE ENVIRONMENTS. *Ecol. Freshwater Fish* 1(1):26-34. 1992. In English with Spanish summ. FR 30(2)
[Sci. Branch, Gulf Reg., Dep. Fish. & Oceans, P.O. Box 5030, Moncton, NB, Canada E1C 9B6]
- 93-003040 Doumenge, Francois and Anne Toulemon, editors [THE EELS CONTRIBUTION TO KNOWLEDGE OF THEM.] *Bull. Inst. Oceanogr. (Monaco)* No. 10. 147p. 1992. In French or English with French summ. FR 30(2)
[Mus. Oceanogr., Av. Sain-Martin, Monaco-Ville, MC 98000, Monaco] Individual papers indexed in this issue of Fisheries Review.
- 93-003041 Falk-Petersen, Inger-Britt; Tore Haug and Erlend Moksness. OBSERVATIONS ON THE OCCURRENCE, SIZE, AND FEEDING OF PELAGIC LARVAL COMMON WOLF-FISH (*ANARHCHAS LUPUS*) IN WESTERN FINNMARK, NORTH-EAST NORWAY. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol 191, p. 45R. 1989. Abstract only. FR 30(2)
[Norwegian Coll. Fish. Sci., Univ. Tromsø, P.O. Box 3003, Gulberg, N-9001 Tromsø, Norway]
- 93-003042 Fontaine, Maurice [THE EELS: THE ROLE PLAYED BY THE INSTITUTE OF OCEANOGRAPHY, FOUNDATION ALBERT I^{er} PRINCE OF MONACO, IN THE DEVELOPMENT OF OUR KNOWLEDGE OF THEIR BIOLOGY.] *Bull. Inst. Oceanogr. (Monaco)* No. 10 p. V-XXVI. 1992. In French. FR 30(2)
[Inst. Oceanogr., 195 rue Saint-Jacques, 75005 Paris, France]
- 93-003043 Chan, D. and W. C. Sprules. DIET, PREY SELECTION, AND GROWTH OF LARVAL AND JUVENILE BURBOT (*Lota lota* (L.)). *J. Fish Biol.* 42(1):47-64. 1993. FR 30(2)
[Univ. British Columbia, Fish. Cent., Rm. 100, Hut 88, 2204 Main Ave., Vancouver, BC, Canada V6T 1W5]
- 93-003044 Herrera, M. and C. Fernandez-Delgado. THE LIFE-HISTORY PATTERNS OF *BARBUS BOGACZI SCZATARY* (GÜNTHER, 1861) IN A TRIBUTARY STREAM OF THE GUADALQUIVIR RIVER BASIN, SOUTHERN SPAIN. *Ecol. Freshwater Fish* 1(1):42-51. 1992. In English with Spanish summ. FR 30(2)
[Zool. Sec., Dep. Anim. Biol., Sci. Fac., Univ. Córdoba, San Alberto Magno Ave., E-14004 Córdoba, Spain]
- 93-003045 Holden, K. K. and M. N. Bruton. A LIFE-HISTORY APPROACH TO THE EARLY ONTOGENY OF THE MOZAMBIQUE TILAPIA *OREOCHROMIS MOZAMBIQUE* (PISCES, CICHLIDAE). *S. Afr. J. Zool.* 27(4):173-191. 1992. In English with Afrikaans summ. FR 30(2)
[J. L. Smith Inst. Ichthyol., Grahamstown 6140, South Africa]
- 93-003046 Hood, Peter B. and Rodric A. Schillerer. AGE, GROWTH, AND REPRODUCTION OF GAG, *MYZGONPERCA MICROLEPIS* (PISCES, SERRANIDAE), IN THE EASTERN GULF OF MEXICO. *Bull. Mar. Sci.* 51(3):337-352. 1992. FR 30(2)
[Mar. Res. Inst., Dep. Nat. Resour., 100 Eighth Ave., S.E., St. Petersburg, FL 33701-5095]
- 93-003047 Kozłowski, Andrzej. STUDIES ON *PSILODRACO BREVIPEPS* NORMAN, 1937 (PISCES, NOTOPTERENOIDEI, BATHYDRACONIDAE) FROM THE REGION OF SOUTH GEORGIA. *Acta Ichthyol. Piscatoria* 22(1):3-14. 1992. In English with Polish summ. FR 30(2)
[Inst. Oceanogr. Rybackiej & Odrobny Morza, Akad. Rolnicza, ul. K. Krowczyka 4, 71-550 Szczecin, Poland]
- 93-003048 Kunzmann, Andreas and Christopher Zimmermann. *AETHYTAXIS MYOPTERYX*, A HIGH-ANTARCTIC FISH WITH BENTHOPELAGIC MODE OF LIFE. *Mar. Ecol. Prog. Ser.* 88(1):33-40. 1992. FR 30(2)
[Inst. Polar Ecol., Wschhofstr. 1-3, W-2300 Kiel 14, Germany]
- 93-003049 Lantelme, J. STATUS OF THE CHESTNUT LAMPREY, *ICHTHYOMYZON CASTANEUS*, IN CANADA. *Can. Field-Nat.* 106(1):14-18. 1992. In English with French summ. FR 30(2)
[S8-2069 (somme Crescen), Gloucester, ON, Canada K1J 7W2]

FISHERIES REVIEW

LIFE HISTORY-GENERAL WORKS (Continued)

93-003050 Luo Qingzheng. [LIFE HISTORY PATTERNS AND GEOGRAPHICAL VARIATION OF ECOLOGICAL PARAMETERS FOR MARINE FISHES IN THE COASTAL WATERS OF CHINA.] *Oceanol. (Luzon Sea)* 23(1):63-73 1992. In Chinese with English summary FR 30(2)

[Inst. Oceanogr., Acad. Sinica, Qingdao 266071, China]

93-003051 Mallico, G. and J. L. Bagliniere. [BIOLOGY OF THE COMMON TROUT (SALMO TRUTTA L.) IN THE RIVERS OF FRANCE.] In: *The Trout. Biology and Ecology* / J. L. Bagliniere and G. Mallico, editors, p. 25-45 1991. In French. FR 30(2)

[INRA Lab. Pysiol. Poissons, Stn. Pysiol. & Ecol. Poissons, Campus Beaulieu, 35042 Rennes Cedex, France]

93-003052 Mengs, M., F. A. Huntingford, N. B. Metcalfe and J. E. Thorpe. MODELLING DEVELOPMENTAL CONFLICT AND INTRASPECIFIC VARIATION IN ATLANTIC SALMON, SALMO SALAR L. *J. Fish Biol.* 41(Suppl. B):179-183 1992. Poster abstract only. FR 30(2)

[Univ. Calif., Davis]

93-003053 Mann, R. H. K. and J. E. Thorpe, editors. FISH LIFE HISTORY STRATEGIES. THE FISHERIES SOCIETY OF THE BRITISH ISLES 25th ANNIVERSARY SYMPOSIUM, HELD AT THE UNIVERSITY OF LIVERPOOL, 12-17 JULY 1992. *J. Fish Biol.* 41(Suppl. B):184p. 1992. FR 30(2)

[Inst. Freshwater Ecol., East Rivers Group, c/o Inst. Terrestrial Ecol., Manks Wood Exp. Stn., Abbots Ripton Huntingdon, Cambridgeshire PE17 2LS, England] Individual papers and abstracts indexed in this issue of Fisheries Review.

93-003054 Metcalfe, N. B. and J. E. Thorpe. EARLY PREDICTORS OF LIFE-HISTORY EVENTS: THE LINK BETWEEN FIRST FEEDING DATE, DOMINANCE AND SEAWARD MIGRATION IN ATLANTIC SALMON, SALMO SALAR L. *J. Fish Biol.* 41(Suppl. B):93-99, 1992. FR 30(2)

[Fish Behav. & Ecol. Group, Zool. Dept., Glasgow Univ., Glasgow G12 8QQ, Scotland]

93-003055 Munk, Peter and So Skaane. DIFFERENCES IN LIFE HISTORY TRAITS OF NORTHERLY AND SOUTHERLY SPAWNED HERRING LARVAE IN THE NORTH SEA. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 461-462, 1989. Abstract only. FR 30(2)

[Danish Inst. Fish. & Mar. Res., Charlottenlund Castle, DK-2920 Charlottenlund, Denmark] *Chypre Årsrap.*

93-003056 Nelson, Gary A. and Michael R. Ross. DISTRIBUTION, GROWTH AND FOOD HABITS OF THE ATLANTIC WOLF FISH (ANARHICHAS LUPUS) FROM THE GULF OF MAINE-GEORGES BANK REGION. *J. Northwest Atl. Fish. Sci.* Vol. 13, p. 53-61 1992. FR 30(2)

[Dep. For. & Wildl. Manage., 204 Holdsworth Hall, Univ. Mass., Amherst 01003]

93-003057 Paulsen, T.; E. Eilassen; H. C. Eilertsen; K. S. Tande and R. E. Olsen. FEEDING, GROWTH, LIPID COMPOSITION, AND SURVIVAL OF LARVAL COD (GADUS MORHUA L.) IN RELATION TO ENVIRONMENTAL CONDITIONS IN AN ENCLOSURE AT 70°E IN NORTHERN NORWAY. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 409-420 1989. FR 30(2)

[Norwegian Coll. Fish. Sci., Univ. Tromsø, P.O. Box 3083, Galung, 9001 Tromsø, Norway]

93-003058 Reznick, David; Axel Meyer and David Frazar. LIFE HISTORY OF BRACHYRHMUS RHABDOPHORA (PISCES: POECILIIDAE) Copela 1993(1):103-111 1993. FR 30(2)

[Dep. Biol., Univ. Calif., Riverside 92521]

93-003059 Robinson, Shawn M. C. EARLY LIFE HISTORY OF PACIFIC HERRING LARVAE IN THE STRAIT OF GEORGIA, BRITISH COLUMBIA: HYDRODYNAMICS, DISPERSAL, AND ANALYSIS OF GROWTH RATES. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 454, 1989. Abstract only. FR 30(2)

[Dep. Oceanogr., Univ. British Columbia, 6270 University Blvd., Vancouver, BC, Canada V5T 1W5] *Chypre Årsrap.*

93-003060 Rounree, Rodney A. and Kenneth W. Able. FORAGING HABITS, GROWTH, AND TEMPORAL PATTERNS OF SALT-MARSH CREEK HABITAT USE BY YOUNG OF-YEAR SUMMER FLOUNDER IN NEW JERSEY. *Trans. Am. Fish. Soc.* 121(6):765-776, 1992. FR 30(2)

[NMFS, Northeast Fish. Cent., 166 Water St., Woods Hole, MA 02543] *Paralichthys dentatus*, *Morone americana*, and *Fundulus heteroclitus*.

93-003061 Ryan, P. M. AGE, GROWTH, AND FOOD OF THREESPINE STICKLEBACKS (GASTEROSTEUS ACULEATUS) IN THREE LAKES OF CENTRAL NEWFOUNDLAND, CANADA. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1325. 16p. 1984. In English with French summary. FR 30(2)

[Fish. Res. Branch, Dep. Fish. & Oceans, P.O. Box 5667, St. John's, NF, Canada A1C 5X1]

93-003062 Sabates, A. and P. Martin. SPAWNING AND DISTRIBUTION OF BLUEFISH POMAXTOMUS SALATRIX (L.) IN THE NORTHWESTERN MEDITERRANEAN. *J. Fish Biol.* 42(1):109-116, 1993. FR 30(2)

[Inst. Cienc. Mar. Paseo Mar. s/n, 06039 Barcelona, Spain]

FISHERIES REVIEW

LIFE HISTORY-GENERAL WORKS (Continued)

93-003063 Skjoldal, Håin Rune and Wobjorn Melle. NÉKTON AND PLANKTON: SOME COMPARATIVE ASPECTS OF LARVAL ECOLOGY AND RECRUITMENT PROCESSES. *Rapp. P-V Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 330-338, 1989. FR 38(2)

[Inst. Mar. Res., P.O. Box 1870, Nordnes, N-5024 Bergen, Norway]

93-003064 Sogard, Susan M.; Kenneth W. Able and Michael P. Fahay. EARLY LIFE HISTORY OF THE TALUOG TALUOCA ONITS IN THE MID-ATLANTIC BIGHT. *U.S. Natl. Mar. Fish. Serv. Fish. Bull.* 90(3):529-539, 1992. FR 38(2)

[Hatfield Mar. Sci. Cent., Oreg. State Univ., Newport 97365]

93-003065 Steljovics, O. P.; J. Kato and M. Kaskoranta. BIOLOGY OF THE SMÉLT, *OSMERUS EPERLANUS*, IN LAKE VESIJARVI, FINLAND. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):142-145, 1992. FR 38(2)

[Inst. Biol., Kola Sci. Cent., Russian Acad. Sci., Petrozavodsk, USSR]

93-003066 Tricas, Timothy Carl. LIFE HISTORY, FORAGING ECOLOGY, AND TERRITORIAL BEHAVIOR OF THE HAWAIIAN BUTTERFLYFISH, *CHAETODON MULTICINCTUS* *Ph.D.* dissertation, Univ. Hawaii 268p, 1986. *From Diss. Abstr. Int. 8 Sci. Eng.* 47(12):4797, 1987. Order No. DA8707025. FR 38(2)

93-003067 Wright, P. J. and M. C. Bailey. THE RELATION BETWEEN HATCHING TIME AND GROWTH OPPORTUNITY IN THE LESSER SANDÉEL, *AMMODYTES MARINUS* (RAITT). *J. Fish. Biol.* 41(Suppl. 8):182-183, 1992. Poster abstract only. FR 38(2)

[SCOTD Mar. Lab., Aberdeen, Scotland]

93-003068 Yang Shuxun and Ma Liling. BIOLOGY OF THE BURBOOTS (*LOTA LOTA*) IN THE UPPER REACHES OF THE MIUDAN RIVER, INCLUDING LAKE JINGBO, CHINA. *Proceedings of the International Symposium on Coldwater Fish Culture*, Beijing, China, 19-23 September 1990, Wang Xing, editor. *Salmon Fish.* 1990(Spec. Issue):175, 1990. Abstract only. FR 38(2)

[Fish. Sta., Yanbian Autonomous Prefecture, Jilin, China]

POPULATION STUDIES, PRODUCTION, RECRUITMENT, ETC.

93-003069 Alshuth, Sabine. RELATIONSHIP BETWEEN SEASONAL LARVAL PRODUCTION AND BACK-CALCULATED BIRTH-DATE DISTRIBUTION OF JUVENILE SPRAT (*SPRATUUS SPRATTUS* L.). *Rapp. P-V Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 468, 1989. Abstract only. FR 38(2)

[Alfred-Wegener-Inst. Polar & Mar. Res., Columbusstr., 2850 Bremerhaven, Germany]

93-003070 Anderson, John T. and Ian Webster. ICHTHYOPLANKTON SAMPLING ERROR ASSOCIATED WITH ITS NON-CONSTANT DEPTH DISTRIBUTION IN TWO LAYERED SYSTEMS. *Rapp. P-V Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 447, 1989. Abstract only. FR 38(2)

[Sci. Branch, Deep Fish & Oceans, P.O. Box 5667, St. John's, NF, Canada A1C 5X1] Sebasties.

93-003071 Audelo Naranjo, Juan Manuel, Olga Olivia Zamudio Armenta and Jose Luis Madero Perez. [POPULATION DYNAMICS OF THE LARGEMOUTH BASS (*MICROPYRUS SALMONIDES*, LACÉPÈDE) IN THE NORTHERN REGION OF SINALOA, MEXICO.] *Cienc. Mar.* 1(12):18-23, 1992. In Spanish. FR 38(2)

93-003072 Baumgartner, Tim R.; Andy Soutar and Vicente Ferreira-Barbosa. RECONSTRUCTION OF THE HISTORY OF PACIFIC SARDINE AND NORTHERN ANCHOVY POPULATIONS OVER THE PAST TWO MILLENNIA FROM SEDIMENTS OF THE SANTA BARBARA BASIN, CALIFORNIA. *Calif. Coop. Oceanic Fish. Invest. Rep. Vol. 33*, p. 24-40, 1992. In English with Spanish summary. FR 38(2)

[Div. Oceanic, Cent. Invest. Cienc. & Educ. Superior Ensenada, Ensenada, Baja California, Mexico] Sardinas *axagar* and Enguadís *mordax*

93-003073 Berestovskiy, E. G. THE SIZE AT SEXUAL MATURATION AND AGE OF MALES OF THE BARENTS SEA LONG ROUGH DAB, *HYPOGLOSSOIDES PLATESSOIDES* (LIMANDOIDES). *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):134-136, 1992. FR 38(2)

[Murmansk Mar. Biol. Inst., Russian Acad. Sci., Dol'nije Zeleenty, USSR]

93-003074 Boehlert, George W.; William Watson and L. Charles Sun. DISTRIBUTION OF LARVAL FISHES AROUND AN ISOLATED OCEANIC ISLAND AND THE ROLE OF LARVAL RETENTION IN POPULATION MAINTENANCE. *Rapp. P-V Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 448, 1989. Abstract only. FR 38(2)

[NMFS, Southwest Fish. Cent., Honolulu Lab., 2570 Dole St., Honolulu, HI 96822-2106] Evlota *epiphanes* in the Pacific Ocean

93-003075 Boykin, I. V. ICHTHYOPLANKTON IN THE COASTAL WATERS OF WEST SPITSBERGEN. *Rapp. P-V Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 440, 1989. Abstract only. FR 38(2)

[Polar Res. Inst. Mar. Fish. & Oceanogr. (PINRO), 6 Kripovich Str., 183763 Murmansk, USSR] *Melanogrammus aeglefinus*, *Coxus asotus*, *Melilotus villosus*, and *Sebastes mentella*

FISHERIES REVIEW

POPULATION STUDIES, PRODUCTION, RECRUITMENT, ETC. (Continued)

93-003076 Clarke, M. E., M. Fakir, C. Dowd and M. Schmale. AGE OF RECRUITMENT OF BICOLOUR DAMSELFLISH (*POMACENTRUS PARTIUS*) TO REEFS IN SOUTHERN FLORIDA. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 457. 1989. Abstract only. FR 38(2)

[Rosenstiel School Mar. & Atmos. Sci., B1, & Univ. Miami, 4600 Rickenbacker Causeway, Miami, FL 33149]

93-003077 Crawford, Orm L., James D. Woolington and Beverly A. Cross. BRISTOL BAY SOCKEYE SALMON SMOLT STUDIES FOR 1990. *Abr. Dep. Fish. Game Tech. Fish. Rep. No. 92-19. 74p. 1992. FR 38(2)*

[Dep. Fish. & Game, Div. Comm. Fish., 333 Raspberry Rd., Anchorage, AK 99518] *Oncorhynchus nerka* in Alaska.

93-003078 Davaine, P. and E. Beal. RELATIONSHIPS BETWEEN TEMPERATURE, POPULATION DENSITY, AND GROWTH IN A SEATROUT POPULATION (*S. TILGITA* L.) OF THE KERGUÉLEN ISLANDS. *J. Cons. Cons. Int. Explor. Mer.* 40(4):445-451. 1992. FR 38(2)

[INRA, Stn. Hydrobiol., Écol. Poissons, BP3, 64310 Saint-Pées-sur-Nivelle, France]

93-003079 Eilertsen, Bjornar, Petter Fossum, Per Solemdal and Svein Sundby. RELATION BETWEEN TEMPERATURE AND SURVIVAL OF EGGS AND FIRST-FEEDING LARVAE OF NORTHEAST ARCTIC COD (*GADUS MORHUA* L.). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 209-219. 1989. FR 38(2)

[Inst. Mar. Res., Nordnesparken 2, P.O. Box 1070, N-5024 Bergen-Nordnes, Norway]

93-003080 Elliott, J. M. and E. Baroud. LONG-TERM AND SHORT-TERM FLUCTUATIONS IN THE NUMBERS AND CATCHES OF ARCTIC CHARR, *SALVELINUS ALPINUS* (L.), IN WINDERMERE (NORTHWEST ENGLAND). *Am. J. Zool.* 28(2):135-146. 1992. In English with French summ. FR 38(2)

[NERC Inst. Freshwater Ecol., Windermere Lab., Ambleside, Cumbria LA22 0LP, England]

93-003081 Cline, Stephen R. DISTRIBUTION OF RAINBOW SMELT (*OSMERUS MORDAK*) IN ONTARIO'S EASTERN LAKE ERIE FROM A BOTTOM TRAWL PARTNERSHIP ASSESSMENT SURVEY. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 132. 1992. Abstract only. FR 38(2)

[Ontario Minis. Nat. Resour., Box 429, Port Dover, ON, Canada N0A 1N0]

93-003082 Huisman, Henk J. L. and Adriaan D. Rijnsdorp. INVESTIGATIONS ON EGG PRODUCTION AND MORTALITY OF COD (*GADUS MORHUA* L.) AND PLAICE (*PLEURONECTES PLATESSA* L.) IN THE SOUTHERN AND EASTERN NORTH SEA IN 1987 AND 1988. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 15-20. 1989. FR 38(2)

[Netherlands Inst. Fish. Invest., P.O. Box 68, 1970 AB IJmuiden, Netherlands]

93-003083 Hollowed, Anne Babcock. SPATIAL AND TEMPORAL DISTRIBUTIONS OF PACIFIC HAKE, *MERLUCCIOUS PRODUCTUS*, LARVAE AND ESTIMATES OF SURVIVAL DURING EARLY LIFE STAGES. *Calif. Coop. Oceanic Fish. Invest. Rep.* Vol. 33, p. 100-123. 1992. In English with Spanish summ. FR 38(2)

[NMFS, Alaska Fish. Sci. Cent., 2600 Sand Point Way, N.E. BIN C15700, Seattle, WA 98115-0070]

93-003084 Johannessen, Tore and Stein Tveite. INFLUENCE OF VARIOUS PHYSICAL ENVIRONMENTAL FACTORS ON 0-GROUP COD RECRUITMENT AS MODELLED BY PARTIAL LEAST-SQUARES REGRESSION. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 311-318. 1989. FR 38(2)

[Hoddevigen Skol. Stn., N-4817 Hls, Norway] *Gadus morhua*.

93-003085 King, Tim L. and Henry O. Pate. POPULATION STRUCTURE OF SPOTTED SEATROUT INHABITING THE TEXAS GULF COAST: AN ALLOZYMIC PERSPECTIVE. *Trans. Am. Fish. Soc.* 121(6):746-756. 1992. FR 38(2)

[Perry R. Bass Mar. Fish. Res. Stn., Parks & Wildl. Dep., HIC 2, Box 385, Palacios, TX 77465] *Cynoscion nebulosus*.

93-003086 Lesrie, C. G. de P. Caballero, E. Valero, J. J. Martínez and A. D. Hawkins. HISTORICAL CHANGES IN SOME SPANISH ROE AND LINE SALMON, *SALMO SALAR* L., FISHERIES: WHY ARE LARGE MULTI-SEASON FISH BECOMING SCARCER? *J. Fish Biol.* 41(Suppl. 8):179. 1992. Poster abstract only. FR 38(2)

[Hawkins: SOAFO Mar. Lab., Aberdeen, Scotland]

93-003087 Luch-Selds, Daniel, Sergio Hernandez-Vazquez, Daniel B. Luch-Cote, Cesar A. Salinas-Zavala and Richard A. Schwartzlose. THE RECOVERY OF THE CALIFORNIA SARDINE AS RELATED TO GLOBAL CHANGE. *Calif. Coop. Oceanic Fish. Invest. Rep.* Vol. 33, p. 50-59. 1992. In English with Spanish summ. FR 38(2)

[Cent. Invest. Biol. Baja California Sur, A.C. Apdo. Postal 128, La Paz, B.C.S. Mexico 23000, Mexico]

93-003088 Lukomov, E. G. and N. V. Mukhina. SOME ASPECTS OF SAITHE (*POELACHMUS VIRENS* L.) ABUNDANCE DYNAMICS DURING EARLY LIFE STAGES IN RELATION TO THE EFFECT OF BIOTIC AND ABIOTIC ENVIRONMENTAL FACTORS DURING THE FORMATION OF YEAR CLASSES. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 319-323. 1989. FR 38(2)

[Polar Res. Inst. Mar. Fish. & Oceanogr. (PINRO), 6 Kntsevich St., 103762, Murmansk, Russia]

FISHERIES REVIEW

POPULATION STUDIES, PRODUCTION, RECRUITMENT, ETC. (Continued)

- 93-003089 Aftinazi, Takashi; Masaru Tanaka, Motohiko Nakamura, Ryosai Nakamura and Takahisa Seiki. RECRUITMENT AND TEMPORAL VARIATIONS IN LARVAL SIZE DURING THE SETTLING STAGE OF JAPANESE FLOUNDER (*PARALICHTHYS OLIVACEUS*) Rapp. P-V Resur. Cons. Int. Explor. Mar. Vol. 191, p. 461. 1989. Abstract only. FR 38(2)
[Japan Sea Reg. Fish. Res. Lab., Niigata 951, Japan]
- 93-003090 Montgomery, Caron R. THE ECOLOGY OF THE PERCH (*PERCA FLUMINATIS* L.) OF LOUGH NEAGH, NORTHERN IRELAND. Ph.D. dissertation, Univ. Ulster (Northern Ireland) 218p. 1990. From Diss. Abstr. Int. II Sci. Eng. 53(4), 1685. 1992. Order No. BRDX96533. FR 38(2)
- 93-003091 Morrison, B. R. S. and R. Hawiman. FISH POPULATIONS AND INVERTEBRATES IN SOME HEADWATERS OF THE RIVERS DEE AND SPEY, 1980-1985. Scott. Fish. Res. Rep. No. 53. 10p. 1992. FR 38(2)
[SCAFD, Freshwater Fish. Lab., Pitlochry, Perthshire, Scotland] *Salmo salar* and *S. trutta* in Scotland
- 93-003092 Murray, P. A. and E. A. Moore. RECRUITMENT AND EXPLOITATION RATE OF *ETELIS OCLATUS* VAL IN THE ST. LUCIAN FISHERY. Proc. Gulf Caribb. Fish. Inst. Vol. 42, p. 362. 1992. Abstract only. FR 38(2)
[Dep. Fish., Marit. Agric., Lands, Fish. & Co-operatives, St. Lucia]
- 93-003093 Murray, P. A.; L. I. Chinnery and E. A. Moore. THE RECRUITMENT OF THE QUEEN SNAPPER *ETELIS OCLATUS* VAL., INTO THE ST. LUCIAN FISHERY. RECRUITMENT OF FISH AND RECRUITMENT OF FISHERMEN. Proc. Gulf Caribb. Fish. Inst. Vol. 41, p. 297-303. 1992. FR 38(2)
[Biol. Dep., Univ. West Indies, Cave Hill, Barbados]
- 93-003094 Nichols, J. H. and K. M. Brander. HERRING LARVAL STUDIES IN THE WEST-CENTRAL NORTH SEA. Rapp. P-V Resur. Cons. Int. Explor. Mar. Vol. 191, p. 160-168. 1989. FR 38(2)
[MAFF, Dir. Fish Res., Fish. Lab., Lowestoft, Suffolk NR33 0ET, England] *Clupea harengus*.
- 93-003095 Norcross, Brenda L. TRANSPORT AND RECRUITMENT OF SPOT (*DIPOSTOMUS XANTHURUS*) INTO CHESAPEAKE BAY, USA. Rapp. P-V Resur. Cons. Int. Explor. Mar. Vol. 191, p. 453. 1989. Abstract only. FR 38(2)
[Coll. William & Mary, School Mar. Sci., Inst. Mar. Sci., Gloucester Point, VA 23062]
- 93-003096 Oxenford, Hazel; Robin Mahon and Wayne Hunte. RELATIVE ABUNDANCE AND DISTRIBUTION OF ADULT FLYINGFISH IN THE EASTERN CARIBBEAN. Proc. Gulf Caribb. Fish. Inst. Vol. 42, p. 251-260. 1992. FR 38(2)
[Biology Res. Inst., McGill Univ., St. James, Barbados] *Hirundichthys affinis*, *Parascopelus lachypterus*, and *Cypselurus cyanopterus*
- 93-003097 Ribeiro, Pedro. ECOLOGY OF THE PLANKTONIC PHASE OF THE ANCHOVY [*ENGRAULIS ENGRASCOELUS* (L.)] WITHIN THE MIRA (STUARY, PORTUGAL). Rapp. P-V Resur. Cons. Int. Explor. Mar. Vol. 191, p. 462-463. 1989. Abstract only. FR 38(2)
[Dep. Zool. Antropol., Fac. Cienc., Univ. Lisbon, Bloco C2-Piso 3 Campo Grande, 1700 Lisbon, Portugal]
- 93-003098 Reckahn, James A. INTER-RELATIONS BETWEEN WINTER PRECIPITATION, SPRING RIVER RUNOFF VOLUMES, AND YEAR-CLASS STRENGTH IN RIVER SPAWNING WAJALEYES. Int. Assoc. Great Lakes Res. Conf. No. 35, p. 131. 1992. Abstract only. FR 38(2)
[Ontario Minstr. Nat. Resour., Fish. Res. Sect., Maple, ON, Canada L6A 1S9] *Stizostedion vitreum* in Canada.
- 93-003099 Rose, Gary J. and James G. Carlfield. LONGITUDINAL TRACKING RESPONSES OF THE WEAKLY ELECTRIC FISH, *STERNOPYGUS*. J. Comp. Physiol. A. Sens. Neural Behav. Physiol. 171(6):791-798. 1993. FR 38(2)
[Dep. Biol., Univ. Utah, Salt Lake City 84112] *S. nasutus* and *S. macrurus*.
- 93-003100 Solvanes, Anne Gro Vos and Oyvind Ulltang. POPULATION PARAMETERS, MIGRATION AND EXPLOITATION OF THE COD (*GADUS MORHUAL*, L.) IN MASFJORDEN, WESTERN NORWAY. Fish. Res. (Amst.) 15(3):253-289. 1992. FR 38(2)
[Dep. Fish. & Mar. Biol., Univ. Bergen, N-5020 Bergen, Norway]
- 93-003101 Shevchenko, A. V.; N. A. Isayev and S. V. Belikov. SOME RESULTS OF ICHTHIOPLANKTON AND HYDROGRAPHIC INVESTIGATIONS TO THE WEST AND NORTHWEST OF THE BRITISH ISLES IN 1983-1987. Rapp. P-V Resur. Cons. Int. Explor. Mar. Vol. 191, p. 455. 1989. Abstract only. FR 38(2)
[Polar Res. Inst. Mar. Fish. & Oceanogr. (PINRO), 6 Kripovich St., 183763, Murmansk, USSR] *Micromesistius poussieu*.
- 93-003102 Smith, Paul E.; N. Chyan-Hueilo and John L. Butler. LIFE-STAGE DURATION AND SURVIVAL PARAMETERS AS RELATED TO INTERDECADAL POPULATION VARIABILITY IN PACIFIC SARDINE. Calif. Coop. Oceanic Fish. Invest. Rep. Vol. 33, p. 41-45. 1992. In English with Spanish summ. FR 38(2)
[Coastal Div., NOAA, NMFS, Southwest Fish. Sci. Cent., P.O. Box 271, La Jolla, CA 92038-0271] *Sardinops sagax* in California.

POPULATION STUDIES, PRODUCTION, RECRUITMENT, ETC. (Continued)

- 93-003103 Seimstad, P. and M. Sinclair. JOHAN HJORT - FOUNDER OF MODERN NORWEGIAN FISHERY RESEARCH AND PIONEER IN RECRUITMENT THINKING. *Rapp P-V. Reun. Cons. Int. Explor. Mer.* Vol. 191 p. 339-344. 1989. FR 38(2)
[Inst. Mar. Fish. Res., P.O. Box 1870, N-5024 Bergen, Norway]
- 93-003104 Stevenson, D.K.; K.M. Sherman and J.J. Graham. ABUNDANCE AND POPULATION DYNAMICS OF THE 1966 YEAR CLASS OF HERRING ALONG THE MAINE COAST. *Rapp P-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 345-350. 1989. FR 38(2)
[Dep. Mar. Resour., West Goshoboy Harbor, ME 04575] Clupea forenigr
- 93-003105 Stratton, Barry L. and Drew L. Crawford. ABUNDANCE, AGE, SEX, AND SIZE STATISTICS FOR PACIFIC SALMON IN BRISTOL BAY, 1991. *Alsk. Dep. Fish. Game Tech. Fish. Rep. No.* 92-17, 168p. 1992. FR 38(2)
[Dep. Fish. & Game, Div. Commer. Fish., 333 Raspberry Rd., Anchorage, AK 99518] *Oncorhynchus nerka*, *O. tshawytscha*, *O. keta*, *O. kisutch*, and *O. gorbuscha* in Alaska.
- 93-003106 Tokranov, A.M. and S.V. Zavarina. SIZE-AGE STRUCTURE AND SEX RATIOS OF ALASKA PLAICE, *Pleuronectes quadrituberculatus*, ON THE WESTERN KAMCHATKA SHELF. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):118-127. 1992. FR 38(2)
[Kamchatkan Dep. Wildl. Manage., Pac. Inst. Geogr., Far East Branch, USSR Acad. Sci., Kamchatka Div., Pac. Fish. & Oceanogr. Res. Inst., Petropavlovsk-Kamchatskiy, USSR]
- 93-003107 Volodin, V.M. POPULATION STRUCTURE OF BREAM, *ABRAMIS BRAMA*, OF IVANKOVSKOYE AND RYBINSKOYE RESERVOIRS. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):80-89. 1992. FR 38(2)
[Inst. Inland Waters, USSR Acad. Sci., Borok, Yaroslavlsky Region, USSR]
- 93-003108 Walker, Susan H. STATUS OF THE SHORTNOSE CISCO, A CANDIDATE SPECIES FOR ENDANGERED SPECIES LISTING. *Int. Assoc. Great Lakes Res. Conf. No.* 35 p. 131. 1992. Abstract only. FR 38(2)
[U.S. Fish. & Wildl. Serv., 302 Manly Miles Bldg., 1405 S. Harrison Rd., East Lansing, MI 48823] *Coregonus reighardi* and *Petromyzon marinus* in the Great Lakes
- 93-003109 Wason, William. DISTRIBUTION OF LARVAL PACIFIC SARDINE, *SARDINOPS SAGAX*, IN SHALLOW COASTAL WATERS BETWEEN OCLANSIDE AND SAN DIONISIO, CALIFORNIA: 1978-1986. *Calif. Coop. Oceanic Fish. Invest. Rep.* Vol. 33 p. 89-99. 1992. In English with Spanish summ. FR 38(2)
[NOAA, NMFS, Southwest Fish. Sci. Cent., P.O. Box 271, La Jolla, CA 92038-0271]
- 93-003110 Young, R. J.; K.A. Houston; J.G. Weise and J.R.M. Kelso. THE EFFECT OF ENVIRONMENTAL VARIABLES ON THE POPULATION DYNAMICS OF SEA LAMPREY, *PETROMYZON MARINUS*. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1736. 33p. 1990. In English with French summ. FR 38(2)
[Great Lakes Lab. Fish. & Aquat. Sci., Dep. Fish. & Oceans, Canal Dr., Ship Canal P.O., South Ste. Marie, ON, Canada P6A 1P0]
- 93-003111 Zhang, Chang Ik and Yong Mun Kim. ESTIMATION OF POPULATION ECOLOGICAL CHARACTERISTICS OF SMALL YELLOW CROAKER, *PSUDOSCHAEZA POLYACTIS* OFF KOREA. *Bull. Korean Fish. Soc.* 25(1):29-36. 1992. In Korean. From Korean Sci. Abstr. 24(5):50205070. 1992. FR 38(2)
- SPAWNING HABITS AND MOVEMENTS, FECUNDITY, ETC.
- 93-003112 Ahnesjö, I. FEWER NEWBORN RESULT IN SUPERIOR JUVENILES IN THE PATERNALLY BROODING PIPEFISH *SYNCYPHUS TYPHEL*. *J. Fish Biol.* 41(Suppl. B):53-63. 1992. FR 38(2)
[Dep. Zool., Uppsala Univ., Box 561, S-751 22 Uppsala, Sweden]
- 93-003113 Albert, Juergen. COMPARATIVE SPAWNING BIOLOGY OF ANCHOVIES, SARDINES, AND SPRATS. *Rapp P-V. Reun. Cons. Int. Explor. Mer.* Vol. 191 p. 7-14. 1989. FR 38(2)
[Intergov. Oceanogr. Comm. (IOC), UNESCO, 7 Pl. Fontenay, 75700 Paris, France] Data for 17 species.
- 93-003114 Beschta, David A.; Brent C. Allen; Robert C. Richards; Wayne A. Wurtsbaugh and Charles R. Goldman. LAKE TROUT SPAWNING IN LAKE TAHOE: EGG INCUBATION IN DEEPWATER MACROPHYTE BEDS. *N. Am. J. Fish. Manage.* 12(3):442-449. 1992. FR 38(2)
[Dep. Fish. & Wildl., Utah State Univ., Logan 84322] *Salvelinus namaycush* in Nevada.
- 93-003115 Bellón, E. B. REPRODUCTIVE STRATEGY OF *POMATOSCHISTUS MICROPUS* (KROYER) (PISCES: GOBIIDAE) IN THE MAR MENOR LAGOON, MURCIA, SPAIN. *J. Fish Biol.* 41(Suppl. 4):103. 1992. Poster abstract only. FR 38(2)
[Univ. Murcia, Murcia, Spain]
- 93-003116 Bengtsson, A. SEASONAL VARIATION OF MASS, CONDITION AND GONADOSOMATIC INDEX IN FOURHORN SCULPIN (*MYXODORCEPHALUS QUADRICORNIS*) WITH NORMAL AND MALFORMED VERTEBRAE IN THE GULF OF BOTHNIA. *J. Fish Biol.* 42(2):265-278. 1993. FR 38(2)
[Dep. Anim. Ecol., Univ. Umeå, S-901 87 Umeå, Sweden]

FISHERIES REVIEW

SPAWNING HABITS AND MOVEMENTS, FECUNDITY, ETC. (Continued)

- 93-003117 Bevelton, R. J. H. PATTERNS OF REPRODUCTIVE STRATEGY PARAMETERS IN SOME MARINE TELEOST FISHES. *J. Fish Biol.* 41(Suppl. B) 137-160. 1992. FR 30(2)
[School Pure & Appl. Biol., Univ. Wales Coll. Cardiff, P.O. Box 915, Cardiff CT1 3TL, Wales] Data for 12 *Sebastes* species and 23 other species
- 93-003118 Bonnett, M. L. SPAWNING IN SYMPATRIC ALPINE GALAXIAS [GALAXIAS FALCISPONDYLUS STOKELL] AND LONGJAWED GALAXIAS, (G. PROGNATHUS STOKELL) IN A SOUTH ISLAND, NEW ZEALAND, HIGH-COUNTRY STREAM. *N.Z. Nat. Sci. Vol.* 19, p. 27-30. 1992. FR 30(2)
[Freshwater Div., Natl. Inst. Water & Atmos. Res. Ltd., P.O. Box 0602, Christchurch, New Zealand]
- 93-003119 Branler, K. M. THE LOCATION AND TIMING OF COD SPAWNING IN THE IRISH SEA AND CENTRAL NORTH SEA. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 439. 1989. Abstract only. FR 30(2)
[MAFF, Fish Lab., Pakefield Rd., Lowestoft, Suffolk NR33 0HT, England] *Gadus morhua*
- 93-003120 Checkley, David M., Jr., Gary L. Maillet and Katherine M. Mason. WINTER STORM EFFECTS ON ATLANTIC MENHADEN. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 449. 1989. Abstract only. FR 30(2)
[Dep. Mar., Earth, & Atmos. Sci., Box 0208, N.C. State Univ., Raleigh 27695-0208] *Brevoortia tyrannus*
- 93-003121 Corio, S. and I. Vila. SPAWNING OF *BASILEICHTHYS MICROLEPIDOTUS* [JENYNS] *J. Fish Biol.* 41(6):971-981. 1992. FR 30(2)
[Dep. Cienc. Ecol., Fac. Cienc., Univ. Chile, Casilla 653, Santiago, Chile]
- 93-003122 Conover, D. O. SEASONALITY AND THE SCHEDULING OF LIFE HISTORY AT DIFFERENT LATITUDES. *J. Fish Biol.* 41(Suppl. B):161-178. 1992. FR 30(2)
[Mar. Sci. Res. Cent., SUNY, Stony Brook, NY 11794-5000] *Morone chrysops* in the Atlantic Ocean
- 93-003123 Conover, David O.; David A. Van Voorhies and Amir Eshdham. SEX RATIO SELECTION AND THE EVOLUTION OF ENVIRONMENTAL SEX DETERMINATION IN LABORATORY POPULATIONS OF *MENIDIA MENIDIA*. *Evolution* 46(6):1722-1730. 1992. FR 30(2)
[Mar. Sci. Res. Cent., SUNY, Stony Brook, NY 11794-5000]
- 93-003124 Dickerson, Teri L.; Beverly J. Macowicz and J. Roe Hunter. SPAWNING FREQUENCY AND BATCH FECUNDITY OF CHLUB MACKEREL, *SCOMBER JAPONICUS*, DURING 1985. *Calif. Coop. Oceanic Fish. Invest. Rep.* Vol. 33, p. 130-140. 1992. In English with Spanish sums. FR 30(2)
[Dep. Fish & Game, 330 Golden Shore, Suite 50, Long Beach, CA 90802]
- 93-003125 Doyle, Miriam J. NEUSTONIC ICHTHYOPLANKTON IN THE NORTHERN REGION OF THE CALIFORNIA CURRENT ECOSYSTEM. *Calif. Coop. Oceanic Fish. Invest. Rep.* Vol. 33, p. 141-161. 1992. In English with Spanish sums. FR 30(2)
[NMFS, Alaska Fish. Sci. Cent., 7600 Sand Point Way, NE, Seattle, WA 98115-0070] Data for 64 species
- 93-003126 Eiler, John H.; Bonita D. Nelson and Robert F. Bradshaw. RIVERINE SPAWNING BY SOCKEYE SALMON IN THE Taku RIVER, ALASKA AND BRITISH COLUMBIA. *Trans. Am. Fish. Soc.* 121(6):701-708. 1992. FR 30(2)
[Alaska Bay Lab., Fish. Sci. Cent., NMFS, 11305 Glacier Hwy., Juneau, AK 99801-8626] *Oncorhynchus nerka*
- 93-003127 Foster, S. A.; J. A. Baker and M. A. Bell. PHENOTYPIC INTEGRATION OF LIFE HISTORY AND MORPHOLOGY: AN EXAMPLE FROM THREE-SPINED STICKLEBACK, *GASTEROSTEUS ACLEATUS* L. *J. Fish Biol.* 41(Suppl. B):21-35. 1992. FR 30(2)
[Dep. Biol. Sci., Univ. Arkansas, Fayetteville 72701]
- 93-003128 Galini, S., A. Galits and M. Goren. EFFECT OF WATER LEVEL FLUCTUATION ON SHORE SPAWNING OF *MIBOGREX TERRAZSANCTAE* [STEINITZ], [CYPRINIDAE] IN LAKE KINNERET, ISRAEL. *J. Fish Biol.* 41(6):863-871. 1992. FR 30(2)
[Coastal Inst. Nat. Conserv. Res., Tel-Aviv Univ., Ramat-Aviv 69978, Israel]
- 93-003129 Hara, Noriyuki and Tetsuro Muryama. [LONG-TERM FLUCTUATIONS IN ABUNDANCE OF THE YELLOWTAIL IMMIGRANTS IN THE COASTAL AREAS OF JAPAN] *Nippon Suisan Gakkaishi* 58(12):2219-2227. 1992. In Japanese with English sums. FR 30(2)
[Dep. Fish., For. Agric., Kyoto Univ., Kitashirakawa, Sakyo, Kyoto 606, Japan] *Seriola quinqueradiata*
- 93-003130 Hattori, Tsutomu; Yasunori Sakurai and Kenji Shimazaki. MATURATION AND REPRODUCTIVE CYCLE OF FEMALE PACIFIC COD IN WATERS ADJACENT TO THE SOUTHERN COAST OF HOKKAIDO, JAPAN. *Nippon Suisan Gakkaishi* 58(12):2245-2252. 1992. In English with Japanese sums. FR 30(2)
[Fac. Fish., Hokkaido Univ., Minato, Hakodate, Hokkaido 041, Japan] *Gadus macrocephalus*
- 93-003131 Haug, T. and E. Bjørnvik. COMPARATIVE STUDIES OF ATLANTIC HALIBUT (*HYPOGLOSSUS HYPOGLOSSUS*) SPAWNING IN DIFFERENT AREAS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 440. 1989. Abstract only. FR 30(2)
[Dep. Mar. Biol., Tromsø Mus., Univ. Tromsø, P.O. Box 2550, N-9001 Tromsø, Norway]

SPAWNING HABITS AND MOVEMENTS, FECUNDITY, ETC. (Continued)

- 93-003132 Heggberget, Tor G. SOME ENVIRONMENTAL REQUIREMENTS OF ATLANTIC SALMON. *Am Fish Soc Symp* No. 10 p. 132-135 1991 FR 38(2)
[Norwegian Inst Nat. Res., Tungstallet 2, N-7004 Trondheim, Norway] *Salmo salar* and *S. trutta* in Norway.
- 93-003133 Howell, B R. and A. P. Scott. OVULATION CYCLES AND POST-OVULATORY DETERIORATION OF EGGS OF THE TURBOT (*SCOPHTHALMUS MAXIMUS* L.). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol. 191 p. 21-26. 1989 FR 38(2)
[MAFF, Ok. Fish Res., Fish. Lab., Conwy, Gwynedd LL32 8UB, Wales]
- 93-003134 Huang Haoming, Chang Delong, Du Xiaoyan and He Xiejin. AN ECOLOGICAL OBSERVATION ON THE UPSTREAM SPAWNING OF FINE SCALE FISH, BRACHYMYSTAX LENOK (PALLAS) IN THE YA LU RIVER. *Proceedings of the International Symposium on Coldwater fish Culture, Beijing, China, 19-23 September 1989*. Wang Xing, editor. *Salmon Fish. 1990* (Spec. Issue):41-45. 1990. FR 38(2)
[Fish. Res. Inst., Jilin Province, China]
- 93-003135 Knapp, Roland Alexander. FEMALE MATE CHOICE IN THE BICOLOR DAMSEL FISH, *STEGASTES PARVITUS*. DIRECT AND INDIRECT ASSESSMENT OF MALE AND NEST QUALITY. Ph.D. dissertation, Univ. Calif. (Santa Barbara) 125p. 1991. From *Osteo. Abstr. Int. B Sci. Eng* 53(8) 3895. 1993. Order No. DA9237814 FR 38(2)
- 93-003136 Loughton, R. and G. W. Smith. THE RELATIONSHIP BETWEEN THE DATE OF RIVER ENTRY AND THE ESTIMATED SPAWNING POSITION OF ADULT ATLANTIC SALMON (*SALMO SALAR* L.) IN TWO MAJOR SCOTCH FISH EAST COAST RIVERS. In: *Wildlife Telemetry Remote Monitoring and Tracking of Animals*. Invertebrate George Friede and Susan M. Swick, editors. p. 423-433. 1992. FR 38(2)
[Spey Dist. Salmon Fish. Board, 121 High St., Forres, Scotland]
- 93-003137 Lura, H.; B. T. Sarlavap and H. Saegrov. SPAWNING BEHAVIOUR OF A FARMED ESCAPED FEMALE ATLANTIC SALMON (*SALMO SALAR*). *J. Fish Biol.* 42(2):311-313. 1993. FR 38(2)
[Mus. Zool., Dep. Antim. Ecol., Univ. Bergen, Museiplas 3, N-5007 Bergen, Norway]
- 93-003138 Lutniewy, Marcin Michael Francis. BEHAVIORAL ECOLOGY OF REPRODUCTION IN THE POMACANTHID ANGEL FISH, *CENTROPYGE POITIERI*. Ph.D. dissertation, Univ. Hawaii 167p. 1992. From *Osteo. Abstr. Int. B Sci. Eng* 53(8):3975-3976. 1993. Order No. DA9300335. FR 38(2)
- 93-003139 Marquet, Gerard. [THE STUDY OF THE RECRUITMENT AND THE PHYSIOLOGY OF EELS IN FRENCH POLYNESIA, ENCIRCLING THEIR AREA OF SPAWNING.]. *Bull. Inst. Oceanogr. (Marseille)* No. 10. p. 129-147. 1992. In French. FR 38(2)
[Ecole Pratique Hautes Etudes, Lab. Ichtyocool. Trop. & Méditerranéenne, URA CNRS 1453, Univ. Perpignan, 66060 Perpignan Cedex, France] *Argulus marmorata*, *A. obsoletus*, and *A. megastomus*.
- 93-003140 McEvoy, L. A. and J. McEvoy. MULTIPLE SPAWNING IN SEVERAL COMMERCIAL FISH SPECIES AND ITS CONSEQUENCES FOR FISHERIES MANAGEMENT, CULTIVATION AND EXPERIMENTATION. *J. Fish Biol.* 41(Suppl. 0):125-136. 1992. FR 38(2)
[School Biol. Sci., Univ. Wales, Swansea, Singleton Park, Swansea SA2 8PP, Wales] *Scophthalmus maximus*, *Hippoglossus hippoglossus*, *Cardus morhua*, and *Engraulis mordax*.
- 93-003141 Morimoto, Hareyuki. [TIME OF MAXIMAL OOCYTE HYDRATION AND SPAWNING IN THE JAPANESE SARDINE IN TOSA BAY, SOUTHWESTERN JAPAN.]. *Nippon Suisan Gakkaishi* 59(1):7-14. 1993. In Japanese with English sum. FR 38(2)
[Nansei Natl. Fish Res. Inst., Sanbashi-1, Kochi 780, Japan] *Sardinops melanosticta*.
- 93-003142 Myers, R. A. and J. A. Hitchings. SEA AGE AT MATURITY FOR ATLANTIC SALMON, *SALMO SALAR*, IN NORTH AMERICA. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1566. 18p. 1987. In English with French sum. FR 38(2)
[Sci. Branch, Dep. Fish. & Oceans, P.O. Box 5667, St. John's, NF, Canada A1C 5X1]
- 93-003143 Nargis, A. and M. A. Hossain. REPRODUCTIVE PERIODICITY OF CLIMBING PERCH, *AMBLYS TESTUDINEUS* (BLOCH) (ANABANTIDAE: PISCIFORMES). *Bangladesh J. Sci. Ind. Res.* 27(1-2):87-93. 1992. FR 38(2)
[ICSR Lab., Rajshahi 6206, Bangladesh]
- 93-003144 Naja, Zbigniew. MATURATION AND FECUNDITY OF MACKEREL (*SCOMBER SCOMBRUS* L.) IN NORTHWEST ATLANTIC. *Acta Ichthyol. Piscicoll.* 22(1):125-140. 1992. In English with Polish sum. FR 38(2)
[Zakład Biol. Zasobow Morza, Akad. Rolniczej, ul. K. Krolewicz 4, 71-550 Szczecin, Poland]
- 93-003145 Ojaveer, E. and T. Raid. ROLE OF REPRODUCTION IN BALTIC HERRING POPULATION DIFFERENTIATION. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol. 191. p. 462. 1989. Abstract only. FR 38(2)
[Tallinn Dep. Baltic Fish. Res. Inst., Apteegi 1-2, Tallinn 200101, USSR] *Clupea harengus*.

FISHERIES REVIEW

SPAWNING HABITS AND MOVEMENTS, FECLINDITY, ETC. (Continued)

- 93-003146 Palomera, I and A. Sabales. SPAWNING HABITS OF TWO CLUPEIFORM FISHES (*ENGRAULIS ENCRASCOLOUS* L.) AND *SARDINELLA AURITA* (VAL.) IN THE NORTHWESTERN MEDITERRANEAN. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 443. 1989. Abstract only. FR 38(2)
[Inst. Cienc. Mar. P. Nac., s/n 08003 Barcelona, Spain]
- 93-003147 Pimplika, Elzbieta. FECUNDITY OF TENCH (*TINCA TINCA* L.) FEMALES IN LAKE DRWECKIE *Acta Ichthyol. Piscator.* 21(2): 129-141. 1991. In English with Polish summ. FR 38(2)
[Akad. Rolniczo-Tech., Katedra Zool., 10-957 Olsztyń-Kortowo, Poland]
- 93-003148 Poncin, P. INFLUENCE OF THE DAILY DISTRIBUTION OF LIGHT ON REPRODUCTION IN THE BARBEL, *BARBUS BARBUS* (L.) *J. Fish Biol.* 41(6):993-997. 1992. FR 38(2)
[Univ. Liege, Dep. Anim. Ethol., 22 quai Van Beneden, B-4020 Liege, Belgium]
- 93-003149 Prevost, E.; E. M. P. Chadwick and R. R. Clayton. INFLUENCE OF SIZE, WINTER DURATION AND DENSITY ON SEXUAL MATURATION OF ATLANTIC SALMON (*SALMO SALAR*) JUVENILES IN LITTLE CODROY RIVER (SOUTHWEST NEWFOUNDLAND). *J. Fish Biol.* 41(6):1013-1019. 1992. FR 38(2)
[Lab. Ecol. Hydrobiol., Inst. Natl. Rech. Agron., 65 rue St. Brieux, 35042 Rennes Cedex, France]
- 93-003150 Rana, T. S. REGULARITY IN THE INCREASE OF EGG SIZE AMONG MARINE FISHES AND INVERTEBRATES POLEWARDS FROM THE EQUATOR TO HIGH-LATITUDES. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 443-444. 1989. Abstract only. FR 38(2)
[Inst. Oceanol., Acad. Sci. USSR, Moscow 117218, Russia] *Sardinella, Sardinops, Clupea harengus, C. pallasii, and Brevoortia*
- 93-003151 Renda, Jeffrey H. and Charles A. Wilson. REPRODUCTIVE BIOLOGY OF SHEEPSHEAD IN THE NORTHERN GULF OF MEXICO. *Trans. Am. Fish. Soc.* 121(6):757-764. 1992. FR 38(2)
[Coastal Fish. Inst., Cont. Coastal Energy & Environ. Resour., La. State Univ., Baton Rouge 70803-7503] *Archosargus probatocephalus*
- 93-003152 Sabales, A. and M. P. Olivar. COMPARATIVE SPAWNING STRATEGIES OF MESOPELAGIC FISHES IN TWO MARINE SYSTEMS WITH DIFFERENT PRODUCTIVITY. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 27-33. 1989. FR 38(2)
[Inst. Cienc. Mar. P. Nac. s/n, 08003 Barcelona, Spain]
- 93-003153 Solemdal, Per. THE SPAWNING OF ARCTO-NORWEGIAN COD DURING THE YEARS 1976-1988. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 445. 1989. Abstract only. FR 38(2)
[Inst. Mar. Res., Dir. Fish., P.O. Box 1870, N-5024 Bergen, Norway] *Gadus morhua*
- 93-003154 Tucker, John W., Jr. SPAWNING AND DEVELOPMENT OF NASSAU GROUPER AT GRAND CAYMAN. *Proc. Gulf Caribb. Fish. Inst.* Vol. 42, p. 275. 1992. Abstract only. FR 38(2)
[Harbor Branch Oceanogr. Inst., 5600 Old Dixie Hwy., Fort Pierce, FL 34946] *Epinephalus striatus*
- 93-003155 Ware, D. M. and R. W. Tanasichuk. BIOLOGICAL BASIS OF MATURATION AND WAVE SPAWNING IN PACIFIC HERRING (*CLUPEA HARENGUS* PALLAS). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 446. 1989. Abstract only. FR 38(2)
[Dep. Fish. & Oceans, Pac. Biol. Stn., Nanaimo, BC, Canada V9R 5K6]
- 93-003156 White, M. G. and P. J. Burnes. REPRODUCTION AND LARVAL GROWTH OF HARPAGIER ANTARCTICUS NYBELIN (PISCES, NOTOTHENIOIDEI). *Antarct. Sci.* 4(4):421-430. 1992. FR 38(2)
[British Antarctic Surv., Nat. Environ. Res. Council, High Cross, Madingley Rd., Cambridge CB3 0ET, England]
- 93-003157 Zastrow, Colleen E.; Edward D. Houde and Elizabeth H. Saunders. QUALITY OF STRIPED BASS (*MORONE SAXATILUS*) EGGS IN RELATION TO RIVER SOURCE AND FEMALE WEIGHT. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 34-42. 1989. FR 38(2)
[Univ. Md. Syst., Cont. Environ. & Estuarine Studies, Chesapeake Biol. Lab., Solomons 20680-0030]

MOVEMENTS, SEASONAL AND DEPTH DISTRIBUTION, ETC.

- 93-003158 Bartel, Ryszard. [DISTRIBUTION, GROWTH AND MIGRATIONS OF NEWLY MARKED TROUT INTRODUCED INTO THE WEIPRZA RIVER DRABNAGE BASIN.] *Rocz. Nauk. Pol. Związku Wodkarskiego* Vol. 1, p. 157-172. 1988. In Polish with English and Russian summ. FR 38(2)
[Inst. Rybactwa Środładowego & Olsztynia, Pracownia Rybactwa Rzeźnego, ul. Bytowska 5, 80-328 Gdańsk-Oliwa, Poland] *Salmo trutta* [Poland]
- 93-003159 Berg, Ole Kristian and Magnus Berg. DURATION OF SEA AND FRESHWATER RESIDENCE OF ARCTIC CHAR (*SALVELINUS ALPINUS*), FROM THE VARDNES RIVER IN NORTHERN NORWAY. *Aquaculture* 110(2):129-140. 1993. FR 38(2)
[Dep. Zool., Univ. Trondheim, N-7055 Dragvoll, Norway]

FISHERIES REVIEW

MOVEMENTS, SEASONAL AND DEPTH DISTRIBUTION, ETC. (Continued)

93-003160 Bradford, Rodney C. and T. Derrick. RETENTION OF HERRING (*CLUPEA HARENGUS*) LARVAE INSIDE MINAS BASIN, INNER BAY OF FUNDY. *Can J Zool* 71(1) 56-63 1993. In English with french summ. FR 38(2)

[Dep. Fish. & Oceans, Maurice Lamontagne Inst., P.O. Box 1000, Mont-Joli, PQ, Canada G5H 3Z4]

93-003161 Caballero, P. and C. C. de Lencruz. WITHIN-RIVER VARIABILITY IN MIGRATORY BEHAVIOUR AMONG BROWN TROUT, *Salmo trutta* L., POPULATIONS IN THE UMEA CATCHMENT NORTHWEST SPAIN. *J. Fish Biol.* 41(Suppl. B)184. 1992. Poster abstract only. FR 38(2)

[Xerxa Galicia, Conselleria Agric., Pontevedra, Spain]

93-003162 de Lafontaine, Yves and Dominique Gascon. ONTOGENETIC VARIATION IN THE VERTICAL DISTRIBUTION OF EGGS AND LARVAE OF ATLANTIC MACKEREL (*SCOMBER SCOMBRUS*). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 137-145. 1989. FR 38(2)

[Inst. Maurice Lamontagne, Minist. Pêches & Océans Canada, P.O. Box 1000, Mont-Joli, PQ, Canada G5H 3Z4]

93-003163 Doroshov, Rika. ACTIVITY PATTERNS AND HOME RANGE OF THE WHITE EEL, CONGER *ANGUILLA*, AND TWO PROXIMATE CUES CONTROLLING ACTIVITY INITIATION. *Seventeenth Annual Alberta T. Tester Memorial Symposium, 15-16 April 1992 Pac. Sci.* 47(1)87 1993. Abstract only. FR 38(2)

[Dep. Zool., Univ. Hawaii Manoa, Honolulu 96822]

93-003164 Frank, Kenneth T., James I. Carscadden and William C. Leggett. COMPARATIVE ANALYSIS OF FACTORS UNDERLYING RETENTION OF CAPELIN AND FLATFISH LARVAE ON THE SOUTHERN GRAND BANKS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 450. 1989. Abstract only. FR 38(2)

[Dep. Fish. & Oceans, Mar. Fish. Div., Bedford Inst. Oceanogr., P.O. Box 1006, Dartmouth, NS, Canada B2Y 4A2] *Hippoglossoides platessoides*, *Neuronectes femineus*, and *Mallotus villosus*

93-003165 Gelfin, A. J. and R. D. M. Nash. THE LIFE-HISTORY STRATEGY OF DEEPWATER SCULPIN, *MYXOCEPHALUS THOMPSONI* (GIRARD), IN LAKE MICHIGAN: DISPERSAL AND SETTLEMENT PATTERNS DURING THE FIRST YEAR OF LIFE. *J. Fish Biol.* 41(Suppl. 0) 101-110 1992. FR 38(2)

[Port Erin Mar. Lab., Univ. Liverpool, Port Erin, Isle of Man, United Kingdom]

93-003166 Maccagnan-Moulin, C., C. Castelbon, G. Champalbert, D. Chihit, L. Le Drosch-Boursier and G. Paillet. THE ROLE OF BAROSENSITIVITY IN THE CONTROL OF MIGRATIONS OF LARVAL AND JUVENILE SOLE (*SOLEA SOLEA* L.): INFLUENCE OF PRESSURE VARIATIONS ON SWIMMING ACTIVITY AND ORIENTATION. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 400-406. 1989. FR 38(2)

[Cent. Océanol. Marseille, Fac. Sci. Luminy, Case 901, F-13288 Marseille Cedex 9, France]

93-003167 Meyers, Leo S., Thomas F. Thoenner and Greg W. Kornely. SEASONAL MOVEMENTS OF BROWN TROUT IN NORTHEAST WISCONSIN. *N. Am. J. Fish. Manage.* 12(3)433-441. 1992. FR 38(2)

[Dep. Nat. Resour., Box 10448, Green Bay, WI 54307] *Salmo trutta*

93-003168 Osmford, Hazel A. PRELIMINARY TAGGING RESULTS ON THE FOUR-WING FLYINGFISH *HIRUNDINCHTHYS AFFINS* IN THE EASTERN CARIBBEAN. *Proc. Gulf Caribb. Fish. Inst.* Vol. 41, p. 51-66. 1992. FR 38(2)

[Ocellus Res. Inst., McGill Univ., St James, Barbados]

93-003169 Phelan, Beth A. WINTER FLOUNDER MOVEMENTS IN THE INNER NEW YORK BIGHT. *Trans. Am. Fish. Soc.* 121(6)777-784 1992. FR 38(2)

[NWFIS, Northeast Fish. Cont., Sandy Hook Lab., Highlands, NJ 07732] *Pleuronectes americanus*

93-003170 Takatsuki, Tetsuya; Toyomi Takahashi; Toshikuni Nakatani; Tatsuki Maezō and Kinzo Ohkoshi. DISTRIBUTION AND MOVEMENT OF WALLEYE POLLOCK IN EARLY LIFE STAGES IN MUTSU BAY, AOMORI.] *Nippon Suisan Gakkaishi* 58(12)2235-2243 1992. In Japanese with English summ. FR 38(2)

[Fac. Fish., Hokkaido Univ., Minato, Hakodate, Hokkaido 041, Japan] *Thyasra chalcogramma* In Japan.

93-003171 Tanaka, Masaru; Tsuneo Goto; Minoru Tomiyama; Hiroyuki Sudo and Mikio Azuma. LUNAR-PHASED IMMIGRATION AND SETTLEMENT OF METAMORPHOSING JAPANESE FLOUNDER LARVAE INTO THE NEARSHORE NURSERY GROUND. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 303-310. 1989. FR 38(2)

[Dep. Fish., Fac. Agric., Kyoto Univ., Kyoto 606, Japan] *Paralichthys olivacea*

93-003172 Ueno, Yasuhiro. DEEPWATER MIGRATIONS OF CHUM SALMON (*ONCORHYNCHUS KETA*) ALONG THE PACIFIC COAST OF NORTHERN JAPAN. *Can. J. Fish. Aquat. Sci.* 49(11)2307-2312. 1992. In English with French summ. FR 38(2)

[Nat. Res. Inst. Far Seas Fish., 7-1, 5 Cho-Me Orido, Shimizu 424, Japan]

FISHERIES REVIEW

MOVEMENTS, SEASONAL AND DEPTH DISTRIBUTION, ETC. (Continued)

- 93-003173 Walker, A. F. and A. M. Walker. THE LITTLE GREENARD ATLANTIC SALMON (*Salmo salar* L.) CATCH AND RELEASE TRACKING STUDY. In: Wildlife Telemetry: Remote Monitoring and Tracking of Animals. *Insects George Prede and Susan M. Swift, editors* p. 434-440. 1992. FR 38(2)
[SOAFD Freshwater Fish Lab., Faskally, Pitlochry, Perthshire, Scotland]
- 93-003174 West, Robin L.; Michael W. Smith; Willard E. Barber; James B. Reynolds and Hank Hop. ALUMINUM MIGRATION AND OVERWINTERING OF ARCTIC GRAYLING IN COASTAL STREAMS OF THE ARCTIC NATIONAL WILDLIFE REFUGE, ALASKA. *Trans. Am. Fish. Soc.* 121(6): 709-715. 1992. FR 38(2)
[Reynolds Coop. Fish. & Wildl. Res. Unit, Univ. Alaska, Fairbanks 99775] *Thymallus arcticus*
- 93-003175 White, E. and B. Knights. ELVER AND JUVENILE EEL, *ANGUILLA ANGUILLA* (L.), MIGRATION IN THE SEVERN AND AVON. *J. Fish Biol.* 41(Suppl. 0):181. 1992. Poster abstract only. FR 38(2)
[Polytechnic Cent. London, Westminster Univ., London, England]
- 93-003176 Wigley, Susan E. and Fredric M. Seeluck. SPATIAL AND TEMPORAL DISTRIBUTION OF JUVENILE ATLANTIC COD *GADUS MORHUA* IN THE GEORGES BANK-SOUTHERN NEW ENGLAND REGION. *U.S. Natl. Mar. Fish. Serv. Fish. Bull.* 90(3): 599-606. 1992. FR 38(2)
[Woods Hole Lab., Northeast Fish. Sci. Cent., NMFS, NOAA, 166 Water St., Woods Hole, MA 02543-1057]

FOODS/FEEDING

- 93-003177 Aarnio, Kati and Erik Brandzell. SEASONAL VARIATION IN ABUNDANCE AND DIET OF THE SAND COBBY *POMATOSCHISTUS MINUTUS* (PALLAS) IN A NORTHERN BALTIC ARCHIPELAGO. *Ophelia* 37(1):19-30. 1993. FR 38(2)
[Dep. Biol. & Histo. Biol. Stn., Abo Akad. Univ., SF-20500 Abo, Finland]
- 93-003178 Almeida, P. R.; F. Moreira; J. L. Costa; C. A. Assis and M. J. Costa. THE FEEDING STRATEGIES OF *LAGA RAMALDA* (ROSSO, 1826) IN FRESH AND BRACKISH WATER IN THE RIVER TAGUS, PORTUGAL. *J. Fish Biol.* 42(1):95-107. 1993. FR 38(2)
[Dep. Zool. & Antropol., Fac. Cienc. Lisboa, Bloco C-2, 3^o Piso, Campo Grande, 1700 Lisboa, Portugal]
- 93-003179 Anderson, John T. FEEDING OF REDFISH LARVAE (*SEBASTES* SP.) DURING TWO YEARS DEPENDENT ON THE TIMING OF SPRING PRODUCTION AND ITS EFFECT ON GROWTH AND SURVIVAL. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.*, Vol. 191, p. 456. 1989. Abstract only. FR 38(2)
[Sci. Branch, Dep. Fish. & Oceans, P.O. Box 5667, St. John's, NF, Canada A1C 5X1]
- 93-003180 Arnold, G. P. and B. H. Hoffman. THE REACTIVE PERCEPTIVE FIELD OF THE LARVAL PLICE (*PLEURONECTES PLATESSA* L.): A THREE-DIMENSIONAL ANALYSIS OF VISUAL FEEDING. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.*, Vol. 191, p. 474. 1989. Abstract only. FR 38(2)
[Fish. Lab., Lowestoft NR33 0HT, England]
- 93-003181 Assis, C. A.; P. R. Almeida; F. Moreira; J. L. Costa and M. J. Costa. DIET OF THE TWAITT SHAD *ALOSA PALLAS* (LACEPEDE) (CLUPIDAE) IN THE RIVER TAGUS ESTUARY, PORTUGAL. *J. Fish Biol.* 41(6):1049-1050. 1992. FR 38(2)
[Dep. Zool. & Antropol., Fac. Cienc. Lisboa, Campo Grande, Bloco C-2, 3^o Piso, 1700 Lisboa, Portugal]
- 93-003182 Azuma, Teruo. DIET FEEDING HABITS OF SOCKEYE AND CHUM SALMON IN THE BERING SEA DURING THE SUMMER. *Nippon Suisan Gakkaishi* 58(11):2019-2025. 1992. In English with Japanese summ. FR 38(2)
[Natl. Res. Inst. Far Seas Fish., Ordo, Shimizu, Shizuoka 424, Japan] *Oncorhynchus nerka* and *O. keta*
- 93-003183 Biedel, Tadeusz and Lidia Horoszewicz. [SIZE AND NUMBER OF PREY IN PISCIVOROUS FISH: A TRIAL OF EXPLANATION BY MEANS OF MODELS.] *Rocz. Nauk. Pol. Związku Wiedzykowskiego* Vol. 3, p. 147-162. 1990. In Polish with English and Russian summ. FR 38(2)
[Inst. Rybnictwa Środzładowego i Olsztyńskie, Zakłady i Zabłonec, Zabłonec, 05-500 Płaszczyno, Poland] *Esox lucius*, *Stizostedion lucioperca*, *Perca fluviatilis*, *Aspius aspius*, and *Silurus glanis* in Poland.
- 93-003184 Bettoli, Phillip W.; Michael J. Macsina; Richard L. Noble and Robert K. Bettli. PISCIVORY IN LARGE MOUTH BASS AS A FUNCTION OF AQUATIC VEGETATION ABUNDANCE. *N. Am. J. Fish. Manage.* 12(3):509-516. 1992. FR 38(2)
[Coop. Fish. Res. Unit, Tenn. Technol. Univ., Cookeville 38505] *Micropterus salmoides* and *Ctenopharyngodon idella* in Texas.
- 93-003185 Blake, M. A. and P. J. O. Hart. THE BEHAVIOURAL RESPONSES OF JUVENILE SIGNAL CRAYFISH *PACIFASTACUS LENISCULEUS* TO STIMULI FROM PERCH AND EELS. *Freshwater Biol.* 29(1):89-97. 1993. FR 38(2)
[Dep. Zool., Adnan Bldg. Univ. Leicester, Leicester LE1 7RH, England] *Perca fluviatilis*, *Anguilla anguilla* and *A. australis*.

FISHERIES REVIEW

FOODS/FEEDING (Continued)

- 93-003186 Bacon, Alicja and Sławomir Baron. [FOOD OF BLEAK *ALBURNUS ALBURNUS* (L.) FROM THE WŁOCŁAWEK DAM RESERVOIR. *Roczn. Nauk Pol. Zwierzki Wodnarskiego* Vol. 2 p. 61-70. 1989. In Polish with English and Russian sum. FR 38(2)
[Katedra Zool., Katedra Rybostwa, Akad. Rolniczo-Techn., Olsztynia, Poland]
- 93-003187 Brugger, Kristin E. DIFFERENTIAL DIGESTION OF FISH BY DOUBLE-CRESTED CORMORANTS (*PHALACROCORAX ALURITUS*). *Colon Waterbird Soc. Bull.* 16(2):62. 1992. Abstract only. FR 38(2)
[U.S. Dep. Agric., Denver Wildl. Res. Cent., Field St., Gainesville, FL 32601] *Actulans punctatus*, *Dorosoma cepedianum*, and *Lepomis macrochirus*
- 93-003188 Bulgakova, Yu. V. INTENSITY OF FEEDING OF THE BLACK SEA ANCHOVY, *ENGRANULUS ENGRANULUS*, DURING THE SPAWNING PERIOD. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtiol.)* 32(7):146-151. 1992. FR 38(2)
[Inst. Dev. Biol., Russian Acad. Sci., Moscow, Russia]
- 93-003189 Busleres, Dany. [ESTIMATION OF THE DAILY CONSUMPTION OF INVERTEBRATES BY A POPULATION OF BROOK TROUT (*SALVELINUS FONTINALIS*)]. M.S. thesis, Univ. Laval (Canada) 47p. 1990. From *Masters Abstr. Int.* 31(1):235. 1993. Order No. MAMM68434. FR 38(2)
- 93-003190 Carter, Chris G.; Dominic F. Houlihan; Ian D. McCarthy and Alan E. Brafield. VARIATION IN THE FOOD INTAKE OF GRASS CARP, *Ctenopharyngodon idella* (Val.), FED SINGLY OR IN GROUPS. *Aquat. Living Resour.* 5(3):225-228. 1992. FR 38(2)
[Dep. Zool., Univ. Aberdeen, Tillydrone Ave., Aberdeen AB9 2TN, Scotland]
- 93-003191 Chapman, Gregory Charles. THE DIET AND FEEDING HABITS OF *Oreochromis niloticus* (Linnaeus) AND *Cyprinus carpio* (Linnaeus) IN LOWLAND RICE FIELDS IN NORTHEAST THAILAND. M.S. thesis, Univ. Waterloo (Canada) 145p. 1991. From *Masters Abstr. Int.* 31(1):236. 1993. Order No. MAMM67311. FR 38(2)
- 93-003192 Cochran, Philip A.; Adam A. Lelison and Martin E. Sween. CASES OF PREDATION AND PARASITISM ON LAMPREYS IN WISCONSIN. *J. Freshwater Ecol.* 7(4):435-436. 1992. FR 38(2)
[Chc. Nat. Sci., St. Norbert Coll., DePue, WI 54155] *Achlyrocyon urcticus*, *I. foveus*, and *I. caitaneus*.
- 93-003193 Cohen, Joel E.; Stuart L. Pimm; Peter Yodanis and Jonn Saldana. BODY SIZES OF ANIMAL PREDATORS AND ANIMAL PREY IN FOOD WEBS. *J. Anim. Ecol.* 62(1):67-70. 1993. FR 38(2)
[Rockefeller Univ., 1230 York Ave., Box 20, New York, NY 10021-6399]
- 93-003194 Costello, Mark J. DIET OF JUVENILE *POLLACHIUS POLLACHIUS* (L.) AND *GOBIUS FLAVESCENS* (FABR.) IN THE PLYMOUTH AREA. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol. 191, p. 457. 1989. Abstract only. FR 38(2)
[Dep. Agric. & Fish., Mar. Lab., Fremont, Poolewa, Ross-shire IV22 2LW, Scotland]
- 93-003195 Dugotkin, Lee Alan and Jean Guy J. Godin. PREY APPROACHING PREDATORS: A COST-BENEFIT PERSPECTIVE. *Ann. Zool. Fenn.* 29(4):233-252. 1992. FR 38(2)
[Cent. Evol. Ecol., T.H. Morgan School Biol. Sci., Univ. Ky., Lexington 40506-0225]
- 93-003196 Fournier, Y.; P.-O. Ploner and J. C. Micha. [FEEDING HABITS OF FOUR SPECIES BELONGING TO THE GENUS *VARICHOROMIS* (TELEOSTEI, CICHLIDAE) IN IHEEMA LAKE (RWANDA)]. *Ann. Zool.* 28(1):57-69. 1992. In French with English sum. FR 38(2)
[Univ. Ecol. Eauz Douces, Fac. Univ. Notre-Dame Paix, Rue de Bruxelles, 61 B-5000 Namur, Belgium]
- 93-003197 Frits, Michael B. and Michael H. Horn. EFFECTS OF DIETS OF DIFFERENT PROTEIN CONTENT ON FOOD CONSUMPTION, GLUT RETENTION, PROTEIN CONVERSION, AND GROWTH OF CERDICH-17195 *WOLACUS* (GIRARD), AN HERIVOROUS FISH OF TEMPERATE ZONE MARINE WATERS. *J. Exp. Mar. Biol. Ecol.* 166(2):105-202. 1993. FR 38(2)
[Horn Dep. Biol. Sci., Calif. State Univ., Fullerton 92634]
- 93-003198 Gadomski, Dena M. and Judy A. Hall-Grissold. PREDATION BY NORTHERN SQUAWFISH ON LIVE AND DEAD JUVENILE CHINOOK SALMON. *Trans. Am. Fish. Soc.* 121(5):680-685. 1992. FR 38(2)
[U.S. Fish & Wildl. Serv., Nat. Fish. Res. Con. Seattle, Columbia River Field Sta., Cook, WA 98605] *Ptychocheilus oregonensis* and *Oncorhynchus tshawytscha*.
- 93-003199 Goranun-Tjeldto, Oddvard; Ingver Huse; Anders Jøhnset; Per Gean Kruger and Ingegrid Opstad. SOME OBSERVATIONS ON SURVIVAL AND GLUT BACTERIA DURING START-FEEDING OF COD LARVAE (*GADUS MORHUA* L.) WITH ARTIFICIAL DIETS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 478. 1989. Abstract only. FR 38(2)
[Dep. Biochem. Univ. Bergen, Arstadveien 15, N-5000 Bergen, Norway]

FOODS/FEEDING (Continued)

- 93-003200 Guitauts, Vytaras and Joseph A. Brown. SUBSTRATE SELECTION BY JUVENILE ATLANTIC COD (*GADUS MORHUA*) EFFECTS OF PREDATION RISK. *Oecologia (Hordab)* 193(1) 31-37. 1993. FR 38(2)
[Ocean Sci. Cent., Memorial Univ. Newfoundland, St. John's, NF, Canada A1C 5S7]
- 93-003201 Crover, Jill J., Bon L. Olla and Robert I. Wickham. FOOD HABIT OF NASSAU GROUPER (*EPINEPHELUS STRIATUS*) JUVENILES IN THREE HABITATS IN THE BAHAMAS. *Proc. Gulf Caribb. Fish. Inst. Vol. 42*, p. 247. 1992. Abstract only. FR 38(2)
[Coll. Oceanogr., Oregon State Univ., Hatfield Mar. Sci. Cent., Newport 97365]
- 93-003202 Hamerlynek, O., C.R. Jensen and E. Van Landschoot. FASTING AND FEEDING IN LATE LARVAL AND EARLY POST-LARVAL PLAICE (*PLEURONECTES PLATESSAL*). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 465. 1989. Abstract only. FR 38(2)
[Zool. Inst., K.L. Ledeganckstr. 35, 9000 Gent, Belgium]
- 93-003203 Heath, Mike. A MODELLING AND FIELD STUDY OF GRAZING BY HERRING LARVAE. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 233-247. 1989. FR 38(2)
[DAFS Mar. Lab., Victoria Rd., Aberdeen AB8 8DB, Scotland] *Clupea harengus*
- 93-003204 Hop, Haakon, Jakob Gjosaeter and Diddrik S. Danielsen. SEASONAL FEEDING ECOLOGY OF COD (*GADUS MORHUA* L.) ON THE NORWEGIAN SKAGERRAK COAST. *J. Cons. Cons. Int. Explor. Mer. Vol. 49*(4) 453-461. 1992. FR 38(2)
[Dep. Zool., Univ. Alberta, Edmonton, AB, Canada T6G 2E9]
- 93-003205 Hopkins, P. J. HERRING PREDATION ON FISH EGGS AND LARVAE IN THE NORTH SEA. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 459. 1989. Abstract only. FR 38(2)
[DAFS Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen, Scotland] *Clupea harengus*
- 93-003206 Hubold, Carl and Werner Ekau. TROPHIC INTERACTIONS OF POST-LARVAL AND JUVENILE NOTOTHENICIDS IN THE SOUTHERN WEDDELL SEA. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 460. 1989. Abstract only. FR 38(2)
[Inst. Polar Ecol., Univ. Kiel, 3 Kiel, Germany] *Pleurogrammus antarcticus*
- 93-003207 Jackson, Mary E. and Raymond D. Semlitsch. PAEDIOMORPHOSIS IN THE SALAMANDER *AMBYSTOMA TALPOIDELM*: EFFECTS OF A FISH PREDATOR. *Ecology* 74(2) 342-350. 1993. FR 38(2)
[Semlitsch Inst. Zool., Univ. Zurich, CH-8057 Zurich, Switzerland] *Lepomis macrochirus*
- 93-003208 Jarzynowa, Barbara and Cezary Macgaj. PIKE'S FOOD FROM THE TYSMIENICA RIVER OXBOW LAKES. *Rocz. Nauk Pol. Zwiastki Wodnarskiego* Vol. 1, p. 181-188. 1988. In Polish with English and Russian sums. FR 38(2)
[Inst. Biol. Podstaw. Prod. Zwierzecol., Akad. Rolniczej i Lulnisk, ul. Akad. 13, 20-934 Lulin, Poland] *Esox lucius*, *Rutilus rutilus*, *Percis fluviatilis*, *Alburnus alburnus*, *Carassius carassius*, *Acorina corvina*, and *Casterosteus aculeatus* in Poland
- 93-003209 Keats, D. W. and D. H. Steele. FOOD OF B GROUP OCEAN POLT [MACROZORCES AMERICANUS (SCHNEIDER)] IN EASTERN NEWFOUNDLAND. THE IMPORTANCE OF HARPACTICOID COPEPODS. *J. Fish Biol.* 42(1) 145-148. 1993. FR 38(2)
[Bot. Dep., Univ. West. Cape, P. Bag X17, Bellville 7535, South Africa]
- 93-003210 Khlopnikov, M. M. FEEDING OF PREDATORY FISHES IN THE VISTULA LAGOON OF THE BALTIC SEA. *J. Ichthyol. (Engl. Transl. Vopr. Ichtyol.)* 32(7) 152-158. 1992. FR 38(2)
[All. Inst. Fish. & Oceanogr., Kaliningrad, USSR] *Esox lucius*, *Stizostedion lucioperca*, *Percis fluviatilis*, *Pelecus cultratus*, *Anguilla anguilla*, and *Lota lota* in Poland
- 93-003211 Kido, Michael H., Phyllis Ha and Robert A. Kinzie III. INSECT INTRODUCTIONS AND DIET CHANGES IN AN ENDEMIC HAWAIIAN AMPHIDROMOUS GOBY, *AWAOLUS STAMINELUS* (PISCES: GOBIIDAE). *Pac. Sci.* 47(1) 43-50. 1993. FR 38(2)
[Kawai Res. Fac., Univ. Hawaii, 7370A Kuamo'o Rd., Kapa'a, Kauai 96746]
- 93-003212 Kirsch, Eileen M. DOUBLE-CRESTED CORMORANTS ALONG THE UPPER MISSISSIPPI RIVER. *Colan. Waterbird Soc. Bull.* 16(2):53. 1992. Abstract only. FR 38(2)
[U.S. Fish & Wildl. Serv., North. Peale Wildl. Res. Cent., P.O. Box 2226, La Crosse, WI 54602]
- 93-003213 Kjørsvik, E., H. Kyvik, T. van der Meeren and P. Kvenseseth. GUT DEVELOPMENT AND GUT CONTENT DURING THE START-FEEDING PERIOD OF LARVAL COD (*GADUS MORHUA* L.) REARED IN A POND. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 480. 1989. Abstract only. FR 38(2)
[Dep. Aquat. Biol., Norwegian Coll. Fish. Sci., Univ. Tromsø, P.O. Box 3003, Culeng, N-6001 Tromsø, Norway]

FISHERIES REVIEW

FOODS/FEEDING (Continued)

- 93-003214 Komowski, Andrzej FOOD AND FEEDING BEHAVIOUR OF PARACHAENICHTHYS GEORGIANUS (FISCHER, 1885) AND PARACHAENICHTHYS CHARCOFFI (VAILLANT, 1906) (PISCES, BATHYDRACONIDAE) *Acta Ichthyol Piscatoris* 22(1):15-29 1992. In English with Polish summ. FR 38(2)
[Inst. Oceanogr. Rybackiej & Ochrony Morza, Alkad Rolnicza, ul. K. Krolewicz 4, 71-550 Szczecin, Poland]
- 93-003215 Kozuchowski, E. S., H. P. Bessen and R. J. Snyder PREY SELECTION BY RAINBOW SMELT FOR BYTHOTRAPHES CEDERSTROMII IN EASTERN LAKE ERIE. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 132 1992. Abstract only. FR 38(2)
[Dep. Biol., SUNY Coll., Buffalo, NY 14222] Osmevur sardax
- 93-003216 Kralovec, Mary L.; Richard L. Knight; Gerald R. Craig and Robert G. McLean NESTING PRODUCTIVITY, FOOD HABITS, AND NEST SITES OF BALD EAGLES IN COLORADO AND SOUTHEASTERN WYOMING. *Southwest Nat.* 37(4):356-361 1992. FR 38(2)
[Dep. Fish & Wildl. Biol., Colo. State Univ., Fort Collins 80523] *Cyprinus carpio*, *Esoc lucius*, *Onchostychnus mykiss*, *Ictalurus punctatus*, *Lepomis*, *Micropterus salmoides*, and *Pomoxis*
- 93-003217 Krohn, William B.; R. Bradford Allen, John R. Moring and Alan E. Hutchinson DOUBBLE-CRESTED CORMORANTS IN NEW ENGLAND: POPULATION AND MANAGEMENT HISTORIES. *Colin Waterbird Soc. Bull.* 16(2):48-49 1992. Abstract only. FR 38(2)
[U.S. Fish & Wildl. Serv., Coop. Fish & Wildl. Res. Unit, 240 Nutting Hall, Univ. Maine, Orono 04473] *Salmo salar*
- 93-003218 Krusk, H.; D. N. Carrs and J. W. H. Conroy OTTER PREDATION ON SALMONID FISHES. *Int. Trans. Ecol. Rep. (United Kingdom)* 1991-1992. p. 59-61 1992. FR 38(2)
Salmo trutta and *S. salar* in Scotland.
- 93-003219 Langan, Richard. DISCARDS OF COMMERCIAL FISH SPECIES IN THE GULF OF MAINE. *GROUND FISH AND SHRIMP FISHERIES. Pl. D. dissertation, Univ. NH* 123p. 1992. From *Dis. Abstr. Int.* 0. Sci. Eng. 53(4):1747-1748. 1992. Order No. DA9225254. FR 38(2)
Spiracle spiracle.
- 93-003220 Lille, Richard A. and William L. Hohenhoff A SURVEY OF THE AQUATIC INSECTS OF THE LOWER WISCONSIN RIVER, 1985-1986, WITH NOTES ON DISTRIBUTION AND HABITAT. *Wis. Dep. Nat. Resour. Tech. Bull. No. 178* 47p. 1992. FR 38(2)
[Dep. Nat. Resour., Box 7921, Madison, WI 53707]
- 93-003221 Lilly, G. R. INTERACTIONS BETWEEN ATLANTIC COD (*GADUS MORHUA*) AND CAPELIN (*MALLOTUS VILLOSIUS*) OFF LABRADOR AND EASTERN NEWFOUNDLAND: A REVIEW. *Can. Tech. Rep. Fish. Aquat. Sci. No. 1567*, 37p. 1987. In English with French summ. FR 38(2)
[Sci. Branch, Dep. Fish & Oceans, P.O. Box 5667, St. John's, NF, Canada A1C 5X1]
- 93-003222 Lookabaugh, Patrick S. and Paul L. Angermeier. DIET PATTERNS OF AMERICAN [(I., *ANGUILLA ROSTRATA*], IN THE JAMES RIVER DRAINAGE, VIRGINIA. *J. Freshwater Ecol.* 7(4):425-431. 1992. FR 38(2)
[U.S. Fish & Wildl. Serv., Coop. Fish & Wildl. Res. Unit, VPI&SU, Blacksburg, VA 24061-0321]
- 93-003223 Magnuson, Jutta V. and Oskar K. Palfsson. THE FEEDING HABITS OF COD AND REDFISH IN EAST GREENLAND WATERS, WITH SPECIAL EMPHASIS ON PREDATION ON JUVENILE RECONISH. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 465. 1989. Abstract only. FR 38(2)
[Mar. Res. Inst., Reykjavik, Iceland] *Sebastes* and *Codrus morhua*.
- 93-003224 Malmqvist, H. J. PHENOTYPE-SPECIFIC FEEDING BEHAVIOR OF TWO ARCTIC CHARR *SALVELLAUS ALPINUS* MORPHS. *Oecologia (Heidelberg)* 92(3):354-361. 1992. FR 38(2)
[Inst. Biol., Univ. Iceland, Grensávegur 12, 108 Reykjavik, Iceland]
- 93-003225 Mathan, Bindoo and C. M. Aravindan. STUDIES ON THE EFFECT OF PREY DENSITY ON THE SATIATION TIME OF A COMMON FRESHWATER PREDATORY FISH *CHANNA STRIATA* (BLOCH). *Acta Ichthyol. Piscatoris* 22(1):55-62. 1992. In English with Polish summ. FR 38(2)
[Dep. Aquat. Biol. & Fish., Univ. Kerala, Thiruvananthapuram-695 007, India]
- 93-003226 Matsushita, Katsumi. THE ROLE OF WATER TURBULENCE IN LARVAL FEEDING SUCCESS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 460-461. 1989. Abstract only. FR 38(2)
[Dep. Fish., Fac. Agric., Univ. Tokyo, 1-1, Yayoi 1, Bunkyo-ku, Tokyo 113, Japan]
- 93-003227 McNeill, O. K. and M. Woyland. DISTRIBUTION OF WATERFOWL BROODS IN SLOBURY AREA LAKES IN RELATION TO FISH, MACROINVERTEBRATES, AND WATER CHEMISTRY. *Can. J. Fish. Aquat. Sci.* 49(Suppl. 1):122-133. 1992. In English with French summ. FR 38(2)
[Canadian Wildl. Serv., Ontario Reg., 49 Camelot Dr., Nepean, ON, Canada K1A 0H3] *Perca flavescens* and *Cerostomus commersoni* in Canada.

FISHERIES REVIEW

FOODS/FEEDING (Continued)

- 93-003220 Milton, G. Randy; Peter J. Austin-Smith and Gill J. Farmer. SHOUTING AT SHAGS: A CASE STUDY OF CORAMORANT MANAGEMENT IN NOVA SCOTIA. *Colon Waterbird Soc. Bull.* 16(2):48. 1992. Abstract only. FR 38(2)
[Dep. Nat. Resour., Provincial Bldg., 136 Exhibition St., Kentville, Kings County, NS, Canada B4N 4E5]
- 93-003229 Neveu, A. [FEEDING STRATEGIES OF COMMON TROUT (*SALMO TRUTTA* L.) IN RUNNING WATER.] In: [The Trout Biology and Ecology / J. L. Bagliniere and G. Malse, editors, p. 97-120. 1991. In French. FR 38(2)]
[INRA, Lab. Physiol. Poissons, Stn. Hydrobiol., BP 3, Saint-Pee-sur-Nivelle, 64310 Auzan, France]
- 93-003230 Nielsen, Jennifer I. MICROHABITAT-SPECIFIC FORAGING BEHAVIOR, DIET, AND GROWTH OF JUVENILE COHO SALMON. *Trans. Am. Fish. Soc.* 121(5):617-634. 1992. FR 38(2)
[Pac. Southwest Res. Stn., U.S. For. Serv., 1700 Bayview Dr., Arcata, CA 95521-6080] *Oncorhynchus kisutch* in Washington
- 93-003231 Norton, S. F. THE EVOLUTION OF AN UNIQUE FEEDING MECHANISM: SNAIL-PUNCHING IN COTTID FISHES. *Am. Zool.* 32(5):149A. 1992. Abstract only. FR 38(2)
[Univ. Maine, Orono] *Rachibius*, *Triglops*, and *Asteriscialys taylori*
- 93-003232 Packard, Anne Turner. HORIZONTAL DISTRIBUTION, FEEDING RATES AND PREY SELECTIVITY OF THE LITTORAL PREDATOR, *POLYDORUS PEDICULUS* P.D. *dorsalis*. *Limnol. Mar.* 12(1):1992. *Trans. Dts. Abstr. Int. J. Sci. Eng.* 53(4):1685. 1992. Order No. DA9225261. FR 38(2)
Micropterus dolomieu in New Hampshire
- 93-003233 Pakhomov, E. A. and A. A. Shumatova. FEEDING AND ESTIMATION OF DAILY RATION OF WILSON'S GLASSFISH, *CHAENORRHOCHUS WILSONI*, OF THE INDIAN OCEAN SECTOR OF ANTARCTICA. *J. Ichthyol. (Engl. Transl. Vopr. Ichtyol.)* 32(7):56-70. 1992. FR 38(2)
[South. Res. Inst. Mar. Fish. & Oceanogr., Krcch, USSR]
- 93-003234 Reilly, Carol A.; Tina Wyllie Echeverria and Stephen Rakston. INTERANNUAL VARIATION AND OVERLAP IN THE DIETS OF PELAGIC JUVENILE ROCKFISH (GENUS *SEBASTES*) OFF CENTRAL CALIFORNIA. *U.S. Natl. Mar. Fish. Bull.* 90(3):505-515. 1992. FR 38(2)
[Tiburon Lab., Southwest Fish. Sci. Cent., NMFS, NOAA, 3150 Paradise Dr., Tiburon, CA 94920] *S. entomelas*, *S. bewleyi*, *S. gades*, *S. jordani*, and *S. paucispinis*.
- 93-003235 Richoux, C., J. E. Atlas-Gonzalez and J. N. Tourenq. [A STUDY OF THE DIET OF ROACH (*RUTILUS RUTILUS* (L.)) IN THE LAKE OF PARELOUP (MASSIF CENTRAL, FRANCE)] *Ann. Limnol.* 28(3):245-252. 1992. In French with English summary. FR 38(2)
[Lab. Hydrobiol., URA 695 C N.R.S., Univ. Paul-Sabatier, 118, rd. Narbonne, F-31062 Toulouse Cedex, France]
- 93-003236 Shaw, Megan and Gregory P. Jenkins. SPATIAL VARIATION IN FEEDING, PREY DISTRIBUTION AND FOOD LIMITATION OF JUVENILE FLOUNDER *RHOMBOSOLEA TAPIRINA* GUNTHER. *J. Exp. Mar. Biol. Ecol.* 165(1):1-21. 1992. FR 38(2)
[Jenkins' Queenscliff Mar. Stn., P.O. Box 138, Queenscliff, Vic. 3225, Australia]
- 93-003237 Sib, Andrew. INTEGRATIVE APPROACHES TO THE STUDY OF PREDATION: GENERAL THOUGHTS AND A CASE STUDY ON SUNFISH AND SALAMANDER LARVAE. *Ann. Zool. Fenn.* 29(4):183-198. 1992. FR 38(2)
[Cent. Evol. Ecol., T.H. Morgan School Biol. Sci., Univ. Ky., Lexington 40506] *Lepomis cyanellus*.
- 93-003238 Soderback, Bjorn. PREDATOR AVOIDANCE AND VULNERABILITY OF TWO CO-OCCURRING CRAYFISH SPECIES, *ASTACUS ASTACUS* (L.) AND *PACIFASTACUS LENUSCULUS* (DANA). *Ann. Zool. Fenn.* 29(4):253-258. 1992. FR 38(2)
[Inst. Limnol., Uppsala Univ., Box 557, S-751 22 Uppsala, Sweden] *Perca fluviatilis*.
- 93-003239 Stevenson, Michael M. FOOD HABITS WITHIN THE LAGUNA CHICHANCANAB CYPRINODON (PISCES: CYPRINODONTIDAE) SPECIES FLOCK. *Southeast. Nat.* 37(4):337-343. 1992. In English with Spanish summary. FR 38(2)
[Dep. Biol. Sci., Univ. New Orleans, New Orleans, LA 70148] *C. helzant*, *C. labialis*, *C. maya*, and *C. sinus* in Mexico.
- 93-003240 Stoeckel, Joseph N. and Roy C. Hekinger. RELATIVE SUSCEPTIBILITY OF INLAND AND BROOK SILVER SIDES TO CAPTURE BY LARGE MOUTH BASS. *N. Am. J. Fish. Manage.* 12(3):495-503. 1992. FR 38(2)
[Dep. Fish. & Wildl. Sci., VPI&SU, Blacksburg, VA 24061] *Labidesthes sicculus*, *Ameletus boylii*, and *Micropterus salmoides* in Illinois
- 93-003241 Stokes, M. D. and N. D. Holland. SOUTHERN STINGRAY (*DASYATIS AMERICANA*) FEEDING ON LANCELETS (*BRANCHIOSTOMA FLORIDAE*). *J. Fish. Biol.* 41(6):1043-1044. 1992. FR 38(2)
[Mar. Biol. Res. Div., Scripps Inst. Oceanogr., La Jolla, CA 92091]

FISHERIES REVIEW

FOODS/FEEDING (Continued)

93-003242 Szygula, Jerzy. FEEDING OF HERRING AND SPRAT IN THE SOUTHERN BALTIC OVER 1971-1989. *Acta Ichthyol. Pisciculae* 22(2):181-196, 1992. In English with Polish summ. FR 38(2)

[Zakład Biol. Ryb., Akad. Rolnicza, ul. K. Krolewicza 4, 17-530 Szczecin, Poland; Clupea harengus and Sprattus sprattus.

93-003243 Terlecki, Janusz. [THE DIET OF PIKEPERCH, STIZOSTEDION LUCIOPERCA (L.), THE MAIN PISCIVOROUS FISH IN WLOCLAWEK RESERVOIR, WITULA RIVER]. *Roczn. Nauk. Pol. Związku Weterykarskiego* Vol. 3, p. 47-60, 1990. In Polish with English and Russian summ. FR 38(2)

[Katedra Zool., Wydział Ochrony Wod i Rybnactwa Środkowego, Akad. Rolniczo-Techn., 10-057 Głazyn, Poland]

93-003244 Thorlason, Konrad. THE FOOD OF LARVAE AND PELAGIC JUVENILES OF COD (GADUS MORHUA L.) IN THE COASTAL WATERS WEST OF ICELAND. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol. 191, p. 264-272, 1989. FR 38(2)

[Mar. Res. Inst., P.O. Box 1350, 121 Reykjavik, Iceland]

93-003245 Tokranov, A. M. FEATURES OF FEEDING OF BENTHIC PREDATORY FISHES OF THE WEST KAMCHATKA SHELF. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):45-55, 1992. FR 38(2)

[Kamchatka Sect., Pac. Ocean Res. Inst. Fish. & Oceanogr., Petropavlovsk-Kamchatskiy, Russia; Hemirhamphus wilsoni, Myoxocephalus jaski, M. polycanthocephalus, and Gadus morhua macrocephalus in the USSR.

93-003246 Turfing, R. C. and P. C. Wainwright. FUNCTIONAL MORPHOLOGICAL ANALYSIS OF THE FEEDING MECHANISM OF A CORAL REEF FISH. *Am. Zool.* 32(5):153A, 1992. Abstract only. FR 38(2)

[Univ. Puerto Rico] *Balistes vetulus*.

93-003247 Vassilopoulou, V. and C. Papaconstantinou. FEEDING HABITS OF RED MULLET (MULLUS BARBATUS) IN A GULF IN WESTERN GREECE. *Fish. Res. (Amst.)* 16(1):69-83, 1993. FR 38(2)

[Natl. Cent. Mar. Res., Agios Kosmas Hellinikon, Athens 166 04, Greece]

93-003248 Vaughn, Caryn C.; Frances P. Gelwick and William J. Matthews. EFFECTS OF ALGIVOROUS MINNOWS ON PRODUCTION OF GRAZING STREAM INVERTEBRATES. *Oikos* 66(1):119-126, 1993. FR 38(2)

[Biol. Surv. & Dep. Zool., Univ. Okla., Norman 73019] *Carpenterina anomala*.

93-003249 Watanabe, Ken-ichi; Kyochi Tamai and Ken-ichi Numachi. [FEEDING HABITS AND DISTRIBUTION PATTERN OF TWO FORMS OF FLATFISHES (GENUS PLEURONICHTHYS) IN KIUSUDO CHANNEL WATERS OFF THE PACIFIC COAST OF CENTRAL JAPAN.] *Nippon Suisan Gakkaishi* 58(12):2253-2260, 1992. In Japanese with English summ. FR 38(2)

[Tokushima Prefectural Fish. Exp. Sta., Hiwasa, Katsu, Tokushima 779-23, Japan] *P. cornutus*

93-003250 Wei Sheng and Jiang Weimin. [STUDY ON FOOD WEB OF FISHES IN THE YELLOW SEA.] *Oceanol. Limnol. Sin.* 23(2):102-102, 1992. In Chinese with English summ. FR 38(2)

[Yellow Sea Fish. Res. Inst., Qingdao 266003, China] Data for 10 species

93-003251 Weseloh, D. V.; P. J. Ewins; J. Neuman and J. P. Ludwig. DOUBLE-CRESTED CORMORANTS OF THE GREAT LAKES: POPULATION CHANGES, DIET, FISHERIES CONFLICTS AND BAND RECOVERY. *Colon. Waterbird Soc. Bull.* 16(2):47-48, 1992. Abstract only. FR 38(2)

[Canadian Wildl. Serv., Box 5050, Burlington, ON, Canada L7R 4A6] *Aluco pseudoharengus*, *Perca flavescens*, *Osmox mordax*, and *Esox lucius*

93-003252 Williams, P. James. DEVELOPMENT OF PREDATOR AVOIDANCE AND FEEDING BEHAVIOUR OF LARVAL COD (GADUS MORHUA L.). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol. 191, p. 400, 1989. Abstract only. FR 38(2)

[Mar. Sci. Res. Lab., Memorial Univ. Newfoundland, St. John's, NF, Canada A1C 5S7]

93-003253 Ylonas, Hansu and Carin Magnhagen. ANTI-PREDATORY BEHAVIOUR: A 'HOT SPOT' OF EVOLUTIONARY ECOLOGY OF THE NINEFINES. *Am. Zool.* 39(4):179-182, 1992. FR 38(2)

93-003254 Zhou Yangling and Wu Wenzong. THE PRELIMINARY STUDY ON THE FEEDING HABIT OF HUACHO BLEEKERI KIMURA AND ITS DIGESTION TO FOODS. *Proceedings of the International Symposium on Coldwater Fish Culture*, Beijing, China, 79-23 September 1989, Wang Xing, ed. *Salmon Fish.* 1990 [Spec. Issue]:113-117, 1990. FR 38(2)

[Southwest Agric. Univ., Chongqing, China] *Nemachilus in China*

AGE AND GROWTH

93-003255 Andersen, Tom and Erlend Moksness. ESTIMATION OF AGE IN DAYS AND DAILY GROWTH RATE IN LARVAL AND JUVENILE MARINE FISHES BASED UPON READING DAILY INCREMENTS IN THEIR OTOLITHS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol. 191, p. 474, 1989. Abstract only. FR 38(2)

[Dep. Biol. Mar. Bot., Univ. Oslo, P.O. Box 1069, Blindern, N-0316 Oslo 3, Norway]

AGE AND GROWTH (Continued)

- 93-003256 Balbonin, Fernando and Alejandro Cannobbio. GROWTH AND MORTALITY IN LABORATORY-REARED LARVAE OF CHILEAN SARDINE (*SARDINOPS SAGAX MUSICA*). *Rapp. P-V Reun Cons Int Explor Mer*. Vol. 191, p. 475. 1989. Abstract only. FR 38(2)
[Inst. Oceanol, Casilla 13 d, Vina del Mar, Chile]
- 93-003257 Buynak, Gerard L., R. Scott Hole and Bill Mitchell. DIFFERENTIAL GROWTH OF YOUNG-OF-YEAR CAZ ZARD SHAD IN SEVERAL KENTUCKY RESERVOIRS. *N. Am. J. Fish. Manage.* 12(3):656-662. 1992. FR 38(2)
[Dep. Fish & Wildl. Resour., 1 Game Farm Rd., Frankfort, KY 40601] *Dorosoma cepedianum*.
- 93-003258 Chambers, R. Christopher; William C. Leggett and Joseph A. Brown. EGG SIZE, MATERNAL EFFECTS, AND THE CORRELATIONS BETWEEN EARLY LIFE HISTORY TRAITS OF CAPELIN (*MALLOTUS YELGOSUS*) (PISCES: OSMERIDAE): AN APPRAISAL AT THE INDIVIDUAL LEVEL. *Rapp. P-V Reun Cons Int Explor Mer*. Vol. 191, p. 439. 1989. Abstract only. FR 38(2)
[Mar. Sci. Res. Lab., Memorial Univ., St. John's, NF, Canada A1C 5S7]
- 93-003259 Odeowski, Piotr. [THE GROWTH OF BROWN TROUT (*SALMO TRUTTA MORPHA FARIO*L.) IN TWO TRIBUTARIES OF THE PASLEKA RIVER. *Rocz Nauk Pol. Związku Wodkarskiego* Vol. 2, p. 45-60. 1989. In Polish with English and Russian summ. FR 38(2)
[Inst. Rybactwa Środlądowego i Olszynie, Pracownia Rybactwa Rzeźniczego, ul. Bytowska 5, 80-328 Gdańsk-Oliwa, Poland]
- 93-003260 Donald, David B.; John A. Babaluk; John F. Craig and William A. Munker. EVALUATION OF THE SCALE AND OPERCULUM METHODS TO DETERMINE AGE OF ADULT GOLDFEYES WITH SPECIAL REFERENCE TO A DOMINANT YEAR-CLASS. *Trans. Am. Fish. Soc.* 121(6):792-796. 1992. FR 38(2)
[Environ. Canada, Inland Waters Div., 1901 Victoria Ave., Regina, SK, Canada S4P 3R4] *Hiodon alosoides* in Canada.
- 93-003261 Eckmann, Rainer and Martin Pusch. THE INFLUENCE OF TEMPERATURE ON GROWTH OF YOUNG COREGONIDS (*COREGONUS LAVARETUS* L.) IN A LARGE PREALPINE LAKE. *Rapp. P-V Reun Cons Int Explor Mer*. Vol. 191, p. 201-208. 1989. FR 38(2)
[Limnol. Inst., Univ. Konstanz, P.O. Box 5560, 7750 Konstanz, Germany]
- 93-003262 Gaignon, Jean-Louis and Loïc Quemener. INFLUENCE OF EARLY THERMIC AND PHOTOPERIODIC CONTROL ON GROWTH AND SMOLIFICATION IN ATLANTIC SALMON (*SALMO SALAR*). *Aquat. Living Resour.* 5(3):185-195. 1992. In English with French summ. FR 38(2)
[IFREMER, Lab. Poissons, B.P. 70, 29280 Plouzané, France]
- 93-003263 Gascuel, Didier, Alain Fonteneau and Corinne Caplano. [A TWO-STANZA GROWTH MODEL FOR THE YELLOWFIN TUNA (*THUNNUS ALBACARES*) IN THE EASTERN ATLANTIC]. *Aquat. Living Resour.* 5(3):155-172. 1992. In French with English summ. FR 38(2)
[ENSAE/IRSTOM/CRODT, Dep. Halieutique, 65 rt. Saine-Brievic, 35042 Rennes Cedex, France]
- 93-003264 Halderson, Lewis A. J., Paul, David Stenitt and John Waits. ANNUAL AND SEASONAL VARIATION IN GROWTH OF LARVAL WALLEYE POLLOCK AND FLATHEAD SOLE IN A SOUTHEASTERN ALASKAN BAY. *Rapp. P-V Reun Cons Int Explor Mer*. Vol. 191, p. 220-225. 1989. FR 38(2)
[Cent. Fish. & Ocean Sci., Univ. Alaska, Juneau 99801] *Theragra chalcogramma* and *Hippoglossoides elassodon*.
- 93-003265 Hales, L. Stanton, Jr., and Mark C. Bell. VALIDATION OF OTOLITH ANNI OF BLUEGELS IN A SOUTHEASTERN THERMAL RESERVOIR. *Trans. Am. Fish. Soc.* 121(6):823-830. 1992. FR 38(2)
[Rutgers Univ. Mar. Field Stn., Inst. Mar. & Coastal Sci., Great Bay Blvd., Tuckerton, NJ 08057] *Lepomis macrochirus* in South Carolina.
- 93-003266 Hoese, Tomasz and Jerzy Mastynski. [PRELIMINARY ESTIMATES OF THE IMPACT OF THE NEWLY CONSTRUCTED JEZIORSKO DAM RESERVOIR ON THE GROWTH OF SELECTED FISH SPECIES]. *Rocz Nauk Pol. Związku Wodkarskiego* Vol. 3, p. 61-80. 1990. In Polish with English and Russian summ. FR 38(2)
[Zakład Biol. i Chem. Sanitamej WSi Koszalin 75-620 Koszalin, ul. Racławicka 15-17, Poland] *Esca lucius*, *Rutilus rutilus*, *Abramis brama*, *Blicca bjoerkna*, *Carassius auratus*, and *Tinca tinca* in Poland.
- 93-003267 Hindley, Sarah. ASPECTS OF VARIATION IN EGG SIZE OF WALLEYE POLLOCK (*THERAGRA CHALCOGRAMMA*) WITH A PRELIMINARY EXAMINATION OF THE EFFECT OF EGG SIZE ON LARVAL SIZE. *Rapp. P-V Reun Cons Int Explor Mer*. Vol. 191, p. 441. 1989. Abstract only. FR 38(2)
[Northwest & Alaska Fish. Cent., NMFS, 7600 Sand Point Way, N.E., Seattle, WA 98115]
- 93-003268 Houde, Edward D. COMPARATIVE GROWTH AND ENERGETICS OF MARINE FISH LARVAE. *Rapp. P-V Reun Cons Int Explor Mer*. Vol. 191, p. 479. 1989. Abstract only. FR 38(2)
[Univ. Md., Cent. Environ. & Estuarine Studies, Chesapeake Biol. Lab., Solomons 20680]

FISHERIES REVIEW

AGE AND GROWTH (Continued)

- 93-003269 Hovenkamp, Frans WITHIN-SEASON VARIATION IN GROWTH OF LARVAL PLAICE (*PLEURONECTES PLATESSA* L.). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 248-257. 1989. FR 38(2) [Netherlands Inst. Sea Res., P.O. Box 59, Den Burg, Netherlands]
- 93-003270 Herringford, F. A.; J. E. Thorpe, C. Garcia de Leoniz and D. W. Hay PATTERNS OF GROWTH AND SMOLTING IN ALUTIMIN MIGRANTS FROM A SCOTTISH POPULATION OF ATLANTIC SALMON, *SALMO SALAR* L. *J. Fish Biol.* 41(Suppl. B):43-51. 1992. FR 38(2) [Zool. Dep., Univ. Glasgow, Glasgow G12 8QQ, Scotland]
- 93-003271 Jarzynowa, Barbara; Stanislaw Radwan and Zbigniew Girsztewit. [AGE AND GROWTH OF MORE ABUNDANT FISH SPECIES COMPARED WITH FISHERIES AND FISH STOCKINGS IN THE ZIMBORZYCE RESERVOIR.] *Rocz. Nauk. Pol. Związku Wiedkarskiego* Vol. 3, p. 33-46. 1990. In Polish with English and Russian summs. FR 38(2) [Inst. Biol. Podstaw Prod. Zwierzeczej, Akad. Rolniczej Lublinskiej, ul. Akadem. 13, 20-934 Lubin, Poland] *Aburru brama*, *Silozostedion kicloparka*, *Esox lucius*, *Rutilus rutilus*, *Tinca tinca*, and *Carrasius gibelio* in Poland.
- 93-003272 Karaklı, Maria and Fietn von Westemhagen. DAILY GROWTH PATTERNS IN OTOLITHS OF LARVAL AND JUVENILE PLAICE (*PLEURONECTES PLATESSA* L.): INFLUENCE OF TEMPERATURE, SALINITY, AND LIGHT CONDITIONS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 376-382. 1989. FR 38(2) [Biol. Anstalt Helgoland, Nordstr. 31, 2000 Hamburg 52, Germany]
- 93-003273 Koutsikopoulos, Constantine Maria Karaklı; Yves Desautay and Didier Dorval. RESPONSE OF JUVENILE SOLE (*SOLEA SOLEA* (L.)) TO ENVIRONMENTAL CHANGES INVESTIGATED BY OTOLITH MICROSTRUCTURE ANALYSIS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 281-286. 1989. FR 38(2) [IFREMER, Cent. Nantes, B.P. 1049, 44037 Nantes Cedex, France]
- 93-003274 Lagardere, Françoise. INFLUENCE OF FEEDING CONDITIONS AND TEMPERATURE ON THE GROWTH RATE AND OTOLITH-INCREMENT DEPOSITION OF LARVAL DOVER SOLE (*SOLEA SOLEA* (L.)). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 390-399. 1989. FR 38(2) [CREMAH-Houmeau (CNRS-IFREMER), BP 5, 17137 L'Houmeau, France]
- 93-003275 Lou, D. C. GROWTH IN JUVENILE *SCARUS RULATUS* AND *CTENOGHAETUS BINOTATUS*: A COMPARISON OF FAMILIES SCARIDAE AND ACANTHURIDAE. *J. Fish Biol.* 42(1):15-23. 1993. FR 38(2) [Dep. Mar. Biol., James Cook Univ. North Queensland, Townsville, Qld. 4811, Australia]
- 93-003276 Nishimura, Akira. OCCURRENCE OF A CHECK IN OTOLITHS OF REARED AND SEA-CUGHT LARVAL WALLEYE POLLOCK *THERRAGRA CHALCOGRAMMA* (PAULS) AND ITS RELATIONSHIP TO EVENTS IN EARLY-LIFE HISTORY. *J. Exp. Mar. Biol. Ecol.* 166(2):175-183. 1993. FR 38(2) [Natl. Res. Inst. Far Seas Fish., 5-7-1 Orido, Shimizu, Shizuoka 424, Japan]
- 93-003277 Paul, A. J.; J. M. Paul and R. L. Smith. ENERGY AND RATION REQUIREMENTS OF FLATHEAD SOLE (*HYPOGLOSSOIDES ELASGODON* JORDAN AND GILBERT 1880) BASED ON ENERGY CONSUMPTION AND GROWTH. *J. Cons. Cons. Int. Explor. Mer.* 49(4):413-416. 1992. FR 38(2) [Univ. Alaska, Seward Mar. Cont. Lab., P.O. Box 730, Seward 99664]
- 93-003278 Persson, L. GROWTH AS A KEY ELEMENT IN CONNECTING INDIVIDUAL AND POPULATION PROCESSES. *J. Fish Biol.* 41(Suppl. B):183-184. 1992. Poster abstract only. FR 38(2) [Univ. Umea, Umea, Sweden]
- 93-003279 Flitman, Karin; Anne Bøit Skillebæk and Torstein Harboe. EFFECT OF TEMPERATURE ON GROWTH RATES AND ORGANOGENESIS IN THE LARVAE OF HALIBUT (*HYPOGLOSSUS HYPOGLOSSUS* L.). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 421-430. 1989. FR 38(2) [Dep. Fish. Biol., Univ. Bergen, P.O. Box 1839 Nordnes, 5024 Bergen, Norway]
- 93-003280 Power, G. SEASONAL GROWTH AND DIET OF JUVENILE CHINOOK SALMON (*ONCORHYNCHUS Tshawytscha*) IN DEMONSTRATION CHANNELS AND THE MAIN CHANNEL OF THE WAITAKI RIVER, NEW ZEALAND, 1982-1983. *Ecol. Freshwater Fish* 1(1):12-25. 1992. In English with Spanish summs. FR 38(2) [Dep. Biol. Univ. Waterloo, Waterloo, ON, Canada N2L 3G1]
- 93-003281 Reimchen, T. E. EXTENDED LONGEVITY IN A LARGE-BODIED STICKLEBACK, *GASTEROSTEUS*, POPULATION. *Can. Field-Nat.* 106(1):122-125. 1992. FR 38(2) [Dep. Biol., Univ. Victoria, P.O. Box 1700, Victoria, BC, Canada V8W 2Y2] *G. aculeatus* in Canada.
- 93-003282 Rijnbeek, A. D. and P. I. van Leeuwen. DENSITY-DEPENDENT AND INDEPENDENT CHANGES IN SOMATIC GROWTH OF FEMALE NORTH SEA PLAICE *PLEURONECTES PLATESSA* BETWEEN 1930 AND 1985 AS REVEALED BY BACK-CALCULATION OF OTOLITHS. *Mar. Ecol. Prog. Ser.* 88(1):19-32. 1992. FR 38(2) [Netherlands Inst. Fish. Res., P.O. Box 68, 1970 AB IJmuiden, Netherlands]

AGE AND GROWTH (Continued)

93-003283 Rapin, Andreas DAY AND NIGHT VARIABILITY IN THE CALCULATION OF GROWTH OF LARVAL MACKEREL (*SCOMBER SCOMBRUS*) DURING A PATCH-STUDY IN THE CELTIC SEA. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 463, 1989, Abstract only. FR 38(2)

[Inst. Hydrobiol. & Fischereiwiss., Obereisweg 24, D-2000 Hamburg 50, Germany]

93-003284 Ross, Michael R. and Gary A. Nelson, INFLUENCES OF STOCK ABUNDANCE AND BOTTOM-WATER TEMPERATURE ON GROWTH DYNAMICS OF HADDOCK AND YELLOWTAIL FLOUNDER ON GEORGES BANK. *Trans. Am. Fish. Soc.* 121(5):578-587, 1992. FR 38(2)

[Dep. For. & Wild. Manage., Univ. Mass., Amherst 01003] *Neuroneces ferrugineus* and *Melanogrammus aeglefinus*

93-003285 Sadovy, Yvonne, Miguel Figueroa and Ana Roman AGE AND GROWTH OF RED HIND (*EPINEPHELUS CUTTATUS*) IN PUERTO RICO AND ST THOMAS U.S. *Natl. Mar. Fish. Serv. Fish. Bull.* 90(3):516-528, 1992. FR 38(2)

[Figueroa Fish. Res. Lab., Dep. Nat. Resour., P.O. Box 3665, Mayaguez, PR]

93-003286 Secor, David H., John Mark Dean and Rodolfo B. Baldozarova. COMPARISON OF GROWTH AND SOMATIC GROWTH IN LARVAL AND JUVENILE FISHES BASED ON OTOLITH LENGTH-FISH LENGTH RELATIONSHIPS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 431-438, 1989. FR 38(2)

[Beilw. W. Banach Inst., Mar. Biol. & Control Res., Biol. Dep., Univ. S.C., Columbia 29208] *Morone saxatilis*, *Pagrus major*, and *Lepostomus xanthurus*

93-003287 Simard, Patrick; Martin Castonguay; Denis D'Amours and Pierre Magnan GROWTH COMPARISON BETWEEN JUVENILE ATLANTIC MACKEREL (*SCOMBER SCOMBRUS*) FROM THE TWO SPAWNING GROUPS OF THE NORTHWEST ATLANTIC. *Can. J. Fish. Aquat. Sci.* 49(11):2242-2248, 1992. In English with French summ. FR 38(2)

[Castonguay Minist. Peches & Océans, Inst. Maurice-Lamontagne, C.P. 1000, Mont-Joli, PQ, Canada]

93-003288 Smetana, Przemyslaw ASSESSMENT OF THE LENGTH GROWTH RATE OF FIVE-BEARDED ROCKLING (*CILIATA MUSTELA* L.) OF THE WADDEN SEA ORIGIN. *Acta Ichthyol. Piscatoria* 22(1):39-54, 1992. In English with Polish summ. FR 38(2)

[Univ. Szczecinski, Wydział Biologii i Nauk o Morzu, ul. Felczaka 3a, 71-412, Szczecin, Poland]

93-003289 Suthers, Ian M. and Kenneth T. Frank. DISPERSAL, GROWTH, AND CONDITION OF JUVENILE PELAGIC COD (*GADUS MORHUA* L.) IN SOUTH-WESTERN NOVA SCOTIA. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 466-467, 1989. Abstract only. FR 38(2)

[Dep. Biol., Dalhousie Univ., Halifax, NS, Canada]

93-003290 Takita, Toru, Taji Sato and Koichi Kasai. AGE AND GROWTH OF NIBEA ALBIFLORA (*SCAENIDAE*) DISTRIBUTED IN ARIAKE SOUND. *Nippon Suisan Gakkaishi* 59(1):39-44, 1993. In English with Japanese summ. FR 38(2)

[Fac. Fish., Nagasaki Univ., Bunkyo, Nagasaki, Nagasaki 852, Japan]

93-003291 Trzaskowski, Rajmund and Jozef Dmugala. [CORRELATION BETWEEN THE EGG DIAMETER OF SEA TROUT AND THE SIZE OF HATCH AND FRY DEVELOPED FROM THE EGGS] *Rocz. Nauk. Pol. Zwiastku Wodnaskiego* Vol. 1, p. 173-180, 1988. In Polish with English and Russian summ. FR 38(2)

[Akad. Rolnicza, Inst. Akwakul. & Techniki Rybackiej 71-550 Szczecin, ul. Kazimierza Krolewicza 4, Poland] *Salmo trutta* in Poland.

93-003292 Warlen, Stanley M. AGE, GROWTH, AND SIZE DISTRIBUTION OF LARVAL ATLANTIC MENHADEN OFF NORTH CAROLINA. *Trans. Am. Fish. Soc.* 121(5):588-598, 1992. FR 38(2)

[NMFIS, Southeast Fish. Sci. Cons., Beaufort Lab., Beaufort, NC 28516-9722] *Brevoortia tyrannus*

93-003293 Wright, P. J. and F. A. Huntingford. DAILY GROWTH INCREMENTS IN THE OTOLITHS OF THE THREE-SPINED STICKLEBACK, *GASTEROSTEUS ACULEATUS* L. *J. Fish. Biol.* 42(1):65-77, 1993. FR 38(2)

[SCAFD Mar. Lab., Victoria Rd., Aberdeen AB9 8DB, Scotland]

GEOGRAPHICAL DISTRIBUTION, FISH SURVEYS, ETC.

93-003294 Bagliniere, J. L. [THE COMMON TROUT (*SALMO TRUTTA* L.), ITS ORIGIN, ITS AREA OF DISTRIBUTION, THEIR ECONOMIC AND SCIENTIFIC INTERESTS.] In: [The Trout: Biology and Ecology] / J. L. Bagliniere and G. Makse, editors, p. 11-22, 1991. FR 38(2)

[INRA-ENSA, Lab. Ecol. Hydrobiol., Sin. Physiol. & Ecol. Poissons, 65 rue de St. Brisac, 35042 Rennes Cedex, France]

93-003295 Bergman, M. J. N.; H. W. van der Voer; A. Saen and D. Zuidema. TRANSPORT MECHANISMS OF LARVAL PLAICE (*PLEURONECTES PLATESSA* L.) FROM THE COASTAL ZONE INTO THE WADDEN SEA NURSERY AREA. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 43-49, 1989. FR 38(2)

[Netherlands Inst. Sea Res., P.O. Box 59, 1790 AB Den Burg, Texel, Netherlands]

FISHERIES REVIEW

GEOGRAPHICAL DISTRIBUTION, FISH SURVEYS, ETC. (Continued)

- 93-003296 Campana, Steven L.; Stephen J. Smith and Peter C. F. Hurley. AN AGE-STRUCTURED INDEX OF COD LARVAL DRIFT AND RETENTION IN THE WATERS OFF SOUTH-WEST NOVA SCOTIA. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol 191, p. 50-62. 1989. FR 38(2)
[Mar. Fish Div., Bedford Inst. Oceanogr., P.O. Box 1006, Dartmouth, NS, Canada B2Y 4A2]
- 93-003297 Campbell, R. E. STATUS OF THE Y-PRICKLEBACK, *ALLOLAMPENUS HYPOCHROMUS*, IN CANADA. *Can. Field Nat.* 105(1):19-23. 1992. In English with French summ. FR 38(2)
[2880 Carling Ave. #1410, Ottawa, ON, Canada K2B 7Z1]
- 93-003298 Castonguay, Martin; George A. Rose and William C. Leggett. ONSHORE MOVEMENTS OF ATLANTIC MACKEREL (*SCOMBER SCOMBRUS*) IN THE NORTHERN GULF OF ST. LAWRENCE: ASSOCIATIONS WITH WIND-FORCED ADVECTIONS OF WARMED SURFACE WATERS. *Can. J. Fish. Aquat. Sci.* 49(11):2232-2241. 1992. In English with French summ. FR 38(2)
[Minist. Peches & Océans, Inst. Maurice-Lamontagne, C.P. 1000, Mon-Hol, PQ, Canada G5H 3Z4] *Gadus morhua* In Canada
- 93-003299 Doyle, William J. and Thomas A. Ryan. SPATIAL PATTERNS IN A COASTAL KITHYPOPLANKTON COMMUNITY SOUTHWEST OF IRELAND. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol 191, p. 70-84. 1989. FR 38(2)
[Northwest & Alaska Fish. Cent., 7600 Sand Point Way, N.E., Seattle, WA 98115] Data for 32 species.
- 93-003300 Ebelin, Mark E.; Guy W. Ermsing; Bill J. Stark; Joseph R. Tomelleri and Thomas L. Wenke. RECENT SURVEYS OF FISHES FROM WESTERN KANSAS. *Trans. Kans. Acad. Sci.* 92(1-4):24-32. 1989. FR 38(2)
[Nat. Sci. Res. Assoc., 409 E. Eleventh St., Hays, KS 67601] Data for 24 species.
- 93-003301 Edsall, David R. FISH ASSEMBLAGE STRUCTURE AND ENVIRONMENTAL CORRELATES IN NEPAL'S GANDAKI RIVER. *Copeia* 1993(1):40-60. 1993. FR 38(2)
[Div. Biol. Sci., Emporia State Univ., Emporia, KS 66801]
- 93-003302 Ermsing, Guy W.; Mark E. Ebelin and Thomas L. Wenke. RANGE EXTENSIONS FOR THREE SPECIES OF MADTOMS (NOBILUS: ICTALURIDAE) IN KANSAS. *Trans. Kans. Acad. Sci.* 92(1-4):206-207. 1989. FR 38(2)
[Nat. Sci. Res. Assoc., 409 E. Eleventh St., Hays, KS 67601] *N. notostomus*, *N. plecidus*, and *N. exilis*.
- 93-003303 Fan, Ruth A. and David L. Ward. FISHES OF THE LOWER WILLAMETTE RIVER, NEAR PORTLAND, OREGON. *Northwest Sci.* 67(1):16-22. 1993. FR 38(2)
[Dep. Fish & Wildl., Res. & Dev., 17330 S.E. Evelyn St., Clackamas, OR 97015] Data for 39 species.
- 93-003304 Cobales, K. W. SEARCH FOR ARCHAEOLOGICAL EVIDENCE FOR SACRAMENTO-SAN JOAQUIN RIVER FISHES IN THE PAJARO-SALINAS RIVER SYSTEM OF CALIFORNIA. *Am. Zool.* 32(5):156A. 1992. Abstract only. FR 38(2)
[Calif. State Univ., Bakersfield] *Achenser*, *Gila castrocarida*, *Pogonichthys macrolepidotus*, and *Amylopharodon conceptus*.
- 93-003305 Gordo, O. R.; J. Gjøsæter; K. Sunnana and O. Dragesand. SPATIAL DISTRIBUTION OF 0-GROUP GADQIDS OFF MID-NORWAY. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol 191, p. 273-280. 1989. FR 38(2)
[Inst. Mar. Res., P.O. Box 1870 Nordernes, N-5024 Bergen, Norway] *Pollichtius pollicetus*, *P. virens*, *Melanogrammus aeglefinus*, *Clupea morhua*, and *Melanogrammus merlangus*.
- 93-003306 Hank, John Lowrey. SYSTEMATICS, DISTRIBUTION, AND BIOLOGY OF FISHES CURRENTLY ALLOCATED TO *ERMYSTAX* (JORDAN), A SUBGENUS OF *HYBOPSS* (CYPRINIDAE). Ph.D. dissertation, Univ. Tenn. 350p. 1986. From *Dis. Abstr. Int. B Sci. Eng.* 47(12):4087. 1987. Order No. DAB701794. FR 38(2)
E. obscurus, *E. haysii*, and *E. insignis*.
- 93-003307 Haug, Tore; Herman Bjørke and Inger-Britt Falk-Petersen. THE DISTRIBUTION, SIZE COMPOSITION, AND FEEDING OF LARVAL GREENLAND HALIBUT (*IRENARCTIUS HYPOGLOSSOIDES WALBAUM*) IN THE EASTERN NORWEGIAN AND BARENTS SEAS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol 191, p. 226-232. 1989. FR 38(2)
[Dep. Mar. Biol., Tromsø Mus., Univ. Tromsø, P.O. Box 2550, N-9001 Tromsø, Norway]
- 93-003308 Heald, M. TRANSPORT OF LARVAL HERRING (*CLUPEA HARENGUS* L.) BY THE SCOTTISH COASTAL CURRENT. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol 191, p. 85-91. 1989. FR 38(2)
[DAFS Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen AB9 8DB, Scotland]
- 93-003309 Herra, Tomasz. LARVAL REDFISH DRIFT MIGRATION IN RELATION TO HYDROGRAPHIC FEATURES. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol 191, p. 92-98. 1989. FR 38(2)
[Dep. Oceanogr., Sea Fish. Inst., Aljei 2)wodziszyn 1, 81-345 Gdynia, Poland] *Sebastes mentella*.

FISHERIES REVIEW

GEOGRAPHICAL DISTRIBUTION, FISH SURVEYS, ETC. (Continued)

- 93-003310 Holt, Scott A., G. Jean Holt and Connie R. Amold. TIDAL STREAM TRANSPORT OF LARVAL FISHES INTO NON-STRATIFIED ESTUARIES. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 100-104, 1989. FR 38(2)
[Univ. Tex. Mar. Sci. Inst., P.O. Box 1267, Port Aransas 78373] *Sciaenops ocellatus* in Texas
- 93-003311 Houde, Edward D., Peter B. Otnes, Lawrence Lubbers III and Shailer R. Cummings. TEST OF A CAMERA-NET SYSTEM TO DETERMINE ABUNDANCE AND HETEROGENEITY IN ANCHOVY EGG DISTRIBUTIONS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 112-118, 1989. FR 38(2)
[Univ. Md., Cent. Environ. & Estuarine Studies, Chesapeake Biol. Lab., Solomons, MD 20688] *Anchoa mitchellii* in the United States.
- 93-003312 Iwatsuki, Yukio, Hideaki Nakata and Reijiro Hirano. THE THERMOHALINE FRONT IN RELATION TO FISH LARVAE. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 119-126, 1989. FR 38(2)
[Lab. Fish. Oceanogr., Dep. Fish., Tac. Agric., Univ. Tokyo 1-1-1 Yayoi, Bunkyo-ku, Tokyo 113, Japan] *Hexagrammos otakii* and *Agrimnus agrimnus* in Japan
- 93-003313 Kim, Suam and Arthur W. Kendall, Jr. DISTRIBUTION AND TRANSPORT OF LARVAL WALLEYE POLLOCK (*THERAGRA CHALCOGRAMMA*) IN SHELKOF STRAIT, GULF OF ALASKA, IN RELATION TO WATER MOVEMENT. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 127-136, 1989. FR 38(2)
[Korea Ocean Res. & Dev. Inst., Polar Res. Lab., An San P.O. Box 29, Seoul 425-600, Korea]
- 93-003314 Laveligne, J. STATUS OF THE NORTHERN BROOK LAMPREY, *ICHTHYOMYZON FOSSOR*, IN CANADA. *Can. Field-Nat.* 106(1):7-13, 1992. In English with French summary. FR 38(2)
[50-2069 Jasmine Crescent, Gloucester, ON, Canada K1J 7W2]
- 93-003315 Malley, John G. FISH FOSSILS AND EVOLUTION. *Trop. Fish. Hobbyist* 41(5):92-94, 96, 1993. FR 38(2)
- 93-003316 Marchand, Jocelyne and Gerard Masson. PROCESS OF ESTUARINE COLONIZATION BY 0-GROUP SOLE (*SOLEA SOLIFA*): HYDROLOGICAL CONDITIONS, BEHAVIOUR, AND FEEDING ACTIVITY IN THE VILAINE ESTUARY. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 287-295, 1989. FR 38(2)
[Lab. Biol. Mar., Univ. Nantes, 2 rue Houssiero, 44072 Nantes Cedex 03, France]
- 93-003317 Masuti, E. and C. Stefanescu. FIRST RECORD OF *SERIOLA FASCIATA* (BOUCHÉ, 1793) (OSTEICHTHYES: CARANGIDAE) IN THE MEDITERRANEAN. *J. Fish Biol.* 42(1):143-144, 1993. FR 38(2)
[Cent. Oceanogr. Balears, Inst. Espanol Oceanogr., Muelle De Poniente s/n, Apdo. 291, E-07080 Palma de Mallorca, Spain]
- 93-003318 McInisch, Stephen P., Charles H. Hocutt and Roman V. Jeslen. DISCOVERY OF AN ENDANGERED MARYLAND FISH, THE GLASSY DARTER, *ETHIOSTOMA VIRELUM* (COPE), ON THE DELMARVA PENINSULA, MARYLAND. *Mar. Nat.* 35(1-4):11-14, 1991. FR 38(2)
[Environ. & Estuarine Studies, Horn Point Environ. Lab., P.O. Box 775, Cambridge, MD 21613]
- 93-003319 Nakata, Hideaki. TRANSPORT AND DISTRIBUTION OF FISH EGGS AND LARVAE IN THE VICINITY OF COASTAL FRONTS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 153-159, 1989. FR 38(2)
[Ocean Res. Inst., Univ. Tokyo, 1-15-1 Minamida, Nakano, Tokyo 164, Japan] *Seriola quinqueseriata* and *Seriola melanosticta*.
- 93-003320 North, A. W. and A. W. A. Masay. ABUNDANCE AND DIURNAL VERTICAL DISTRIBUTION OF FISH LARVAE IN EARLY SPRING AND SUMMER IN A FJORD AT SOUTH GEORGIA. *Antarct. Sci.* 4(4):405-412, 1992. FR 38(2)
[British Antarctic Surv., Nat. Environ. Res. Council, High Cross, Madingley Rd., Cambridge CB3 0ET, England] *Channoscephalus gurnardii*, *Lepidionotolepis nudifrons*, *Pseudochannichthys georgianus*, *Channoscephalus aceratus*, *Parachannichthys georgianus*, and *Electrona antarctica* in Antarctica.
- 93-003321 Olson, Steinar and Aud Vold Sævi. OBSERVATIONS ON INSHORE DISTRIBUTION AND BEHAVIOUR OF 0-GROUP NORTHEAST ARCTIC COD. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 296-302, 1989. FR 38(2)
[Inst. Fish. Technol. Res., P.O. Box 1964, N-5024 Bergen, Norway] *Gadus morhua* in Norway.
- 93-003322 Richards, William J., Thomas Leming, Michael F. McGowan, John T. Lamkin and Sharon Kelley-Frapp. DISTRIBUTION OF FISH LARVAE IN RELATION TO HYDROGRAPHIC FEATURES OF THE LOOP CURRENT BOUNDARY IN THE GULF OF MEXICO. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 169-176, 1989. FR 38(2)
[NMF5, Southeast Fish. Cent., 75 Virginia Beach Dr., Miami, FL 33149] *Thunnus thynnus*.
- 93-003323 Sarlow, Darb. THREE DARTERS FOUND IN MINNESOTA RIVERS. *Am. Curator* p. 22-27, Fall 1992. FR 38(2)
Ammocrypta clara, *Percina phoxocephala*, and *Etheostoma caeruleum*.

FISHERIES REVIEW

GEOGRAPHICAL DISTRIBUTION, FISH SURVEYS, ETC. (Continued)

93-003324 Saskatchewan Parks and Renewable Resources, FISH SPECIES DISTRIBUTION IN SASKATCHEWAN Sask. Parks Renew Resour. Fish Tech. Rep. 91-7 102p. 1991. FR 38(2)

93-003325 Shuntov, V. P. [FUNCTIONAL STRUCTURE OF THE DISTRIBUTION AREA OF WALLYE POLLOCK IN THE BERING SEA], *Bol' Morya (Waldvis.)*, 1991(4):3-16. 1991. In Russian with English summary. FR 38(2)

[Lab. Appl. Biocemol., Pac. Res. Inst. Fish. & Oceanogr., Vladivostok 690600, USSR.] *Theragra chalcogramma*.

93-003326 Sinclair, A. FISH DISTRIBUTION AND PARTIAL RECRUITMENT: THE CASE OF EASTERN SCOTIAN SHELT COD. *J. Northwest Atl. Fish. Sci.* Vol. 13. p. 15-24. 1992. FR 38(2)

[Dep. Fish. & Oceans, Gulf Fish. Cent., P.O. Box 5030, Moncton, NB, Canada E1C 906.] *Gadus morhua* in Canada.

93-003327 Skerfving, Stig. SPATIAL MATCH AND MISMATCH BETWEEN LARVAE OF COD (*GADUS MORHUA*) AND THEIR PRINCIPAL PREDY, NAUPLII OF CALANUS FINMAREICUS (*CLUNNERUS*) *Rapp. P.-V. Resour. Cons. Int. Explor. Mer.* Vol. 191. p. 250-263. 1989. FR 38(2)

[Int. Fish. & Aquacult., Nordland Coll., P.O. Box 6003, Moelva, N-8016 Bodø, Norway]

93-003328 Stephenson, Robert L. and Michael J. Power. OBSERVATIONS ON HERRING LARVAE RETAINED IN THE BAY OF FUNDY: VARIABILITY IN VERTICAL MOVEMENT AND POSITION OF THE PATCH EDGE *Rapp. P.-V. Resour. Cons. Int. Explor. Mer.* Vol. 191. p. 177-183. 1989. FR 38(2)

[Mar. Fish. Div., Biol. Sci. Branch, Dep. Fish. & Oceans, Biol. Stn., St. Andrews, NB, Canada E0G 2X0.] *Clupea harengus* in Canada.

93-003329 Stephenson, Sam A. THE DISTRIBUTION OF FISHES IN THE THUNDER BAY AREA OF NORTHWESTERN ONTARIO SINCE DEGLACIATION, WITH SPECIAL REFERENCE TO THE CARTERS (GENUS *ETHIOPOSTOMA*) AND THE SIBLEY PENINSULA. *M.S. thesis, Lakehead Univ. (Canada)* 105p. 1991. From Masters Abstr. Int. 31(1):222. 1993. Order No. MAMM69146. FR 38(2)

E. ovale and *E. nigricum* in Lake Superior.

93-003330 Taggart, Christopher T.; Kenneth F. Drinkwater; Kenneth T. Frank; Jeff McRuer and Rene LaRoche. LARVAL FISH, ZOOPLANKTON COMMUNITY STRUCTURE, AND PHYSICAL DYNAMICS AT A TIDAL FRONT *Rapp. P.-V. Resour. Cons. Int. Explor. Mer.* Vol. 191. p. 184-194. 1989. FR 38(2)

[Dalhousie Univ., Dep. Oceanogr., Halifax, NS, Canada B3H 4J1]

93-003331 Taquet, Marc. [THE FISHES OF THE REUNION ISLAND.] *Equipeur No.* 40. p. 19-25. 1992. In French. FR 38(2)

93-003332 Walker, H. J., Jr., and Keith W. Radford. EASTERN PACIFIC SPECIES OF THE GENUS *UMBRINA* (PISCES: SCIAENIDAE) WITH A DESCRIPTION OF A NEW SPECIES. *U.S. Natl. Mar. Fish. Serv. Fish. Bull.* 90(3):574-587. 1992. FR 38(2)

[Scripts Inst. Oceanogr., Univ. Calif., San Diego, La Jolla 92093-0208.] *U. bessingi*, *U. roncador*, *U. unshii*, *U. roeri*, *U. dorsalis*, *U. galapagensis*, *U. analis*, and *U. ventriosum*.

93-003333 White, M. G. THE EARLY LIFE-HISTORY OF ANTARCTIC FISH. *J. Fish Biol.* 41(Suppl. B) 181. 1992. Poster abstract only. FR 38(2)

[British Antarctic Surv., Cambridge, England]

93-003334 Wing, Bruce L.; Charles M. Cuthrie III and Anthony J. Ghanetti. ATLANTIC SALMON IN MARINE WATERS OF SOUTHEASTERN ALASKA. *Trans. Am. Fish. Soc.* 121(6):814-818. 1992. FR 38(2)

[Admiral Bay Lab., Fish. Sci. Cent., NMFS, 11305 Glacier Hwy., Juneau, AK 99901-8626.] *Salmo salar*.

ABUNDANCE, FACTORS OF SURVIVAL AND MORTALITY

93-003335 de Lafontaine, Yves and W. C. Leggett. MACROINVERTEBRATE PREDATION ON LARVAL FISH AN *IN SITU* MESOCOSM APPROACH *Rapp. P.-V. Resour. Cons. Int. Explor. Mer.* Vol. 191. p. 487. 1989. Abstract only. FR 38(2)

[Pechus & Oceans Canada, Inst. Maurice Lamontagne, 650 R. Mer., Mont-Joli, PQ, Canada G5H 3Z4.] *Malinus villosus*.

93-003336 Dempsey, Clive H. and Stuart I. Rogers. THE INFLUENCE OF A DIRECT COOLED COASTAL NURSERY STATION ON LARVAL FISH MORTALITY. *Rapp. P.-V. Resour. Cons. Int. Explor. Mer.* Vol. 191. p. 492. Abstract only. FR 38(2)

[GB Mar. Biol. Unit, Fareley, Southampton, [England]

93-003337 Fuiman, Lee A. and John C. Gamble. INFLUENCE OF EXPERIMENTAL MANIPULATIONS ON THE SURVIVAL OF HERRING LARVAE BY JUVENILE HERRING IN LARGE ENCLOSURES *Rapp. P.-V. Resour. Cons. Int. Explor. Mer.* Vol. 191. p. 359-365. 1989. FR 38(2)

[U. Tex. Austin, Mar. Sci. Inst., Port Aransas 78373.] *Clupea harengus*.

FISHERIES REVIEW

ABUNDANCE, FACTORS OF; SURVIVAL AND MORTALITY (Continued)

- 93-003338 Gagne, J. A. and L. Fortin. LARVAE HERRING DISPERSION AND SURVIVAL IN THE ST LAWRENCE ESTUARY: AN EVALUATION OF THE MATCH/MISMATCH AND MEMBER/VAGRANT HYPOTHESES. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol. 191, p. 451. 1989. Abstract only. FR 38(2)
[Minist. Peches & Océans, Inst. Maurice-Lamontagne, Mont-Joli, PQ, Canada G5H 3Z4]
- 93-003339 Garrido, John C. and Stephen J. Hily. PREDATION BY THE SCYPHOMEDUSAN *AURELIA AURITA* ON HERRING LARVAE IN LARGE ENCLOSURES: EFFECTS OF PREDATOR SIZE AND PREY STARVATION. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol. 191, p. 366-375. 1989. FR 38(2)
[DAFS Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen AB9 0DS, Scotland] *Clupea harengus harengus*
- 93-003340 Laurence, Geoffrey C. TOWARDS A CONSENSUS PARADIGM OF EARLY LIFE STAGES SURVIVAL OF FISHES AND RECRUITMENT RESEARCH IN THE FACE OF VARIABILITY AND UNCERTAINTY. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol. 191, p. 470. 1989. Abstract only. FR 38(2)
[NOAA, NMFS, Northeast Fish. Cent., Narragansett, RI 02882]
- 93-003341 Marques, Mick and Keith Duncan. VARIATION IN THE ABUNDANCE OF RED-BREASTED MERGANSERS *MERGUS serrator* ON A SCOTTISH RIVER IN RELATION TO SEASON, YEAR, RIVER HYDROGRAPHY, SALMON DENSITY AND SPRING CULLING. *ibid.* 135(1):31-41. 1993. FR 38(2)
[Inst. Terrestrial Ecol., Hill of Brathens, Banchory, Kincardineshire AB31 4BY, Scotland] *Salmo salar*
- 93-003342 Martenslöv, G. and K. W. Alsós. INFLUENCE OF EGG SIZE ON EMBRYOS AND LARVAE OF *FUNDULUS HETEROCITUS* (L.). *J. Fish Biol.* 41(6):883-896. 1992. FR 38(2)
[Inst. Mar. Res., Skúlagata 4, 121 Reykjavík, Iceland] *F. h. heterocitrus* and *F. h. heteroclitus*
- 93-003343 Roberts, Bruce C. and Robert G. White. EFFECTS OF ANGLER WADING ON SURVIVAL OF TROUT EGGS AND PRE-EMERGENT FRY. *N. Am. J. Fish. Manage.* 12(3):450-459. 1992. FR 38(2)
[U.S. For. Serv., Intermt. Res. Stn., 316 E. Myrtle St., Boise, ID 83702] *Salmo trutta*, *Oncorhynchus clarkii*, and *O. mykiss*
- 93-003344 Sundby, Svein; Herman Björker; Aud Vold Solvik and Steinar Olsen. MORTALITY RATES DURING THE EARLY LIFE STAGES AND YEAR-CLASS STRENGTH OF NORTHEAST ARCTIC COD (*GADUS MORHUA* L.). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol. 191, p. 351-358. 1989. FR 38(2)
[Inst. Mar. Res., P.O. Box 1670, Nordnes, N-5024 Bergen, Norway]

IDENTIFICATION, KEYS, CLASSIFICATION

- 93-003345 Anderson, M. E. A NEW SANDPUNCH, *PARAPERCS MARITZ* (TELEOSTEI: PINGLIPEDIDAE), FROM SOUTH AFRICA. *S. Afr. J. Zool.* 27(4):151-155. 1992. In English with Afrikaans summ. FR 38(2)
[J.L.B. Smith Inst. Ichthyol., Private Bag 1015, Grahamstown 6140, South Africa]
- 93-003346 Baker, Donald E., Jr. MICRONESIAN MARINE FISH COLLECTING: KOSRAE STATE, F.S.M. *Trop. Fish. Hobbyist* 41(4):64-66, 68, 70. 1992. FR 38(2)
- 93-003347 Balshine, A. V. CLASSIFICATION, PHYLOGENETIC RELATIONSHIPS, AND ORIGINS OF THE FAMILIES OF THE SUBORDER NOTOTHEMNOIDEI (PERCIFORMES). *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):90-110. 1992. FR 38(2)
[Zool. Inst., Russian Acad. Sci., Saint Petersburg, Russia]
- 93-003348 Bibeau, A. [THE RAYS: THEIR [AL. NAMES.]] *Épave* No. 40, p. 31-32. 1992. In French. FR 38(2)
Raja batia, *R. clavata*, *R. fulonica*, *R. montagui*, *R. nasus*, and *R. brachyura*.
- 93-003349 Borodulina, O. D. DESCRIPTION OF A NEW MESOPELAGIC FISH, *ASTRONESTHES GRIBBS*, AND NOTES ON THE CLOSELY RELATED SPECIES, *A. NIGROIDES* (ASTRONESTHIDAE). *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):111-117. 1992. FR 38(2)
[Inst. Oceanogr., USSR Acad. Sci., Moscow, Russia]
- 93-003350 Briggs, John C. NEW GENUS AND SPECIES OF CLINGFISH (GOBIESOCIDAE) FROM SOUTHERN AUSTRALIA. *Copeia* 1993(1):196-199. 1993. FR 38(2)
[Zool. Collections, Mus. Nat. Hist., Univ. Ga., Athens 30602] *Powderichthys fastidius*
- 93-003351 Burgess, Warren C. and Jerry G. Walls. *CYCLASOMA*: THE NEXT STEP. *Trop. Fish. Hobbyist* 41(5):80-82. 1993. FR 38(2)
C. cyanoguttatum, *C. severum*, and *Aequidens portalegrensis*.
- 93-003352 Chen Yimin; Yang Junqing and Xu Guocai. A NEW BLIND LOACH OF TRIPLOPHYSA FROM YUNNAN STONE FOREST WITH COMMENTS ON ITS PHYLOGENETIC RELATIONSHIP. *Zool. Res.* 13(1):17-23. 1992. In English with Chinese summ. FR 38(2)
[Kunming Inst. Zool., Acad. Sinica 650107, China] *T. shibrenskii* in China.

FISHERIES REVIEW

IDENTIFICATION, KEYS, CLASSIFICATION (Continued)

- 93-003353 Oidier, D. A PHYLOGENETIC RELATIONSHIPS OF EXTANT CHIMAEROID FISHES (H-OLOCEPHALI, CHIMAERIDAE). *Am. Zool.* 32(5):141A, 1992. Abstract only FR 38(2)
[Univ. Mass., Amherst] *Callorhynchus, Rhinoclinus, Haplloichthys, Neohaplloichthys, Chamaera, and Hydrologus*
- 93-003354 Faga, Don. DISTRIBUTION AND RELATIVE ABUNDANCE OF FISHES IN WISCONSIN WELLSUMMARY REPORT. *Wis. Dep. Nat. Resour. Tech. Bull. No. 175*, 370p, 1992. FR 38(2)
[Dep. Nat. Resour., Box 7921, Madison, WI 53707] Data for 143 species.
- 93-003355 Feltes, Ross M. PARAPOLYNEMUS, A NEW GENUS FOR THE POLYNEMID FISH PREVIOUSLY KNOWN AS POLYNEMUS VEREERI. *Copeia* 1993(1):207-215, 1993. FR 38(2)
[Mus. Zool., Ohio State Univ., Columbus 43210]
- 93-003356 Fozoshchuk, V. P. and V. V. Fedorov. POELOCOPSETTA NORMAN - A NEW SPECIES OF BLOUNDER (PLEURONECTIDAE) FROM SAYA DE MALHA BANK, INDIAN OCEAN. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):37-44, 1992. FR 38(2)
[Zool. Inst. USSR Acad. Sci., Leningrad, Russia]
- 93-003357 Gill, A. C. and D. J. Woodland. DESCRIPTION OF A NEW DOTTYSBACK OF THE GENUS PSEUDOCROMIS (PISCES: PSEUDOCROMIDAE) FROM WESTERN AUSTRALIA. *Rec. Aust. Mus.* 44(3):247-251, 1992. FR 38(2)
[Nat. Mus. Nat. Hist., Smithsonian Inst., Washington, DC 20560] *P. reticulatus*.
- 93-003358 Gorr, Thomas and Traute Kleinschmidt. EVOLUTIONARY RELATIONSHIPS OF THE COELACANTH. *Am. Sci.* 81(1):72-82, 1993. FR 38(2)
[Max Planck Inst. Biochem., Am. Klopfersplatz 18a, 80333 Martinsried bei Munchen, Germany] *Latimeria chalumnae*.
- 93-003359 Greenfield, David W.; Lloyd T. Findlay and Robert K. Johnson. PSILOTRIS KAUFMAN N. SP. (PISCES: GOBIIDAE), A FOURTH WESTERN ATLANTIC SPECIES OF PSILOTRIS. *Copeia* 1993(1):183-186, 1993. FR 38(2)
[Dep. Zool., Univ. Hawaii, Honolulu 96822]
- 93-003360 Jha, D. K., M. K. Shrivastha and S. C. Rai. FISH FAUNA OF THE NARAYANI AND RAPTI RIVER SYSTEMS IN CHITWAN, NEPAL. *J. Inst. Agric. Anim. Sci. Vol. 10*, p. 97-107, 1993. FR 38(2)
[Inst. Agric. & Anim. Sci., Chitwan, Nepal] Data for 60 species.
- 93-003361 Kobylansky, S. G. TWO NEW SPECIES OF THE GENUS NANSENIA (MICROSTOMATIDAE, SALMONIFORMES) FROM THE WESTERN INDIAN OCEAN. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):30-36, 1992. FR 38(2)
[Inst. Oceanol., USSR Acad. Sci., Moscow, Russia] *N. obscura* and *N. indica*.
- 93-003362 Luckhurst, Brian E. A FISHERY-INDEPENDENT ASSESSMENT OF BERMUDA'S CORAL REEF FISH STOCKS BY DIVER CENSUS FOLLOWING THE FISH POT BAN. *Bermuda Dep. Agric. Fish. Monthly Bull.* 64(1):1-7, 1993. FR 38(2)
Data for 67 species.
- 93-003363 Miller, P. J. A NEW SPECIES OF ENDOCOBLUS (TELEOSTEI: GOBIIDAE) FROM THE ADRIATIC SEA. *J. Nat. Hist.* 25(6):1413-1419, 1992. FR 38(2)
[Zool. Dep., The Univ., Bristol BS8 1UC, England] *O. schlewenti*.
- 93-003364 Orr, James Wilder and Ronald A. Fritzsche. REVISION OF THE GHOST PIPERISHES, FAMILY SOLEMNOSTOMIDAE (TELEOSTEI: SYNGNATHOIDEI). *Copeia* 1993(1):160-182, 1993. FR 38(2)
[School Fish., HF-15, Coll. Ocean & Fish. Sci., Univ. Wash., Seattle 98195] *Solemnostomus paradoxus*, *S. cyanopterus*, and *S. armatus*.
- 93-003365 Parin, N. V. PSEUDOTRICHONOTUS XANTHOZAEINA (PSEUDOTRICHONOTIDAE, AJULOIFORMES) - NEW SPECIES FROM THE SAYA DE MALHA BANK. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):120-131, 1992. FR 38(2)
[Inst. Oceanol., Russian Acad. Sci., Moscow, Russia]
- 93-003366 Singh, D. F. and G. M. Yezlant. OSTEOBRAMA SHIMENSIS, A NEW CYPRINID FISH FROM BHIMA RIVER, PLUNE DISTRICT, MAHARASHTRA, J. *Bombay Nat. Hist. Soc.* 09(1):96-99, 1992. FR 38(2)
[Yezlant Zool. Surv. India, West. Reg. Stn., 1182/2, F.C. Rd., Pune-411 005, India]
- 93-003367 Smith, C. Lavett. MINNOWS FIRST, THEN TROUT. *Fisheries (Berhenda)* 13(4):4-8, 1988. FR 38(2)
[Am. Mus. Nat. Hist., Dep. Ichthyol., Cent. Park W. at 79th St., New York, NY 10024]

FISHERIES REVIEW

IDENTIFICATION, KEYS, CLASSIFICATION (Continued)

93-003368 Vasil'eva, V. P. and I. D. Vasil'eva. KARYOLOGICAL PROOF OF THE SPECIES INDIVIDUATION OF *NEOGOBILUS KESSLERI* (GUNTHER) AND *NEOGOBILUS GORLAPILJIN* (PISCES, Gobiidae). *Dokl. Akad. Nauk SSSR* 324(1-6):301-303, 1992. FR 38(2)

[A.N. Severtsov Inst. Evol. Morphol. & Anim. Ecol., Russian Acad. Sci., Moscow, Russia]

93-003369 Wilson, Mark V. H. IMPORTANCE FOR PHYLOGENY OF SINGLE AND MULTIPLE STEM GROUP FOSSIL SPECIES WITH EXAMPLES FROM FRESH-WATER FISHES. *Syst. Biol.* 41(4):462-470, 1992. FR 38(2)

[Dep. Zool. & Lab. Vert. Paleontol., Univ. Alberta, Edmonton, AB, Canada T6G 2E9]

93-003370 Wisemiller, Kirk O. and Leslie C. Kelso-Wisemiller. DESCRIPTION OF A NEW *NEOLEBIS* (CHARACIFORMES, DISTICHOCONTIDAE) FROM THE UPPER ZAMBEZI DRAINAGE OF ZAMBIA. *Copeia* 1993(1):112-116, 1993. FR 38(2)

[Dep. Wildl. & Fish. Sci., Tex. A&M Univ., College Station 77843-2258] *N. Jozif*

PARASITES AND DISEASES-GENERAL

93-003371 Heath, John G., editor. GREAT LAKES FISH DISEASE CONTROL POLICY AND MODEL PROGRAM. *GL Lakes Fish. Comm. Spec. Publ.* 93(1):1-38, 1993. FR 38(2)

[Dep. Nat. Resour., Fish Health Lab., 34270 CR 652, Rt. 1, Mattawan, MI 49071]

93-003372 Horner, Rodney W. and Randy L. Eshenroder, editors. PROTOCOL TO MINIMIZE THE RISK OF INTRODUCING EMERGENCY DISEASE AGENTS WITH IMPORTATION OF SALMONID FISHES FROM ENZOOTIC AREAS. *GL Lakes Fish. Comm. Spec. Publ.* 93(1):39-54, 1993. FR 38(2)

[Dep. Conserv., Inke Wolf Fish Hatchery, R.R. #4, Box 54, Marlin, IL 61546]

93-003373 Huang, Shih-Ling, Mei-Chu Chen and Ting-Chi Yi. [THE STUDY OF EEL DISEASE AND SEASONAL VARIATION IN THE MIDDLE PART OF TAIWAN.] *COA (Council Agric.) Fish. Ser. No.* 33, p. 40-51, 1992. In Chinese with English summ. FR 38(2)

[Fish. Res. Inst., Lu Kang Branch Sta., Chang Hwa, Taiwan]

93-003374 Ishioka, Hiroko. EPIDEMIOLOGY OF MARINE FISH DISEASES IN THE WARM WATERS ALONG THE KURUSHIO CURRENT. *Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Inc. Mie Prefecture, Japan, 29-30 October 1990.* Ralph S. Swjczek, ed. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Nat. Mar. Fish. Serv.) No. 111, p. 69-83, 1992. FR 38(2)

[Nansen Nat. Fish. Res. Inst., 2-17-5 Minamishi, Ohno-Cho, Saki-City, Hiroshima 739-04, Japan] *Pagrus major*, *Sebino quingreradota*, *Paralichthys olivaceus*, and *Fugu neriipes* in Japan.

93-003375 Meberg, Gary P. STRESS INDUCED PATHOLOGIES IN FISH: THE COST OF STRESS. *Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Inc. Mie Prefecture, Japan, 29-30 October 1990.* Ralph S. Swjczek, editor. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Nat. Mar. Fish. Serv.) No. 111, p. 131-134, 1992. FR 38(2)

[Dep. Anim. Sci. & Fish. Program, Univ. Calif., Davis 95616]

93-003376 Niwaga, Kyoko. BACTERIAL AND VIRAL DISEASES OF MARINE FISH DURING SEED PRODUCTION. *Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Inc. Mie Prefecture, Japan, 29-30 October 1990.* Ralph S. Swjczek, editor. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Nat. Mar. Fish. Serv.) No. 111, p. 57-61, 1992. FR 38(2)

[Fac. Appl. Biol. Sci., Hiroshima Univ., Higashi-Hiroshima 724, Japan] *Pagrus major*, *Paralichthys olivaceus*, and *Acanthopagrus schlegelii* in Japan.

93-003377 Oblekezie, Austin I.; Kerstin Andersen; Roland Uck; Helmo Moiler and Harry Palm. EXTERNAL LESIONS AND FRESH PARASITES IN COMMERCIAL FISHES OF NIGERIAN INSHORE WATERS. *Aquat. Living Resour.* 5(3):173-183, 1992. In English with French summ. FR 38(2)

[Inst. Oceanogr., Univ. Calabar, P.M.B. 1115, Calabar, Nigeria]

93-003378 Ootake, Mitsuru and Teruyuki Nakamishi. KINETICS OF BOVINE SERUM ALBUMIN ADMINISTERED BY THE IMMERSION METHOD IN FISHES ACCLIMATIZED TO SEAWATER AND TO FRESH WATER. *Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Inc. Mie Prefecture, Japan, 29-30 October 1990.* Ralph S. Swjczek, editor. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Nat. Mar. Fish. Serv.) No. 111, p. 95-100, 1992. FR 38(2)

[Inland Sta., Nat. Res. Inst. Aquacult., Tamaki, Mie 519-04, Japan] *Oncorhynchus keta* and *Tilapia aurea*.

93-003379 Rasheed, Victoria M. DISEASES OF CULTURED BROWN-SPOTTED GROUPER *EPINEPHELUS TAUWINA* AND SILVERY BLACK PORGY *ACANTHOPAGRUS CLAWI* IN KUWAIT. *J. Aquac. Anim. Health* 1(2):102-107, 1989. FR 38(2)

[4328 Valley Trail Dr., Atlanta, GA 30339]

FISHERIES REVIEW

PARASITES AND DISEASES-GENERAL (Continued)

93-003380 Swjczek, Ralph S., editor. CONTROL OF DISEASE IN AQUACULTURE. PROCEEDINGS OF THE NINETEENTH U.S.-JAPAN MEETING ON AQUACULTURE, ISE, AICHI PREFECTURE, JAPAN, 29-30 OCTOBER 1990. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Nat. Mar. Fish. Serv.) No. 111. 143p. 1992. Available from U.S. Dep. Commerce, Nat. Tech. Inform. Serv., 5285 Port Royal Rd., Springfield, VA 22161. FR 38(2)

Selected papers indexed in this issue of *Fisheries Review*.

93-003381 Wierzbicka, Iodwiga. PARASITIC FAUNA OF GREENLAND HALIBUT, *REINHARDTUS HIPPOGLOSSOIDES* (WALBAUM, 1792) FROM THE BARENTS SEA. *Acta Ichthyol. Piscicult.* 22(1):31-37, 1992. In English with Polish summ. FR 38(2)

[Inst. Ichtiol., ul. Kazimierza Krzywiczka 4, 71-550 Szczecin, Poland]

93-003382 Yan Tao and Zhang Zhong. [THE INFLUENCE OF He-Ne LASER IRRADIATION ON DISEASE RESISTANCE AND GROWTH OF CLUPPA, *POCILIA RETICULATA*] *Oceanol. Limnol. Sin.* 23(1):74-78, 1992. In Chinese with English summ. FR 38(2)

[S. China Sea Inst. Oceanol., Acad. Sinica, Guangzhou 51030, China]

BACTERIAL DISEASES

93-003383 Almann, Klaus; Mary Marshall, Sandra E. Nicholson; Peter J. Hanna and Nicholas Gudkov. GLUCOSE REPRESSION OF PIGMENT PRODUCTION IN ATYPICAL ISOLATES OF *AEROMONAS SALMONICIDA* RESPONSIBLE FOR GOLDFISH ULCER (DISEASE *Microbes* 72(292-293):215-220, 1992. FR 38(2)

[Hann. Dep. Biol. Sci., Deakin Univ., Geelong, Vic. 3217, Australia]

93-003384 Aoki, Takashi and Isuo Hirano. CLONING OF HEMOLYSIN GENES OF *AEROMONADS*. *Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Ise, Aichi Prefecture, Japan, 29-30 October 1990*. Ralph S. Swjczek, editor. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Nat. Mar. Fish. Serv.) No. 111. p. 21-25, 1992. FR 38(2)

[Dep. Biol. Resour., Fac. Agric., Miyazaki Univ., Miyazaki 809-21, Japan] *Oncorhynchus mykiss*.

93-003385 Austin, B. and M. Stoble. RECOVERY OF *SERRATIA PLYMUTICA* AND PRESUMPTIVE *PSEUDOMONAS PSEUDOCALCIGENES* FROM SKIN LESIONS IN RAINBOW TROUT, *ONCORHYNCHUS MYKISS* (WALBAUM), OTHERWISE INFECTED WITH ENTERIC REDMOUTH. *J. Fish Dis.* 15(6):541-543, 1992. FR 38(2)

[Div. Aquacult., Dep. Biol. Sci., Heriot-Watt Univ., Riccarton, Edinburgh EH14 4AS, Scotland]

93-003386 Bally, Shannon Kathleen. OBSERVATIONS ON THE EPIZOOTIOLOGY OF BACTERIAL KIDNEY DISEASE IN FARMED SALMONIDS. M.S. thesis, Simon Fraser Univ. (Canada) 95p. 1990. From *Masters Abstr. Int.* 31(1):189, 1993. Order No. MAMM6969. FR 38(2)

Oncorhynchus tshawytscha.

93-003387 Bandin, I.; A. E. Ellis; J. L. Barja and C. J. Secombes. INTERACTION BETWEEN RAINBOW TROUT MACROPHAGES AND *RENBACTERIUM SALMONICARUM* IN VITRO. *Fish Shellfish Immunol.* 3(1):25-33, 1993. FR 38(2)

[Biol. Sci. Res. Lab., P.O. Box 101, Victoria Rd., Aberdeen AB9 8DB, Scotland] *Salmo salar* and *Oncorhynchus tshawytscha*.

93-003388 Baya, A. M.; B. Luplan; I. Bandin; F. M. Hetick; A. Figueira; A. Camahan; E. M. May and A. E. Toranzo. PHENOTYPIC AND PATHOLOGICAL PROPERTIES BY *CORYNEBACTERIUM AQUATICUM* ISOLATED FROM DISEASED STRIPED BASS. *Dis. Aquat. Org.* 14(2):115-126, 1992. FR 38(2)

[Dep. Microbiol., Univ. Md., College Park 20742] *Morone saxatilis*.

93-003389 Bennett, A. J.; P. W. Whiteby and G. Coleman. RETENTION OF ANTICGENICITY BY A FRAGMENT OF *AEROMONAS SALMONICIDA* 70-KDa SERINE PROTEASE WHICH INCLUDES THE PRIMARY SUBSTRATE BINDING SITE EXPRESSED AS β -GALACTOSIDASE-HYBRID PROTEINS. *J. Fish Dis.* 15(6):473-484, 1992. FR 38(2)

[Coleman: Dep. Biochem., Nottingham Univ. Med. School, Queen's Med. Cent., Nottingham NG7 2UH, England]

93-003390 Bergh, Olav; Cair Hovik Hansen; Ingvar Huse and Anders Jørgen. STUDIES ON DISEASES OF CULTURED JUVENILE ATLANTIC HALIBUT. *Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Ise, Aichi Prefecture, Japan, 29-30 October 1990*. Ralph S. Swjczek, editor. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Nat. Mar. Fish. Serv.) No. 111. p. 1-5, 1992. FR 38(2)

[Inst. Mar. Res., Aastevoll Aquacult. Res. Stn., N-5392 Storøya, Norway] *Hippoglossus hippoglossus*.

BACTERIAL DISEASES (Continued)

93-003391 Ilovesca, E. C.; C. Esteve, E. Garay and C. Amaro. [EVALUATION OF THE API 20E SYSTEM FOR IDENTIFICATION AND DISCRIMINATION OF *VIBRIO VULNIFICUS* BIOTYPES 1 AND 2. *J. Fish Dis.* 16(1):79-82, 1993. FR 30(2)]

[Amaro: Dep. Microbiol., Fac. Biol., Univ. Valencia, Valencia, Spain]

93-003392 Bewsee, Paul R.; R. B. Landy, G. A. Wooster and J. G. Bablish. EFFICACY OF ELEVATED DIETARY FLUORIDE FOR THE CONTROL OF *RENIBACTERIUM SALMONICARUM* INFECTION IN RAINBOW TROUT *SALMO GARDNERI*. *J. World Aquacult. Soc.* 15(1):1-7, 1988. FR 30(2)]

[Dep. Avian & Aquat. Anim. Med., N.Y. State Coll. Vet. Med., Cornell Univ., Ithaca 14853]

93-003393 Bruno, D. W. HISTOPATHOLOGY OF BACTERIAL KIDNEY DISEASE IN LABORATORY INFECTED RAINBOW TROUT, *SALMO GARDNERI* RICHARDSON, AND ATLANTIC SALMON, *SALMO SALAR* L., WITH REFERENCE TO NATURALLY INFECTED FISH. *J. Fish Dis.* 9(6):523-537, 1986. FR 30(2)]

[Dep. Agric. & Fish., Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen AB9 8DB, Scotland]

93-003394 Chen, S. C. and M. C. Tung. [AN EPIZOOTIC IN LARGE MOUTH BASS (*MACROPTERUS SALMOIDES* LACEPÈDE), CAUSED BY *NOCARDIA AUSTERODES* IN FRESH WATER POND IN SOUTHERN TAIWAN. *J. Chinese Soc. Vet. Sci.* 17(1):15-22, 1991. In Chinese with English summary. FR 30(2)]

[Dep. Vet. Med., Natl. Pingtung Inst. Agric., Pingtung, Taiwan]

93-003395 Cooper, Richard K. II, Clifford E. Starliper, Emmett B. Shotts, Jr. and Peter W. Taylor. COMPARISON OF PLASMIDS ISOLATED FROM ROMET-30-RESISTANT EDWARDSIELLA *ICTALURI* AND TRIMETHOPYRIMIDIN-RESISTANT ESCHERICHIA *COLI*. *J. Aquat. Anim. Health* 5(1):9-15, 1993. FR 30(2)]

[Dep. Vet. Sci., Agric. Exp. Sta., La. State Univ., Baton Rouge 70803] *foralvus punctatus*

93-003396 Dolina, Marisa and Raffaele Peduzzi. POPULATION GENETICS OF HUMAN, ANIMAL, AND ENVIRONMENTAL *YERSINIA* STRAINS. *Appl. Environ. Microbiol.* 59(2):442-450, 1993. FR 30(2)]

[Peduzzi, Ita. Cantonale Bacteriologica, 6900 Lugano, Switzerland]

93-003397 Ferreliden, Svein Erik; Rolf Nordmo; Torje Refstie and Knut H. Reed. DISEASE RESISTANCE IN ATLANTIC SALMON (*SALMO SALAR*) SELECTED FOR HIGH OR LOW RESPONSES TO STRESS. *Aquaculture* 109(3-4):215-224, 1993. FR 30(2)]

[Norwegian Coll. Fish. Sci., Univ. Tromsø, N-9037 Tromsø, Norway]

93-003398 Freedman, Stephen J. THE ROLES OF ALPHA 2-MACROGLOBULIN AND C1q IN FURUNCULOSIS. A COMPARISON OF RAINBOW AND BROOK TROUT. Ph.D. dissertation, Utah State Univ. 73p, 1992. FR 30(2)]

Oncorhynchus mykiss and *Salvelinus fontinalis*.

93-003399 Fuentes, M. D.; D. J. Alderman; D. Bucke; T. C. Fletcher; D. Knox and A. White. DIETARY VITAMIN E AND THE RESPONSE OF RAINBOW TROUT, *ONCORHYNCHUS MYKISS* (WALBAUM), TO INFECTION WITH *YERSINIA RUCKERTI*. *J. Fish Biol.* 41(6):1037-1041, 1992. FR 30(2)]

[SEMAMSA, Carrer Foners, 10, 07006 Palma Mallorca, Baleares, Spain]

93-003400 Gacheco, Rafael A.; Barry M. Phipps; Wolfgang Baumelster and Willem W. Kay. NOVEL STRUCTURAL PATTERNS IN DIVALENT CATION-DEPLETED SURFACE LAYERS OF *AEROMONAS SALMONICIDA*. *J. Structural Biol.* 109(3):184-195, 1992. FR 30(2)]

[Kay: Dep. Biochem. & Microbiol., Univ. Victoria, Petch Bldg., P.O. Box 3055, Victoria, BC, Canada V8W 3P6]

93-003401 Grizzle, John M. and Ysunari Kiyu. HISTOPATHOLOGY OF GILL, LIVER, AND PANCREAS, AND SERUM ENZYME LEVELS OF CHANNEL CATFISH INFECTED WITH *AEROMONAS HYDROPHILA* COMPLEX. *J. Aquat. Anim. Health* 5(1):36-50, 1993. FR 30(2)]

[Southeast. Coop. Fish Dis. Proj., Dep. Fish. & Allied Aquacult., Agric. Exp. Sta., Auburn Univ., Auburn, AL 36849] *Aeromonas punctatus*.

93-003402 Holt, R. A.; A. Amundt; J. S. Rohovec and J. L. Fryer. RELATION OF WATER TEMPERATURE TO BACTERIAL COLD-WATER DISEASE IN COHO SALMON, CHINOOK SALMON, AND RAINBOW TROUT. *J. Aquat. Anim. Health* 1(2):94-101, 1989. FR 30(2)]

[Dep. Fish. & Wildl., Dep. Microbiol., Oreg. State Univ., Corvallis 97331] *Oncorhynchus kisutch*, *O. tshawytscha*, and *O. mykiss*.

93-003403 Jenev, Galina and Douglas P. Anderson. [ENHANCED IMMUNE RESPONSE AND PROTECTION IN RAINBOW TROUT TO *AEROMONAS SALMONICIDA* BACTERIA FOLLOWING PRIOR IMMERSION IN IMMUNOSTIMULANTS. *Fish Shellfish Immunol.* 3(1):51-58, 1993. FR 30(2)]

[Fish Culture Inst., H-5541 Szarvas, P.O. Box 47, Hungary] *Oncorhynchus mykiss*.

BACTERIAL DISEASES (Continued)

93-003404 Johnson, Michael R., Katherine L. Smith and Richard A. Rode. FIELD TRIALS OF SARAFIN- AND ROMET-MECCATEO FEEDS FOR TREATMENT OF EDWARDSIELLA ICTALURI INFECTIONS IN CHANNEL CATFISH. *J. Aquat. Anim. Health* 5(1):51-58. 1993. FR 38(2)

[Miss State Univ., Coll. Vet. Med., & Delta Res. & Ext. Ctr., P.O. Box 197, Stoneville 38776] *Ictalurus punctatus*.

93-003405 Klesius, P. H. RAPID ENZYME-LINKED IMMUNOSORBENT TEST FOR DETECTING ANTIBODIES TO EDWARDSIELLA ICTALURI IN CHANNEL CATFISH, ICTALURUS PUNCTATUS. *Third International Veterinary Immunology Symposium*, August 17-20, 1992, Budapest, Hungary. *Vet. Immunol. Immunopathol.* 35(Suppl.):171. 1993. Abstract only. FR 38(2)

[U.S. A.R.S., Anim. Parasite Res. Lab., P.O. Box 952, Auburn, AL 36831-0952]

93-003406 Lansdell, W., B. Olson, N. Smith and L. Benjamin. ISOLATION OF SEVERAL MYCOBACTERIUM SPECIES FROM FISHS. *J. Aquat. Anim. Health* 5(1):73-76. 1993. FR 38(2)

[Dep. Biol. Sci., Calif. State Univ., Hayward 94542] *Morone saxatilis*, *Oncorhynchus tshawytscha*, *Actinopterygii mediotristis*, *Leptocottus armatus*, *Carassius auratus*, *Cyprinus birmosus*, and *C. meeki* in California

93-003407 Lee, Hun Ku. PATHOLOGY OF ULCEROUS DISEASE IN CULTIVATED SNAKEHEAD, CHANNA ARGUS. *Korean J. Microbiol.* 30(3):164-170. 1992. In *Korean From Korean Sci. Abstr.* 24(5):9205032. 1992. FR 38(2)

[Natl. Fish., Univ. Pusan, Pusan, Korea] *Ophicephalus argus*

93-003408 Lillehaug, A. ORAL IMMUNIZATION OF RAINBOW TROUT, SALMO GARDNERI RICHARDSON, AGAINST VIBRIOSIS WITH VACCINES PROTECTED AGAINST DIGESTIVE DEGRADATION. *J. Fish Dis.* 12(6):579-584. 1989. FR 38(2)

[Natl. Vet. Inst., P.O. Box 8156 Dep., N-0033 Oslo 1, Norway]

93-003409 Lillehaug, A.; T. Lundø and T. T. Poppo. FIELD TESTING OF ADJUVANTED FURUNCULOSIS VACCINES IN ATLANTIC SALMON, SALMO SALAR L. *J. Fish Dis.* 15(6):485-496. 1992. FR 38(2)

[Natl. Vet. Inst., Box 8156 Dep., N-0033 Oslo, Norway]

93-003410 Lillehaug, A.; Arne Ramstad, Karen Bækkén and Liv Jonan Røtten. PROTECTIVE IMMUNITY IN ATLANTIC SALMON (SALMO SALAR L.) VACCINATED AT DIFFERENT WATER TEMPERATURES. *Fish Shellfish Immunol.* 3(2):143-156. 1993. FR 38(2)

[Natl. Vet. Inst., P.O. Box 8156 Dep., N-0033 Oslo, Norway]

93-003411 Loganathan, B. and A. Ramesh. NATURAL AND ARTIFICIALLY INDUCED VIBRIOSIS IN EURYHALINE FISH. *Microbes* 72(291):95-108. 1992. FR 38(2)

[Dep. Biol., Risk Univ., Nashville, TN] *Lates calcarifer* and *Ambassis commersoni*.

93-003412 Mørland, Eugene Trent. IMMUNODIAGNOSTIC METHODS FOR THE DETECTION OF BACTERIAL KIDNEY DISEASE IN SALMONID FISHES. Ph.D. dissertation, Univ. Wash. 195p. *From Dis. Abstr. Int. Sci. Eng.* 47(12):4718. 1987. Order No. DA8706626. FR 38(2)

Oncorhynchus mykiss, *O. kisutch*, and *O. tshawytscha*

93-003413 Marsden, M. J.; D. Coe and C. J. Secombes. IN VITRO CORRELATES OF CELL-MEDIATED IMMUNITY IN SALMONIDS. *Third International Veterinary Immunology Symposium*, August 17-20, 1992, Budapest, Hungary. *Vet. Immunol. Immunopathol.* 35(Suppl.):172-173. 1993. Abstract only. FR 38(2)

[Dep. Zool., Univ. Aberdeen, Tillymore Ave., Aberdeen AB9 2FN, Scotland] *Oncorhynchus mykiss*.

93-003414 Michel, C., J.-F. Bernadet and D. Dinand. PHENOTYPIC AND GENOTYPIC STUDIES OF PSEUDOMONAS ANGLUE (SEPTICA) STRAINS ISOLATED FROM FARMED EUROPEAN EELS (ANGUILLA ANGUILLA) IN FRANCE. *Fish. Pathol.* 27(4):229-232. 1992. In English with Japanese summ. FR 38(2)

[INRA, Unite Virol. & Immunol. Mol., Equipe Bacteriol. Poissons, 78352 Jouy-en-Josas Cedex, France]

93-003415 Newton, Joseph C. and Patricia L. Triche. ISOLATION AND CHARACTERIZATION OF FLAGELLA FROM EDWARDSIELLA ICTALURI. *J. Aquat. Anim. Health* 5(1):16-22. 1993. FR 38(2)

[Dep. Vet. Pathol., School Vet. Med., La. State Univ., Baton Rouge 70803]

93-003416 Nomura, Tetsuichi, Mamoru Yoshimizu and Takahisa Kimura. THE EPIDEMIOLOGICAL STUDY OF FURUNCULOSIS IN SALMON PROPAGATION. *Control of Disease in Aquaculture: Proceedings of the Nineteenth ICS-Japan Meeting on Aquaculture, Ise, Mie Prefecture, Japan, 29-30 October 1990*. Ralph S. Swick, editor. NOAA [Natl. Oceanic Atmos. Admin.] Tech. Rep. NMFS [Natl. Mar. Fish. Serv.] No. 111, p. 101-106. 1992. FR 38(2)

[Hokkaido Salmon Hatchery, Fish Agency, Nakazono 2-2, Toyohaku, Sepporo, Japan] *Oncorhynchus keta*, *O. masou*, and *O. gorbuscha* in Japan

BACTERIAL DISEASES (Continued)

- 93-003417 Olsen, Anne Bent, Petter Hopp, Martin Binde and Halstein Gronstol. PRACTICAL ASPECTS OF BACTERIAL CULTURE FOR THE DIAGNOSIS OF BACTERIAL KIDNEY DISEASE (BKD) *Dis Aquat. Org.* 14(3):207-212, 1992. FR 38(2)
[State Vet. Lab., Bergen, P.O. Box 40, N-5032 Minda, Norway] *Salmo salar*.
- 93-003418 Pascho, R. J.; D. G. Elliott and S. Achord. MONITORING OF THE IN-RIVER MIGRATION OF SMOLTS FROM TWO GROUPS OF SPRING CHINOOK SALMON, *ONCORHYNCHUS Tshawytscha* (WALBAUM), WITH DIFFERENT PROFILES OF RENIBACTERIUM SALMONINARUM INFECTION. *Aquacult. Fish Manage.* 24(2):163-169, 1993. FR 38(2)
[U.S. Fish & Wildl. Serv., Natl. Fish Res. Cent.-Seattle, Bldg. 204, Naval St., Seattle, WA 98115]
- 93-003419 Plumb, J. A. and S. Vinitnanthant. VACCINATION OF CHANNEL CATFISH, *ICTALURUS PUNCTATUS* (RAFINESQUE), BY IMMERSION AND ORAL BOOSTER AGAINST *EDWARDSIELLA ICTALURI*. *J. Fish Dis.* 16(1):65-71, 1993. FR 38(2)
[Dep. Fish & Allied Aquacult., Agric. Exp. Stn., Auburn Univ., Auburn, AL 36849]
- 93-003420 Press, C. McL., E. J. Reiten and T. Landsverk. VACCINATION AGAINST FURUNCULOSIS IN ATLANTIC SALMON: RETENTION OF VACCINE COMPONENTS AND IMMUNE RESPONSE. *Third International Veterinary Immunology Symposium, August 17-20, 1992, Budapest, Hungary. Vet. Immunol. Immunopathol.* 35(Suppl.):173-174, 1993. Abstract only. FR 38(2)
[Inst. Pathol., Norwegian Coll. Vet. Med., Natl. Vet. Inst., Norway] *Salmo salar*.
- 93-003421 Ramadan, A., N. A. Abd. M. M. Mostafa and A. M. Serry. THE EFFECT OF ASCOGEN ON THE IMMUNE RESPONSE OF TILAPIA FISH TO AEROMONAS HYDROPHILA VACCINE. *Third International Veterinary Immunology Symposium, August 17-20, 1992, Budapest, Hungary. Vet. Immunol. Immunopathol.* 35(Suppl.):174, 1993. Abstract only. FR 38(2)
[Dep. Pharmacol., Fac. Vet. Med., Cairo Univ., Giza, Egypt] *Tilapia*.
- 93-003422 Rodriguez, L. A., A. L. G. Fernandez and T. P. Nieto. PRODUCTION OF THE LETHAL ACETYLCHOLINESTERASE TOXIN BY DIFFERENT AEROMONAS HYDROPHILA STRAINS. *J. Fish Dis.* 16(1):73-78, 1993. FR 38(2)
[Nieto, Dep. Biol. Fundamental, Fac. Cienc., Campus Orense, As Lagoas, 32004 Orense, Spain] *Oncorhynchus mykiss*.
- 93-003423 Rose, A. S., A. E. Elisand and L. S. Munro. THE INFECTIVITY BY DIFFERENT ROUTES OF EXPOSURE AND SHEDDING RATES OF AEROMONAS SALMONICIDA SUBSP. SALMONICIDA IN ATLANTIC SALMON, *SALMO SALAR* L., HELD IN SEA WATER. *J. Fish Dis.* 12(6):573-578, 1989. FR 38(2)
[Brit. Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen AB9 8DB, Scotland]
- 93-003424 Sako, Hiroshi. STREPTOCOCCAL INFECTION IN CULTURED YELLOWTAIL. *Control of Disease in Aquaculture. Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Inc. Mt. Prefecture, Japan, 29-30 October 1990.* Ralph S. Swick, editor. NOAA (Natl. Oceanic Atmos. Adm'n.) Tech. Rep. NMFS (Natl. Mar. Fish. Serv.) No. 111, p. 125-130, 1992. FR 38(2)
[Naresi Natl. Fish. Res. Inst., Ohno, Sasaki, Hiroshima 739-04, Japan] *Seriola quinqueradiata*.
- 93-003425 Sharp, G. J. E. and C. J. Secombes. THE ROLE OF REACTIVE OXYGEN SPECIES IN THE KILLING OF THE BACTERIAL FISH PATHOGEN AEROMONAS SALMONICIDA BY RAINBOW TROUT MACROPHAGES. *Fish Shellfish Immunol.* 3(2):119-129, 1993. FR 38(2)
[Secombes: Dep. Zool., Univ. Aberdeen, Tillydrone Ave., Aberdeen AB9 2TN, Scotland] *Oncorhynchus mykiss*.
- 93-003426 Shi Zhanguang. A PRELIMINARY STUDY ON WHITE SPOT DISEASE IN THE YOLK-SAC OF CHUM SALMON (*ONCORHYNCHUS KETA*) FRY. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989.* Wang Xing, editor. *Salmon Fish.* 1990(Spec. Issue):167, 1990. Abstract only. FR 38(2)
[Special Fishes' Res. Inst., Heilongjiang Province, Harbin, China]
- 93-003427 Spears, D. J.; V. E. Ostland and H. W. Ferguson. PATHOLOGY ASSOCIATED WITH MENINGOENCEPHALITIS DURING BACTERIAL KIDNEY DISEASE OF SALMONIDS. *Res. Vet. Sci.* 54(1):25-31, 1993. FR 38(2)
[Dep. Pathol. & Microbiol., Atl. Vet. Coll., Univ. Prince Edward Island, 550 University Ave., Charlottetown, P.I. Canada C1A 4P3] *Oncorhynchus mykiss*, *O. tshawytscha*, *O. kisutch*, *Salmo salar*, and *Salvelinus fontinalis*.
- 93-003428 Starfliper, Clifford E.; Richard K. Cooper; Emmett B. Shotts, Jr., and Peter W. Taylor. PLASMA-MEDIATED ROMET RESISTANCE OF *EDWARDSIELLA ICTALURI*. *J. Aquat. Anim. Health* 5(1):1-8, 1993. FR 38(2)
[U.S. Fish & Wildl. Serv., Natl. Fish Health Res. Lab., Box 700, Kearneysville, WV 25430] *Ictalurus punctatus*.

BACTERIAL DISEASES (Continued)

93-003429 Teshima, Chiato, Shigeharu Kudo, Yoshimi Ohtani and Aaiko Saito. KIDNEY PATHOLOGY FROM THE BACTERIUM *MARCIA ALVEI*: EXPERIMENTAL EVIDENCE. *Trans. Am. Fish. Soc.* 121(5): 599-607 1992. FR 38(2)

[Kusko: Dep. Anat., Gunma Univ. School Med., Maebashi 371, Japan] *Oncorhynchus masou*

93-003430 Teaka, Jeffrey D.; Rocco C. Oplano and William B. Schill. MOLECULAR AND GENETIC CHARACTERIZATION OF CYTOCHROME OXIDASE-NEGATIVE AEROMONAS SALMONICIDA ISOLATED FROM COHO SALMON (*ONCORHYNCHUS KISUTCH*). *J. Wildl. Dis.* 28(4):515-520 1992. FR 38(2)

[U.S. Fish & Wildl. Serv., Natl. Fish Health Res. Lab., Box 700, Kearneysville, WV 25430] *Salvelinus fontinalis*.

93-003431 Tseng, Chao-Huang; Kuniko Yamaguchi; Mitsuhiro Nishimura and Manabu Kitamkado. ALGINATE LYASE FROM VIBRIO ALGINOLYTIKUS ATCC 17749. *Nippon Suisan Gakkaishi* 58(11): 2063-2067, 1992. In English with Japanese summ. FR 38(2)

[Dep. Fish. Fac. Agric., Kyushu Univ., Hakozaki, Higashi, Fukuoka 812, Japan]

93-003432 Veenstra, J. P., J. G. M. Rieter, J. M. Coster, C. P. Stoutenbeek, E. A. Ter Laak, O. L. M. Haenen, H. H. W. De Gier and S. Dirks-Go. HUMAN VIBRIO VULNIFICUS INFECTIONS AND ENVIRONMENTAL ISOLATES IN THE NETHERLANDS. *Aquacult. Fish. Manage.* 24(1): 119-122, 1993. FR 38(2)

[Dep. Internal Med., Onze Lieve Vrouwe Gasthuis, In Oosteparkstr. 179, 1091 HA Amsterdam, Netherlands] *Anguilla anguilla*.

93-003433 Whitby, P. W., S. G. Delany, G. Coleman and A. L. S. Munro. THE OCCURRENCE OF A 70KD₂ SERINE PROTEASE GENE IN TYPICAL AND ATYPICAL STRAINS OF AEROMONAS SALMONICIDA. *J. Fish Dis.* 15(6):529-535, 1992. FR 38(2)

[Coleman: Dep. Biochem., Nottingham Univ. Med. School, Queen's Med. Cent., Nottingham NG7 2UH, England]

93-003434 Xu Bohai; Li Wei; Ge Ruifang and Zhu Bingren. VIBRIOSIS IN RAINBOW TROUT, *SALMO GARDNERI*, IN FRESH WATER BY EXPERIMENTAL HATCHERY OF SHANXI. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989*. Wang Xing, editor. *Salmon Fish 1990* (Spec. Issue): 129-134, 1990. FR 38(2)

[Inst. Hydrobiol., Acad. Sinica, Weihan, China]

FUNGAL DISEASES

93-003435 Hatai, K. and G. Hoshiai. MASS MORTALITY IN CULTURED COHO SALMON (*ONCORHYNCHUS KISUTCH*) DUE TO *SAPROLEGNIA PARASITICA* COKER. *J. Wildl. Dis.* 28(4):532-536, 1992. FR 38(2)

[Div. Fish Dis., Nippon Vet. & Anim. Sci. Univ., 1-7-1 Kyonan-cho, Musashino, Tokyo 100, Japan]

93-003436 Hatai, Kishio and Gen-ichi Hoshiai. *SAPROLEGNIASIS* IN CULTURED COHO SALMON (*ONCORHYNCHUS KISUTCH*). *Fish. Pathol.* 27(4):233-234, 1992. In English with Japanese summ. FR 38(2)

[Div. Fish Dis., Nippon Vet. & Anim. Sci. Univ., 1-7-1 Kyonan-cho, Musashino, Tokyo 100, Japan]

PROTOZOAN DISEASES

93-003437 Adams, A.; R. H. Richards and M. Marin De Mateo. DEVELOPMENT OF MONOCLONAL ANTIBODIES TO PKC γ , THE CAUSATIVE AGENT OF PROLIFERATIVE KIDNEY DISEASE. *J. Fish Dis.* 15(6):515-521, 1992. FR 38(2)

[Inst. Aquacult., Univ. Stirling, Stirling FK9 4LA, Scotland] *Oncorhynchus mykiss*.

93-003438 Alvarez-Pellitero, P.; A. Sola-Botadilla and A. Franco-Siera. PROTOZOAN PARASITES OF WILD AND CULTURED SEA BASS, *DICENTRARCHUS LABRAX* (L.), FROM THE MEDITERRANEAN AREA. *Aquacult. Fish. Manage.* 24(1):101-108, 1993. FR 38(2)

[Inst. Acuacult. Torre de la Sal, Ribera Cabanes, 12595 Torre la Sal, Castellon, Spain]

93-003439 Athanassopoulou, F. and C. Sommerville. THE SIGNIFICANCE OF MYXOSPOREAN INFECTIONS IN ROACH, *RUTILUS RUTILUS* L., IN DIFFERENT HABITATS. *J. Fish Dis.* 16(1):39-51, 1993. FR 38(2)

[F.A. Inverte Inst. Aquacult., Univ. Stirling, Stirling FK9 4LA, Scotland]

93-003440 Athanassopoulou, F. and C. Sommerville. A COMPARATIVE STUDY OF THE MYXOSPOREANS *MYXIDIUM RHODELSCHEI*, 1905 AND *MYXIDIUM PFEIFFERI* AUJERBACH, 1908 IN ROACH, *RUTILUS RUTILUS* L. *J. Fish Dis.* 16(1):27-38, 1993. FR 38(2)

[F.A. Inverte Inst. Aquacult., Univ. Stirling, Stirling FK9 4LA, Scotland]

FISHERIES REVIEW

PROTOZOAN DISEASES (Continued)

93-003441 Bartholomew, J. L., F. L. Fryer and J. S. Rohovec. IMPACT OF THE MYXOSPOREAN PARASITE *CERatomyxa SHASTA* ON SURVIVAL OF MIGRATING COLUMBIA RIVER BASIN SALMONIDS. *Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Ito, Mie Prefecture, Japan, 29-30 October 1990*. Ralph S. Svirjcek, editor. NOAA [Nat. Oceanic Atmos. Admin.] Tech. Rep. NMFS [Nat. Mar. Fish. Serv.] No. 111. p. 33-41. 1992. FR 38(2)

[Rohovec: Dep. Microbiol., Oreg. State Univ., Corvallis 97331-3804]

93-003442 Bucher, F., R. Hofer and M. H. Marbouh. PREVALENCE AND PATHOLOGY OF *ZSCHOKKELIA NOVA* [MYXOSPOREA] IN THE LIVER OF BULLHEAD COTTUS GOBIO FROM A POLLUTED RIVER. *Dis. Aquat. Org.* 14(2):137-143. 1992. FR 38(2)

[Inst. Zool., Univ. Innsbruck, Technikerstr. 25, A-6020 Innsbruck, Austria]

93-003443 Chen, Chau-Hong, Yung-Lin Lai and Jieen J. Chen. [THE HISTOPATHOLOGICAL AND BLOOD CHEMISTRY STUDIES OF PLISTOPHOROSES ON REARED ADULT EEL (*ANGUILLA JAPONICA*)]. *COA (Coast. Agric.) Fish. Ser. No. 33*. p. 34-39. 1992. In Chinese with English summ. FR 38(2)

[Dep. Physiol., Natl. Yang-Ming Med. Coll., Taipei, Taiwan]

93-003444 Cross, M. L. and R. A. Matthews. *ICHTHYOPHITHIRIASIS MULTIFEXIS FOUQUEI* [CILIOPHORA]: THE LOCATION OF SITES IMMUNOGENIC TO THE HOST *CYPRINUS CARPIO* (L.). *Fish. Shellfish. Immunol.* 3(1):13-24. 1993. FR 38(2)

[Matthews: Dep. Biol. Sci., Polytechnic Southwest, Plymouth, Devon PL4 8AA, England]

93-003445 Cross, M. L. and R. A. Matthews. *ICHTHYOPHITHIRIASIS* IN CARP, *CYPRINUS CARPIO* L.: FATE OF PARASITES IN IMMUNIZED FISH. *J. Fish. Dis.* 15(6):497-505. 1992. FR 38(2)

[c/o Rm. 410, Forbes Bldg., Univ. Ariz., Tucson 85721]

93-003446 Figueras, A.; B. Novoa, M. Santarem, E. Martínez; J. M. Alvarez; A. E. Toranzo and I. Dykowi. *TETRAMACRA BREVIUM*, A POTENTIAL THREAT TO FARMED TURBOT *SCOPHYTHALMUS MAXIMUS*. *Dis. Aquat. Org.* 14(2):127-135. 1992. FR 38(2)

[Inst. Invest. Mar. CSIC, Eduardo Cabello 6, E-36200 Vigo, Spain]

93-003447 Hedrick, R. P.; D. Monge and P. de Kinkelin. TRANSMISSION OF PKX, THE CAUSATIVE AGENT OF PROLIFERATIVE KIDNEY DISEASE (PKD), TO RAINBOW TROUT *ONCORHYNCHUS MYKISS* FOLLOWING FILTRATION OF WATER AND SEDIMENTS. *Dis. Aquat. Org.* 14(3):237-240. 1992. FR 38(2)

[Dep. Med., School Vet. Med., Univ. Calif., Davis 95616]

93-003448 Jones, S. R. M.; G. F. Wiegertjes and W. B. Van Mulswinkel. THE HUMORAL IMMUNE RESPONSE OF COMMON CARP, *CYPRINUS CARPIO* TO THE BLOOD PARASITE *FRYANOPLOASMA BORELLI*. *Third International Veterinary Immunology Symposium, August 17-20, 1992, Budapest, Hungary. Vet. Immunol. Immunopathol.* 35(Suppl.):17D-17I. 1993. Abstract only. FR 38(2)

[Dep. Exp. Morphol. & Cell Biol., P.O. Box 331, 6700 AH Wageningen, Netherlands]

93-003449 Kent, M. L.; J. Dils, J. W. Fournie; S. C. Dawe; J. W. Bagshaw and D. J. Whitaker. SYSTEMIC HEXAMITID (PROTOZOA: DIPLOMONADIDA) INFECTION IN SEAWATER PEN-REARED CHINOOK SALMON *ONCORHYNCHUS Tshawytscha*. *Dis. Aquat. Org.* 14(2):81-89. 1992. FR 38(2)

[Dep. Fish. & Oceans, Biol. Sci. Branch, Pac. Biol. Stn., Nanaimo, BC, Canada V9R 5K6]

93-003450 Langdon, J. S.; T. Thome and W. J. Fletcher. RESERVOIR HOSTS AND NEW CLUPEOID HOST RECORDS FOR THE MYOILIQUEACTIVE MYXOSPOREAN PARASITE *AUDOCA THYRSITES* (GILCHRIST). *J. Fish. Dis.* 15(6):459-471. 1992. FR 38(2)

[Thome: Fish Health Sect., Western Australia Dep. Agric., Baron-Hay Ct., South Perth, W.A. 6151, Australia]
[Engrauis mordax, E. japonica, F. assata, *Sardinops neopalchardus*, *Sardinella lemuru*, *Spatefobolus robustus*, *Hyperlophus vittatus*, *Nematolosa wernighi*, and *Eucemus totes* in Australia]

93-003451 MacConnell, Elizabeth, Charlie E. Smith, Ronald P. Hedrick and C. A. Speer. CELLULAR INFLAMMATORY RESPONSE OF RAINBOW TROUT TO THE PROTOZOAN PARASITE THAT CAUSES PROLIFERATIVE KIDNEY DISEASE. *J. Aquat. Anim. Health* 1(2):108-118. 1989. FR 38(2)

[U.S. Fish & Wildl. Serv., Fish Technol. Cent., 4050 Bridger Canyon Rd., Bozeman, MT 59715] *Oncorhynchus mykiss*

93-003452 Maeno, Yukio and Minoru Sorimachi. SKELETAL ABNORMALITIES OF FISHES CAUSED BY PARASITISM OF MYXOSPOREA. *Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Ito, Mie Prefecture, Japan, 29-30 October 1990*. Ralph S. Svirjcek, editor. NOAA [Nat. Oceanic Atmos. Admin.] Tech. Rep. NMFS [Nat. Mar. Fish. Serv.] No. 111. p. 113-118. 1992. FR 38(2)

[Natl. Res. Inst. Aquacult., Fish. Agency, Nansai-cho, Mie 516-01, Japan] *Seriola quinqueradiata*, *Scombroops boops*, and *Mull. cephalus*

FISHERIES REVIEW

PROTOZOAN DISEASES (Continued)

93-003453 Merison, C. M. and S. L. Poynton. A NEW SPECIES OF *GOUSSIA* (APICOMPLEXA, COCCIDIA) IN THE KIDNEY TUBULES OF THE COD, *GADUS MORHUA* L. *J. Fish Dis.* 12(6):533-560. 1989. FR 38(2)
[Dep. Fish & Oceans, Biol. Sci. Branch, Halifax Fish. Res. Lab., P.O. Box, NS, Canada]

93-003454 Poppo, T. T., T. A. Mo and L. Iversen. DISSEMINATED HEXAMITOSIS IN SEA-CAGED ATLANTIC SALMON *Salmo salar*. *Ols. Aquat. Org.* 14(2):91-97. 1992. FR 38(2)
[Norwegian Coll. Vet. Med., POB 8146 Dep. N-0033 Oslo 1, Norway]

93-003455 Sija-Bohadilla, A. and P. Alvarez-Pellitero. POPULATION DYNAMICS OF *SPHAEROSPOORA DICENTRARCHUS* SIIJA-BOHADILLA ET ALVAREZ-PELLITERO, 1992 AND *S. TESTICULARIS* SIIJA-BOHADILLA ET ALVAREZ-PELLITERO, 1990 (MYXOSPOREA: BIVALVULIDA) INFECTIONS IN WILD AND CULTURED MEDITERRANEAN SEA BASS (*DICENTRARCHUS LABRAX* L.). *Parasitology* 106(1):39-45. 1993. FR 38(2)
[Inst. Acuicult. Torre de la Sal (CSIC), Ribera Cabanes, 12595 Torre de la Sal, Castellon, Spain]

93-003456 Sija-Bohadilla, A. and P. Alvarez-Pellitero. EFFECT OF FLUMAZILIN TREATMENT ON SEA BASS *DICENTRARCHUS LABRAX* PARASITIZED BY *SPHAEROSPOORA TESTICULARIS* (MYXOSPOREA: BIVALVULIDA). *Ols. Aquat. Org.* 14(3):171-178. 1992. FR 38(2)
[Inst. Acuicult. Torre de la Sal (C.S.I.C.), Ribera Cabanes, E-12595 Torre de la Sal, Castellon, Spain]

93-003457 Steh, Carla and D. J. Whitaker. HOST-PARASITE INTERACTION OF THE MYXOSPOREAN *KUDDA PANIFORMIS* KADATA & WHITAKER, 1981 AND *KUDDA* TYPESITES (GILCHRIST, 1924) IN THE MUSCLE OF PACIFIC WHITING, *MERLUCCIVUS PRODUCTUS* (AYRES). AN ULTRASTRUCTURAL STUDY. *J. Fish Dis.* 9(6):505-517. 1986. FR 38(2)
[Environ. Conserv. Div., Northwest & Alaska Fish. Cent., 2725 Montlake Blvd. E., Seattle, WA 98112]

93-003458 Steh, Carla. SPOROGENESIS OF THE MYXOSPOREAN *KUDDA PANIFORMIS* KADATA & WHITAKER, 1981 INFECTING THE MUSCLE OF THE PACIFIC WHITING, *MERLUCCIVUS PRODUCTUS* (AYRES). *J. Fish Dis.* 9(6):493-504. 1986. FR 38(2)
[Environ. Conserv. Div., Northwest & Alaska Fish. Cent., 2725 Montlake Blvd. E., Seattle, WA 98112]

93-003459 Subasinghe, R. P. EFFECTS OF IMMUNOSUPPRESSION ON PROTECTION OF FRY FROM *ICHTHYOPHTHRICUS MULTIVIRIS* FOUQUET 1876 DURING MOUTH-BROODING OF *OREOCHROMIS MOSSAMBICUS* (PETERS). *Fish Shellfish Immunol.* 3(2):97-105. 1993. FR 38(2)
[Fac. Fish & Mar. Sci., Univ. Pertanian Malaysia, 43400 Serbang, Selangor, Davul Ehsan, Malaysia]

93-003460 Tsukamoto, Yasuichi, Akira Umezawa, Kazumi Tsukamoto and Munee Ohyama. A FULLY GROWN LEPTOCYPHALLUS OF JAPANESE EEL COLLECTED FROM THE WESTERN NORTH PACIFIC. *Nippon Suisan Gakkaishi* 58(11):2209. 1992. In English with Japanese summary. FR 38(2)
[Ocean Res. Inst., Univ. Tokyo, Nakano, Tokyo 164, Japan] *Anguilla japonica*.

93-003461 Ueawa, Shigehiko. EFFECTS OF *ICHTHYOBODON* NEGATOR INFECTIONS ON SEAWATER SURVIVAL OF JUVENILE CHUM SALMON (*ONCORHYNCHUS KETA*). *Aquaculture* 110(2):101-110. 1993. FR 38(2)
[Res. Div., Hokkaido Salmon Hatchery, Fish Agency Japan, 2-2 Nakanoshima, Toyohira ku, Sapporo 062, Japan]

VIRAL DISEASES

93-003462 Arimoto, Minoru, Keichi Mushiike, Younosuke Mizuta, Toshihiko Nakai, Kiyokuni Auroga and Iwao Furusawa. DETECTION OF STRIPED JACK NERVOUS NECROSIS VIRUS (SJNNV) BY ENZYME-LINKED IMMUNOSORBENT ASSAY (ELISA). *Fish Pathol.* 27(4):191-195. 1992. In English with Japanese summary. FR 38(2)
[Nakai Fac. Appl. Biol. Sci., Hiroshima Univ., Higashi-Hiroshima 724, Japan] *Pseudocaranx dentex* in Japan.

93-003463 Barrie, R. J.; C. L. Mason and J. C. Luong. IDENTIFICATION OF A CONSERVED ANTIGENIC DOMAIN IN THE MAJOR CAPSID PROTEIN OF INFECTIOUS PANCREATIC NECROSIS VIRUS. *Control of Disease in Aquaculture. Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Inc. Mie Prefecture, Japan, 29-30 October 1990.* Ralph S. Swarcik, editor. NOAA (Nat. Oceanic Atmos. Adm.) Tech. Rep. NMFS (Nat. Mar. Fish. Serv.) No. 111, p. 15-20. 1992. FR 38(2)
[Luong: Dep. Microbiol., Oregon State Univ., Corvallis 97331-3804]

93-003464 Chlmonczyk, S. and J. R. Winton. INVOLVEMENT OF LEUCOCYTES IN THE FIRST STEPS OF INFECTIOUS HEMATOPOIETIC NECROSIS INFECTION. *Third International Veterinary Immunology Symposium, August 17-20, 1992, Budapest, Hungary. Vet. Immunol. Immunopathol.* 35(Suppl.):169. 1993. Abstract only. FR 38(2)
[INRA, Unite Virol. Immunol. Mol., 78352 Jouy-en-Josas Cedex, France] *Oncorhynchus mykiss*.

VIRAL DISEASES (Continued)

93-003465 Huttenberger-Baudouy, A-M, M Danton, C. Merle; C. Tordy and P. de Kinkelin. SEROLOGICAL EVIDENCE OF INFECTIOUS HEMATOPOIETIC NECROSIS IN RAINBOW TROUT FROM A FRENCH OUTBREAK OF DISEASE. *J. Aquat. Anim. Health* 11(2):126-134. 1989. FR 30(2)

[Cent. Natl. Etudes Vet. & Alimentaires, Lab. Cent. Rech. Vet., 22 rue Pierre Curie, 94700 Maisons-Alfort, France] *Oncorhynchus mykiss*.

93-003466 Hsu, Ya-Li; Shu-Yuan Chang; Shou-Tzu Lin and Jen-Leih Wu. THE SPECIFIC DETECTION OF INFECTIOUS PANCREATIC NECROSIS VIRUS IN INFECTED CELLS AND FISH BY THE IMMUNO DOT BLOT METHOD. *J. Fish Dis.* 12(6):561-571. 1989. FR 30(2)

[Inst. Zool., Acad. Sinica, Taipei, Taiwan 11529] *Oncorhynchus tshawytscha*

93-003467 Jiang Yulin and Li Zhenqin. ISOLATION AND IDENTIFICATION OF IPN VIRUS FROM IMPORTED RAINBOW TROUT (*SALMO GARDNERI*) IN CHINA. Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish*, 1990(Spec. Issue):173. 1990. Abstract only. FR 30(2)

[Inst. Hydrobiol., Acad. Sinica, Wuhan, China]

93-003468 Lorenzen, N.; N. Olesen, I. Ø. Jensen and P. F. V. Jørgensen. ANTIBODY MEDIATED NEUTRALIZATION OF VHS VIRUS FROM RAINBOW TROUT, 3rd International Veterinary Immunology Symposium, August 17-20, 1992, Budapest, Hungary. *Vet. Immunol. Immunopathol.* 35(Suppl):172. 1993. Abstract only. FR 30(2)

[Natl. Vet. Lab., Arhus, Denmark] *Oncorhynchus mykiss*

93-003469 Meyers, T. R., A. K. Hauck, W. D. Blankenbecker and T. Mincucci. FIRST REPORT OF VIRAL ERYTHROCYTIC NECROSIS IN ALASKA, USA, ASSOCIATED WITH EPIZOOTIC MORTALITY IN PACIFIC HERRING, *CLupea harengus pallasi* (VALENCIENNES). *J. Fish Dis.* 9(6):479-491. 1986. FR 30(2)

[Dep. Fish & Game, F.R.E.D. Div., P.O. Box 3-2000, Juneau, AK 99802-2000]

93-003470 Meyers, Theodore. CONTROL OF IHN VIRUS IN ALASKAN SOCKEYE SALMON CULTURE. *Control of Disease in Aquaculture. Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Its Role Prefecture, Japan, 29-30 October 1990*. Ralph S. Swjcek, editor. NOAA (Natl. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Natl. Mar. Fish. Serv.) No. 111, p. 13-14. 1992. FR 30(2)

[Dep. Fish & Game, F.R.E.D. Div., P.O. Box 25526, Juneau, AK 99802-5526] *Oncorhynchus nerka*.

93-003471 Miyazaki, T., K. Fujiwara, I. Kobayashi, N. Matsumoto, M. Abe and T. Nagano. HISTOPATHOLOGY ASSOCIATED WITH TWO VIRAL DISEASES OF LARVAL AND JUVENILE FISHES: EPIDERMAL NECROSIS OF THE JAPANESE FLOUNDER *PARALICHTHYS OLIVACEUS* AND EPITHELIAL NECROSIS OF BLACK SEA BREAM *ACANTHOPAGRUS SCHLEGELI*. *J. Aquat. Anim. Health* 11(2):85-93. 1989. FR 30(2)

[Fac. Biosour., Mie Univ., 2-80 Edobashi, Tsu, Mie 514, Japan]

93-003472 Mushioka, Kefichi, Misaou Arimoto; Tomo Furusawa; Wao Furusawa; Toshihiro Nakoi and Kiyokuni Muroga. DETECTION OF ANTIBODIES AGAINST STRIPED JACK NEURONAL NECROSIS VIRUS (SJNNV) FROM BROOD STOCKS OF STRIPED JACK. *Nippon Suisan Gakkaishi* 58(12):2351-2356. 1992. In English with Japanese summ. FR 30(2)

[Nakai Lab. Fish Pathol., Fac. Appl. Biol. Sci., Hiroshima Univ., Kagamiyama, Higashi-Hiroshima, Hiroshima 724, Japan] *Pseudocaranx dentex*.

93-003473 Okamoto, Nobuaki, Kiyotaka Takahashi, Akira Kumagai, Hiroyuki Shitsuzaki; Masashi Maita; Makoto Tanaka; John S. Rohovec and Yayoi Ikeda. [ERYTHROCYTIC INCLUSION BODY SYNDROME: FIRST REPORT OF A NATURAL INFECTION IN JUVENILE COHO SALMON REARED IN FRESH-WATER IN JAPAN.] *Fish. Pathol.* 27(4):207-212. 1992. In Japanese with English summ. FR 30(2)

[Dep. Aquat. Biosci., Tokyo Univ. Fish., Kanazawa, Minato-ku, Tokyo 108, Japan] *Oncorhynchus kisutch*.

93-003474 Okamoto, Nobuaki, Kiyotaka Takahashi; Akira Kumagai; Masashi Maita; John S. Rohovec and Yayoi Ikeda. ERYTHROCYTIC INCLUSION BODY SYNDROME: RESISTANCE TO REINFECTION. *Fish. Pathol.* 27(4):213-216. 1992. In English with Japanese summ. FR 30(2)

[Dep. Aquat. Biosci., Tokyo Univ. Fish., Kanazawa, Minato-ku, Tokyo 108, Japan] *Oncorhynchus kisutch*.

93-003475 Pina, Rosa M.; Juan Jaime and Albert Bosch. INTERFERON-LIKE ACTIVITY IN SEA BASS AFFECTED BY VIRAL ERYTHROCYTIC INFECTION. *Fish. Shellfish Immunol.* 3(2):89-96. 1993. FR 30(2)

[Bosch: Dep. Microbiol., Fac. Biol., Diagonal 645, 08028 Barcelona, Spain] *Morone saxatilis*.

93-003476 Sanz, F.; B. Basurco; M. Baldo; J. Dominguez and J. M. Coll. MONOCLONAL ANTIBODIES AGAINST THE STRUCTURAL PROTEINS OF VIRAL HAEMORRHAGIC SEPTICAEMIA VIRUS ISOLATES. *J. Fish Dis.* 16(1):53-63. 1993. FR 30(2)

[Coll. Dep. Sanidad Anim., Cent. Invest. & Tecnol. I.N.I.A., Embajadores 60, 28012 Madrid, Spain]

FISHERIES REVIEW

VIRAL DISEASES (Continued)

93-003477 Tung, M. C.; S. S. Tsai, S. C. Cheng, R. S. Chen and S. S. Juang. [FIRST REPORT ON LYMPHOCYTIS DISEASE VIRUS INFECTION IN POND-CULTURED BLACK-SPOTTED GROUPER (*EPINEPHELUS AMBLECYPHALUS* BLEEDER) AND GRAY SNAPPER (*LUTJANUS ARGENTIMACULATUS* FORSSKAL.) IN TAIWAN.]. *Chinese Soc. Vet. Sci.* 17(2):81-88, 1991. In Chinese with English summ. FR 38(2)

[Dep. Vet. Med., Natl. Pingtung Inst. Agric., Taiwan]

93-003478 Winton, James R. THE APPLICATION OF MOLECULAR BIOLOGY TO THE DETECTION OF INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS. *Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S./Japan Meeting on Aquaculture, Ise, Mie Prefecture, Japan, 29-30 October 1990* Ralph S. Swick, editor. NOAA (Natl. Oceanic Atmos. Adm'n.) Tech. Rep. NMFS (Natl. Mar. Fish. Serv.) No. 111, p. 53-56, 1992. FR 38(2)

[U.S. Fish & Wildl. Serv., Natl. Fish. Res. Cent., Bldg. 204, Naval Stn., Seattle, WA 98115]

93-003479 Yoshizumi, Mamoru and Takahisa Kimura. VIRAL INFECTIONS OF CULTURED FISH IN JAPAN. *Control of Disease in Aquaculture. Proceedings of the Nineteenth U.S./Japan Meeting on Aquaculture, Ise, Mie Prefecture, Japan, 29-30 October 1990*. Ralph S. Swick, editor. NOAA (Natl. Oceanic Atmos. Adm'n.) Tech. Rep. NMFS (Natl. Mar. Fish. Serv.) No. 111, p. 43-47, 1992. FR 38(2)

[Lab. Microbiol., Fac. Fish., Hokkaido Univ., Minato 3-1-1, Hokodate, Hokkaido 041, Japan] *Anguilla*, *Cyprinus carpio*, *Semola quinquevittata*, *Plecoglossus olivaceus*, *Fugu rubripes*, *Lateolabrax japonicus*, *Spicara macrocephala*, *Pagrus major*, and *Sebastes inermis*.

OTHER DISEASES AND PARASITES

93-003480 Aebly, G. S. STRATEGIES OF A MARINE PARASITE AND TWO OF ITS HOSTS. *Seventeenth Annual Albert L. Tester Memorial Symposium, 15-16 April 1992*. Pac. Sci. 47(1):66-67, 1993. Abstract only. FR 38(2)

[Dep. Zool., Univ. Hawaii Manoa, Honolulu 96822] *Chaetodon*.

93-003481 Akhama, Toshio. SCOLIOSIS OF FISHES CAUSED BY TRYPTOPHAN DEFICIENCY. *Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S./Japan Meeting on Aquaculture, Ise, Mie Prefecture, Japan, 29-30 October 1990*. Ralph S. Swick, editor. NOAA (Natl. Oceanic Atmos. Adm'n.) Tech. Rep. NMFS (Natl. Mar. Fish. Serv.) No. 111, p. 7-12, 1992. FR 38(2)

[Natl. Res. Inst. Aquacult., Fish. Agency, Tamaki, Mie 519-04, Japan] *Oncorhynchus keta*.

93-003482 Avdeyev, V. V. ON THE POSSIBLE USE OF PARASITIC ISOPODS AS BIOINDICATORS OF THE MIGRATORY ROUTES OF HORSE MACKERELS IN THE PACIFIC OCEAN. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtol.)* 32(7):14-21, 1992. FR 38(2)

[Inst. Biol. & Soil Sci., Far East Div., Russian Acad. Sci. (DVO RAN), Vladivostok, Russia] *Trachurus decliv.*

93-003483 Benz, George W.; Peter J. Mohan and Gerald L. Crow. DEVELOPMENTAL STAGES OF PARALEION (*ELONGATUS*) FROM AQUARIUM-HELD REEF WHITETIP SHARKS (*TRIMACODON OBESUS*) CAPTURED IN HAWAIIAN WATERS. *J. Parasitol.* 78(5):1027-1035, 1992. FR 38(2)

[Tenn. Aquarium, 537 Market St., Suite 17, Chattanooga 37402]

93-003484 Buckner, Richard L. and Sharon C. Buckner. DESCRIPTION OF *NEOECHEINORHYNCHUS CARINATUS* N. SP. (ACANTHOCEPHALA: NEOECHEINORHYNCHIDAE) FROM THE SHARPPIN CHUBBUCKER, *ERMYZON TENNIS*, OF LOUISIANA AND MISSISSIPPI. *J. Parasitol.* 79(1):32-36, 1993. FR 38(2)

[Div. Nat. Sci. & Math., Livingston Univ., Livingston, AL 36470]

93-003485 Cone, D. K. and M. Robb. PREVALENCE AND INTENSITY OF *GYRODACTYLUS MACULOSUS* SP. N. (MONOCENEA) PARASITIZING GILTS OF SCULPIN (*OLIGOCOTTUS MACULOSUS*) IN COASTAL BRITISH COLUMBIA, CANADA. *J. Helminthol. Soc. Wash.* 60(1):1-4, 1993. FR 38(2)

[Dep. Biol., Saint Mary's Univ., Halifax, NS, Canada B3H 3C3]

93-003486 Cone, D. K.; D. J. Marcogliese and W. D. Watt. METAZOAN PARASITE COMMUNITIES OF YELLOW BELS (*ANGUILLA ROSTRATA*) IN ACIDIC AND LIMED RIVERS OF NOVA SCOTIA. *Can. J. Zool.* 71(1):177-184, 1993. In English with French summ. FR 38(2)

[Dep. Biol., Saint Mary's Univ., Halifax, NS, Canada B3H 3C3]

93-003487 Crozier, W. W. OCCURRENCE OF *CONTRACAECUM CLAVATUM* RUDOLPHI IN ANGLER-FISH (*LOPAILUS PISCATORIS* L.) FROM THE NORTH IRISH SEA. *Fish. Res. (Amst.)* 5(1):83-90, 1987. FR 38(2)

[Dep. Agric., Fish. Res. Lab., 38 Castlereagh Rd., Coleraine, Co. Londonderry BT51 3RL, Northern Ireland]

93-003488 Farrell, A. P.; P. S. Davis and R. Sparkman. THE ABSENCE OF CORONARY ARTERIAL LESIONS IN FIVE SPECIES OF ELASMOBRANCHS, *RAIA NASUTA*, *SQUALUS ACANTHIAS* L., *ISURUS OXYRINCHUS* RAFINESQUE, *PRIONACE GLAUCA* (L.) AND *LAMNA NASUS* (BONNATERRE). *J. Fish Dis.* 13(6):537-540, 1992. FR 38(2)

[Dep. Biol. Sci., Simon Fraser Univ., Burnaby, BC, Canada]

OTHER DISEASES AND PARASITES (Continued)

- 93-003489 Francis-Floyd, Ruth; Brad Bolton, William Fraser and Peggy Reed. LIP FIBROMAS ASSOCIATED WITH RETROVIRUS-LIKE PARTICLES IN ANGEL FISH. *J. Am. Vet. Med. Assoc.* 202(3):427-429. 1993. FR 38(2)
[Dep. Large Anim. Clinical Sci., Univ. Fla., 7922 N.W. 71st St., Gainesville 32606]
- 93-003490 Gresty, Karen A., Geoffrey A. Soxhall and Kazuya Nagasawa. THE FINE STRUCTURE AND FUNCTION OF THE CEPHALIC APPENDAGES OF THE BRANCHIURAN PARASITE, ARGUEUS JAPONICUS THELE. *Philos. Trans. R. Soc. Lond. B Biol. Sci.* 339(1287):119-124. 1993. FR 38(2)
[Dep. Zool., Nat. Hist. Mus., Cromwell Rd., London SW7 5BD, England] *Cyprinus carpio*
- 93-003491 Guegan, J.-F. and C. R. Kennedy. MAXIMUM LOCAL HELMINTH PARASITE COMMUNITY RICHNESS IN BRITISH FRESHWATER FISH: A TEST OF THE COLONIZATION TIME HYPOTHESIS. *Parasitology* 106(1):91-100. 1993. FR 38(2)
[Kennedy: Dep. Biol. Sci., Hatherly Lab., Exeter Univ., Prince of Wales Rd., Exeter EX4 4PS, England] Data for 32 species.
- 93-003492 Han Shoujun. THE PRELIMINARY STUDY ON INTESTINAL MYCOSES OF RAINBOW TROUT FRY. Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989. Wang Xing, editor. *Salmon Fish 1990(Spec. Issue):169-190*. Abstract only. FR 38(2)
[Ying Kou Res. Inst., Ying Kou, Liaoning Province, China] *Oncorhynchus mykiss*.
- 93-003493 Hartvigsen, R. and O. Halvorsen. COMMON AND RARE TROUT PARASITES IN A SMALL LANDSCAPE SYSTEM. *Parasitology* 106(1):101-105. 1993. FR 38(2)
[Zool. Mus., Univ. Oslo, Sars gt. 1, 0562 Oslo S, Norway] *Salmo trutta* and *S. salar* in Norway
- 93-003494 Heckmann, R. A.; P. D. Greger and R. C. Turtke. THE ASIAN FISH TAPEWORM, *BOITHROCOPHYLUS ACHEILICOGNATHI*, IN FISHES FROM NEVADA. *J. Helminthol. Soc. Wash.* 60(1):127-128. 1993. FR 38(2)
[Dep. Zool., Brigham Young Univ., Provo, UT 84602] *Pimephales promelas*, *Cyprinella lutrensis*, *Gila robusta*, and *Notemigonus crysoleucas*.
- 93-003495 Hemmingen, W.; D. A. Lysne; T. Eilnes and A. Skorping. THE OCCURRENCE OF LARVAL ASCARIDOID NEMATODES IN WILD-CAUGHT AND IN CAGED AND ARTIFICIALLY FED ATLANTIC COD, *GADUS MORJUA* L., IN NORWEGIAN WATERS. *Fish Res. (Amst.)* 15(4):379-386. 1993. FR 38(2)
[Inst. Biol. & Geol., Univ. Tromsø, N-9001 Tromsø, Norway]
- 93-003496 Ho, Ju-Sheng; P. Jayarajan and S. Radhakrishnan. COPEPODS OF THE FAMILY ERGASILIIDAE (POECILOSTOMATOIDEA) PARASITIC ON COASTAL FISHES OF KERALA, INDIA. *J. Nat. Hist.* 26(6):1227-1241. 1992. FR 38(2)
[Dep. Biol., Calif. State Univ., Long Beach 90840]
- 93-003497 Hogans, William L. and Kenneth J. Sulak. *DIOCUS LYCENCHELUS* NEW SPECIES (COPEPODA: CHONORACANTHIDAE) PARASITIC ON THE ELPOUT *LYCENCHELUS VERRILLI* (ZOARCIDAE) FROM THE HATTERAS SHOALS OF THE NORTH-WEST ATLANTIC OCEAN. *Bull. Mar. Sci.* 51(3):301-308. 1992. FR 38(2)
[Ail. Res. Cent., Huntsman Mar. Sci. Cent., Brandy Cove, St. Andrews, NB, Canada E0G 2X0]
- 93-003498 Hogland, J.; J. Andersson and J. Hardig. HAEMATOLOGICAL RESPONSES IN THE EUROPEAN EEL, *ANGUILLA ANGUILLA* L., TO SUBLETHAL INFESTATION BY *ANGUILLICOLA CRASSUS* IN A THERMAL EFFLUENT OF THE SWEDISH BALTIC. *J. Fish Dis.* 15(6):507-514. 1992. FR 38(2)
[Nat. Vet. Inst., S-750 07 Uppsala, Sweden]
- 93-003499 Holloway, Harry L., Jr., and Craig A. Shoemaker. ROENTGENOLOGY OF MYOFIBROGRANULOMA IN WALLEYE, *STIZOSTEDION WYRHEUM*. *Can. J. Zool.* 71(1):219-221. 1993. In English with French summ. FR 38(2)
[Biol. Dep., Univ. N.D., Box #238, Univ. Stn., Grand Forks 58202]
- 93-003500 Johnson, S. C. and L. J. Albright. EFFECTS OF CORTISOL IMPLANTS ON THE SUSCEPTIBILITY AND THE HISTOPATHOLOGY OF THE RESPONSES OF NAIVE COHO SALMON *ONCORHYNCHUS KISUTCH* TO EXPERIMENTAL INFECTION WITH *LEPIDIPTHERUS SALMONIS* (COPEPODA: CALIGIDAE). *Dis. Aquat. Org.* 14(3):195-205. 1992. FR 38(2)
[Dep. Fish. & Oceans, Biol. Sci. Branch, Pac. Biol. Stn., Nanaimo, BC, Canada V9R 5K6]
- 93-003501 Johnson, S. C. and L. J. Albright. COMPARATIVE SUSCEPTIBILITY AND HISTOPATHOLOGY OF THE RESPONSE OF NATIVE ATLANTIC, CHINOOK AND COHO SALMON TO EXPERIMENTAL INFECTION WITH *LEPIDIPTHERUS SALMONIS* (COPEPODA: CALIGIDAE). *Dis. Aquat. Org.* 14(3):179-193. 1992. FR 38(2)
[Dep. Fish. & Oceans, Biol. Sci. Branch, Pac. Biol. Stn., Nanaimo, BC, Canada V9R 5K6] *Salmo salar*, *Oncorhynchus tshawytscha*, and *O. kisutch*

OTHER DISEASES AND PARASITES (Continued)

93-003502 Jonsdottir, H.; J. E. Bron, R. Wootton and J. F. Turnbull. THE HISTOPATHOLOGY ASSOCIATED WITH THE PRE-ADULT AND ADULT STAGES OF *LEPOTHPHERUS SALMONIS* ON THE ATLANTIC SALMON, *SALEMA SALAR* L. *J. Fish Dis.* 15(6):521-527, 1992. FR 38(2)

[Brit. Inst. Aquacult., Univ. Stirling, Stirling FK9 4LA, Scotland]

93-003503 Kelly, Rosemarie and John L. Crites. ULTRASTRUCTURE OF THE FIRST-STAGE LARVAE OF A *PHILOMETRA* SP. (NEMATODA: PHILOMETRIDAE) FROM FRESH-WATER DRUM (*APLODONOTUS GRUNNENS*). *J. Helminthol. Soc. Wash.* 60(1):40-54, 1993. FR 38(2)

[Dep. Zool., Ohio State Univ., Columbus 43210]

93-003504 Kuang Puren and Liu Dusheng. DIFFERENTIATIONS OF TWO SPECIES IN THE FAMILY ERGASILIDAE EXPRESSED BY ULTRASTRUCTURE. *Zool. Res.* 13(1):1-3, 1992. In Chinese with English summ. FR 38(2)

[Kunming Inst. Zool., Acad. Sinica 650107, China]

93-003505 Lasee, B. A. and D. R. Sutherland. BACTERIAL COLONIZATION OF TEGUMENTAL SURFACES OF *CULAEATREMA INCONSTANS* LASEE ET AL., 1988 (DIGENEA) FROM THE BROOK STICKLEBACK, *CULAEA INCONSTANS*. *J. Fish Dis.* 16(1):83-85, 1993. FR 38(2)

[Fish Dis. Control, P.O. Box 1595, La Crosse, WI 54602-1595]

93-003506 Meneses, Isabel and Pedro Re. INFECTION OF SARDINE EGGS BY A PARASITIC CINOFLAGELLATE (*ICHTHYOPODINUM CHABELARDI*) OFF PORTUGAL. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 442, 1989. Abstract only. FR 38(2)

[Inst. Nac. Invest. Pescas Av. Basilla, 1400 Lisbon, Portugal]

93-003507 Muzzall, Patrick M. *ELBOTHRIUM SALVELINI* (CESTODA: PSEUDOPHYLIDEA) IN BROOK TROUT, *Salvelinus fontinalis*, FROM WEST-CENTRAL LOWER MICHIGAN. *J. Helminthol. Soc. Wash.* 60(1):134-137, 1993. FR 38(2)

[Dep. Zool., Nat. Sci. Bldg., Mich. State Univ., East Lansing 48824]

93-003508 Muzzall, Patrick M. PARASITES OF PARR AND LAKE AGE CHINOOK SALMON, *Oncorhynchus tshawytscha*, FROM THE PIRE MARQUETTE RIVER AND WIGNITY, MICHIGAN. *J. Helminthol. Soc. Wash.* 60(1):55-61, 1993. FR 38(2)

[Dep. Zool., Nat. Sci. Bldg., Mich. State Univ., East Lansing 48824]

93-003509 Nagasawa, Kazuya and Tatsuya Takemi. HOST UTILIZATION BY THE SALMON LOUSE (*LEPOTHPHERUS SALMONIS* (COPEPODA: CALIGIDAE)) IN THE SEA OF JAPAN. *J. Parasitol.* 79(1):127-139, 1993. FR 38(2)

[Natl. Res. Inst. Far Seas Fish, Fish Agency, Shintzu, Shizuoka 424, Japan] *Oncorhynchus masou* and *O. gorbusha*.

93-003510 Ogawa, Kazuo. *CALIGUS LOMGIPEDIS* INFECTION OF CULTURED STRIPED JACK, *PSEUDOCARANX DENTEX* (TELEOSTEI: CARANGIDAE) IN JAPAN. *Fish. Pathol.* 27(4):197-205, 1992. In English with Japanese summ. FR 38(2)

[Dep. Fish, Fac. Agric., Univ. Tokyo, Yayoi, Bunkyo-ku, Tokyo 113, Japan]

93-003511 Olsen, Yngvar A.; Knut Falk and Ole B. Rein. CORTISOL AND LACTATE LEVELS IN ATLANTIC SALMON *SALEMA SALAR* DEVELOPING INFECTIOUS ANAEMIA (ISA). *Dis. Aquat. Org.* 14(2):99-104, 1992. FR 38(2)

[Inst. Aquacult. & Fish Dis., Norwegian Coll. Vet. Med., Box 8146 Dep., N-0033 Oslo 1, Norway]

93-003512 Pan Jinpei; Wang Weijun; Zheng Xiaoyin and W. Ahne. STUDIES ON THE DIPLOSTOMIASIS ON RAINBOW TROUT IN CHINA - I. A NEW DIPLOSTOMIUM AND OBSERVATIONS ON DEVELOPMENT OF THE EARLY LARVAE. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989*. Wang Xing, editor. *Salmon Fish 1990* (Spec. issue):119-126, 1990. FR 38(2)

[Inst. Hydrobiol., Acad. Sinica, Wuhan, China] *Oncorhynchus mykiss* and *Aristichthys nobilis*

93-003513 Parker, Lynn M.; Darrel L. Launey; Bruce D. Hornsbeck; Bruce Winder and David E. Hinton. BIOCHEMICAL AND HISTOCHEMICAL PROPERTIES OF HEPATIC TUMORS OF RAINBOW TROUT, *Oncorhynchus mykiss*. *Carcinogenesis* (Yusufam) 14(2):211-217, 1993. FR 38(2)

[Diag. Med., School Vet. Med., Univ. Calif., Davis 95616]

93-003514 Plawcki, Wojciech; Najm R. Khamesi and Furhan T. Mhalebi. A NEW SPECIES OF *MUCILACOLA* TRIPATHI, 1960 (CRUSTACEA) COPEPODA, THEROCOMASIDAE) PARASITIC ON IRAQI FISH. *Acta Ichthyol. Piscatol.* 21(2):143-151, 1991. In English with Polish summ. FR 38(2)

[Univ. Agric., Inst. Ichthyol., Kazimierza Kozłowieca 4, 71-350 Szczecin, Poland] *Uta albu*.

FISHERIES REVIEW

OTHER DISEASES AND PARASITES (Continued)

93-003515 Price, W. Wayne and Joseph V. Nadolny *PISCICOLARIA REDUCTA* (HIRUNINAE: PISCICOLIDAE) FROM FISHES IN A SUBTROPICAL FLORIDA STREAM. *J. Helminthol. Soc. Wash.* 60(1):130-134, 1993. FR 38(2)

[Dep. Biol., Univ. Tampa, Tampa, FL 33606] *Micropterus salmoides*, *Pomoxis nigromaculatus*, *Emysson suetta*, *Tilapia auroa*, *Lepomis gibbosus*, *L. aeneus*, and *L. punctatus*.

93-003516 Rana, H. B., M. P. Gupta and D. K. Iya. NEW SPECIES OF NEMATODES OF FISHES FROM NEPAL. *J. Inst. Agric. Anim. Sci.* Vol. 11, p. 133-136, 1990. FR 38(2)

[Inst. Agric. & Anim. Sci., Chitwan, Nepal] *Tor praitona* and *Mysus seenghala*.

93-003517 Read-Connole, C., C. A. Smith and F. M. Hetrick. PRESENCE OF ONCOGENES IN FISH TISSUES AND IN FISH CELL LINES. *Control of Disease in Aquaculture. Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Inc. Mie Prefecture, Japan, 29-30 October 1990.* Ralph S. Swick, editor. NOAA (Natl. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Natl. Mar. Fish. Serv. No. 113, p. 119-124, 1992. FR 38(2)

[Hetrick, Dep. Microbiol., Univ. Md., College Park 20742]

93-003518 Rego, A. Arandas. REDescription of *GIBSONIELA MANQUAB* (WOODLAND, 1935) (CESTODA: PROTEOCEPHALIDEA), A PARASITE OF *AGENIOSUS BREVIUS* (PISCES: SILURIFORMES), AND REAPPRAISAL OF THE CLASSIFICATION OF THIS PROTEOCEPHALIDEANS. *Mem. Inst. Oswaldo Cruz Rio J.* 87(3):417-422, 1992. FR 38(2)

[Dep. Helminthol. Inst. Oswaldo Cruz, C.P. 926, 21045-900 Rio de Janeiro, RJ, Brazil]

93-003519 Reilly, P. and M. F. Mulcahy. HUMORAL ANTIBODY RESPONSE IN ATLANTIC SALMON (*SALMO SALAR* L.) IMMUNISED WITH EXTRACTS DERIVED FROM THE ECTOPARASITIC CALIGID COPEPODS, *CALIGUS ELONGATUS* (NORDMANN, 1832) AND *LEPEOPHYTHIRUS SALMONIS* (KROYER, 1838). *Fish Shellfish Immunol.* 3(1):59-70, 1993. FR 38(2)

[Dep. Zool., Univ. Coll. Cork, Ireland]

93-003520 Riley, Milton W. INTRASPECIFIC VARIATION IN THE FISH TREMATODE *PROTEROMETRA MACROSTOMA* (DICEINAE, AZYGIIDAE). Ph.D. dissertation, Univ. Ky., 149p., 1992. *From Class. Abstr. Int. B. Sci. Eng.* 53(7):3357, 1993. Order No. DA9233618. FR 38(2)

93-003521 Robinson, R. D.; L. F. Jøhli, R. N. Hill and R. D. Steola. INFECTION OF RED HYBRID TILAPIA WITH A MONOGENEAN IN COASTAL WATERS OFF SOUTHERN JAMAICA. *Proc. Gulf Caribb. Fish. Inst. Vol.* 42, p. 441-447, 1992. FR 38(2)

[Dep. Zool., Univ. West Indies, Mona, Kingston 7, Jamaica] *Tilapia moresambica* x *T. hornorum*

93-003522 Rokicki, Jerzy and Krzysztof Zdzikowski. DYNAMICS OF *EURACIHELLA ANTARCTICA* (QUADOR, 1906) (COPEPODA) OCCURRENCE IN NOTOTAFNIA ROSSII/MARMORATA (FISCHER, 1885). *Acta Ichthyol. Piscatoria* 21(2):45-52, 1991. In English with Polish summary. FR 38(2)

[Dep. Invertebr. Zool., Univ. Gdansk, 81-378 Gdynia, Pilsudskiego 46, Poland]

93-003523 Roth, M.; R. H. Richards and C. Sommerville. CURRENT PRACTICES IN THE CHEMOTHERAPEUTIC CONTROL OF SEA LICE INFESTATIONS IN AQUACULTURE: A REVIEW. *J. Fish Dis.* 16(1):1-26, 1993. FR 38(2)

[Richards, Inst. Aquacult., Univ. Stirling, Stirling FK9 4LA, Scotland]

93-003524 Schaefer, S. A. A REMARKABLE OCCURRENCE OF ISOPOD PARASITISM ON AN ARMOURLED CATFISH, *MICROLEPIDOGASTER MACULIPANNIS*. *J. Fish Biol.* 42(2):307-310, 1993. FR 38(2)

[Dep. Ichthyol., Acad. Nat. Sci. Philadelphia, 1900 Benjamin Franklin Pkwy., Philadelphia, PA 19103-1195]

93-003525 Schwartz, Frank J. ALGAL-DIATOM GROWTHS ASSOCIATED WITH THE MARINE FISH SHEEPHEAD, *ARCHOSARGUS PROBATOPHYLUS*, AND LOGGERHEAD, *CARETTA CARETTA*, AND GREEN, *CHELONIA MYDAS*, SEA TURTLES HELD IN CAPTIVITY IN NORTH CAROLINA. *Bull. Mar. Sci.* 51(3):466-474, 1992. FR 38(2)

[Inst. Mar. Sci., Univ. N.C., Morehead City 28557]

93-003526 Smith, I. R., H. W. Ferguson, D. A. Rokosh and M. A. Hayes. PAPILLOMATOSIS AND CHOLANGIOLAR NEOPLASIA IN FISH FROM HAMILTON HARBOUR, LAKE ONTARIO. *Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986.* J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 108-110, 1987. English and French abstract only. FR 38(2)

[Ontario Vet. Coll., Univ. Guelph, Guelph, ON, Canada N1G 2W1] *Caecostomus commersoni*, *Ameiurus nebulosus*, and *Cyprinus carpio*

93-003527 Thomas, K. and J. Olliver. POPULATION BIOLOGY OF *ANGUILLICOLA CRASSUS* IN THE FINAL HOST *ANGUILLA ANGUILLA*. *Dis. Aquat. Org.* 14(3):163-170, 1992. FR 38(2)

[Zool. Inst., Lab. Ecol. & Aquacult., Catholic Univ. Louvain, Navesstr. 59, B-3000 Louvain, Belgium]

OTHER DISEASES AND PARASITES (Continued)

93-003528 Whittington, I. D. and C. C. Kearn. A NEW SPECIES OF SKIN-PARASITIC BENEDICINID MONOGENEAN WITH A PREFERENCE FOR THE PELVIC FINS OF ITS HOST, LUTJANUS CARPOMUTUS (PERCIFORMES: LUTJANIDAE) FROM THE GREAT BARRIER REEF. *J. Nat. Hist.* 27(1):1-14. 1993. FR 38(2)
[Dep. Parasitol., Univ. Queensland, Brisbane, Qld. 4072, Australia]

93-003529 Williams, A.; M. Moran, N. Caputi and C. Walters. DIDYMOZOID TREMATODE INFECTION OF SNAPPER, *PAGRUS AURATUS* (SPARIDAE), OFF WESTERN AUSTRALIA. PARASITE POPULATION BIOLOGY AND FISHERY IMPLICATIONS. *Fish. Res. (Amst.)* 16(2):113-129. 1993. FR 38(2)
[CSIRO Div. Fish., P.O. Box 1538, Hobart, Tasm. 7001, Australia]

93-003530 Yang, C. Z. and L. J. Albright. EFFECTS OF THE HARMFUL DIATOM *CYMETOCEBO CONCAVOCORNIS* ON RESPIRATION OF RAINBOW TROUT *ONCORHYNCHUS MYKISS*. *Environ. Biol. Fish.* 14(2):105-114. 1992. FR 38(2)
[Inst. Aquacult. Res., Dep. Biol. Sci., Simon Fraser Univ., Burnaby, BC, Canada V5A 1S6]

93-003531 Yin Yuanhong, Yang Maosheng, Liu Jingwen, Mi Lihua, Zhan Bing and Zhang Junqing. THE PATHOLOGICAL OBSERVATION ON FATTY DEGENERATION OF THE LIVER IN RAINBOW TROUT. Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989. Wang Ying, editor. *Shandong Fish. 1990(Spec. Issue):135-139*. 1990. FR 38(2)
[Dep. Biol., Shandong Univ., Talyuan, Shandong, China] *Oncorhynchus mykiss*.

93-003532 Yoshinaga, Tomoyoshi. AN ECOLOGICAL STUDY OF THE PARASITIC NEMATODE *HYSTEROHYLACUM HAZE* IN THE JAPANESE COMMON GOBY *ACANTHIOGOBUS FLAVIMANUS*, IN A BRACKISH INLET. Control of Disease in Aquaculture: Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, 8th. *Mar. Biotechnol. Japan*, 29-30 October 1990. Ralph S. Swetick, editor. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Nat. Mar. Fish. Serv.) No. 111. p. 63-67. 1992. FR 38(2)
[Nat. Res. Inst. Fish. Sci., Kachidoki, Chouku, Tokyo 104, Japan]

93-003533 Zdzienicka, Krzysztof and Martin C. White. DIGENIDAN TREMATODA INFECTION OF INSHORE FISH AT SOUTH GEORGIA, Antarctica. *Sci.* 4(1):51-55. 1992. FR 38(2)
[W. Stefanski Inst. Parasitol., Polish Acad. Sci., ul. Pasteura 3, sp. 153, 00-573 Warsaw, Poland] *Notolishia* sp.

POLLUTION

93-003534 Ahe, M.; J. McEvoy and W. Clegg. BIOACCUMULATION OF THE LIPOPHILIC METABOLITES OF IONOMIC SURFACTANTS IN FRESHWATER ORGANISMS. *Environ. Pollut.* 79(3):243-249. 1993. FR 38(2)
[Cent. Mar. Res. Zagreb, Inst. "Rudjer Boskovic", P.O. Box 1016, 41000 Zagreb, Croatia] *Bombus terrestris*, *Squalus cephalus*, and *Oncorhynchus mykiss* in Switzerland

93-003535 Bentzen, E., D. R. S. Lean, C. Hauschild and W. Scheider. TEMPORAL CHANGES OF PCBs IN LAKE ONTARIO FISH AND THE ROLE OF LIPIDS IN PCB BIOCONCENTRATION. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 169. 1992. Abstract only. FR 38(2)
[Dep. Environ. & Resour. Studies, Trent Univ., Peterborough, ON, Canada K9J 7B0] *Oncorhynchus tshawytscha*, *O. kisutch*, *Salmo gairdneri*, and *Salvelinus namaycush*.

93-003536 Bocquere, Gilles; Francois Galgan; Thierry Bugeot; Lolo Le Dean and Philippe Trequet. ACETYLCHOLINESTERASE LEVELS IN MARINE ORGANISMS ALONG FRENCH COASTS. *Mar. Pollut. Bull.* 26(2):101-106. 1993. FR 38(2)
[IFREMER, Del/Ecotoxicol., B.P. 1049, 44037 Nantes Cedex, France]

93-003537 Bostemps, Stanislaw and Tadeusz Backiel. [SENSORY ASSESSMENT OF FISH IN THE VISTULA RIVER AND IN WLOCLAWSKE LAKE IN 1069-1070 AND IN 1981-1984.] *Roczn. Nauk. Pol. Zwiastek Wodnarkiego Vol. 1*, p. 191-213. 1988. In Polish with English and Russian sums. FR 38(2)
[Inst. Rybnictwa Srodoladowego i Olsztyne, Zaklad Rybnictwa Rzecznego Zablenca, Poland] *Abramis brama*, *Silurus glanis*, *Acipenser*, and data for 14 other species in Poland.

93-003538 Brooks, James M.; Terry L. Wade; Mahlon C. Demkovic II; Denis A. Wiesenburg, Dan Wilkerson; Thomas J. McDonald and Suzanne J. McDonald. TOXIC COPOLYMER CHARACTERIZATION OF AQUATIC ORGANISMS IN GALVESTON BAY: A PILOT STUDY. *Galveston Bay Nat. Estuary Program (U.S. Environ. Prot. Agency & Tex. Water Comm.) No. 20*, 341 p. 1992. FR 38(2)
[Geochem. & Environ. Res. Group, Tex. A&M Univ., 833 Graham Rd., College Station 77845] *Cyprinus carpio*, *Pogonias cromis*, and *Pseudotyroneus arborescens* in Texas.

93-003539 Burke, John S.; David S. Peters and Peter J. Hanson. MORPHOLOGICAL INDICES AND OTOLITH MICROSTRUCTURE OF ATLANTIC CROAKER, *MICROPODONIS UNDULATUS*, AS INDICATORS OF HABITAT QUALITY ALONG AN ESTUARINE POLLUTION GRADIENT. *Environ. Biol. Fishes* 36(1):25-33. 1993. FR 38(2)
[NMFS, NOAA, Southeast Fish. Sci. Cent., Beaufort Lab., Beaufort, NC 28516]

FISHERIES REVIEW

POLLUTION (Continued)

- 93-003540 Burns, Kathryn A. EVIDENCE FOR THE IMPORTANCE OF INCLUDING HYDROCARBON OXIDATION PRODUCTS IN ENVIRONMENTAL ASSESSMENT STUDIES. *Mar. Pollut. Bull.* 26(2):77-85, 1993. FR 38(2)
 [Bermuda Biol. Sta. Res., 17 Biological Station Ln., Bermuda GD1]
- 93-003541 Carr, O. J. and R. Goulder. DIRECTLY COUNTED BACTERIA IN A TROUT FARM AND ITS EFFLUENT. *Aquacult. Fish. Manage.* 24(1):19-27, 1993. FR 38(2)
 [Dep. Appl. Biol., Univ. Hull, Hull HU6 7RX, England] *Oncochrysis mykiss* and *Silurus lutra* in England.
- 93-003542 Crossland, C. J. and K. M. Abel. NEW PULP MILLS IN AUSTRALIA: A PERSPECTIVE. *Mar. Pollut. Bull.* 25(5-6):181-185, 1992. FR 38(2)
 [CSIRO INRE Proj. Off., P.O. Box 225, Dickson, A.C.T. 2602, Australia]
- 93-003543 Diaz, R. J., R. J. Neubauer, L. C. Schallheiser, J. P. H. and S. P. Baden. CONTINUOUS MONITORING OF DISSOLVED OXYGEN IN AN ESTUARY EXPERIENCING PERIODIC HYPOXIA AND THE EFFECT OF HYPOXIA ON MACROBENTHOS AND FISH. *Marine Coastal Eutrophication: The Response of Marine Transitional Systems to Human Impact: Problems and Perspectives for Restoration*. Proceedings of an International Conference, Bologna, Italy, March 21-24, 1990. R. A. Voltenweider, R. Marchetti, and R. Viviani, editors. *Sci. Total Environ. Suppl.* p. 1055-1068, 1992. FR 38(2)
 [Inst. Mar. Sci., Coll. William & Mary, Gloucester Point, VA 23062]
- 93-003544 Ernst, W. R. ASSESSING AND REGULATING THE ENVIRONMENT (EFFECTS OF PESTICIDE USE). *Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop*, Moncton, New Brunswick, November 12-14, 1986. J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 67-69, 1987. English and French abstract only. FR 38(2)
 [Environ. Prot. Serv., Environ. Canada, Dartmouth, NS, Canada B2Y 2N6]
- 93-003545 Fagan, P. A., C. Miskiewicz and P. M. Tait. AN APPROACH TO MONITORING SEWAGE OUTFALLS: A CASE STUDY ON THE SYDNEY DEEPWATER SEWAGE OUTFALLS. *Mar. Pollut. Bull.* 25(5-6):172-180, 1992. FR 38(2)
 [Environ. Manage. Unit, Water Board, P.O. Box A53, Sydney South, N.S.W. 2002, Australia]
- 93-003546 Gopal, V. and K. Mahaswari. Dev. BIOMONITORING OF HEAVY METAL AND PESTICIDE POLLUTION. *Indian J. Environ. Health* 33(4):488-491, 1991. From *Paryawaran Abstr.* 9(3):9200-137, 1992. FR 38(2)
 [Neurophysiol. Behav. Sci., Dep. Zool., Bharathiar Univ., Coimbatore-641 046, India]
- 93-003547 Hanley, J., Russell and Daniel Couriel. COASTAL MANAGEMENT ISSUES IN THE NORTHERN TERRITORY: AN ASSESSMENT OF CURRENT AND FUTURE PROBLEMS. *Mar. Pollut. Bull.* 25(5-6):134-142, 1992. FR 38(2)
 [Northern Territory Mus. Arts & Sci., P.O. Box 4646, Darwin, N.T. 0801, Australia]
- 93-003548 Harlow, Heather E. and Peter V. Hodson. CHEMICAL CONTAMINATION OF HAMILTON HARBOUR: A REVIEW. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1603, 91p., 1988. In English with French summ. FR 38(2)
 [Connors Brewing Enterprises Ltd., 6 Queen St. W., Mississauga, ON, Canada L5H 1L4]
- 93-003549 Hoss, Donald E. and Lawrence R. Settle. INGESTION OF PLASTICS BY TELEOST FISHES. *Proceeding of the Second International Conference on Marine Debris, Honolulu, Hawaii, 2-7 April 1989*. Vol. 1, Richard S. Shomura and Mary Lynne Godfrey, editors. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 154, p. 693-709, 1990. FR 38(2)
 [Southeast Fish. Sci. Cent. Beaufort Lab., NMFS, NOAA, Beaufort, NC 28516-9722] *Brevortia tyrannus*, *Lagodon rhomboides*, *Lekanesius xanthopus*, *Mugil cephalus*, *Paralichthys*, and data for 20 other species.
- 93-003550 Jordan, S. J., R. J. Klauka, T. C. Brown and C. M. Dulpea. LIVING RESOURCES: THE ULTIMATE RESULT. *Proceedings of the Seventh Biennial Conference of the International Association on Water Pollution Research and Control*, Washington, DC, USA, 24-30 May 1992. M. Suzuki, D. Jolley, A.-G. Dahlberg, W. Gujer, D. Jenkins, H. Kiclas, A. C. Di Pinto, K. Zorner, A. Milburn, E. J. Izard and P. T. Nagle, editors. *Water Sci. Technol.* 26(12):2695-2704, 1992. FR 38(2)
 [Dep. Nat. Resour., Taxes State Off. Bldg., Annapolis, MD 21401]
- 93-003551 Kerr, S. R. and R. A. Rydar. EFFECTS OF CULTURAL EUTROPHICATION ON COASTAL MARINE FISHERIES: A COMPARATIVE APPROACH. *Marine Coastal Eutrophication: Marine Coastal Eutrophication: The Response of Marine Transitional Systems to Human Impact: Problems and Perspectives for Restoration*. Proceedings of an International Conference, Bologna, Italy, March 21-24, 1990. R. A. Voltenweider, R. Marchetti, and R. Viviani, editors. *Sci. Total Environ. Suppl.* p. 590-614, 1992. FR 38(2)
 [Dep. Fish. & Oceans, Bedford Inst. Oceanogr., Dartmouth, NS, Canada B2Y 4A2]

POLLUTION (Continued)

- 93-003552 Konar, S. K., T. K. Ghosh and N. C. Dey. MANAGEMENT OF COMPLEX POLLUTIONAL PROBLEMS OF INDIAN RESERVOIRS IN INCREASE FISH YIELD. *Environ. Foot.* 9(2) 460-472. 1991. From *Paryavaran Abstr.* B(4)9104-006. 1991. FR 38(2).
[Fish Lab., Zool. Dep., Kalyani Univ., Kalyani-741 235, India.]
- 93-003553 Kubota, Tadashi. SYNTHETIC MATERIALS FOUND IN THE STOMACHS OF LONGNOSE LANCEFISH COLLECTED FROM SURUGA BAY, CENTRAL JAPAN. *Proceeding of the Second International Conference on Marine Debris, Honolulu, Hawaii, 2-7 April 1989*. Vol. I. Richard S. Shomura and Mary Lynne Godfrey, editors. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 154, p. 710-717. 1990. FR 38(2).
[Dep. Fish., Fac. Mar. Serv. & Technol., Tokai Univ., Shimizu-shi, Shizuoka 424, Japan.] *Alpheaurus ferox*.
- 93-003554 Kucklick, John R.; Terry F. Bidleman; Laura L. McConnell and Gennadi P. Ivanov. ORGANOCHLORINE RESIDUES IN WATER AND BIOTA OF LAKE BAIKAL, SIBERIA. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 170. 1992. Abstract only. FR 38(2).
[Mar. Sci. Program, Dep. Chem., Univ. S.C., Columbia 29208.]
- 93-003555 Kushima, Jo-Ann N. and Raymond P. Clarke. MARINE DEBRIS AND EPHELIC FISHES. *Proceeding of the Second International Conference on Marine Debris, 2-7 April 1989, Honolulu, Hawaii*. Richard S. Shomura and Mary L. Godfrey, editors. NOAA (Nat. Oceanic Atmos. Adm.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 154, p. 1194. 1990. Abstract only. FR 38(2).
[Div. Aquat. Resour., 1151 Punchbowl St., Honolulu, HI 96813.] *Coryphaena hippurus* and *Alopius gladius*.
- 93-003556 Lenz, Mauro. EXPERIENCES OF THE MANAGEMENT OF ORBETELLO LAGOON: EUTROPHICATION AND FISHING. *Marine Coastal Eutrophication. The Role of Marine Transitional Systems to Human Impact: Problems and Perspectives for Restoration. Proceedings of an International Conference, Bologna, Italy, March 21-24, 1990*. R. A. Volleweider, R. Marchetti, and R. Viviani, editors. *Sci. Total Environ. Suppl.* p. 1189-1190. 1992. FR 38(2).
[Orbetello Pesca Lagunare s.p.a., via Leopardi 15, 56015 Orbetello (GR), Italy.]
- 93-003557 Mathiasen, Peter; John E. Thain; Robin J. Law and Tim W. Filomen. ATTEMPTS TO ASSESS THE ENVIRONMENTAL HAZARD POSED BY COMPLEX MIXTURES OF ORGANIC CHEMICALS IN UK ESTUARIES. *Mar. Pollut. Bull.* 26(2):90-95. 1993. FR 38(2).
[MAFF, Div. Fish. Res., Fish. Lab., Buxham-on-Crouch, Essex CM0 8HA, England.]
- 93-003558 Nianda, Sajanku and S. K. Sarkar. MERCURY CONCENTRATION OF FISHES IN NORTH KOEL RIVER, REHELA (PALAMAU), BIHAR INDIA. *Indian Biol.* 23(2):58-60. 1992. From *Paryavaran Abstr.* 9(3):9003-165. 1992. FR 38(2).
[Tangar Inst. Neurol., 52/1A, Sambhansh Pandit St., Calcutta 25, India.]
- 93-003559 Nival, P. and A. Solot, editors. [THE FATE OF CHEMICAL POLLUTIONS SEMINAR, 13 DECEMBER 1991.] *Oceans 18(5):505-577*. 1992. In French with English summ. FR 38(2).
- 93-003560 Pearce, John B. MARINE VESSEL DEBRIS: A NORTH AMERICAN PERSPECTIVE. *Mar. Pollut. Bull.* 24(12):586-592. 1992. FR 38(2).
[NOAA, Northeast Fish. Sci. Cent., Woods Hole, MA 02543.]
- 93-003561 Phillips, D. J. H.; B. J. Richardson; A. P. Murray and J. C. Fabris. TRACE METALS, ORGANOCHLORINES AND HYDROCARBONS IN PORT PHILIP BAY, VICTORIA: A HISTORICAL REVIEW. *Mar. Pollut. Bull.* 25(5-8):200-217. 1992. FR 38(2).
[Acer Environ., Howard Co., Manor Park, Daresbury, Nr. Runcorn, Cheshire WA7 1S, England.] *Platycephalus bassensis* in Australia.
- 93-003562 Phillips, M. J.; R. Clarke and A. Mowat. PHOSPHORUS LEACHING FROM ATLANTIC SALMON DIETS. *Aquacult. Eng.* 12(1):47-54. 1993. FR 38(2).
[Inst. Aquacult., Univ. Stirling, Stirling FK9 4LA, Scotland.] *Salmo salar*.
- 93-003563 Quevauxville, Ph.; C. N. Krimer and B. Grepink. A NEW CERTIFIED REFERENCE MATERIAL FOR THE QUALITY CONTROL OF TRACE ELEMENTS IN MARINE MONITORING: COD MUSCLE (CRM 422). *Mar. Pollut. Bull.* 24(12):601-606. 1992. FR 38(2).
[Comm. European Communities, Community Bur. Ref. (BCR), rue de la Loi 200, 1049 Brussels, Belgium.] *Gadus morhua* in the North Sea.
- 93-003564 Randall, R. C.; C. K. Mills and V. W. Cairns. EFFECT OF HABITAT STRESS ON THE SPECIES COMPOSITION AND BIOMASS OF FISH IN LITTORAL HABITATS OF THREE GREAT LAKES AREAS OF CONCERN. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 44. 1992. Abstract only. FR 38(2).
[Dep. Fish. & Oceans, Great Lakes Lab. Fish. & Aquat. Sci., P.O. Box 5050, Burlington, ON, Canada L7R 4A6.] *Cyprinus capio*.

FISHERIES REVIEW

POLLUTION (Continued)

93-003565 Regier, Henry A. and Gordon A. Wicket. ECOSYSTEM INTEGRITY IN THE GREATER TORONTO AREA. *Int. Assoc. Great Lakes Res. Conf. No. 35* p. 64. 1992. Abstract only. FR 38(2)
[Inst. Environ. Studies, Univ. Toronto, Toronto, ON, Canada M5S 1A4]

93-003566 Salunki, J., I. Uusko, F. Laszlo, K. V. Balogh, I. Varrinko and Z. Masala. CHANGES IN THE CONCENTRATION OF HEAVY METALS IN THE ZALA-MINOR-BALATON-ZALA SYSTEM (WATER, SEDIMENT, AQUATIC LIFE). *Water Sci. Technol.* 25(11):173-180. 1992. FR 38(2)
[Lake Balaton Limnol. Res. Inst., Hungarian Acad. Sci., (MTA BLKI), H-8237 Tihany, Hungary]

93-003567 Schmidt, Larry J. and Robert J. Hesselberg. ROUTINELY FOUND COMPOUNDS IN GREAT LAKES FISH MATRICES AND THEIR MASS SPECTRA. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 144. 1992. Abstract only. FR 38(2)
[U.S. Fish & Wildl. Serv., Natl. Fish. Res. Cent.-Great Lakes, 1451 Green Rd., Ann Arbor, MI 48105]

93-003568 Shimura, Richard S. and Mary Lynne Godfrey, editors. PROCEEDINGS OF THE SECOND INTERNATIONAL CONFERENCE ON MARINE DEBRIS, 2-7 APRIL 1989, HONOLULU, HAWAII. NOAA (*Natl. Oceanic Atmos. Admin.*) Tech. Mem. NMFS (Natl. Mar. Fish. Serv.) No. 154, 774p. 1990. FR 38(2)
[Univ. Hawaii, School Ocean & Earth Sci. & Technol., Inst. Mar. Biol., 1000 Pope Rd., Honolulu 96822] Selected papers indexed in this issue of *Fisheries Review*.

93-003569 Squire, James L., Jr. EFFECTS OF THE SANTA BARBARA, CALIF., OIL SPILL ON THE APPARENT ABUNDANCE OF PELAGIC FISHERY RESOURCES. *Mar. Fish. Rev.* 54(1):7-14. 1992. FR 38(2)
[Southwest Fish. Sci. Cent., NMFS, NOAA, P.O. Box 271, La Jolla, CA 92038] *Engraulis mordax*, *Sardinops sagax*, *Scorpaenopsis diabolus*, *Seriola lalandi*, and *Trachurus symmetricus*

93-003570 Thompson, Geoffrey B.; John C. Chapman and Bruce J. Richardson. DISPOSAL OF HAZARDOUS WASTES IN AUSTRALIA: IMPLICATIONS FOR MARINE POLLUTION. *Mar. Pollut. Bull.* 25(5-8):155-162. 1992. FR 38(2)
[Commonwealth Environ. Prot. Agency, P.O. Box E305, Queen Victoria Terrace, A.C.T. 2600, Australia]

93-003571 Van Collie, R.; N. Birmingham, C. Garceau, Y. Roy and R. Veillon. ECOTOXICOLOGICAL ASSESSMENT AT THREE LEVELS OF ENVIRONMENTAL PROTECTION. *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop*, Moncton, New Brunswick, November 12-14, 1986. J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 143. 1987. English and French abstract only. FR 38(2)
[Environ. Canada, 1179 Bleury, Montreal, PQ, Canada H3B 3H9]

93-003572 Vollenweider, R. A.; R. Marchetti and R. Vivian, editors. MARINE COASTAL EUTROPHICATION: THE RESPONSE OF MARINE TRANSITIONAL SYSTEMS TO HUMAN IMPACT. PROBLEMS AND PERSPECTIVES FOR RESTORATION. PROCEEDINGS OF AN INTERNATIONAL CONFERENCE, BOLOGNA, ITALY, 21-24 MARCH 1990. *Sci. Total Environ. Suppl.* 1310p. 1992. FR 38(2)
[Natl. Water Res. Inst., Canada Cent. Inland Waters, Burlington, ON, Canada] Selected papers indexed in this issue of *Fisheries Review*.

93-003573 Wilford, Wayne A. CONTAMINANTS. *Strategies for Rehabilitation of Lake Trout in the Great Lakes*. Proceedings of a Conference on Lake Trout Research, August 1983. Randy J. Eshenroder, Thomas P. Poe, and Charles H. Olson, editors. *Can. Lakes Fish. Comm. Tech. Rep. No. 40*, p. 28-34. 1984. FR 38(2)
[U.S. Fish & Wildl. Serv., Great Lakes Fish. Lab., Ann Arbor, MI 48105] *Salvelinus namaycush* in the Great Lakes.

FISH KILLS

93-003574 Hallograeff, Gustaaf M. HARMFUL ALGAL BLOOMS IN THE AUSTRALIAN REGION. *Mar. Pollut. Bull.* 25(5-8):186-190. 1992. FR 38(2)
[Ocep. Plant Sci., Univ. Tasmania, GPO Box 252C, Hobart, Tasm. 7001, Australia]

93-003575 Siddiqui, S. Z. and V. Rama Rao Kazu. LIMNOLOGIC INVESTIGATIONS ON A RECENT MAJOR FISH KILLS (NOTOPTERUS NOTOPTERUS) IN HUSSAIN SAGAR, HYDERABAD, INDIA. *Pollut. Res.* 10(4):191-198. 1991. From *Paryavaran Abstr.* 9(3):9203-091. 1992. FR 38(2)
[Zool. Surv. India, Freshwater Biol. Stn., 1-1-300/B, Ashok Nagar, Hyderabad 500 202 AP, India]

TOXICOLOGY; BIOASSAYS

93-003576 Abbas, S. A.; V. Bal; K. Madhavan and R. Soet. IMPACT OF CHROMIUM (VI) ON CATFISH WALLAGOATTA. *Indian J. Environ. Health* 23(3):336-390. 1991. From *Paryavaran Abstr.* 9(3):9203-108. 1992. FR 38(2)
[Salim Ali School Ecol., Pondicherry (Cent.) Univ., 3 Rue Vicomte de Souillac, Pondicherry-605 001, India]

TOXICOLOGY: BIOASSAYS (Continued)

- 93-003577 Adams, S. Marshall, W. D. Crosby, M. S. Greeley, Jr., L. R. Shugart and C. F. Saylor. RESP. OF FISH POPULATIONS AND COMMUNITIES TO PULP MILL EFFLUENTS. A HOUSTIC ASSESS *Ecotoxicol. Environ. Saf.* 24(3):347-360, 1992. FR 38(2)
[Environ. Sci. Div., ORNL, Oak Ridge, TN 37831] *Lepomis zatus* in North Carolina and Tennessee.
- 93-003578 Agarwal, S. K. BIOASSAY EVALUATIONS OF ACUTE TOXICITY LEVELS OF MERCURIC CHLORIDE TO AN AIR-BREATHING FISH CHANNA PLANCATULUS (BLOCH); MORTALITY AND BEHAV. STUDY. *J. Environ. Biol.* 12(2):99-106, 1991. From Paryavaran Abstr. 8(4):9104-120, 1991. FR 38(2)
[Min. Sci. Technol., H-11 S&S Div., Technol. Bhawan, New Mehrauli Rd., New Delhi-110 016, India]
- 93-003579 Agarwal, S. K. SUBLETHAL EFFECTS OF MERCURIC CHLORIDE ON SOME BIOCHEM. PARAMETERS OF THE BLOOD IN AN AIR-BREATHING FISH CHANNA PLANCATULUS (BLOCH). *J. Environ.* 13(2): 127-133, 1992. From Paryavaran Abstr. 9(3):9203-112, 1992. FR 38(2)
[Dep. Sci. Technol., Sci. Technol. Div., H-11 Technol. Bhawan, New Delhi-110 016, India]
- 93-003580 Alam, M. K. and O. E. Maughan. ACUTE TOXICITY OF SELECTED ORGANOPHOSPH. PESTICIDES TO CYPRINUS CARPIO AND BARBUS VAGRA. *J. Environ. Sci. Health Part B Pestic. Food C. Agric. Wastes* 28(1):81-85, 1993. FR 38(2)
[Pyramid Lake Fish, Star Rt., Sutcliffe, NV 89510]
- 93-003581 Alcaraz, Guillermo; Carlos Rojas and Sonia Espina. EFFECT OF DETERGENT ON THE RESP. TO TEMPERATURE AND GROWTH OF GRASS CARP, CTENOPOMYRINCODON IDEI (A. *Bull. Environ. Cr. Toxicol.* 50(5):659-664, 1993. FR 38(2)
[Ecophysiol. Lab., Dep. Biol., Fac. Sci., Natl. Autonomous Univ., Mexico, D.F., CP 04510, Mexico]
- 93-003582 Anbu, R. B. and M. Ramaswamy. ADAPTIVE CHANGES IN RESPIRATORY MOVEMENTS C. AIR-BREATHING FISH CHANNA STRIATUS (BECKER) EXPOSED TO CARBAMATE PESTICIDE, SEVIN. *J. & C.* 3(1):11-16, 1991. From Paryavaran Abstr. 8(4):9104-121, 1991. FR 38(2)
[Zool. Dep., Gov. Arts Coll., Coimbatore-641 018, India]
- 93-003583 Anestis, I. and R. J. Newfield. AVOIDANCE-PREFERENCE REACTIONS OF RAINBOW TR. (SALMO GARDNER) AFTER PROLONGED EXPOSURE TO CHROMIUM (VI). *Proceedings of the Third Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986*, J. S. S. Lakshmintra editor. *Can. Tech. Rep. Fish. Aquat. Sci. No. 1575*, p. 90-91, 1987. English and French abstract only. FR 3
[Fac. Eng., McGill Univ., 817 Sherbrooke St. W., Montreal, PQ, Canada H3A 2K6] *Oncorhynchus myk*
- 93-003584 Anton, F. A.; E. Laborda; P. Laborda and E. Ramos. CARBOPURAN ACUTE TOXICITY FRESHWATER ALGAE AND FISH. *Bull. Environ. Contam. Toxicol.* 50(3):400-406, 1993. FR 38(2)
[Ecotoxicol. Group, Environ. Sci. Cent., Spanish Council Sci. Res., Serrano 115-dpto. St., Madrid 28006, S. Caranhus auratus.
- 93-003585 Anton, F. A.; E. Laborda and P. Laborda. ACUTE TOXICITY OF TECHNICAL CAPTAN TO AL. AND FISH. *Bull. Environ. Contam. Toxicol.* 50(3):392-399, 1993. FR 38(2)
[Ecotoxicol. Group, Environ. Sci. Cent., Spanish Council Sci. Res., Serrano 115-dpto. St., Madrid 28006, S. Caranhus auratus.
- 93-003586 Babich, H.; M. R. Palace and A. Stern. OXIDATIVE STRESS IN FISH CELLS. IN VITRO STUD. *Arch. Environ. Contam. Toxicol.* 24(2): 173-178, 1993. FR 38(2)
[Stem Cell. Women, Yeshiva Univ., Dep. Biol. Sci., 245 Lexington Ave., New York, NY 10016] *Lep. macrochirus*.
- 93-003587 Bakshi, Neena. TOXICITY EFFECT OF COPPER ON THE SURVIVAL, BEHAVIOUR / HISTOPATHOLOGICAL CHANGES IN THE LIVER, INTESTINE AND KIDNEY IN A FRESHWATER TELE. *HETEROPNEUSTES FOSSILUS (BLOCH)*. *Uttar Pradesh J. Zool.* 11(2):117-120, 1991. From Paryavaran A 9(3):5203-118, 1992. FR 38(2)
[Dep. Zool., DAV (PC) Coll., Dehra Dun-258 001, India]
- 93-003588 Bamgbose, O.; K. Jinadu and O. Osibanjo. GALZOIDES DECADACTYLUS: A BIO-INDIC. FOR CHLORINATED HYDROCARBONS IN THE NIGERIAN MARINE ENVIRONMENT. *J. Environ. Sci. J. R. Part A Environ. Sci. Eng.* 28(2):321-337, 1993. FR 38(2)
[Dep. Environ. Manage. & Toxicol., Univ. Agric., Abeokuta, P.M.B. 2240, Abeokuta, Ogun State, Nigeri.
- 93-003589 Basakara, P.; C. Gopalakrishnaswamy and P. C. Sathyabama. IMPACT OF COMMERE DETERGENT (MIRMA) ON FEEDING ENERGETICS AND PROTEIN METABOLISM IN THE FRESHWA TELEOST FISH *ORFUCHROMIS MOSSAMBICUS*. *J. Ecotoxicol. Environ. Monit.* 1(1):31-40, 1991. Fr Paryavaran Abstr. 8(4):9104-123, 1991. FR 38(2)
[Dep. Zool., APA Coll. Arts Cult., Palani-624 602, India]

FISHERIES REVIEW

TOXICOLOGY; BIOASSAYS (Continued)

93-003590 Behra, Ronata *IN VITRO* EFFECTS OF CADMIUM, ZINC AND LEAD ON CALMODULIN-DEPENDENT ACTIONS IN *ONCORHYNCHUS MYKISS*, *MYTILUS* SP., AND *CHLAMYDOMOMAS RENHARDTII*. *Arch Environ. Contam. Toxicol.* 24(1):21-27, 1993. FR 38(2)

[EAWAG (Swiss Fed. Inst. Water Resour. & Water Pollut. Control), CH-8600 Dübendorf, Switzerland]

93-003591 Berman, S. S. and V. J. Boyko ICES SEVENTH ROLIND INTERCALIBRATION FOR TRACE METALS IN BIOLOGICAL TISSUE ICES 7/TM/07 (PART 2). *Int. Council. Explor. Sea Coop. Res. Rep. No. 180*, 118p., 1992. FR 38(2)

[Mar. Analytical Chem. Standards Program, Div. Chem., Natl. Res. Council, Ottawa, ON, Canada K1A 0R9]

93-003592 Bernstein, J. W. and S. M. Swanson PARASITE LOAD AND HEMATOLOGICAL PARAMETERS IN WILD FISH SPECIES WITH ELEVATED RADIONUCLIDE LEVELS. *Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Atlantic, New Brunswick, November 12-14, 1986*. J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci. No. 1575* p. 49-51, 1987. English and French abstract only. FR 38(2)

[Dep. Appl. Microbiol. & Food Sci., Univ. Saskatchewan, Saskatoon, SK, Canada S7N 0W0] *Catostomus commersoni*, *Corygonus clappaeformis*, and *Salvelinus namaycush* in Canada

93-003593 Bodensteiner, Leo R.; Robert J. Sheehan, William M. Lewis; Paul S. Wils and Roger L. Homan. EFFECTS OF REPETITIVE FORMALIN TREATMENTS ON CHANNEL CATFISH JUVENILES. *J. Aquat. Anim. Health* 5(1):59-63, 1993. FR 38(2)

[Coop. Fish. Res. Lab. & Dep. Zool., South. Ill. Univ., Carbondale 62901] *Ictalurus punctatus*.

93-003594 Botschlo, Ana Amélia P. [FISH] PRODUCTION IN PORT VELHO, RONDONIA (1984-89) - SOME ECOLOGICAL ASPECTS OF RELEVANT COMMERCIAL SPECIES. *Acta Amazonica* 22(1):163-172, 1992. In Portuguese with English summ. FR 38(2)

[Dep. Cienc. Biomed., Univ. Fed. Rondonia, C.P. 1314, 78900, Porto Velho, RO, Argentina] *Brachyplatystoma flavicans*, *Colossoma macropomum*, *Prochilodus nigricans*, and *Cichla* in Brazil.

93-003595 Boychuk, R. J. and W. L. Lockhart HEPATIC MIXED FUNCTION OXIDASE ENZYMES IN WHITE SUCKERS (*CATOSTOMUS COMMERSONI*) OVER A SEASONAL CYCLE, AND FOLLOWING INJECTION WITH PCB CONGENER 77. *Int. Assoc. Great Lakes Res. Conf. No. 35* p. 180, 1992. Abstract only. FR 38(2)

[Zool. Dep., Univ. Manitoba, Winnipeg, MB, Canada R3T 2N2]

93-003596 Bradbury, Steven P.; Julia M. Dady, Patrick N. Fitzsimmons; Michelle M. Volt; Dean E. Hammenmelster and Russell J. Erickson. TOXICOKINETICS AND METABOLISM OF ANILINE AND 4-CHLOROANILINE IN MEDAKA (*ORYZIAS LATIPES*). *Toxicol. Appl. Pharmacol.* 118(2):205-214, 1993. FR 38(2)

[U.S. Environ. Prot. Agency, Environ. Res. Lab., 6201 Congdon Blvd., Duluth, MN 55804]

93-003597 Bucher, Franz and Rudolf Hofer. THE EFFECTS OF TREATED DOMESTIC SEWAGE ON THREE ORGANS (GILLS, KIDNEY, LIVER) OF BROWN TROUT (*SALMO TRUTTA*). *Water Res.* 27(2):255-261, 1993. FR 38(2)

[Hofer Inst. Zool., Univ. Innsbruck, Technikerstr. 25, A-6020 Innsbruck, Austria]

93-003598 Calabrese, E. J.; D. A. Leonard; L. A. Baldwin and P. T. Kowacki. ORNITHINE DECARBOXYLASE (ODC) ACTIVITY IN THE LIVER OF INDIVIDUAL MEDAKA (*ORYZIAS LATIPES*) OF BOTH SEXES. *Ecotoxicol. Environ. Saf.* 25(1):19-24, 1993. FR 38(2)

[Environ. Health Sci., School Public Health, Univ. Mass., Amherst 01003]

93-003599 Campbell, W. C. RADIOACTIVITY IN SURFACE AND COASTAL WATERS OF THE BRITISH ISLES, 1991. *Fish. Res. Aquat. Environ. Monit. Rep. Minist. Agric. Fish. Food (Lowestoft) No. 34*, 68p., 1993. FR 38(2)

[MAFF Dir. Fish. Res., Fish. Lab., Lowestoft, Suffolk NR33 0HT, England]

93-003600 Chan, K. M.; W. S. Davidson and G. L. Fletcher. INDUCTION OF HEPATIC METALLOTHIONEIN MESSENGER RNA IN THE WINTER FLOUNDER (*PSEUDOPLEURONECTES AMERICANUS*) AFTER CADMIUM CHLORIDE INJECTION. *Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986*. J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci. No. 1575*, p. 104-105, 1987. English and French abstract only. FR 38(2)

[Mar. Sci. Res. Lab., Memorial Univ., St. John's, NF, Canada A1C 5S7]

93-003601 Chaturvedi, L. D. and Kavita Agrawal. PHYSIOLOGICAL RESPONSES OF FISH TO ROGOR AND ALACHLOR. PART I. GENERAL IMPACT ON HETEROPNEUSTES FOSSILUS. *Uttar Pradesh J. Zool.* 11(2):93-102, 1991. From Paryavaran Abstr. 9(3):9203-120, 1992. FR 38(2)

[Dep. Zool., Hindu Coll., Meerut Road-244 001, India]

TOXICOLOGY: BIOASSAYS (Continued)

- 93-003602 Chou, C. L. and J. F. Uthe. FACTORS AFFECTING THE MEASUREMENT OF TRACE METALS IN MARINE BIOLOGICAL TISSUE. Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986. J. S. S. Lakshminarayana, editor. Can. Tech. Rep. Fish. Aquat. Sci. No. 1575. p. 39. 1987. English and French abstract only. FR 38(2)
[Fish. & Environ. Sci. Div., Fish. Res. Branch, Dep. Fish. & Oceans, P.O. Box 550, Halifax, NS, Canada B3J 2S7]
- 93-003603 Christensen, B. UPTAKE AND RELEASE OF FLUORIDE IN ARCTIC CHAR. *Environ. Toxicol. Chem.* 6(7):529-533. 1987. FR 38(2)
[Sjallingund Kommune, DK-7070, Roslev, Denmark] *Salvelinus alpinus*.
- 93-003604 Clemens, Janine H.; Michael R. van den Heuvel, D. George Dixon and Niels C. Bols. A COMPARISON OF FISH AND MAMMALIAN IN VITRO 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN TOXIC EQUIVALENTS FACTORS FOR SELECTED CONGENERS OF PCDDs, PCDFs AND PCBs USING THE RAINBOW TROUT HEPATOCYTE (RTL-W1) AND RAT HEPATOMA (H4IIE) CELL LINES. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 101. 1992. Abstract only. FR 38(2)
[Univ. Waterloo, Dep. Biol., Waterloo, ON, Canada N2L 3G1] *Oncorhynchus mykiss*.
- 93-003605 Cockell, K. A., J. W. Hilson and W. J. Bettger. HEPATOBILIARY AND HEMATOLOGICAL EFFECTS OF DIETARY DISODIUM ARSENATE HEPTAHYDRATE IN JUVENILE RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). *Comp. Biochem. Physiol. C Comp. Pharmacol. Toxicol.* 103(3):453-458. 1992. FR 38(2)
[T.K. Arumay/Natl. Inst. Nutr. Fellow, Div. Gastroenterol., Dep. Med., MCN G-2104, Vanderbilt Univ., Nashville, TN 37232-2279]
- 93-003606 Corison, Michael; John M. Gunn and J. Robert Morris. PREDICTION OF LAKE TROUT (*SALVELINUS NAMAYCUSH*) PRESENCE IN LOW-ALKALINITY LAKES NEAR SUDBURY, ONTARIO. *Can. J. Fish. Aquat. Sci.* 49(Suppl. 1):95-101. 1992. In English with French summary. FR 38(2)
[Gunn: Ontario Minist. Nat. Resour., Fish. Res., Dep. Biol., Laurentian Univ., Sudbury, ON, Canada P3E 2C5]
- 93-003607 Connell, Des and Ross Maxwell. MECHANISM AND PREDICTION OF NONSPECIFIC TOXICITY TO FISH USING BIOCONCENTRATION CHARACTERISTICS. *Ecotoxicol. Environ. Saf.* 24(3):247-265. 1992. FR 38(2)
[Cent. Catchment & Instream Res., Griffith Univ., Nathan Qld. 4111, Australia]
- 93-003608 Corlaine, Suzan; Chris Metcalfe and Doug Hafner. DEPURATION OF COPLANAR PCBs IN RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 111. 1992. Abstract only. FR 38(2)
[Dep. Biol., Univ. Windsor, Windsor, ON, Canada]
- 93-003609 Coyle, James J.; Denny R. Buckler; Christopher G. Ingersoll; James F. Falchid and Thomas W. May. EFFECT OF DIETARY SELENIUM ON THE REPRODUCTIVE SUCCESS OF BLUEGILLS (*LEPOMIS MACROCHIRUS*). *Environ. Toxicol. Chem.* 12(3):551-565. 1993. FR 38(2)
[U.S. Fish & Wildl. Serv., 911 N.E. 11th Ave., Portland, OR 97232-4101]
- 93-003610 de Bruijn, Jack and Joop Hermens. INHIBITION OF ACETYLCHOLINESTERASE AND ACUTE TOXICITY OF ORGANOPHOSPHOROUS COMPOUNDS TO FISH: A PRELIMINARY STRUCTURE-ACTIVITY ANALYSIS. *Aquat. Toxicol. (Amst.)* 24(3-4):257-274. 1993. FR 38(2)
[Dir.-Gen. Environ. Prot., Dir. Chem., Saf. & Radiation Prot., P.O. Box 30945, 2500 GX, S-Gravenhage, Netherlands] *Pimelea reduzula*.
- 93-003611 Delorme, P. D.; F. J. Ward; W. L. Lockhart and D. C. G. Muir. REPRODUCTIVE SUCCESS OF LAKE TROUT AND WHITE SUCKERS GIVEN SINGLE INJECTIONS OF TOXAPHENE, CHLORDANE OR 2,3,4,7,8-PENTACHLORODIBENZOPURAN. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 180. 1992. Abstract only. FR 38(2)
[Dep. Zool., Univ. Manitoba, Winnipeg, MB, Canada R3T 2N2] *Salvelinus namaycush* and *Catostomus commersoni* in Canada.
- 93-003612 Deotay, B. M. and S. B. Wagh. EFFECT OF THIODON ON MUSCLE CONTENTS OF THE CYPRINID FISH *BARBUS BENDIGISS* (HAM.). *J. Environ. Biol.* 12(3):307-312. 1991. From *Paryavaran Abh.* 8(4):9104-129. 1991. FR 38(2)
[Zool. Res. Lab., Arts Sci. Comm. Coll., Satana (Nashik)-423 301, India]
- 93-003613 Don, K. G., W. R. Parker; S. J. Forsford and J. D. A. Vaughan. THE ACUTE AND CHRONIC TOXICITY OF ANTIMONY TO DAPHNIA MAGNA AND RAINBOW TROUT. Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986. J. S. S. Lakshminarayana, editor. Can. Tech. Rep. Fish. Aquat. Sci. No. 1575. p. 40-43. 1987. English and French abstract only. FR 38(2)
[Environ. Prot. Serv., Conserv. & Prot., Environ. Canada, 45 Alderney Dr., Dartmouth, NS, Canada B2Y 2N5] *Oncorhynchus mykiss*.

FISHERIES REVIEW

TOXICOLOGY: BIOASSAYS (Continued)

- 93-003614 du Preez, Hein P., E. van Rensburg and J. H. J. van Vuren. PRELIMINARY LABORATORY INVESTIGATION OF THE BIOCONCENTRATION OF ZINC AND IRON IN SELECTED TISSUES OF THE SANDED TILAPIA, *TILAPIA SPARRMANII* (CICHLIDAE). *Bull. Environ. Contam. Toxicol.* 50(5):674-681. 1993. FR 30(2)
[Res. Unit Aquat. & Terrestrial Ecosyst., Dep. Zool., Rand Afrikaans Univ., P. O. Box 524, Auckland Park 2006, South Africa]
- 93-003615 Duarte, Ana Paula and Elsa Mendonça. THE STUDY OF ICHTHYOPLANKTON IN A COASTAL AREA INFLUENCED BY PULP INDUSTRY EFFLUENTS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 492. 1989. Abstract only. FR 30(2)
[Lab. Nac. Engenharia & Tecnol. Ind., DEI - Ind. Environ. Impact Dep., Estrada Nac. No. 10, 2685 Sacavem, Portugal]
- 93-003616 Eaton, John G.; William A. Swenson; J. Howard McCormick; Timothy D. Simonson and Kathleen M. Jensen. A FIELD AND LABORATORY INVESTIGATION OF ACID EFFECTS ON LARCEMOUTH BASS, ROCK BASS, BLACK CRAPPIE, AND YELLOW PERCH. *Trans. Am. Fish. Soc.* 121(5):644-658. 1992. FR 30(2)
[U.S. Environ. Prot. Agency, Environ. Res. Lab., Duluth, MN 55804] *Micropterus salmoides*, *Ambloplites rupestris*, *Pomoxis nigromaculatus*, and *Perca flavescens* in Wisconsin.
- 93-003617 El-Daimy, I. A., S. A. Sakr, M. M. El-Saadany and S. A. Gaber. ELECTRON MICROSCOPIC STUDY OF THE LIVER OF *TILAPIA NILOTICA* EXPOSED TO NEOPYRUTHRIN. *Bull. Environ. Contam. Toxicol.* 50(5):602-608. 1993. FR 30(2)
[Sakr. Zool. Dep., Fac. Sci., Menoufia Univ., Shebin El-Kh., Egypt]
- 93-003618 Endean, R.; J. K. Griffith, J. J. Roberts and S. A. Monks. MULTIPLE TOXINS IN A SPECIMEN OF THE NARROW-BARRED SPANISH MACKEREL, *SCOMBRIFORMIS COMMERCSONI*. *Toxicol.* 31(2):190-204. 1993. FR 30(2)
[Biomol. Res. Inst., 343 Royal Parade, Parkville, Vic. 3052, Australia]
- 93-003619 Falk-Petersen, I.-B. and E. Kjørsvik. HISTOLOGICAL AND ULTRASTRUCTURAL EFFECTS DUE TO HYDROCARBON EXPOSURE IN LARVAL COD (*GADUS MORHUA* L.). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 403. 1989. Abstract only. FR 30(2)
[Norwegian Coll. Fish. Sci., Univ. Tromsø, P. O. Box 3003 Gulveg, N-9001 Tromsø, Norway]
- 93-003620 Fent, Karl and John J. Stegeman. EFFECTS OF TRIBUTYL TIN IN VIVO ON HEPATIC CYTOCHROME P450 FORMS IN MARINE FISH. *Aquat. Toxicol.* (Amst.) 24(3-4):219-240. 1993. FR 30(2)
[Swiss Fed. Inst. Water Resour., Water Pollut. Control (EAWAG/ETH), CH 8600 Dübendorf, Switzerland] *Senotenus chrysops*.
- 93-003621 Folmar, L. C.; S. Bonamelli; T. Moody and J. Gibson. THE EFFECT OF SHORT-TERM EXPOSURE TO THREE CHEMICALS ON THE BLOOD CHEMISTRY OF THE PINFISH [*LACODON RHOMBODES*]. *Arch. Environ. Contam. Toxicol.* 24(1):83-86. 1993. FR 30(2)
[U.S. Environ. Prot. Agency, Environ. Res. Lab., Sabine Island, Gulf Breeze, FL 32561]
- 93-003622 Furt, A.; Douglas Halpern and Khosrow Adeli. CYTOTOXICITY AND GENOTOXICITY OF SEDIMENT EXTRACTS FROM THE HUROMIRIE CORRIDOR IN THE GREAT LAKE REGION. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 103. 1992. Abstract only. FR 30(2)
[Adelt. Oep. Chem. & Biochem., Univ. Windsor, Windsor, ON, Canada N9B 3P4]
- 93-003623 Garg, Vena; S. D. Tyagi; Neema Singh and S. C. Agarwal. THALIUM NITRATE INDUCED HAEMATO BIOCHEMICAL ANALYSIS OF HETEROPNEUSTES FOSSEUS BLOOD. *J. Environ. Biol.* 12(3):315-323. 1991. From *Paryavaran Abstr.* 8(4):5104-134. 1991. FR 30(2)
[Lab. Environ. Endocrinol. Biochem. Res., Dep. Zool., Meerut Coll., Meerut-250 005, India]
- 93-003624 Gendusa, Tony C.; Thomas L. Beltinger and John H. Rodgers. TOXICITY OF HEXAVALENT CHROMIUM FROM AQUEOUS AND SEDIMENT SOURCES TO *PIMPHALES PROMELAS* AND *ICTALURUS PUNCTATUS*. *Bull. Environ. Contam. Toxicol.* 50(1):144-151. 1993. FR 30(2)
[Camp Dresser & McKee, Inc., Sixth & Last Chance Gulch, Suite 616, Helena, MT 59601]
- 93-003625 Gerstenberger, S. L.; J. Pratt-Sholley; M. S. Beattie and J. A. Dellinger. MERCURY CONCENTRATIONS OF WALLEYE (*STIZOSTEDION WITRUM WITRUM*) IN 34 NORTHERN WISCONSIN LAKES. *Bull. Environ. Contam. Toxicol.* 50(4):612-617. 1993. FR 30(2)
[Lake Superior Res. Inst., Univ. Wis., 1000 Grand Ave., Superior 54880]
- 93-003626 Gibson, W. A. C. THE MITIGATING EFFECT OF CALCIUM ON ALUMINIUM TOXICITY IN TWO SPECIES OF FRESHWATER FISH. *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshops*, Moncton, New Brunswick, November 12-14, 1986. J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 80-89. 1987. English and French abstract only. FR 30(2)
[Trent Univ., Peterborough, ON, Canada] *Oncorhynchus mykiss* and *Luxilus cornutus*.

TOXICOLOGY; BIOASSAYS (Continued)

- 93-003627 Gill Tejendra, S.; Jalshree Parde and Hemo Tewari. INDIVIDUAL AND COMBINED TOXICITY OF COMMON PESTICIDES TO TELLUST PUNTIUS CONCHONILUS HAMILTON. *Indian J. Exp. Biol.* 29(2):145-148 1991. From *Paryavaran Abstr.* 8(4):9104-137 1991. FR 38(2)
[Dep. Zool., Kuruzum Univ., Naini Tal-263 002, India]
- 93-003628 Gopal, K., Murali D. Ram and Deepa Agarwal. SOME PHYSIOLOGICAL CONSEQUENCES TO FRESH WATER FISH, *CHANNA PUNCIATULUS*, AFTER EXPOSURE TO LINDANE. *Bull. Environ. Contam. Toxicol.* 50(2):187-191. 1993. FR 38(2)
[Aquat. Toxicol. Sect., Ind. Toxicol. Res. Cent., Post Box No. 80, Mahatma Gandhi Marg, Lucknow-226 001, India]
- 93-003629 Gopal, V. and K. Maheswari Devi. INFLUENCE OF NUTRITIONAL STATUS ON THE MEDIAN TOLERANCE LIMITS [LC₅₀] OF *OPHIOCEPHALUS STRIATUS* FOR CERTAIN HEAVY METAL AND PESTICIDE TOXICANTS. *Indian J. Environ. Health* 33(3):393-394. 1991. From *Paryavaran Abstr.* 9(3):9203-136 1992. FR 38(2)
[Newo Physiol. Behav. Sci., Dep. Zool., Bharathiar Univ., Coimbatore-641 046, India]
- 93-003630 Haasch, Mary L.; Ellen M. Quandt; Leslie A. Sutherland; Mark S. Goodrich and John J. Loch. HEPATIC CYP1A1 INDUCTION IN RAINBOW TROUT BY CONTINUOUS FLOWTHROUGH EXPOSURE TO β -NAPHTHOFLAVONE. *Fundam. Appl. Toxicol.* 20(1):72-82. 1993. FR 38(2)
[Med. Coll., Pharmacol. & Toxicol. Dep., Milwaukee, WI 53226] *Oncorhynchus mykiss*.
- 93-003631 Hall, Lenwood W., Jr.; Michael C. Ziegenfuss, Steven A. Fischer, John A. Sullivan and Deborah M. Palmer. THE INFLUENCE OF CONTAMINANT AND WATER QUALITY CONDITIONS ON LARVAL STRIPED BASS IN THE POTOMAC RIVER AND UPPER CHESAPEAKE BAY IN 1990: AN *IN SITU* STUDY. *Arch. Environ. Contam. Toxicol.* 24(1):1-10. 1993. FR 38(2)
[Univ. Md. Syst., Inst. Agric. & Nat. Resour., Agric. Exp. Stn., Wye Res. & Educ. Cent., Box 169, Quantown 21658] *Morone saxatilis* in Virginia.
- 93-003632 Heagler, M. C.; M. C. Newman; M. Mulvey and P. M. Dixon. ALLOZYME GENOTYPE IN MOSQUITOFISH, *GAMBUSIA MOL BROOKI*, DURING MERCURY EXPOSURE. TEMPORAL STABILITY, CONCENTRATION EFFECTS AND FIELD VERIFICATION. *Environ. Toxicol. Chem.* 12(2):385-395. 1993. FR 38(2)
[Dep. Biol. & Environ. Sci., McNeese State Univ., P.O. Box 92000, Lake Charles, LA 70609-9200]
- 93-003633 Hodson, P. V.; P. J. Koeppen-Sams; K. R. Munkittrick; W. L. Lockhart; D. A. Metner; P. L. Luxon; I. R. Snelby; M. M. Gagnon; M. Senor and J. F. Payne. PROTOCOLS FOR MEASURING MIXED FUNCTION OXYGENASES OF FISH LIVER. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1829. 51p. 1991. In English with French summ. FR 38(2)
[Physical & Chem. Sci. Bench, Dep. Fish. & Ocean, Maurice Lamontagne Inst., Box 1000, Mont-Joli, PQ, Canada G5H 3Z4]
- 93-003634 Holtze, K. E. and N. J. Hutchinson. RELATING LABORATORY TESTS OF HYDROGEN ION AND ALUMINUM TOXICITY TO LARGE-SCALE FIELD SURVEYS OF FISH POPULATION LOSSES IN ACIDIFIED WATERS OF EASTERN NORTH AMERICA. *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986.* J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575. p. 20-21. 1987. English and French abstract only. FR 38(2)
[Ontario Minist. Environ., Dorset Res. Cent., P.O. Box 39, Dorset, ON, Canada P0A 1E0] *Salvelinus namaycush*, *S. fontinalis*, *Stizostedion vitreum*, *Micropterus dolomieu*, *M. salmoides*, *Coregonus clupeaformis*, *Catostomus commersoni*, and *Lepomis carolinus*.
- 93-003635 Hora, Manish F. POLYCHLORINATED BIPHENYLS (PCBs) IN COMMON CARP (*CYPRINUS CARPIO*) OF THE UPPER MISSISSIPPI RIVER. *Proc. Ann. Meet. Miss. River Res. Consortium* No. 15. p. 231-239. 1992. FR 38(2)
[Monitoring & Analysis Sect., Div. Water Quality, Pollut. Control Agency, 1935 W. County Rd. B2, Roseville, MN 55113]
- 93-003636 Hutchinson, N. J. ACID RAIN, FISH TOXICOLOGY AND HYPOTHESIS TESTING. *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986.* J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575. p. 17-19. 1987. English and French abstract only. FR 38(2)
[Dorset Res. Cent., Ontario Minist. Environ., P.O. Box 39, Dorset, ON, Canada P0A 1E0]

FISHERIES REVIEW

TOXICOLOGY; BIOASSAYS (Continued)

- 93-003637 Hutchinson, N. J. DO LABORATORY TOXICITY TESTS ADEQUATELY DESCRIBE FISH RESPONSE TO ACIDIFICATION IN ANIMAL? Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986. J. S. Lakshminarayana, editor. Can. Tech. Rep. Fish. Aquat. Sci. No. 1575 p. 22. 1987. English and French abstract only. FR 38(2)
[Dorset Res. Cent., Ontario Minist. Environ., P.O. Box 39, Dorset, ON, Canada P0A 1E0] *Salvelinus vitreus*, *Salvelinus namaycush*, and *S. fontinalis*
- 93-003638 Hutchinson, N. J. and K. E. Holze. FACTORS MODIFYING LETHALITY OF HClON AND AL TO SALMONID EARLY LIFE STAGES. Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986. J. S. Lakshminarayana, editor. Can. Tech. Rep. Fish. Aquat. Sci. No. 1575. p. 23. 1987. English and French abstract only. FR 38(2)
[Dorset Res. Cent., Ontario Minist. Environ., P. O. Box 39, Dorset, ON, Canada P0A 1E0]
- 93-003639 Ingersoll, Christopher Glenn. THE EFFECTS OF PH, ALUMINUM, AND CALCIUM ON SURVIVAL AND GROWTH OF BROOK TROUT (*SALVELINUS FONTINALIS*) EARLY LIFE STAGES. Ph.D. dissertation, Univ. Wyo. 137p. 1986. From Diss. Abstr. Int. II Sci. Eng. 47(7):2707. 1987. Order No. DA8623090. FR 38(2)
- 93-003640 Jagoe, Charles H., Victoria E. Matey, Terry A. Haines and Victor T. Komov. EFFECT OF BERYLLIUM ON FISH IN ACID WATER IS ANALOGOUS TO ALUMINIUM TOXICITY. *Aquat. Toxicol. (Amst.)* 24(3-4):241-256. 1993. FR 38(2)
[Univ. Ga., Savannah River Eco. Lab., P.O. Drawer E, Aiken, SC 29802] *Perca fluviatilis* and *Rutilus rutilus*
- 93-003641 Jha, D. S. ALTERATIONS IN THE PROTEIN AND LIPID CONTENTS OF INTESTINE, LIVER AND GONADS IN THE LEAD EXPOSED FRESHWATER MURREL, *CHANNIA PUNCTIATUS* (BLOCH). *J. Ecol. Res.* 3(1):29-34. 1991. From *Parvayan Abstr.* 8(4):9104-140. 1991. FR 38(2)
[Zool. Dep., LN Mithila Univ., Darbhanga-845 004, India]
- 93-003642 Johansen, P. H. PENTACHLOROPHENOL. A REVIEW OF ITS EFFECTS AT THE LEVEL OF THE INDIVIDUAL JUVENILE LARGEMOUTH BASS. Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986. J. S. S. Lakshminarayana, editor. Can. Tech. Rep. Fish. Aquat. Sci. No. 1575. p. 106-107. 1987. English and French abstract only. FR 38(2)
[Dep. Biol., Queen's Univ., Kingston, ON, Canada K7L 3N6] *Micropterus salmoides*
- 93-003643 Jonsson, Claudio M. and Maria Cecilia F. Toledo. ACUTE TOXICITY OF ENDO SULFAN TO THE FISH *HYPHESOBRYCON BIFASCIATUS* AND *BRACHYDANIO RERIO*. *Arch. Environ. Contam. Toxicol.* 24(2):151-155. 1993. FR 38(2)
[Toledo, FEAUNICAMP-C.P. 6121, 13.001-970 Campinas, SP, Brazil]
- 93-003644 Jonsson, Claudio M. and Maria Cecilia F. Toledo. BIOACCUMULATION AND ELIMINATION OF ENDO SULFAN IN THE FISH YELLOW TETRA (*HYPHESOBRYCON BIFASCIATUS*). *Bull. Environ. Contam. Toxicol.* 50(4):572-577. 1993. FR 38(2)
[Toledo: State Univ. Campinas, Fac. Food Eng., Dep. Food Sci., C.P. 6121, 13001 Campinas, SP, Brazil]
- 93-003645 Kaur, Kamaldeep and Asha Dhaswan. VARIABLE SENSITIVITY OF *CYPRINUS CARPIO* EGGS, LARVAE, AND FRY TO PESTICIDES. *Bull. Environ. Contam. Toxicol.* 50(4):593-599. 1993. FR 38(2)
[Fish Res. Complex, Zool. Dep., Punjab Agric. Univ., Ludhiana, Punjab-141 004, India]
- 93-003646 Kaur, Kamaldeep; Asha Dhaswan and H. S. Toor. TOXIC EFFECTS OF INDUSTRIAL EFFLUENTS ON HATCHABILITY AND VIABILITY OF *CYPRINUS CARPIO* EGGS. *Bull. Environ. Contam. Toxicol.* 50(5):640-645. 1993. FR 38(2)
[Fish. Res. Complex, Zool. Dep., Punjab Agric. Univ., Ludhiana-141 004, PB, India] *Oncorhynchus mykiss*, *Cerioda magna*, *Labo rohita*, *Opheichthys punctatus*
- 93-003647 Khan, R. A. and K. Nag. ESTIMATION OF HEMOSIDEROSIS IN SEABIRDS AND FISH EXPOSED TO PETROLEUM. *Bull. Environ. Contam. Toxicol.* 50(1):125-131. 1993. FR 38(2)
[Dep. Biol. & Ocean Sci. Cent., Memorial Univ. Newfoundland, St. John's, NL, Canada A1C 5X7] *Pleuronectes asper*, *Sebastes maliger*, and *Heterogrammus decagrammus* In Alaska.
- 93-003648 Koslowski, Susan; C. D. Metcalfe and Douglas Halfner. EXPOSURE DYNAMICS OF COPLANAR POLYCHLORINATED BIPHENYLS IN LAKE ERIE (HOTA). *Int. Assoc. Great Lakes Res. Conf.* No. 35. p. 168. 1992. Abstract only. FR 38(2)
[Dep. Biol., Univ. Windsor, Windsor, ON, Canada]
- 93-003649 Kovacs, T. G.; P. H. Martel; R. H. Voss; P. E. Whist and R. F. Willes. AQUATIC TOXICITY EQUIVALENCY FACTORS FOR CHLORINATED PHENOLIC COMPOUNDS PRESENT IN PULP MILL EFFLUENTS. *Environ. Toxicol. Chem.* 12(2):281-289. 1993. FR 38(2)
[Pulp & Paper Res. Inst. Canada, 570 St. John's Blvd., Pointe Claire, PQ, Canada H3R 3J9] *Baccharis rostrata*, *Pimephales promelas*, *Oncorhynchus mykiss*, and *Jordanella floridae*

TOXICOLOGY: BIOASSAYS (Continued)

93-003650 Krznovic-Ozretic, M. and B. Ozretic. TOXIC EFFECTS OF PHENOL ON GREY MULLET, *MUGIL ALBATUS* RISSO. *Bull. Environ. Contam. Toxicol.* 40(1):23-29. 1988. FR 30(2)
[Ozretic Cent. Mar. Res., "Ruđer Bošković" Inst., 52210 Rovinj, Yugoslavia]

93-003651 Lakshminarayana, J. S. S. PROCEEDINGS OF THE THIRTEENTH ANNUAL AQUATIC TOXICITY WORKSHOP, NOVEMBER 12-14, 1986, MONCTON, NEW BRUNSWICK. *Can. Tech. Rep. Fish. Aquat. Sci. No. 1575*, 178p., 1987. Available from Dep. Fish. & Oceans, Bayfield Inst. (GLLFAS), Burlington, ON, Canada L7R 4A6. FR 30(2)

[Dep. Biol., Univ. Moncton, Moncton, NB, Canada E1A 3E9] Selected abstracts indexed in this issue of Fisheries Review.

93-003652 Larsson, Per; Gudrun Bremle and Lennart Olof. UPTAKE OF PENTACHLOROPHENOL IN FISH OF ACIDIFIED AND NONACIDIFIED LAKES. *Bull. Environ. Contam. Toxicol.* 50(5):653-650. 1993. FR 30(2)

[Limnology, Dep. Ecol., Univ. Lund, Box 65, 221 00 Lund, Sweden] *Environ. Contam. Toxicol.*

93-003653 Leonard, D. R. P.; W. C. Campbell; P. Caldwell; A. Brown and L. S. Austin. MARINE RADIOACTIVITY IN THE CHANNEL ISLANDS. *Fish. Res. Data Rep. Minist. Agric. Fish. Food (Lowestoft) No. 29*, 42p., 1992. FR 30(2)
[MAFF, Dir. Fish. Res., Fish. Lab., Lowestoft, Suffolk NR33 0HT, England]

93-003654 Lewis, J. W.; A. N. Kay and N. S. Hanna. RESPONSES OF ELECTRIC FISH (FAMILY MORMYRIDAE) TO CHEMICAL CHANGES IN WATER QUALITY: L. CYANIDE. *Environ. Technol. Lett.* 13(12):1169-1174. 1992. FR 30(2)

[Dep. Biol., Royal Holloway & Bedford New Coll., Univ. London, Egham, Surrey, England] *Gnathopneustes petersi* and *G. tomardus*.

93-003655 Union, Tyler Kath. SALINITY AND TEMPERATURE EFFECTS ON THE CHRONIC TOXICITY OF 2,4-DINITROPHENOL AND 4-NITROPHENOL TO SHEEPSHEAD MINNOWS (*CYPRINODON VARIEGATUS*). *M.S. Thesis, Univ. W. Va.*, 1992. From *Master's Abstr. Int.* 31(1):215. 1993. FR 30(2)

93-003656 Lundström, Ronald C.; Christopher Martig; Debra A. Adams, Debra J. Rhoades and Lowell V. Skel. PROGRESS IN THE DEVELOPMENT OF MONOCLONAL ANTIBODIES TO SEMI-PURIFIED MAITOTOXIN EXTRACTS FROM *GAMBERDUSCUS TOXICUS*. *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am.* No. 12, p. 678. 1988. Abstract only. FR 30(2)

[NMFS, Gloucester, MA]

93-003657 Luxon, P. L.; K. R. Monkstrick; G. J. Van Der Kraak and M. E. McMaster. IMPACTS OF LOW LEVEL SAMPLING STRESS ON NON-SPECIFIC BIOCHEMICAL INDICATORS OF STRESS IN FISH EXPOSED TO PULP MILL EFFLUENT. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 84. 1992. Abstract only. FR 30(2)

[GLLFAS, Dep. Fish. & Oceans, P.O. Box 5050, Burlington, ON, Canada L7R 4A6]

93-003658 Madenjian, Charles P. and Stephen R. Carpenter. INDIVIDUAL-BASED MODEL FOR DIETARY CONTAMINATION IN LAKE TROUT. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 170. 1992. Abstract only. FR 30(2)

[U.S. Fish & Wildl. Serv., Sandusky Biol. Stn., 6100 Columbus Ave., Sandusky, OH 44870] *Salvelinus namaycush* in Lake Michigan.

93-003659 Madenjian, Charles P.; Stephen R. Carpenter and George E. Noguči. INDIVIDUAL-BASED MODEL FOR DIETARY CONTAMINATION IN LAKE TROUT. *Arch. Environ. Contam. Toxicol.* 24(1):70-82. 1993. FR 30(2)

[U.S. Fish & Wildl. Serv., Natl. Fish. Res. Cent.-Great Lakes, Sandusky Biol. Stn., 6100 Columbus Ave., Sandusky, OH 44870] *Salvelinus namaycush* in Lake Michigan.

93-003660 Magnella, Stephen J.; Christopher C. Kohler and Donald R. Tindall. ACANTHURIDS DO NOT AVOID CONSUMING CULTURED TOXIC DINOFLAGELLATES YET DO NOT BECOME CIGUATOXIC. *Trans. Am. Fish. Soc.* 121(6):737-745. 1992. FR 30(2)

[Parks & Wildl. Dep., San Marcos, TX 78667] *Acanthurus bahianus* and *A. chirurgus*.

93-003661 Mazurczek, John E.; Donna L. Wales and John M. Gunn. ESTIMATED IMPACTS OF SO₂ EMISSIONS FROM SUDBURY SMELTERS ON ONTARIO'S SPORTFISH POPULATIONS. *Can. J. Fish. Aquat. Sci.* 49(Suppl. 1):87-94. 1992. In English with French summary. FR 30(2)

[Gunn: Ontario Minist. Nat. Resour., Fish. Res., Dep. Biol., Laurentian Univ., Sudbury, ON, Canada P3E 2C6] *Salvelinus namaycush*, *S. fontinalis*, *Micropterus dolomieu*, and *Stizostedion*.

93-003662 McCloskey, John T. and James T. Oris. EFFECT OF ANTHRACENE AND SOLAR ULTRAVIOLET RADIATION EXPOSURE ON GILL ATPase AND SELECTED HEMATOLOGIC MEASUREMENTS IN THE BLUEGILL SUNFISH (*LEPOMIS MACROCHIRUS*). *Aquat. Toxicol. (Amst.)* 24(3-4):207-218. 1993. FR 30(2)

[Univ. Ga., Savannah River Ecol. Lab., P.O. Drawer E, Aiken, SC 29802]

FISHERIES REVIEW

TOXICOLOGY; BIOASSAYS (Continued)

- 93-003653 McGeehy, S M and D G Dixon. WHOLE-BODY ARSENIC CONCENTRATIONS IN RAINBOW TROUT DURING ACUTE EXPOSURE TO ARSENATE. *Ecotoxicol Environ Saf* 24(3):301-308 1992 FR 38(2)
[Dixon: Dep Biol, Univ Waterloo, Waterloo, ON, Canada N2L 3G1] *Oncorhynchus mykiss*
- 93-003654 McGeehy, S M and D G Dixon. THE EFFECTS OF TEMPERATURE ON WATERBORNE ARSENIC TOXICITY TO RAINBOW TROUT (*SALEMO GARDNERI*). Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986. J. S. S. Lakshminarayana, editor. Can. Tech. Rep. Fish Aquat. Sci. No. 1575. p. 27-29. 1987. English and French abstract only. FR 38(2)
[Dep Biol, Univ Waterloo, Waterloo, ON, Canada N2L 3G1]
- 93-003655 McMaster, Mark Ervin. IMPACT OF BLEACHED KRAFT PULP MILL EFFLUENT ON FISH POPULATIONS IN JACKFISH BAY, LAKE SUPERIOR. M.S. thesis, Univ Waterloo (Canada) 149p. 1991. From *Masters Abstr Int.* 31(1):222. 1993. Order No. MAMM67208. FR 38(2)
Catostomus commersoni and *Coregonus clupeaformis*
- 93-003656 Metcalfe, C D. CHEMICAL CARCINOGENESIS STUDIES WITH FISH. Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986. J. S. S. Lakshminarayana, editor. Can. Tech. Rep. Fish Aquat. Sci. No. 1575. p. 98-99. 1987. English and French abstract only. FR 38(2)
[E.R.S. Program, Trent Univ., Peterborough, ON, Canada K9J 7B8] *Ameiurus nebulosus*
- 93-003657 Middaugh, D P, S M Resnick, S E Lantz, C S Heard and J G Mueller. TOXICOLOGICAL ASSESSMENT OF BIODEGRADED PENTACHLOROPHENOL: MICROTOX ® AND FISH EMBRYOS. *Arch Environ Contam Toxicol* 24(2):165-172 1993 FR 38(2)
[Environ. Res Lab, U.S. Environ. Prot. Agency, Sabine Island, Gulf Breeze, FL 32561-3090] *Mendia beryllina* in Florida.
- 93-003658 Mishra, S K and S C Bohera. EVALUATION OF TOXIC EFFECTS OF MERCURIC CHLORIDE ON HEMATOLOGICAL PARAMETERS OF A FRESHWATER FISH *CHANNA PLINCIATUS* (BLOCH). *Environ. Ecol.* 10(2):394-396 1992. From *Panyavaran Abstr.* 9(3):9203-152. 1992. FR 38(2)
[Coll. Fish., Rangalunda, OOTA, Serhampur-760 007, India]
- 93-003659 Mishra, Shivakar, D Sharma and Uma Malkani. FISH MORTALITY AS EFFECTED BY LIQUID EFFLUENTS FROM RAZA TEXTILE LTD. RAMPUR (U.P.) *Int J Ecol Environ Sci* 16(2-3):119-124. 1990. From *Panyavaran Abstr.* 8(4):9104-148. 1991. FR 38(2)
[Dep. Environ. Sci., Coll. Basic Sci., Humanities, GB Pant Univ. Agric. Technol., Panimagar, U.P., India]
- 93-003670 Monroth-McMaster, Cheryl Ann. THE EFFECTS OF UV-B RADIATION ON THE LENS OF THE RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). M.S. thesis, Univ Waterloo (Canada) 115p. 1991. From *Masters Abstr Int.* 31(1):234. 1993. Order No. MAMM69067. FR 38(2)
- 93-003671 Mourad, Mohamed Hassas. CARDIO AND RESPIRATORY RESPONSES IN EEL, *ANGUILLA ANGUILLA* L. DURING EXPOSURE TO DIAZEPAM. *Acta Ichthyol Piscatoria* 22(1):119-123 1992. In English with Polish summ. FR 38(2)
[Nat. Inst. Oceanogr. & Fish., Alexandria, Egypt]
- 93-003672 Mourad, Mohamed Hassan. EFFECTS OF UNDANE ON SWIMMING PERFORMANCE OF CARP (*CYPRINUS CARPIO*). *Acta Ichthyol Piscatoria* 21(2):53-57 1991. In English with Polish summ. FR 38(2)
[Inst. Oceanogr. & Fish., Alexandria, Egypt]
- 93-003673 Mstr, Derek C. G. and Alvin L. Yarochowski. DIETARY ACCUMULATION OF FOUR CHLORINATED DIOXIN CONGENERS BY RAINBOW TROUT AND FATHEAD MINNOWS. *Environ Toxicol. Chem.* 7(3):227-236 1988. FR 38(2)
[Freshwater Inst., Dep. Fish. & Oceans, Winnipeg, MB, Canada R3T 2N6] *Pimephales promelas* and *Oncorhynchus mykiss*.
- 93-003674 Munkittrick, K R. and D. G. Dixon. ASSESSMENT OF REPRODUCTIVE CAPACITY AND LARVAL DEVELOPMENT OF FERAL WHITE SUCKERS (*CATOSTOMUS COMMERSONI*) EXPOSED TO CHRONIC ELEVATIONS OF COPPER AND ZINC. Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986. J. S. S. Lakshminarayana, editor. Can. Tech. Rep. Fish. Aquat. Sci. No. 1575. p. 44-46. 1987. English and French abstract only. FR 38(2)
[Biol. Dep., Univ. Waterloo, Waterloo, ON, Canada N2L 3G1]
- 93-003675 Muzhtar, M. and K. Nagarajan. ALTERED PHYSIOLOGICAL PARAMETERS DUE TO THE PESTICIDE EKALUX IN THE FISH *CATLA CATLA*. *Environ. Ecol.* 10(2):445-447. 1992. From *Panyavaran Abstr.* 9(3):9203-160. 1992. FR 38(2)
[Dep. Zool., Vasavi Coll., Gode-638 316, India]

TOXICOLOGY: BIOASSAYS (Continued)

93-003650 Kraljovic-Ozretic, M. and B. Ozretic. TOXIC EFFECTS OF PHENOL ON GREY MULLET, *MUGIL AURATUS* RISSO. *Bull. Environ. Contam. Toxicol.* 40(1):23-29 1988. FR 38(2)
[Ozretic: Cent. Mar. Res. "Rudjer Boskovic" Inst., 52210 Rovinj, Yugoslavia]

93-003651 Lakshminarayana, J. S. S. PROCEEDINGS OF THE THIRTEENTH ANNUAL AQUATIC TOXICITY WORKSHOP NOVEMBER 12-14, 1986, MONCTON, NEW BRUNSWICK, Can. Tech. Rep. Fish. Aquat. Sci. No. 1575. 178p. 1987. Available from Dep. Fish. & Oceans, Bayfield Inst. (CLIFAS), Burlington, ON, Canada L7R 4A6. FR 38(2)
[Dep. Biol., Univ. Moncton, Moncton, NB, Canada E1A 3E9] Selected abstracts indexed in this issue of Fisheries Review

93-003652 Larsson, Per, Gudrun Bremle and Lennart Olla. UPTAKE OF PENTACHLOROPHENOL IN FISH OF ACIDIFIED AND NONACIDIFIED LAKES. *Bull. Environ. Contam. Toxicol.* 50(5):653-658. 1993. FR 38(2)
[Limnology, Dep. Ecol., Univ. Lund, Box 65, 221 00 Lund, Sweden]

93-003653 Leonard, D. R. P., W. C. Campbell, P. Caldwell, A. Brown and L. S. Austin. MARINE RADIOACTIVITY IN THE CHANNEL ISLANDS. *Fish. Res. Data Rep. Mar. Agric. Fish. Food (Lowestoft)* No. 29. 42p. 1992. FR 38(2)
[MAFF, Div. Fish. Res., Fish. Lab., Lowestoft, Suffolk NR33 0HT, England]

93-003654 Lewis, J. W.; A. N. Kay and N. S. Hanna. RESPONSES OF ELECTRIC FISH (FAMILY MORMYRIDAE) TO CHEMICAL CHANGES IN WATER QUALITY: I. CYANIDE. *Environ. Technol. Lett.* 13(12):1169-1174. 1992. FR 38(2)
[Dep. Biol., Royal Holloway & Bedford New Coll., Univ. London, Egham, Surrey, England] *Gnathopomus petersi* and *C. tamariscus*.

93-003655 Linton, Tyler Keith. SALINITY AND TEMPERATURE EFFECTS ON THE CHRONIC TOXICITY OF 2,4-DINITROPHENOL AND 4-NITROPHENOL TO SHEEPSHEAD MINNOWS (*CYPRINODON VARIEGATUS*). *M.S. thesis, Univ. W. Va.* 1992. From Masters Abstr. Int. 31(1):215. 1993. FR 38(2)

93-003656 Lindstrom, Ronald C.; Christopher Martin; Debra A. Adams; Debra J. Rhoades and Lowell V. Sick. PROGRESS IN THE DEVELOPMENT OF MONOCLONAL ANTIBODIES TO SEMI-PURIFIED MAITOTOXIN EXTRACTS FROM *GAMBIERSCUS TOXICUS*. *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am.* No. 12. p. 678. 1988. Abstract only. FR 38(2)
[NMFS, Gloucester, MA]

93-003657 Luxon, P. L.; K. R. Munkittrick; C. J. Van Der Kraak and M. E. McMaster. IMPACTS OF LOW LEVEL SAMPLING STRESS ON NON-SPECIFIC BIOCHEMICAL INDICATORS OF STRESS IN FISH EXPOSED TO PULP MILL EFFLUENT. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 84. 1992. Abstract only. FR 38(2)
[CLIFAS, Dep. Fish. & Oceans, P.O. Box 5050, Burlington, ON, Canada L7R 4A6]

93-003658 Madenjian, Charles P. and Stephen R. Carpenter. INDIVIDUAL-BASED MODEL FOR DIELDRIN CONTAMINATION IN LAKE TROUT. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 170. 1992. Abstract only. FR 38(2)
[U.S. Fish & Wildl. Serv., Sandusky Biol. Stn., 6100 Columbus Ave., Sandusky, OH 44870] *Salvelinus namaycush* in Lake Michigan.

93-003659 Madenjian, Charles P.; Stephen R. Carpenter and George E. Noguishi. INDIVIDUAL-BASED MODEL FOR DIELDRIN CONTAMINATION IN LAKE TROUT. *Arch. Environ. Contam. Toxicol.* 24(1):70-82. 1993. FR 38(2)
[U.S. Fish & Wildl. Serv., Natl. Fish. Res. Cent.-Great Lakes, Sandusky Biol. Stn., 6100 Columbus Ave., Sandusky, OH 44870] *Salvelinus namaycush* in Lake Michigan.

93-003660 Magnella, Stephen J.; Christopher C. Kohler and Donald R. Threlk. ACANTHURIDS DO NOT AVOID CONSUMING CULTURED TOXIC DINOFAGELLATES YET DO NOT BECOME CIGUATOXIC. *Trans. Am. Fish. Soc.* 121(6):737-745. 1992. FR 38(2)
[Parks & Wildl. Dep., San Marcos, TX 78667] *Acanthurus bahianus* and *A. chirurgus*.

93-003661 Matuszek, John E.; Donna L. Wales and John M. Gunn. ESTIMATED IMPACTS OF SO₂ (MISSIONS FROM SUDBURY SMELTERS ON ONTARIO'S SPORTFISH POPULATIONS. *Can. J. Fish. Aquat. Sci.* 49(Suppl. 1):67-94. 1992. In English with French summary. FR 38(2)
[Comm. Ontario Minist. Nat. Resour., Fish. Res., Dep. Biol., Laurentian Univ., Sudbury, ON, Canada P3E 2C6] *Salvelinus namaycush*, *S. fontinalis*, *Micropterus dolomieu*, and *Siscowetion*

93-003662 McCloskey, John T. and James T. Orls. EFFECT OF ANTHRACENE AND SOLAR ULTRAVIOLET RADIATION EXPOSURE ON GILF ATPase AND SELECTED HEMATOLOGIC MEASUREMENTS IN THE BLUEGILL SUNFISH (*LEPOMIS MICROCHIRUS*). *Aquat. Toxicol. (Amst.)* 24(3-4):207-218. 1993. FR 38(2)
[Univ. Ga., Savannah River Ecol. Lab., P.O. Drawer E, Aiken, SC 29802]

FISHERIES REVIEW

TOXICOLOGY; BIOASSAYS (Continued)

- 93-003663 McGeachy, S. M. and D. G. Dixon WHOLE-BODY ARSENIC CONCENTRATIONS IN RAINBOW TROUT DURING ACUTE EXPOSURE TO ARSENATE. *Ecotoxicol Environ Saf* 24(3):301-308, 1992. FR 38(2)
[Dixon Dep Biol, Univ Waterloo, Waterloo, ON, Canada N2L 3G1] *Oncorhynchus mykiss*
- 93-003664 McGeachy, S. M. and D. G. Dixon THE EFFECTS OF TEMPERATURE ON WATERBORNE ARSENIC TOXICITY TO RAINBOW TROUT [SALMO GARDNERI]. *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986* J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci. No. 1575*, p. 27-29, 1987. English and French abstract only. FR 38(2)
[Dep. Biol, Univ Waterloo, Waterloo, ON, Canada N2L 3G1]
- 93-003665 McMaster, Mark Ervin IMPACT OF BLEACHED KRAFT PULP MILL EFFLUENT ON FISH POPULATIONS IN JACKFISH BAY, LAKE SUPERIOR. M.S. thesis, Univ Waterloo (Canada) 149p, 1991. From *Masters Abstr. Int.* 31(1):222, 1993. Order No. MAMM67208. FR 38(2)
Catostomus commersoni and *Coregonus chupeaformis*.
- 93-003666 Metcalfe, C. D. CHEMICAL CARCINOGENESIS STUDIES WITH FISH. *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986* J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci. No. 1575*, p. 90-99, 1987. English and French abstract only. FR 38(2)
[E. R. S. Program, Trent Univ., Peterborough, ON, Canada K9J 7B8] *Ameiurus nebulosus*
- 93-003667 Middaugh, D. P., S. M. Resnick, S. E. Lantz, C. S. Heard and J. G. Mueller TOXICOLOGICAL ASSESSMENT OF BIODEGRADED PENTACHLOROPHENOL: MICROTOX 80 AND FISH EMBRYOS. *Arch. Environ. Contam. Toxicol.* 24(2):165-172, 1993. FR 38(2)
[Environ. Res. Lab., U.S. Environ. Prot. Agency, Sabine Island, Gulf Breeze, FL 32561-3990] *Menidia beryllina* in Florida.
- 93-003668 Mishra, S. K. and S. C. Behera EVALUATION OF TOXIC EFFECTS OF MERCURIC CHLORIDE ON HEMATOLOGICAL PARAMETERS OF A FRESHWATER FISH *CYPRINUS PUNCTATUS* (BLOCH). *Environ. Ecol.* 10(2):394-396, 1992. From *Paryawaran Abstr.* 9(3):9203-152, 1992. FR 38(2)
[Coll. Fish., Rangalunda, OOTA, Berhanpur-760 007, India]
- 93-003669 Mishra, Shikhar, D. Shama and Uma Malkota FISH MORTALITY AS EFFECTED BY LIQUID EFFLUENTS FROM RAZA TEXTILE LTD. RAMPUR (U.P.), INDIA. *J. Ecol. Environ. Sci.* 16(2-3):119-124, 1990. From *Paryawaran Abstr.* 8(4):9104-148, 1991. FR 38(2)
[Dep. Environ. Sci., Coll. Basic Sci., Humanities, GB Pant Univ. Agric. Technol., Pantnagar, U.P., India]
- 93-003670 Montiel-McMaster, Cheryl Anne. THE EFFECTS OF UWB RADIATION ON THE LENS OF THE RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). M.S. thesis, Univ Waterloo (Canada) 115p, 1991. From *Masters Abstr. Int.* 31(1):234, 1993. Order No. MAMM69067. FR 38(2)
- 93-003671 Mourad, Mohamed Hassan. CARDIO AND RESPIRATORY RESPONSES IN CEL, ANGLILLA ANGLILLA L. DURING EXPOSURE TO DIAZEPAM. *Acta Ichthyol. Piscatorol.* 22(1):119-123, 1992. In English with Polish summ. FR 38(2)
[Natl. Inst. Oceanogr. & Fish., Alexandria, Egypt]
- 93-003672 Mourad, Mohamed Hassan. EFFECTS OF LINDANE ON SWIMMING PERFORMANCE OF CARP (*CYPRINUS CARPIO*). *Acta Ichthyol. Piscatorol.* 21(2):53-57, 1991. In English with Polish summ. FR 38(2)
[Inst. Oceanogr. & Fish., Alexandria, Egypt]
- 93-003673 Muir, Derek C. G. and Alvin L. Yarochewski DIETARY ACCUMULATION OF FOUR CHLORINATED DIOXIN CONGENERS BY RAINBOW TROUT AND FATHEAD MINNOWS. *Environ. Toxicol. Chem.* 7(3):227-236, 1988. FR 38(2)
[Freshwater Inst., Dep. Fish. & Oceans, Winnipeg, MB, Canada R3T 2N6] *Pimephales promelas* and *Oncorhynchus mykiss*.
- 93-003674 Murkittick, K. R. and D. G. Dixon. ASSESSMENT OF REPRODUCTIVE CAPACITY AND LARVAL DEVELOPMENT OF FERAL WHITE SUCKERS (*CATOSTOMUS COMMERSONI*) EXPOSED TO CHRONIC ELEVATIONS OF COPPER AND ZINC. *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986* J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci. No. 1575*, p. 44-46, 1987. English and French abstract only. FR 38(2)
[Biol. Dep., Univ. Waterloo, Waterloo, ON, Canada N2L 3G1]
- 93-003675 Muthaig, M. and K. Nagarajan. ALTERED PHYSIOLOGICAL PARAMETERS DUE TO THE PESTICIDE EKALUX IN THE FISH *CATLA CATLA*. *Environ. Ecol.* 10(2):445-447, 1992. From *Paryawaran Abstr.* 9(3):9203-160, 1992. FR 38(2)
[Dep. Zool., Vasthi Coll., Erode-638 316, India]

TOXICOLOGY; BIOASSAYS (Continued)

93-003676 Najmi, T. A.; Vijay Sharma and Khan A. Haleem. TOXIC EFFECTS OF ENDOSULFAN ON THE STOMACH OF *CLARIAS BARRICHAUS* LINN. *Indian J. Pure Appl. Biol.* 7(1):47-51, 1992. From *Paryayaman Abstr.* 9(3):9203-163, 1992. FR 30(2)

[Dep. Zool., Saffa PG Coll. Sci. Edn., (Bhopal-462 001, India)]

93-003677 Narbonne, J. F., P. M. Sudeas, P. A. Gröler and M. C. Daubeze. METABOLIC EFFECTS OF A POLYCHLORINATED BIPHENYL (PHENOCLOP OP6) ON MULLET, *CHLON LABROSUS*. *Bull. Environ. Contam. Toxicol.* 40(1):8-12, 1988. FR 38(2)

[Lab. Food Toxicol., Univ. Bordeaux 1, Ave. Fac., 33405 Talence Cedex, France]

93-003678 Natarajan, A. V. and N. Govil. EFFECT OF MALATHION ON THE CYTOCHROME P-450 CONTENT OF LIVER MICROSOMES IN A FISH *OPHYRHOCEPHALUS PUNCTATUS*. *Indian Zool.* 15(1&2):17-28, 1991. From *Paryayaman Abstr.* 9(3):9203-166, 1992. FR 30(2)

[Dep. Zool., Bharathiar Univ., Coimbatore-641 046, India]

93-003679 Nimi, A. J. and B. C. Oliver. POLYCHLORINATED BIPHENYL COMPOSITION OF LAKE ONTARIO SALMONIDS. *Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986*. J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 100, 1987. English and French abstract only. FR 30(2)

[Dep. Fish. & Oceans, Canada Cent. Inland Waters, Burlington, ON, Canada L7R 4A6] *Salvelinus fontinalis*, *Salmo trutta*, *Oncorhynchus mykiss*, and *O. kisutch*.

93-003680 Nimi, A. J. NEED FOR A MULTICHEMICAL APPROACH TO ASSESS TOXICOLOGICAL EFFECTS. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 182, 1992. Abstract only. FR 30(2)

[Dep. Fish. & Oceans, Bayfield Inst., Canada Cent. Inland Waters, Burlington, ON, Canada L7R 4A6]

93-003681 O'Brien, M.; B. Flors; W. Sonzogni and H. Anderson. PCBs IN THE SERA OF WISCONSIN CONSUMERS OF GREAT LAKES FISH: DIFFERENTIAL CONDENSER TOXICITY AND PATTERNS OF EXPOSURE. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 175, 1992. Abstract only. FR 30(2)

[Water Chem. Program, Univ. Wis., 465 Henry Mall, Madison 53706]

93-003682 Ortiz, J. A.; A. Rueda, C. Carbonell, J. A. Carrasco, F. Nieto, M. J. Rojo and J. V. Tarazona. ACUTE TOXICITY OF SULFIDE AND LOWER pH IN CULTURED RAINBOW TROUT, ATLANTIC SALMON, AND COHO SALMON. *Bull. Environ. Contam. Toxicol.* 50(1):164-170, 1993. FR 38(2)

[Tarazona, Group Environ. Toxicol., INIA-Anim. Health, E28130 Valdeolmos, Madrid, Spain] *Oncorhynchus mykiss*, *O. kisutch*, and *Salmo salar* in Spain.

93-003683 Ozander, Gary Kent. THE EFFECT OF BENZO(a)PYRENE ON BEHAVIORAL, PHYSIOLOGICAL, AND BIOCHEMICAL PROCESSES OF THE COHO SALMON (*ONCORHYNCHUS KISUTCH*) AND THE RAINBOW TROUT (*SALEMO GARDNERI*). *Ph.D. dissertation, Univ. Wash.*, 1986. From *Diss. Abstr. Int. B Sci. Eng.* 47(12):4795, 1987. FR 38(2)

93-003684 Ozretic, B. and M. Krnjavica-Ozretic. PLASMA SORBITOL DEHYDROGENASE, GLUTAMATE DEHYDROGENASE, AND ALKALINE PHOSPHATASE AS POTENTIAL INDICATORS OF LIVER INTOXICATION IN GREY MULLET (*MUGIL AURATUS* RISSO). *Bull. Environ. Contam. Toxicol.* 50(4):586-592, 1993. FR 38(2)

[Inst. "Ruđer Bosković", Cent. Mar. Res., 52210 Rovinj, Croatia]

93-003685 Palms, Michael D. and William C. Leggett. SUBLETHAL EFFECTS OF HIBERNIA CRUDE OIL ON CAPELIN (*MALLOTUS VILLOSUS*) EMBRYOS. *Repp. P-M. Res. Cons. Int. Explo. Mer.* Vol. 191, p. 493, 1989. Abstract only. FR 38(2)

[Dep. Biol., McGill Univ., 1205 Ave. Dr. Penfield, Montreal, PQ, Canada H3A 101]

93-003686 Palanichamy, R. and V. Murugesu. ACUTE TOXICITY OF HOUSEHOLD DETERGENTS TO A WEED FISH, *RASBORA BLOWGII*. *J. Environ. Biol.* 12(2):143-148, 1991. From *Paryayaman Abstr.* 0(4):9104-156, 1991. FR 38(2)

[Dep. Zool., Yadava Coll., Madurai-625 014, India]

93-003687 Panoff, J. L.; R. M. Wilson; K. A. Payne; A. Lafng and J. B. Sprague. THE EFFECTS OF TOXICANT MIXTURES ON DNA, RNA, AND PROTEIN CONTENT OF FAT HEAD MINNOWS. *Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986*. J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 111-114, 1987. English and French abstract only. FR 38(2)

[Dep. Zool., Univ. Guelph, Guelph, ON, Canada N1G 2W1] *Pimephales promelas*.

93-003688 Patil, P. S.; M. V. Chaudhary, M. P. Gadikari and K. M. Kulkarni. CHANGE IN PROTEASE ACTIVITY OF FISH *RASBORA DANICONIUS* (HAM.) EXPOSED TO MALATHION SUBLETHAL CONCENTRATION. *Environ. Zool.* 10(2):403-405, 1992. From *Paryayaman Abstr.* 9(3):9203-170, 1992. FR 38(2)

[Environ. Physiol. Lab., PG Dep. Zool., Gov. Vidyalaya Mahavidyalaya, Amravati-444 604, India]

FISHERIES REVIEW

TOXICOLOGY; BIOASSAYS (Continued)

93-003689 Patwardhan, S. A. and S. A. Galloway. EFFECT OF SUMITHION ON LIVER, HEPATOPANCREAS AND MESENTERIC PANCREAS OF FRESH-WATER FISH *GAMBUSIA AFFINIS AFFINIS*. *Environ. Ecol.* 9(2):352-355. 1991. From *Paryavaran Abstr.* 8(4):9104-15B. 1991. FR 38(2)

[Dep. Biol. Sci., Ramnarain Ruia Coll., Bombay-400 019, India]

93-003690 Patwardhan, S. A. and S. A. Galloway. SIZE DEPENDENT TOXICITY OF SUMITHION EC 50 ON *GAMBUSIA* (BAIRD AND GIRARD). *Poln. Rev.* 10(1):43-45. 1991. From *Paryavaran Abstr.* 8(4):9104-157. 1991. FR 38(2)

[Dep. Biol. Sci., Ramnarain Ruia Coll., Matunga, Bombay-400 019, India] *G. affinis affinis*.

93-003691 Paul, M. and D. Laliberte. (MERCURY CONTAMINATION AND PCB'S IN SEVEN BASINS OF THE SAINT-LAURENT RIVER, QUEBEC.) Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986. J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575. p. 25-26. 1987. French and English abstract only. FR 38(2)

[Dir. Releves Aquat., Minist. Environ., PQ, Canada C1X 4E4] *Saccostodon vireum*, *Micropterus dolomieu*, and *Esoc lucius*

93-003692 Pavlov, D. D.; G. M. Chivko; Y. V. Gerassimov and V. D. Tonkopy. FEEDING BEHAVIOR AND BRAIN ACETYLCHOLINESTERASE ACTIVITY IN BREAM (*ABRAMIS BRAMA* L.) AS AFFECTED BY DDVP, AN ORGANOPHOSPHORUS INSECTICIDE. *Comp. Biochem. Physiol. C Comp. Pharmacol. Toxicol.* 103(3):563-568. 1992. FR 38(2)

[Inst. Biol. Inland Waters, Acad. Sci. Russia, 152742, Borok, Russia]

93-003693 Piska Ravi, Shankar; Sarala Waghray and Indira Devi. THE EFFECT OF SUBLETHAL CONCENTRATION OF SYNTHETIC PYRETHROID, CYPERMETHRIN TO THE COMMON CARP, *CYPRINUS CARPIO COMMUNIS* (LINNAEUS) FRY. *J. Environ. Biol.* 13(2):89-94. 1992. From *Paryavaran Abstr.* 9(3):9203-173. 1992. FR 38(2)

[Dep. Zool., PG Coll. Sci., Osmania Univ., Saifabad, Hyderabad-500 004, India]

93-003694 Playle, Richard C. and D. George Dixon. COMPETITION BETWEEN LIGANDS AND FISH GILLS FOR METALS: ESTIMATES AND USE OF METAL-GILL STABILITY CONSTANTS. *Int. Assoc. Great Lakes Res. Conf. No.* 35, p. 176. 1992. Abstract only. FR 38(2)

[Univ. Waterloo, Dep. Biol., Waterloo, ON, Canada N2L 3G1] *Pimephales promelas*.

93-003695 Popiker, Gregory J. EFFECTS OF CALCIUM ON THE TOXICITY OF ZINC TO EMBRYOS AND LARVAE OF THE FATHEAD MINNOW (*PIMEPHALES PROMELAS*). *M.S. thesis*, East Ky. Univ. 64p. 1990. FR 38(2)

93-003696 Rahman, A. and Bukhsh, A. K. Khuda. GENOTOXIC POTENTIAL OF SOME INDUSTRIAL EFFLUENTS AND CHEMICAL POLLUTANTS IN FISH BY A RAPID-SCREENING METHOD. *J. Freshwater Biol.* 4(1):39-44. 1992. From *Paryavaran Abstr.* 9(3):9203-178. 1992. FR 38(2)

[Dep. Zool., Univ. Kalyani, Kalyani-741 235, India] *Tilapia mosambica*.

93-003697 Ramakrishnan, M.; T. Malliga Devi; S. Arunachalam and S. Palanichamy. EFFECTS OF PESTICIDES, DECIS AND COROBAN ON FOOD UTILIZATION IN *CYPRINUS CARPIO* VAR. *COMMUNIS*. *J. Ecolotocol. Environ. Monit.* 1(1):56-60. 1991. From *Paryavaran Abstr.* 8(4):9104-162. 1991. FR 38(2)

[PG Res. Dep. Zool., APA Coll. Arts Coll., Palani-624 602, India]

93-003698 Rankin, M. G. and D. G. Dixon. ACUTE AND CHRONIC TOXICITY OF WATERBORNE INORGANIC TRIVALENT ARSENIC TO RAINBOW TROUT (*SALMO GARDNERI*). Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986. J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575. p. 30-33. 1987. English and French abstract only. FR 38(2)

[Univ. Waterloo, Waterloo, ON, Canada N2L 3G1]

93-003699 Sahai, Y. N. and Rajni Gupta. RESIDUE ANALYSIS OF SOME PESTICIDES IN THE BRAIN OF A TELEOST FISH *HETEROPNEUSTES FOSSILIS* (BLOCH). *J. Tissue Res.* 2(1):35-41. 1992. From *Paryavaran Abstr.* 9(3):9203-193. 1992. FR 38(2)

[Zool. Dep., Dr. HS Gour Univ., Sagar-470 003, India]

93-003700 Sancho, E.; M. D. Ferrando; E. Andreu and M. Gamon. BIOCONCENTRATION AND EXCRETION OF DIAZINON BY EEL. *Bull. Environ. Contam. Toxicol.* 50(4):576-585. 1993. FR 38(2)

[Dep. Anim. Physiol., Fac. Biol. Sci., Univ. Valencia, Dr. Moliner 50, E-46100 Burjassot, Valencia, Spain] *Anguilla anguilla*.

93-003701 Sarbadhikari, Anjana and Robin Kumar Sur. EFFECT OF SHORT DURATION EXPOSURE TO METHYL PARATHION FOLLOWED BY RECOVERY ON ACTIVITIES OF SOME ENZYMES OF THE FISH *OREOCHROMIS NILOTICUS* (SMITH). *Environ. Ecol.* 10(2):330-340. 1992. From *Paryavaran Abstr.* 9(3):9203-197. 1992. FR 38(2)

[Anim. Physiol. Lab., Dep. Zool., Calcutta Univ., 35 Ballygunge Circular Rd., Calcutta-700 019, India]

TOXICOLOGY: BIOASSAYS (Continued)

93-003702 Sarkar, S. K. TOXICITY EVALUATION OF UREA AND AMMONIUM SULPHATE TO ORFIOCHROMIS MOSSAMBICUS (PETERS) / *Ecobiol* 3(1) 79-80, 1991. From Paryavaran Abstr. B(4) 9104-169, 1991. FR 38(2)

[Zool. Dep., Nita] [Nagar Day Coll., Regent Park, Calcutta-700 040, India]

93-003703 Sarkar, Sultan Salauddin and Jagabandhu Nanda. TOXIC EFFECTS OF ORGANOPHOSPHORUS PESTICIDE PHOSPHAMIDON ON THE CHOLESTEROL LEVEL IN SOME ORGANS OF THE FISH CHANNA PLUNCTATUS. *Environ. Ecol* 9(2):411-413, 1991. From Paryavaran Abstr. B(4) 9104-170, 1991. FR 38(2)

[Inst. Sci. Edn., Burdwan Univ., Burdwan-713 104, India]

93-003704 Sastry, K. V. and Aradhana Dasgupta. EFFECT OF NUDACRON ON THE NUTRITIVE VALUE OF FRESH WATER TELEOST FISH CHANNA PLUNCTATUS. *J. Environ. Biol.* 12(3):243-248, 1991. From Paryavaran Abstr. B(4) 9104-171, 1991. FR 38(2)

[Dep. Biol. Sci., MD Univ., Rohtak-124 001, India]

93-003705 Servos, M.; M. McMaster; K. Munkittrick; M. Ferguson; J. Parrott and J. Carey. THE EFFECT OF SHORT-TERM MAINTENANCE SHUTDOWNS AT BLEACHED KRAFT MILLS ON EROD INDUCTION IN CAGED WHITE SUCKERS. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 84, 1992. Abstract only. FR 38(2)

[Great Lakes Lab. Fish. & Aquat. Sci., 867 Lakeshore Rd., Burlington, ON, Canada] *Carostomus commersoni* in the Great Lakes

93-003706 Sharma, R. M. EFFECT OF ENDOSULFAN ON ACID AND ALKALINE PHOSPHATASE ACTIVITY IN LIVER, KIDNEY AND MUSCLES OF CHANNA GACHUA. *Bull. Environ. Contam. Toxicol.* 44(3):443-448, 1990. From Paryavaran Abstr. B(4) 9104-176, 1991. FR 38(2)

[School Stud. Bot., Jwa] Univ., Gwalior-474 011, India]

93-003707 Shibley, Paul K.; Juliette Legler; G. George Dixon and David R. Barton. BENTHIC COMMUNITY STRUCTURE ADJACENT TO A BLEACHED KRAFT PULP MILL: THE RELATIVE IMPORTANCE OF PHYSICAL AND CHEMICAL DETERMINANTS. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 85, 1992. Abstract only. FR 38(2)

[Dep. Biol., Univ. Waterloo, Waterloo, ON, Canada N2L 3G1] *Pemphalestis promelas* in Lake Superior

93-003708 Sick, L. V. and P. B. Travis. RECENT PROGRESS IN THE DEVELOPMENT OF A RECEPTOR BASED BIOSENSOR FOR DETECTION OF MARINE TOXINS. *Proc. Annu. Conf. Trop. Subtrop. Fish Technol. Soc. Am.* No. 12 p. 673, 1988. Abstract only. FR 38(2)

[NMFS, Charleston Lab., Charleston, SC 29412]

93-003709 Silberhorn, Eric M.; William A. Robison; Terry M. Short; Jeffrey A. Black and Wesley J. Birge. COMPARISON OF ARTEMIA FEEDING REGIMENS ON LARVAL GROWTH IN A SHORT-TERM FATHEAD MINNOW TOXICITY TEST. *Bull. Environ. Contam. Toxicol.* 50(2):179-186, 1993. FR 38(2)

[Grad. Cent. Toxicol., 204 Funkhouser Bldg., Univ. Ky., Lexington 40506-0054] *Pimephales promelas*

93-003710 Silva, Patricia, Franklin H. Epstein and Richard J. Solomon. THE EFFECT OF MERCURY ON CHLORIDE SECRETION IN THE SHARK (SQUALUS ACANTHIAS) RECTAL GLAND. *Comp. Biochem. Physiol. C Comp. Pharmacol. Toxicol.* 103(3):569-575, 1992. FR 38(2)

[Dep. Med., New England Deaconess Hospital & Beth Israel Hospital, Harvard Med. School, Joslin Diabetes Cent., Harvard Cent. Study Kelsey Div., Mt. Desert Island Biol. Lab., Salisbury Cove, ME]

93-003711 Smith, Ian R.; Allan F. Johnson; Donald MacLennan and Harold Manson. CHEMICAL CONTAMINANTS, LYMPHOCYTOSIS, AND DERMAL SARCOMA IN WALLEYES SPAWNING IN THE THAMES RIVER, ONTARIO. *Trans. Am. Fish. Soc.* 121(5):608-616, 1992. FR 38(2)

[Water Resour., Ontario Minist. Environ., P.O. Box 213, 125 Resources Rd., Rexdale, ON, Canada M9W 5L1] *Sturteadion vitreum*

93-003712 Soderberg, Richard W. and James W. Meade. EFFECTS OF SODIUM AND CALCIUM ON ACUTE TOXICITY OF UNIONIZED AMMONIA TO ATLANTIC SALMON AND LAKE TROUT. *J. Appl. Aquacult.* 1(4):82-92, 1992. FR 38(2)

[Fish Program, Mansfield Univ., Mansfield, PA 16933] *Salmo salar* and *Salvelinus namaycush*

93-003713 Somnath, Beena. EFFECT OF ACUTE SUBLETHAL CONCENTRATION OF TANIC ACID ON THE PROTEIN, CARBOHYDRATES AND LIPID LEVELS IN THE TISSUES OF THE FISH LABEO ROHITA. *J. Environ. Biol.* 12(2):107-112, 1991. From Paryavaran Abstr. B(4) 9104-182, 1991. FR 38(2)

[Dep. Anim. Physiol., School Biol. Sci., Madurai Kamaraj Univ., Madurai-625 021, India]

93-003714 Staveland, G. I.; Martinsson; G. Norheim and K. Johnsen. LEVELS OF ENVIRONMENTAL POLLUTANTS IN FLOUNDER (PLATICHTHYS FLEBUS L.) AND COO (GADUS MORHUA L.) CAUGHT IN THE WATERWAY OF GLOMMA, NORWAY II. MERCURY AND ARSENIC. *Arch. Environ. Contam. Toxicol.* 24(2):187-193, 1993. FR 38(2)

[Minist. Fish., Box 8118 Dep., 0032 Oslo 1, Norway]

FISHERIES REVIEW

TOXICOLOGY: BIOASSAYS (Continued)

93-003715 Steadman, Bryan Lynn XENOBIOTIC METABOLISM IN RAINBOW TROUT: TOXICOLOGY, BIOCHEMISTRY AND BIOMONITORING Ph.D. dissertation, Univ Wyo 182p 1986 From *Dis. Abstr Int B Sci. Eng.* 47(7):2799, 1987 Order No. DA8623109. FR 38(2)

Oncorhynchus mykiss

93-003716 Sun, Kaifu R and Gordon G. Hitchin. FORAGE FISH CONTAMINATION BY MIGRANT PACIFIC SALMON IN THE CREDIT RIVER. *Int. Assoc. Great Lakes Res. Conf. No. 35* p. 96 1992 Abstract only. FR 38(2)

[Water Resour. Branch, Ontario Minist. Environ., 125 Resources Rd., Rosedale, ON, Canada M9W 5L1] *Luxilus cornutus*, *Notropis hudsonius*, and *Oncorhynchus* in Canada.

93-003717 Teh, Swee J and David E. Hinton. DETECTION OF ENZYME HISTOCHEMICAL MARKERS OF HEPATIC PRENEOPLASIA AND NEOPLASIA IN MEDAKA (*ORYZIAS LATIPES*). *Aquat. Toxicol. (Amst.)* 24(3-4): 163-182 1993. FR 38(2)

[Hinton, Dep. Med., School Vet. Med., Univ. Calif., Davis 95616]

93-003718 Thivander, A., E. Wiks and L. Norgren. SUBLETHAL EXPOSURE OF RAINBOW TROUT (*ONCORHYNCHUS MYKISS*) TO CLOPHEN ASD: EFFECTS ON CELLULAR IMMUNITY. *Fish Shellfish Immunol.* 3(2): 107-117, 1993. FR 38(2)

[Natl. Food Admin., Box 622, S-751 26 Uppsala, Sweden]

93-003719 Tikhomirova, L. I. MEMBRANE ULTRASTRUCTURE OF FGGs OF REDEY SCARDINUS *ERYTHROPHthalmus* (L.) NORMALLY AND AFTER γ -IRRADIATION *Dokl. Biol. Sci. (Engl. Transl. Dokl. Akad. Nauk SSSR)* 324(1-6):303-305 1992. FR 38(2)

[A.N. Selez'nev Inst. Evol. Morphol. & Anim. Ecol., Russian Acad. Sci., Moscow, Russia]

93-003720 Tilak, K. S.; N. H. J. Janardhana Rao and Jasjit Lalshni. EFFECT OF PESTICIDES MIXED IN DIFFERENT RATIOS TO THE FRESHWATER LABEO ROHITA / *Ecotoxicol. Environ. Monit.* 1(1):49-52 1991 From *Panyavarn. Abstr.* 8(4):9104-188, 1991. FR 38(2)

[Dep. Zool., Nagajuna Univ., Nagajuna Nagar-522 510, India]

93-003721 Tsuda, T.; S. Aoki, M. Kojima and T. Fujita. ACCUMULATION AND EXCRETION OF ORGANOPHOSPHOROUS PESTICIDES BY WILLOW SHINER. *Chemosphere* 25(12):1945-1951, 1992. FR 38(2)

[Shiga Prefectural Inst. Public Health & Environ. Sci., 13-45, Gotenbama, Ohtsu, Shiga 520, Japan] *Gnathypogon caeruleus*

93-003722 Ueda, T.; M. Hayashi; Y. Ohnaka; T. Nakamura; J. Kobayashi and T. Sofuni. A PRELIMINARY STUDY OF THE MICRONUCLEUS TEST BY ACRIDINE ORANGE FLUORESCENT STAINING COMPARED WITH CHROMOSOMAL ABERRATION TEST USING FISH DRYTHERIOPHOETIC AND EMBRYONIC CELLS. *Water Sci. Technol.* 25(11):235-240 1992. FR 38(2)

[Dep. Biol., Fac. Educ., Utsunomiya Univ., 350 Mine, Utsunomiya 321, Japan] *Carassius auratus*, *Rhodeus ocellatus ocellatus*, and *Taraxilus taraxo*

93-003723 Urho, Lauri and Richard Hadd. SUBLETHAL EFFECTS OF AN OIL SPILL ON FISH LARVAE IN THE NORTHERN QUARK, IN THE BALTIC. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191 p. 494, 1989. Abstract only. FR 38(2)

[Finnish Game & Fish. Res. Inst., P.O. Box 202, SF-00151 Helsinki 15, Finland]

93-003724 Urho, Lauri. FIN DAMAGE IN LARVAL AND ADULT FISHES IN A POLLUTED INLET IN THE BALTIC. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 493-494, 1989. Abstract only. FR 38(2)

[Finnish Game & Fish. Res. Inst., P.O. Box 202, SF-00151 Helsinki 15, Finland]

93-003725 Van Colville, R.; C. Blaise; F. Dostzeau and J. C. Oel. NOVEL TRENDS FOR AQUATIC TOXICITY TESTING AT THE DNA LEVEL. *Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Mancton, New Brunswick, November 12-14, 1986* J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 97, 1987. English and French abstract only. FR 38(2)

[Environ. Canada, 1179 Bleury, Montreal, PQ, Canada H3B 3H5]

93-003726 van den Heuvel, M. R.; I. R. Smith; S. Marchant; J. H. Clemons; D. G. Dixon and J. Frimph. EMBRYONIC MORTALITY, BIOASSAY DERIVED 2,3,7,8-TETRACHLORO-DIBENZO-P-DIOXIN EQUIVALENTS, AND ORGANOCHLORINE CONTAMINANTS IN PACIFIC SALMON FROM LAKE ONTARIO. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 181 1992. Abstract only. FR 38(2)

[Dep. Biol., Univ. Waterloo, Waterloo, ON, Canada N2L 3G1] *Oncorhynchus tshawytscha* and *O. kisutch*

FISHERIES REVIEW

TOXICOLOGY: BIOASSAYS (Continued)

93-003727 van den Heuvel, M. R.; K. R. Munkittrick; G. J. Van Der Kraak; M. Servos, C. B. Portt; R. S. MacLean; M. E. McIvor and D. G. Dixon. A SURVEY OF BIOMARKERS FROM WHITE SUCKER EXPOSED TO THE EFFLUENT OF NINE ONTARIO PULP AND PAPER MILLS AND THE RELATIONSHIPS BETWEEN BIOMARKERS, BIOASSAY (CURVED 2,3,7,8-TCDD EQUIVALENTS AND AOX. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 85. 1992. Abstract only. FR 38(2)

[Univ. Waterloo, Dep. Biol., Waterloo, ON, Canada N2L 3G1] *Catostomus commersoni* in Canada.

93-003728 Van Hoogen, Geertjan and Antoon Opperhuizen. TOXICOKINETICS OF CHLOROBENZENE IN FISH. *Environ. Toxicol. Chem.* 7(3):213-219. 1988. FR 38(2)

[Opperhuizen: Lab. Environ. & Toxicol. Chem., Univ. Amsterdam, 1018 WV Amsterdam, Netherlands] *Plecotus reticulata*.

93-003729 Venugopal, N. B. R. K. and S. L. N. Reddy. NEPHROTOXIC AND HEPATOTOXIC EFFECTS OF TRIVALENT AND HEXAVALENT CHROMIUM IN A TELEOST FISH ANABAS SCANDENS: ENZYMOLOGICAL AND BIOCHEMICAL CHANGES. *Ecotoxicol. Environ. Saf.* 24(3):287-293. 1992. FR 38(2)

[Dep. Zool., Osmania Univ., Hyderabad-500 007, India]

93-003730 Villalón, Eric; Philippe Nourou; Jean-François Munoz; Jean-Joël Côté; Bernard Migeon and Jeanne Garié. ETHOXYRESORFIN-G-DEETHYLASE INDUCTION IN FISH FROM A WATERSHED EXPOSED TO A NON-POINT SOURCE POLLUTION OF AGRICULTURAL ORIGIN. *Water Res.* 27(3):449-455. 1993. FR 38(2)

[Lab. Ecotoxicol., Div. Biol. Ecosyst. Aquat., Cent. Natl. Mécanisme Agric. Génie Rural, Eau & Forêts, 3 quai Chauveau, 69336 Lyon Cedex 09, France] *Leuciscus sturta*, *L. cephalus*, *Rutilus rutilus*, *Gobio gobio*, *Nemacheilus barbatus*, and *Phoxinus phoxinus* in France.

93-003731 Wallace, Kendall S. and Gerald J. Nienl. STRUCTURE-ACTIVITY RELATIONSHIPS OF SPECIES-SELECTIVITY IN ACUTE CHEMICAL TOXICITY BETWEEN FISH AND RODENTS. *Environ. Toxicol. Chem.* 7(3):201-212. 1988. FR 38(2)

[Dep. Pharm., School Med., Chem. Toxicol. Res. Cent., Univ. Minn., Duluth 55812] *Pimephales promelas* and *Oncorhynchus mykiss*.

93-003732 Welch, C. R.; J. R. Tomasso and T. L. J. Smith. TOXICITY OF AMMONIA AND NITRITE TO SUNSHINE BASS IN SELECTED ENVIRONMENTS. *J. Aquat. Anim. Health* 5(1):64-72. 1993. FR 38(2)

[Miss. State Univ., Delta Res. & Ext. Cent., P.O. Box 197, Stoneville 38776] *Morone saxatilis* x *M. chrysops*.

93-003733 Welsh, P. G.; J. F. Skidmore; J. L. Parrott; D. G. Dixon; P. V. Hodson and D. J. Spry. COPPER TOXICITY TO FISH IN SOFTWATER LAKES: THE ROLE OF pH AND DOC. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 176. 1992. Abstract only. FR 38(2)

[Univ. Waterloo, c/o Dorset Res. Cent., Ontario Minist. Environ., Dorset, ON, Canada P0A 1E0]

93-003734 White, Paul A.; Joseph B. Rasmussen and Christian Blaise. PRESENCE AND DISTRIBUTION OF GENOTOXICANTS IN AQUATIC BIOTA COLLECTED DOWNSTREAM FROM LARGE INDUSTRIES. *Environ. Mol. Mutagen.* 21(Suppl. 22):77. 1993. Abstract only. FR 38(2)

[McGill Univ., Dep. Biol., Montreal, PQ, Canada] *Percia flavescens* and *Esox lucius*.

93-003735 Wilner, James C.; Gary A. Jackson; Thomas W. May and Brian P. Cole. LONGITUDINAL DISTRIBUTION OF TRACE ELEMENTS (As, Cd, Cr, Hg, Pb, AND Se) IN FISHES AND SEDIMENTS IN THE UPPER MISSISSIPPI RIVER. *Proc. Annu. Meet. Miss. River Res. Consortium No. 15*, p. 139-170. 1992. FR 38(2)

[U.S. Fish & Wildl. Serv., Columbia Natl. Fish. Res. Lab., Field Res. Stn., Box 936, La Crosse, WI 54601] *Cyprinus capio* and *Lepomis macrochirus*.

RESEARCH AND MANAGEMENT

93-003736 Larkin, P. A. FUTURE PROSPECTS AND THEIR IMPLICATIONS FOR RESEARCH ON THE ECOLOGY OF FRESHWATER FISH. *Ecol. Freshwater Fish* 1(1):1-4. 1992. In English with Spanish summ. FR 38(2)

[Univ. British Columbia, Res. TB, Hal B-3, 6248 Blot. Sci. Rd., Vancouver, BC, Canada V6T 1Z4]

RESEARCH AND MANAGEMENT-GENERAL

93-003737 Alden, Robin. FISHERIES POLICY: A NEW BEGINNING. *Sea Technol.* 34(1):35-36. 1993. FR 38(2)

93-003738 Andrews, Elizabeth F. and Mary C. Pete. NON-COMPETING SMALL-SCALE FISHERIES IN WESTERN ALASKA: SUBSISTENCE AND COMMERCIAL FISHING BY NATIVE ALASKANS. *Research and Small-Scale Fisheries Symposium International, OISTOM-FREEMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 543-550. 1991. In English with French summ. FR 38(2)

[Pete: Dep. Fish & Game, Div. Subsistence, P.O. Box 1788, Bethel, AK 99559]

FISHERIES REVIEW

RESEARCH AND MANAGEMENT-GENERAL (Continued)

- 93-003739 Antona, Marine and Helene Pliot. EVOLUTION OF THE CONSUMPTION OF SEA PRODUCTS IN FRANCE, A STABLE MARKET UNDERGOING MANY TRANSFORMATIONS. *Third France/Japan Conference in Oceanography*, IFREMER, Nantes, 2-5 July 1991. Economic Policy and Fisheries Management. D. Bailly and K. Kase, coordinators. *Oceans* 18(4):419-426. 1992. In English with French summ. FR 38(2)
[IFREMER, Serv. Econ. Maritime, 155 rue J. Rousseau, 92138 Issy-les-Moulineaux, France]
- 93-003740 Apkarian, Arlette and Pierrette Verges. [SELF-EMPLOYED FISHERMEN IN THE TOWN OF MARTIGUES (FRANCE). BUSINESS AND CRAFTS.] *Research and Small-Scale Fisheries Symposium International*, ORSTOM/IFREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 283-289, 1991. In French with English summ. FR 38(2)
[CRES/CNRS, 2 rue Charite, 13002 Marseille, France]
- 93-003741 Baba, Osamu and Katsuji Hiroyoshi. PRESENT CONDITION OF FISHERIES REGULATIONS AND JAPANESE EXPERIMENTS IN CONTROLLING ACCESS TO RESOURCES. *Third France-Japan Conference in Oceanography*, IFREMER, Nantes, 2-5 July 1991. Economic Policy and Fisheries Management. D. Bailly and K. Kase, coordinators. *Oceans* 18(4):397-399. 1992. FR 38(2)
[Tokyo Univ. Fish., 4-5-7 Konan Minato-Ku, 108 Tokyo, Japan]
- 93-003742 Bacis, Jean and Robert Cecil. [RESEARCH AND PHYSICAL AND HUMAN CONTEXTS OF SMALL-SCALE FISHERIES IN AFRICA.] *Research and Small-Scale Fisheries Symposium International*, ORSTOM/IFREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 309-317, 1991. In French with English summ. FR 38(2)
[ACD8200, Promenade Portage, Hall, PQ, Canada K1A 0G4]
- 93-003743 Bailly, D. and K. Kase, coordinators. THIRD FRANCE-JAPAN CONFERENCE IN OCEANOGRAPHY, IFREMER, NANTES, 2-5 JULY 1991. ECONOMIC POLICY AND FISHERIES MANAGEMENT. *Oceans* 18(4):371-503. 1992. In English with French summ. FR 38(2)
[IFREMER, Serv. Econ. Maritime, 155 rue Jean-Jacques Rousseau, 92138 Issy-les-Moulineaux, France]
- 93-003744 Bailly, Denis; Cuytaine Bourguignon and Kazuoichi Kase. AN INTRODUCTION TO JAPANESE AND FRENCH FISHERIES. *Third France/Japan Conference in Oceanography*, IFREMER, Nantes, 2-5 July 1991. Economic Policy and Fisheries Management. D. Bailly and K. Kase, coordinators. *Oceans* 18(4):371-383, 1992. In English with French summ. FR 38(2)
[IFREMER, Serv. Econ. Maritime, 155 rue Jean-Jacques Rousseau, 92138 Issy-les-Moulineaux, France]
- 93-003745 Bakhtayokho, Moussa and Moustapha Kebe. [HOW DO SMALL-SCALE FISHERMEN ADAPT THEIR STRATEGIES AND TACTICS TO RESOURCE AVAILABILITY AND ABUNDANCE?] *Research and Small-Scale Fisheries Symposium International*, ORSTOM/IFREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 943-955, 1991. In French with English summ. FR 38(2)
[CRODT-8 P. 2241, Dakar, Senegal]
- 93-003746 Barrett, David Thomas. A BENEFIT COST ANALYSIS OF THE 1985 CANADA/U.S.A. PACIFIC SALMON TREATY. M.S. thesis, Simon Fraser Univ. (Canada) B.C., 1990. From *Master's Abstr. Int.* 31(1):192. 1993. Order No. MAMM65540. FR 38(2)
- 93-003747 Bouais, Jean-Pierre. A BRANCH AND CHAIN OF MARKET ANALYSIS APPLIED TO THE FISHING SECTOR. *Third France/Japan Conference in Oceanography*, IFREMER, Nantes, 2-5 July 1991. Economic Policy and Fisheries Management. D. Bailly and K. Kase, coordinators. *Oceans* 18(4):437-444, 1992. In English with French summ. FR 38(2)
[Ecole Natl. Supérieure Agron. Rennes, 65 rue Saint-Bélec, 35042 Rennes Cedex, France]
- 93-003748 Bouais, Jean-Pierre. [EFFECTS OF SUBSIDIES ON SMALL-SCALE FISHERIES ACTIVITIES.] *Research and Small-Scale Fisheries Symposium International*, ORSTOM/IFREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 833-838, 1991. In French with English summ. FR 38(2)
[Ecole Natl. Supérieure Agron., Dep. Halieutique, 65 rue Saint-Bélec, 35042 Rennes Cedex, France]
- 93-003749 Bourguignon, Cuytaine. JAPAN'S FISHERIES MARKET. *Third France/Japan Conference in Oceanography*, IFREMER, Nantes, 2-5 July 1991. Economic Policy and Fisheries Management. D. Bailly and K. Kase, coordinators. *Oceans* 18(4):411-417, 1992. In English with French summ. FR 38(2)
[Tokyo Univ. Fish., Manago Div., Econ. Fish., 4-5-7 Konan Minato-ku, 108 Tokyo, Japan]
- 93-003750 Bruton, Francolae. [EXPERIENCE AND ITS TRANSMISSION BETWEEN FISHERMEN: DISCUSSION AND METHODOLOGICAL APPROACH BASED ON RESEARCH CARRIED OUT AT "ESTUDES DEL MAR" (SITGES, SPAIN)] *Research and Small-Scale Fisheries Symposium International*, ORSTOM/IFREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 575-586, 1991. In French with English summ. FR 38(2)
[Cent. Estudis Mar. Serv. Medi Ambient, Dip. Barcelona, Durgal 187, 08036 Barcelona, Spain]

FISHERIES REVIEW

RESEARCH AND MANAGEMENT-GENERAL (Continued)

93-003751 Bowman, Howard L. THE BIOLOGY AND BEHAVIOURAL ECOLOGY OF ONTOGENETIC CRITICAL PERIODS IN FISH. *Rep. P-V Res. Cons. Int. Explor. Mar.* Vol. 191. p. 469-470. 1989. Abstract only. FR 38(2)

[Univ. Kans., Dep. Syst. & Ecol., Lawrence 66045]

93-003752 Carlos Dregan, Antonio. TRADITION AND CHANGE IN THE BRAZILIAN SMALL-SCALE FISHERIES: A PRELIMINARY SYNTHESIS. *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 851-857. 1991. In English with French summ. FR 38(2)

[Inst. Oceanogr., Clède Univ., Guiana CEP 65508, Sao Paulo, Brazil]

93-003753 Chaboud, Christian. [THE RELATIONSHIPS BETWEEN RESEARCH AND INTERVENTION; AN INTRODUCTION] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 805-808. 1991. In French. FR 38(2)

[CRODT-B.P. 2241, Dakar, Senegal]

93-003754 Chaboud, Christian and Emmanuel Charles-Dominique. [THE ARTISANAL FISHERIES IN WEST AFRICA: THE STATUS AND EVOLUTION OF RESEARCH] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1. p. 99-141. 1991. In French. FR 38(2)

[CRODT - S.P. 2241, Dakar, Senegal]

93-003755 Charles, Anthony T. SMALL-SCALE FISHERIES IN NORTH AMERICA: RESEARCH PERSPECTIVES. *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1. p. 157-184. 1991. FR 38(2)

[Dep. Finance & Manage. Sci., Saint Mary's Univ., Halifax, NS, Canada B3H 3C3]

93-003756 Chaussade, Jean. [SOCIAL SCIENCES AND SMALL-SCALE FISHERIES] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 973-979. 1991. In French with English summ. FR 38(2)

[18 Ave. Anjou, 49270 Champloceaux, France]

93-003757 Chaussade, Jean. [PROSPECTS OF RESEARCH ON SMALL-SCALE FISHERIES] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 923-926. 1991. In French. FR 38(2)

[18 Ave. Anjou, 49270 Champloceaux, France]

93-003758 Chauveau, Jean Pierre and Jacques Weber. [THE REPORT OF REGIONAL SYNTHESIS, HISTORIC PERSPECTIVES AND INSTITUTIONS ON THE INTERDISCIPLINARY RESEARCH IN THE AREA OF ARTISANAL FISHERIES] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1. p. 51-82. 1991. In French. FR 38(2)

[ORSTOM-B.P. 5045, 34032 Montpellier Cedex, France]

93-003759 Chilton, Earl W. II and Maurice J. Mucenka. BIOLOGY AND MANAGEMENT OF GRASS CARP (*Ctenopharyngodon idella*, CYPRINIDAE) FOR VEGETATION CONTROL: A NORTH AMERICAN PERSPECTIVE. *Rev. Fish Biol. Fish.* 2(4):283-320. 1992. FR 38(2)

[Parks & Wildl. Dep., Fish. & Wildl. Div., Inland Fish. Branch, 4200 Smith School Rd., Austin, TX 78744]

93-003760 Cole, David N. WILDERNESS RECREATION MANAGEMENT. *J. For.* 91(2):22-24. 1993. FR 38(2)

[Internat. Res. Stn., U.S. For. Serv., Missoula, MT]

93-003761 Coll, John and Ray J. White, editors. FISHERIES BIOENGINEERING SYMPOSIUM. *Am. Fish. Soc. Symp. No. 10*. 56pp. 1991. FR 38(2)

[Am. Fish. Soc., 5410 Grosvenor Ln., Suite 110, Bethesda, MD 20814-2199] Individual papers indexed in this issue of *Fisheries Review*.

93-003762 Comar, Paul. NATIONAL MARINE FISHERIES SERVICE SAULTONSTALL-KENNEDY (S-K) FUNDING: TECHNICAL PEER REVIEW OF NATIONAL PRIORITY PROPOSALS. *Proc. Amer. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12*. p. 306-308. 1988. FR 38(2)

[NMFS, NOAA, Nat. Seafood Inspection Lab., P.O. Drawer 1207, Pascagoula, MS 39568-1207]

93-003763 Cormier-Salem, Marie-Christine. [MIGRANT FISHERMEN AND FARMER/FISHERMEN: TWO MODELS FOR MANAGING FINITE SPACE] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 621-629. 1991. In French with English summ. FR 38(2)

[Univ. Quebec, Gagne, C.P. 0888 Succ. A, Montreal, PQ, Canada H3C 3P0]

FISHERIES REVIEW

RESEARCH AND MANAGEMENT-GENERAL (Continued)

93-003764 Culler, M. Rupert. A LAND EXCHANGE PROGRAM TO PROTECT BIODIVERSITY. *J. For.* 91(2): 25-29. 1993. FR 38(2)

[Explore Park, Roanoke, VA]

93-003765 Darveas, Jean-Marc and Daniel Roy. [ARTISANAL FISHERIES AND STATE INTERVENTION IN NORTHERN QUEBEC.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈRE, Montpellier, France, 3-7 July 1989* | R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 839-843. 1991. In French with English summ. FR 38(2)

93-003766 Deme, Moustapha. [THE EFFECTS OF FINANCIAL AID ON THE SMALL-SCALE FISHERIES IN SENEGAL.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈRE, Montpellier, France, 3-7 July 1989* | R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 845-849. 1991. In French with English summ. FR 38(2)

[CRODT/ISRA-B.P. 2241, Dakar, Senegal]

93-003767 Duffy, David Cameron. WHY IS THE DOUBLE-CRESTED CORMORANT A PROBLEM? INSIGHTS FROM CORMORANT ECOLOGY. *Colon. Waterbird Soc. Bull.* 16(2): 47. 1992. Abstract only. FR 38(2)

[Lyne Dis. Res. Proj., box 1095, Shelter Island Heights, NY 11965]

93-003768 Durand, J. R., J. Lemoalle and J. Weber, editors. RESEARCH AND SMALL-SCALE FISHERIES: SYMPOSIUM INTERNATIONAL, ORSTOM-FRÈRE, MONTPELLIER [FRANCE], 3-7 JULY 1989. *ORSTOM Editions Vol. 1 & 2*. 1070p. 1991. FR 38(2)

[72 Rt. Auboy, F-93143 Bondy Cedex, France] Selected papers indexed in the issue of *Fisheries Review*

93-003769 FAO of the UN. FAO YEARBOOK: FISHERY STATISTICS- COMMODITIES. VOL. 71, 1990. *FAO Fish. Ser. No. 39*. 395p. 1992. In English, French, and Spanish. FR 38(2)

93-003770 FAO of the UN. FAO YEARBOOK: FISHERY STATISTICS- CATCHES AND LANDINGS. VOL. 70, 1990. *FAO Fish. Ser. No. 38*. 647p. 1992. In English, French, and Spanish. FR 38(2)

93-003771 Garcia, Sergio and Jean Pierre Reveret. [RESEARCH AND STRUCTURE OF ARTISANAL FISHERIES-PARADIGMS AND METHODS OF RESEARCH AN INTRODUCTION.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈRE, Montpellier, France, 3-7 July 1989* | R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1. p. 253-268. 1991. In French. FR 38(2)

[FAO, Serv. Resour. Maritimes, Div. Resour. Halieutiques & Environ., Via della Terme di Caracalla, 00100 Rome, Italy]

93-003772 Camille, Michel, Helene Roy and Martine Antoni. [IDENTIFICATION OF THE CAUSES OF FAILURE IN ANALYZING PROJECTS: APPLICATION TO THE STUDY OF FOURTEEN FISHERY PROJECTS.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈRE, Montpellier, France, 3-7 July 1989* | R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 839-896. 1991. In French with English summ. FR 38(2)

[Cent. Etudes Projets, Univ. Montpellier I, Fac. Droit & Sc. Econ., 14 rue Cardinal Cabrières, 34000 Montpellier, France]

93-003773 Gobert, Bertrand and Lionel Reynal. [RESEARCH AND THE ATTITUDE OF THE PROFESSION TO STATISTICAL MONITORING OF SMALL-SCALE FISHERIES IN MARTINIQUE.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈRE, Montpellier, France, 3-7 July 1989* | R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 993-998. 1991. In French with English summ. FR 38(2)

[ORSTOM-B.P. 81, 97256 Fort de France, France]

93-003774 Gold, Barry David. AN ASSESSMENT OF POLICY STRATEGIES FOR MANAGING AN ARTISANAL FISHERY. Ph.D. dissertation, Washington Univ. 199p. 1992. *Trans. Am. Fish. Soc.* 121(7):3239. 1993. Order No. DA9235898. FR 38(2)

93-003775 Gresswell, Robert E. SPECIAL REGULATIONS AS A FISHERY MANAGEMENT TOOL IN YELLOWSTONE NATIONAL PARK. *Proc. Conf. Sol. Natl. Parks* Vol. 6, p. 119-126. 1986. FR 38(2)

[Salvelinus fontinalis, Oncorhynchus clarki, Salmo trutta, and Thymallus arcticus in Wyoming]

93-003776 Hamisch, R., editor. METHODOLOGY AND GUIDELINES FOR FISHERIES DEVELOPMENT PLANNING WITH SPECIAL REFERENCE TO THE DEVELOPING COUNTRIES IN THE AFRICAN REGION. *FAO Fish. Tech. Pap.* Vol. 297. 1988. FR 38(2)

[Steinadtpl. 14, 39012 Merano, Italy]

93-003777 Johnson, Alan W. and Wayne J. Daley. ESTABLISHING VOLUNTEERS IN NATURAL RESOURCE RESTORATION PROGRAMS. *Am. Fish. Soc. Symp.* No. 10, p. 59-61. 1991. FR 38(2)

[Alan W. Johnson & Assoc., 1421 17th St. S.E., Auburn, WA 98002]

FISHERIES REVIEW

RESEARCH AND MANAGEMENT-GENERAL (Continued)

- 93-003778 Kassibo, Brehima [OBSERVATIONS ON CREDIT TO NOMADIC FISHERMEN.] *Research and Small-Scale Fisheries: Symposium International*, ORSTOM-IFREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 857-903. 1991. In French with English summ. FR 38(2)
[Projet Delta Contr.-6 P. 2528, Bamako, Mali]
- 93-003779 Kay, James J. and Eric D. Schneider. A THERMODYNAMIC PERSPECTIVE OF ECOSYSTEM INTEGRITY. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 64. 1992. Abstract only. FR 38(2)
[Environ. & Resour. Studies, Univ. Waterloo, Waterloo, ON, Canada N2L 3G1]
- 93-003780 Klamath River Fisheries Resource Office. KIDDER CREEK ENVIRONMENTAL SCHOOL FISH FIELD STUDY PROGRAM, FINAL REPORT. *Klamath River Fish Resour. Off. Publ.* 91(E-1). 20p. 1991. FR 38(2)
- 93-003781 Lantz, Frederic and Rui Junqueira Lopes. INVESTMENT AND FACTOR REMUNERATION IN SMALL-SCALE FISHERIES. *Third Franco-Japan Conference in Oceanography, IFREMER, Nantes*, 2-5 July 1991: Economic Policy and Fisheries Management. O. Bally and K. Kase, coordinators. *Oceans* 18(4):401-410, 1992. In English with French summ. FR 38(2)
[IFREMER, 155 rue Jean-Jacques Rousseau, 92138 Issy-les-Moulineaux, France]
- 93-003782 Larkin, P. A. THE YEAR 2000: WILL WE BE READY TECHNICALLY? WE'RE READY, ALREADY. *Fisheries (Bethesda)* 18(3):6-11. 1993. FR 38(2)
[Royal Soc. Canada, Res. Eval. Unit, Univ. British Columbia, 2204 Main Mall, Vancouver, BC, Canada V6T 1Z4]
- 93-003783 Laurec, Alain and Jon C. Sulinen [RESEARCH AND DYNAMICS OF ARTISANAL FISHERIES: AN INTRODUCTION.] *Research and Small-Scale Fisheries: Symposium International*, ORSTOM-IFREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 525-531. 1991. In French. FR 38(2)
[IFREMER-Technopole 40, 155 rue Jean-Jacques Rousseau, 92138 Issy-les-Moulineaux, France]
- 93-003784 Leach, Paul J. BUILDING PUBLIC SUPPORT TO ENSURE A FISHING FUTURE. *Natl. Fish Forum Exhib.* 88:9p. 1988. FR 38(2)
- 93-003785 Lemer, Sally. SOMEONE IS WATCHING: SOCIAL SUPPORT FOR ECOSYSTEM INTEGRITY. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 65. 1992. Abstract only. FR 38(2)
[Environ. & Resour. Studies, Univ. Waterloo, Waterloo, ON, Canada N2L 3G1]
- 93-003786 Loomis, David K. and Robert B. Clifton. DISTRIBUTIVE JUSTICE IN FISHERIES MANAGEMENT. *Fisheries (Bethesda)* 18(2):14-18. 1993. FR 38(2)
[Dep. For. & Wildl. Manage., Univ. Mass., Amherst 01003]
- 93-003787 Malolo, John R.; Jeffrey Johnson and David Griffith. APPLICATIONS OF SOCIAL SCIENCE THEORY TO FISHERIES MANAGEMENT: THREE EXAMPLES. *Soc. Nat. Resour.* 5(4):391-407. 1992. FR 38(2)
[Dep. Sociol. & Anthropol., Inst. Coastal & Mar. Resour., E. Carolina Univ., Greenville, NC 27834]
- 93-003788 Malise, G. and J. L. Bagliniere. [UNDERSTANDING THE BIOLOGICAL BASES OF MANAGEMENT, A REALISTIC IDEA FOR THE TROUT (SALMO TRUTTA L.).] *In: [The Trout: Biology and Ecology]* J. L. Bagliniere and G. Malise, editors. p. 297-302. 1991. In French. FR 38(2)
[INRA, Lab. Physiol. Poissons, St. Physiol. & Ecol. Poissons, Campus Beaulieu, 35042 Rennes Cedex, France]
- 93-003789 McCauley, R., chair. ZEBRA MUSSEL STUDIES. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 124-127. 1992. Abstract only. FR 38(2)
A collection of four papers.
- 93-003790 Myatt, Dewitt O. and Evelyn N. Myatt. WHAT TO LOOK FOR IN A TOURNAMENT WEIGHMASTER, WHERE TO FIND ONE, AND HOW TO USE ONE TO A TOURNAMENT'S BEST ADVANTAGE. *Proc. Calif. Calif. Fish. Inst.* Vol. 40, p. 200-205. 1991. FR 38(2)
[Int. Weighmaster, Inc., Fort Lauderdale, FL 33309]
- 93-003791 Natural Environment Research Council. REPORT OF THE INSTITUTE OF FRESHWATER ECOLOGY, 1991/1992. *Int. Freshwater Ecol. Rep.* 48p. 1991-1992. FR 38(2)
[Windermere Lab., Far Sawrey, Ambleside, Cumbria LA22 0LP, England]
- 93-003792 Nehlsen, Willa; James A. Uchatowich and Jack L. Williams. PACIFIC SALMON AND THE SEARCH FOR SUSTAINABILITY. *Renew. Resour. J.* 10(2):20-26. 1992. FR 38(2)
[Northwest Power Planning Council, Portland, OR] *Oncorhynchus*.
- 93-003793 Percy, William G. OCEAN ECOLOGY OF NORTH PACIFIC SALMONIDS. *Univ. Wash. Press* 179p. 1992. Available at \$25.00 (cloth) or \$15.00 (paper) from Univ. Wash. Press, P.O. Box 50096, Seattle, WA 98145-5096. FR 38(2)
Oncorhynchus and *O. kisutch*.

FISHERIES REVIEW

RESEARCH AND MANAGEMENT-GENERAL (Continued)

93-003794 Saeki, Hiroki, Tamotsu Shoji, Fumio Hirata, Michio Nonaka and Ken-ichi Arai. [EFFECT OF $CaCl_2$ ON GEL FORMING ABILITY AND CROSS-LINKING REACTION OF MYOSIN HEAVY CHAIN IN SALT-GROUND MEAT OF SKIPPACK TUNA, CARP, AND WALLEYE POLLACK.] *Nippon Suisan Gakkaishi* 58(11):2137-2146. 1992. In Japanese with English summary. FR 38(2)

[Cent. Res. Inst., Taiyo Fish. Co. Ltd., Wada, Tsukuba, Ibaraki 300-42, Japan] *Lutjanus pelurus*, *Cyprinus carpio*, and *Theragra chalcogramma*.

93-003795 Scottish Office Agriculture and Fisheries Department. FRESHWATER FISHERIES LABORATORY PITLOCHRY ANNUAL REVIEW, 1990-1991. *Freshwater Fish. Lab. Pitlochry Annu. Rev.* 64p. 1990-1991. Available from Freshwater Fish. Lab., Faskilly, Pitlochry, Perthshire PH16 5LB, Scotland. FR 38(2)

93-003796 Shoji, Tamotsu, Hiroki Saeki, Atsushi Wakameda, Makoto Nakamura and Michio Nonaka. [CONTROL OF QUALITY OF PRESSURE-INDUCED GEL FROM WALLEYE POLLACK SURIMI BY HEAT-TREATMENT.] *Nippon Suisan Gakkaishi* 58(11):2055-2061. 1992. In Japanese with English summary. FR 38(2)

[Cent. Res. Inst., Taiyo Fish. Co. Ltd., Wada, Tsukuba, Ibaraki 300-42, Japan] *Theragra chalcogramma*

93-003797 Templar, Elisabeth. [THE MORPHOLOGICAL APPROACH TO FISHERIES.] *Research and Small-Scale Fisheries. Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1. 483-490. 1991. In French with English summary. FR 38(2)

[10 Montee Berceau P. Puget, 13016 Marseille, France]

93-003798 Thibault, M. [THE MANAGEMENT OF NATURAL POPULATIONS OF COMMON TROUT IN FRANCE, ANALYSIS IN A HISTORICAL PERSPECTIVE. (1669-1986).] In *The Trout: Biology and Ecology*, J. L. Bagliniere and G. Maisse, editors. p. 239-293. 1991. In French. FR 38(2)

[INRA, Lab. Ecol. Hydrobiol., Stn. Physiol. & Ecol. Poissons, 65 rue de St. Bleuve, 35042 Rennes Cedex, France] *Salmo trutta*.

93-003799 Thompson, Bruce C., Joseph J. Campo and Ray C. Telfair II. ORIGIN, POPULATION ATTRIBUTES, AND MANAGEMENT CONFLICT RESOLUTION FOR DOUBLE-CRESTED CORMORANTS WINTERING IN TEXAS. *Colon Waterbird Soc. Bull.* 16(2):49. 1992. Abstract only. FR 38(2)

[U.S. Fish & Wildl. Serv., Coop. Fish & Wildl. Res. Unit, Box 30003 Dep. 4901, Las Cruces, NM 88003]

93-003800 Tilmant, James T., Edward R. Rutherford, Richard H. Dawson and Edith B. Thue. IMPACTS OF GAMEFISH HARVEST IN EVERGLADES NATIONAL PARK. *Proc. Conf. So. Natl. Parks* Vol. 6, p. 75-103. 1986. FR 38(2)

[Natl. Park Serv., Res. Cent., Everglades Natl. Park, P.O. Box 279, Homestead, FL 33003] *Lutjanus griseus*, *Cynoscion nebulosus*, and *Scolaroops ocellatus* in Florida

93-003801 Tibbo, Donald L. and Douglas L. Denton. COLONIZATION OF RESTORED WETLANDS BY INVERTEBRATES, FISH, AMPHIBIANS AND REPTILES STUDIED (MICHIGAN). *Restoration Manage. Notes* 10(2):187. 1992. FR 38(2)

[Johnson, Johnson, & Roy Inc., 110 Miller, Ann Arbor, MI 48104] *Pimphalis notatus*, *P. promelas*, and *Lepomis macrochirus*.

93-003802 Webster, Henry H. and Daniel E. Chappelle. AN ALTERNATIVE TO LARGE-SCALE LAND TENURE CHANGES. *J. For.* 91(2):30-32. 1993. FR 38(2)

[Lake States For. Alliance, St. Paul, MN]

93-003803 Yamaha Outboards. HOW TO PROMOTE A FISHING TOURNAMENT. *Proc. Gulf Caribb. Fish. Mtg.* Vol. 40, p. 206-217. 1991. FR 38(2)

93-003804 Zhang Juemin. EXPLOITATION AND UTILIZATION OF COLDWATER FISHES IN CHINA. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989.* Wang Xing, editor. *Salmon Fish.* 1990(Spec. Issue):33-39. 1990. FR 38(2)

[Hefenglang Fish. Res. Inst., Chinese Acad. Fish. Sci., Harbin, China]

ADMINISTRATION AND PLANNING

93-003805 Bayliff, William H., editor. THE QUARTERLY REPORT: JULY-SEPTEMBER, 1992 OF THE INTER-AMERICAN TROPICAL TUNA COMMISSION. *Inter-Am. Trop. Tuna Comm. Q. Rep.* July-Sept. 45p. 1992. In English and Spanish. FR 38(2)

93-003806 Inter-American Tropical Tuna Commission. ANNUAL REPORT OF THE INTER-AMERICAN TROPICAL TUNA COMMISSION, 1991. *Inter-Am. Trop. Tuna Comm. Annu. Rep.* 1991. 277p. 1992. FR 38(2)

[Scriptus Inst. Oceanogr., La Jolla, CA 92037-1508]

HABITAT ALTERATIONS

93-003807 Andrew, Fred J. COOPERATIVE EFFORTS TO PROTECT SALMONID HABITAT FROM POTENTIAL EFFECTS OF HIGHWAY CONSTRUCTION IN BRITISH COLUMBIA. *Am. Fish. Soc. Symp.* No. 10 p. 191-199. 1991. FR 38(2)

[Andrew Consult. Ltd., 5024 Buxton St., Burnaby, BC, Canada V5H 1J6] *Oncorhynchus mykiss*, *O. gorbuscha*, *O. kisutch*, and *O. tshawytscha*

93-003808 Bartl, Ivan. THE IMPACT OF THE GABCIKOVO RIVER BARRAGE SYSTEM ON FISHERY MANAGEMENT. *Biological Monitoring of Large Rivers. Documents presented at the International Seminar held in Brno and Gabčíkovo, Czechoslovakia, 3-6 July, 1990*, Milan Ponaz, editor p. 79-81. 1991. FR 38(2)

[Inst. Zool. & Ecosyst., Celetova 3, 626 24 Brno, Czechoslovakia]

93-003809 Beasht, Robert L. STREAM HABITAT MANAGEMENT FOR FISH IN THE NORTHWESTERN UNITED STATES-THE ROLE OF RIPARIAN VEGETATION. *Am. Fish. Soc. Symp.* No. 10, p. 53-58. 1991. FR 38(2)

[Dep. For. Eng., Oreg. State Univ., Corvallis 97331]

93-003810 Bray, K. HISTORICAL CHANGE IN FISH HABITAT OF THE ST. MARYS RIVER. *Int. Assoc. Great Lakes Res. Conf.* No. 35, p. 162. 1992. Abstract only. FR 38(2)

[Watershed Ecosyst. Grad. Programme, Trent Univ., Peterborough, ON, Canada K9J 7B8]

93-003811 Burton, Timothy A., William H. Clark, Geoffrey W. Harvey and Terry R. Moret. DEVELOPMENT OF SEDIMENT CRITERIA FOR THE PROTECTION AND PROPAGATION OF SALMONID FISHES. *J. Idaho Acad. Sci.* 20(1):14. 1992. Abstract only. FR 38(2)

[1. Boise Natl. For., 1750 Front St., Boise, ID 83702]

93-003812 Friswell, Christopher Andrew. CUMULATIVE EFFECTS OF LAND USE ON SALMON HABITAT IN SOUTHWEST OREGON COASTAL STREAMS. Ph.D. dissertation, Oreg. State Univ. 241p. 1992. From *Dis. Abstr. Int. B Sci. Eng.* 53(7):3239. 1993. Order No. DA9232330. FR 38(2)

Oncorhynchus mykiss

93-003813 Gilfilla, William B., Benny I. Galway, William J. Gazey and Robert E. Dillinger, Jr. GROWTH AND CONDITION OF ARCTIC CISCO AND BROAD WHITFISH AS INDICATORS OF CAUSEWAY-INDUCED EFFECTS IN THE PRUDHOE BAY REGION, ALASKA. *Trans. Am. Fish. Soc.* 121(5):557-577. 1992. FR 38(2)

[UGL Ltd., Environ. Res. Assoc., 9768 Second St., Sidney, BC, Canada V8L 3Y8] *Coregonus autumnalis* and *C. nasus*

93-003814 Hollebome, J. E. AGRICULTURAL PESTICIDES IN THE AQUATIC ENVIRONMENT- RISKS VS BENEFITS. *Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986*, J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 66. 1987. Abstract only. FR 38(2)

[Issues, Planning & Priorities Div., Pesticides Dir., Agric. Canada, Ottawa, ON, Canada K1A 0G6]

93-003815 International Council for the Exploration of the Sea. EFFECTS OF EXTRACTION OF MARINE SEDIMENTS ON FISHERIES. *Int. Council Explor. Sea Coop. Res. Rep.* No. 182, 77p. 1992. FR 38(2)

[Int. Council Explor. Sea, Palaesgade 2-4, DK-1261 Copenhagen K, Denmark]

93-003816 Johnson, W. Carter. DAMS AND RIPARIAN FORESTS- CASE STUDY FROM THE UPPER MISSOURI RIVER. *Rivers* 3(4):229-242. 1992. FR 38(2)

[Dep. Horticul., For., Landscape & Parks, S.D. State Univ., Brookings 57007]

93-003817 Kanehl, Paul and John Lyons. IMPACTS OF IN-STREAM SAND AND GRAVEL MINING ON STREAM HABITAT AND FISH COMMUNITIES, INCLUDING A SURVEY ON THE BIG RIB RIVER, MARATHON COUNTY, WISCONSIN. *Wis. Dep. Nat. Resour. Res. Rep.* No. 155, 32p. 1992. FR 38(2)

[Dep. Nat. Resour., Bur. Res., 1350 Fernite Dr., Monona, WI 53716] Data for 30 species.

93-003818 Kingsbury, Peter D. RISKS TO AQUATIC ORGANISMS FROM FORESTRY PESTICIDE USE IN CANADA. *Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986*, J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 66. 1987. Abstract only. FR 38(2)

[For. Pest Manage. Int., Canadian For. Serv., Sault Ste. Marie, ON, Canada P6A 5M7]

93-003819 Lockhart, W. L. THE DEPARTMENT OF FISHERIES AND OCEANS' ROLE IN PESTICIDE REGISTRATION. *Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986*, J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 67. 1987. Abstract only. FR 38(2)

[Canada Dep. Fish. & Oceans, Cont. & Artic Reg., Freshwater Inst., 501 University Crescent, Winnipeg, MB, Canada R3T 2N6]

FISHERIES REVIEW

HABITAT ALTERATIONS (Continued)

- 93-003820 May, Richard T MARINE CONSERVATION RESERVES, PETROLEUM EXPLORATION AND DEVELOPMENT, AND OIL SPILS IN COASTAL WATERS OF WESTERN AUSTRALIA *Mar Pollut Bull* 25(5-8) 147-154 1992 FR 38(2)
[G.P.O. Box 614, Applecross, W.A. 6153, Australia]
- 93-003821 McKinnon, G. A. and T. N. Hrytko THE EFFECT OF WINTER PIPELINE CONSTRUCTION ON THE FISHES AND FISH HABITAT OF HODGSON CREEK, N.W.T. *Can. Tech. Rep. Fish. Aquat. Sci. No. 1598* 44p 1988. In English with French summary FR 38(2)
[Cent. & Arctic Reg., Dep. Fish. & Oceans, Winnipeg, MB, Canada R3T 2N6] *Thynnus arcticus*, *Coregonus cognatus*, *Coregonus plumbeus*, *Coregonus catostomus*, *Lotte lota*, and *Esox lucius* in Canada
- 93-003822 Muehlstein, Lisa K. and Jim Beets SEAGRASS DECLINES AND THEIR IMPACT ON FISHERIES *Proc. Gulf Caribb. Fish. Inst. Vol. 42* p. 55-65, 1992. FR 38(2)
[Caribbean Res. Inst., Univ. Virgin Islands, St. Thomas, Virgin Islands 00802]
- 93-003823 Mundle, J. H. OVERVIEW OF EFFECTS OF PACIFIC COAST RIVER REGULATION ON SALMONIDS AND THE OPPORTUNITIES FOR MITIGATION *Am. Fish. Soc. Symp. No. 10* p. 1-11 1991 FR 38(2)
[Dep. Fish. & Oceans, Biol. Sci. Branch, Pac. Biol. Stn., Nanaimo, BC, Canada V9R 5G6]
- 93-003824 Nakamura, Shunroku; Nobuhiko Mizuno, Nobuyuki Tamai and Rikizo Ishida AN INVESTIGATION OF ENVIRONMENTAL IMPROVEMENTS FOR FISH PRODUCTION IN DEVELOPED JAPANESE RIVERS *Am. Fish. Soc. Symp. No. 10* p. 32-41 1991 FR 38(2)
[Dep. Civil Eng./Reg. Planning, Toyohashi Univ. Technol., Toriyukaicho Toyohashi 441, Japan]
- 93-003825 Palmer, Michael H.; Stephen F. Modica and Eric G. Hofstetter SHORT-TERM CHANGES IN A SOUTHEASTERN COASTAL PLAIN FISH ASSEMBLAGE FOLLOWING ARTIFICIAL INCREASES IN STREAMFLOW *Rivers* 3(4):243-250, 1992. FR 38(2)
[Environ. Sci. Sect., Bldg. 773-42A, Savannah River Lab., Westinghouse Savannah River Co., Aiken, SC 29802] *Micropterus salmoides*, *Morone melanops*, and *Norops* in South Carolina
- 93-003826 Penaz, M.; G. H. Capps, J. M. Oliver and A. L. Roux. FISH REPRODUCTIVE POTENTIAL OF REGULATED FLUVIAL ECOSYSTEMS: AN APPLICATION OF JUVENILE FISHES AS FUNCTIONAL DESCRIPTORS *Biological Monitoring of Large Rivers. Documents presented at the International Seminar held in Brno and Gabčíkovo, Czechoslovakia, 3-6 July, 1990. Milan Penaz, editor* p. 93-98 1991 FR 38(2)
[Inst. Syst. & Ecol. Biol., Czechoslovak Acad. Sci., Kvetna B, 603 65 Brno, Czechoslovakia]
- 93-003827 Penaz, Milan and Evzen Wohlgemuth ICHTHYOFAUNA OF THE MORAVA RIVER WITH RESPECT TO THE PROPOSED DANUBE - ODRA CANAL *Biological Monitoring of Large Rivers. Documents presented at the International Seminar held in Brno and Gabčíkovo, Czechoslovakia, 3-6 July, 1990. Milan Penaz, editor* p. 99-101, 1991. FR 38(2)
[Inst. Syst. & Ecol. Biol., Czechoslovak Acad. Sci., Kvetna B, 603 65 Brno, Czechoslovakia] Data for 60 species in Czechoslovakia.
- 93-003828 Penaz, Milan, editor. BIOLOGICAL MONITORING OF LARGE RIVERS. DOCUMENTS PRESENTED AT THE INTERNATIONAL SEMINAR HELD IN BRNO AND GABČIKOVO, CZECHOSLOVAKIA, 3-6 JULY, 1990. *Czech. Acad. Sci. (Brno)* 120p. 1991. FR 38(2)
[Inst. Syst. & Ecol. Biol., Czechoslovak Acad. Sci., Kvetna B, 603 65 Brno, Czechoslovakia] Selected papers indexed in this issue of *Fisheries Review*.
- 93-003829 Reeves, Gordon H., Fred H. Everest and James R. Seckel. RESPONSES OF ANADROMOUS SALMONIDS TO HABITAT MODIFICATION. HOW DO WE MEASURE THEM? *Am. Fish. Soc. Symp. No. 10* p. 62-67, 1991. FR 38(2)
[U.S. For. Serv., Pac. Northwest Exp. Stn., 3200 Jefferson Way, Corvallis, OR 97331] *Oncorhynchus klutchi*, *O. mykiss*, and *O. tshawytscha*
- 93-003830 Roberts, Bruce C. FISH SQUISH *Trout* 34(1):64-66, 1993. FR 38(2)
Oncorhynchus mykiss, *O. clarki*, and *Salmo trutta* in Montana.
- 93-003831 Rutherford, D. Alex; Anthony A. Echelle and O. Eugene Maughan DRAINAGE-WIDE EFFECTS OF TIMBER HARVESTING ON THE STRUCTURE OF STREAM FISH ASSEMBLAGES IN SOUTHEASTERN OKLAHOMA. *Trans. Am. Fish. Soc.* 121(6):716-728, 1992. FR 38(2)
[School For., Wildl., & Fish., La. State Univ., Baton Rouge 70803] Data for 29 species.
- 93-003832 Schmitt, Wyman C. and Kathy J. McDonnell, compilers. PROCEEDINGS-SYMPOSIUM ON WETBARK PINE ECOSYSTEMS - (COLOGY AND MANAGEMENT OF A HIGH-MOUNTAIN RESOURCE. BOZEMAN, MT, MARCH 29-31, 1989. U.S. For. Serv. Gen. Tech. Rep. INT No. 270 386p. 1990. FR 38(2)
Selected paper indexed in this issue of *Fisheries Review*

FISHERIES REVIEW

HABITAT ALTERATIONS (Continued)

93-003833 Squires, Donald F. QUANTIFYING ANTHROPOGENIC SHORELINE MODIFICATION OF THE HUDSON RIVER AND ESTUARY FROM EUROPEAN CONTACT TO MODERN TIME. *Coastal Manage.* 20(4):343-354. 1992. FR 38(2)

[Mar. Sci. Inst., Univ. Conn., Storrs 06268]

93-003834 Sweeney, Bernard W. STREAMSIDE FORESTS AND THE PHYSICAL, CHEMICAL, AND TROPIC CHARACTERISTICS OF PIEDMONT STREAMS IN EASTERN NORTH AMERICA. *Proceedings of the Seventh Biennial Conference of the International Association on Water Pollution Research and Control, Washington, DC, USA, 24-30 May 1992*. M. Suzuki, D. Bailey, A.-G. Dahlberg, W. Gujer, D. Jenkins, H. Kroiss, A. C. Di Pino, K. Zoller, A. Milburn, E. J. Izold and P. T. Nagle, editors. *Water Sci. Technol.* 26(12):2653-2673. 1992. FR 38(2)

[Stroud Water Res. Cent., Acad. Nat. Sci. Philadelphia, R.O. #1, Box 512, Spencer Rd., Avondale, PA 19311]

93-003835 Tanner, C. C. A REVIEW OF CATTLE GRAZING EFFECTS ON LAKE MARCIN VEGETATION WITH OBSERVATIONS FROM OLIVE LAKES IN NORTH-LAND, NEW ZEALAND. *N.Z. Nat. Sci. Vol.* 19, p. 1-14. 1992. FR 38(2)

[Nat. Inst. Water & Atmos. Res., Ruakura Agric. Cent., Private Bag 3123, Hamilton, New Zealand]

93-003836 Westcott, K.; T. O'Donoghue, M. Fox and T. Whillans. LIMITS ON REGENERATION OF SUBMERSED MARSH VEGETATION: PROPAGULE BANKS, CARP AND WATERFOWL IN LAKE ONTARIO. *Int. Assoc. Great Lakes Res. Conf. No. 38*, p. 13D. 1992. Abstract only. FR 38(2)

[Environ. & Resour. Studies, Trent Univ., Peterborough, ON, Canada K9J 7B8]

HARVEST, CREEL CENSUS, ETC.

93-003837 Bayliff, William H., editor. THE QUARTERLY REPORT: OCTOBER-DECEMBER 1992, OF THE INTER-AMERICAN TROPICAL TUNA COMMISSION. *Inter-Am. Trop. Tuna Comm. Q. Rep.* 56p. Oct-Dec. 1992. In English and Spanish. FR 38(2)

93-003838 Beckeman, Stephen. BARI SPEAR FISHING: ADVANTAGES TO GROUP FORMATION? *Hum. Ecol.* 19(4):529-554. 1991. FR 38(2)

[Anthropol. Dep., Pa. State Univ., University Park 16802] *Prochilodus reticulatus* in Venezuela.

93-003839 Beets, James and Joseph A. LaPlante. VIRGIN ISLANDS BAITFISH SURVEY: OCTOBER TO DECEMBER 1986. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40, p. 55-63. 1991. FR 38(2)

[Div. Fish. & Wildl., Dep. Conserv. & Cultural Affairs, Virgin Islands] *Harengula clupeioides*, *H. hutchingsi*, *Jenkinsia leucoproctus*, *Anchoa hepsetus*, *Hemiramphus brasiliensis*, and *Solea crumenophthalma*.

93-003840 Bogasul, Alpina. FOOD TABOOS AT BUZIOS ISLAND (BRAZIL). THEIR SIGNIFICANCE AND RELATION TO FOLK MEDICINE. *J. Ethnobiol.* 12(1):117-139. 1992. In English with Portuguese and French summ. FR 38(2)

[Nucleo Estudos & Pesq. Ambientais, Univ. Estadual Campinas, CP 1178, Campinas, 13081, SP, Brazil] Data for 30 species.

93-003841 Brewer, Don. ATTITUDES TOWARD AQUATIC WILDLIFE AND FISH RESOURCES IN NEW HAMPSHIRE. M.S. thesis, Univ. N.H. 93p. 1991. FR 38(2)

93-003842 Butz, Ivo. [FISH TRADE IN AUSTRIA 1991.] *Osterr. Fisch. Fachzeits.* 46(1):23-27. 1993. In German. FR 38(2)

93-003843 Ditton, Robert B. SOCIAL AND ECONOMIC DIMENSIONS OF FISHING TOURNAMENTS. *Proc. Gulf Caribb. Fish. Inst.* Vol. 43, p. 155-161. 1991. FR 38(2)

[Dep. Recreation & Parks, Tex. A&M Univ., College Station 77843-2261]

93-003844 Fisher, Mark R. and Robert B. Ditton. CHARACTERISTICS OF BILLYFISH ANGLERS IN THE U.S. ATLANTIC OCEAN. *Mar. Fish. Rev.* 54(1):1-6. 1992. FR 38(2)

[Dep. Wildl. & Fish. Sci., Tex. A&M Univ., College Station 77843] *Istophorus platypterus*, *Makaira nigricans*, *Tetrapturus albidus*, and *T. pfluegeri*.

93-003845 Friend, Anthony M. ECONOMICS, ECOLOGY AND SUSTAINABLE DEVELOPMENT: ARE THEY COMPATIBLE? *Int. Assoc. Great Lakes Res. Conf. No. 38*, p. 66. 1992. Abstract only. FR 38(2)

[Inst. Res. Environ. & Econ., Univ. Ottawa, 5 Calixa Lavallee, Ottawa, ON, Canada K1N 6N5]

93-003846 Gallaghy, John. TOURNAMENT SPONSORSHIP STRATEGIES. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40, p. 162-166. 1991. FR 38(2)

FISHERIES REVIEW

HARVEST, CREEL CENSUS, ETC. (Continued)

- 93-003847 Gobert, Bertrand. POTENTIAL INTEREST OF TWO TIME-SAVING METHODS FOR MEASURING ACTIVITY AND CATCHES OF SMALL-SCALE FISHERIES. *Proc. Gulf Caribb. Fish. Inst.* Vol. 41, p. 36-47. 1992. FR 38(2)
[Pole Rech. Océanol & Halieutiques Caraïbe, Cent. ORSTOM Fort France, BP 8006, 97259 Fort France Cedex, Martinique]
- 93-003848 Hoeking, William; Brian E. Perkins, Richard K. Wallace and Hugh A. Swingle. AN ECONOMIC ANALYSIS OF THE 1986 ALABAMA MULLET ROE INDUSTRY. *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am.* No. 12, p. 459-465. 1988. FR 38(2)
[Sea Grant Est. Serv., 3940 Government Blvd., Mobile, AL 36693] Magl.
- 93-003849 Howell, W. Hunting and Richard Langin. DISCARDING OF COMMERCIAL GROUND FISH SPECIES IN THE GULF OF MAINE SHRIMP FISHERY. *N. Am. J. Fish. Manage.* 12(3):560-580. 1992. FR 38(2)
[Dep. Zool. & Coastal Mar. Lab., Univ. N.H., Durham 03824] *Hippoglossoides platessoides*, *Glyptocephalus cynoglossus*, *Platichthys ferrugineus*, *P. americanus*, *Lopholatilus chamaeleonis*, *Merluccius bilinearis*, and *Gadus morhua* in Maine.
- 93-003850 Kimmel, Joseph J. A FISHERIES DEPENDANT SURVEY OF BAITFISHES IN PUERTO RICO. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40, p. 64-81. 1991. FR 38(2)
[Mar. Res. Inst., 100 8th Ave. S.E., St. Petersburg, FL 33701]
- 93-003851 Kitada, Syuichi. [METHODS FOR ESTIMATING THE TOTAL CATCH OF MARINE RECREATIONAL FISHERY BY SAMPLE SURVEY OF PARTY BOATS.] *Nippon Suisan Gakkaishi* 59(1):75-78. 1993. In Japanese with English summ. FR 38(2)
[Japan Sea-Farming Assoc., Arakawa, Tokyo 116, Japan]
- 93-003852 Kitada, Syuichi; Hirohisa Kishino and Yasuichi Taga. [ESTIMATES OF STOCKING EFFECTIVENESS EVALUATED BY A TWO-STAGE SAMPLING SURVEY OF COMMERCIAL LANDINGS.] *Nippon Suisan Gakkaishi* 59(1):67-73. 1993. In Japanese with English summ. FR 38(2)
[Japan Sea-Farming Assoc., Arakawa, Tokyo 116, Japan]
- 93-003853 Martineau, Kristen S. and Bo Shelby. ENCOUNTER AND PROXIMITY NORMS FOR SALMON ANGLERS IN CALIFORNIA AND NEW ZEALAND. *N. Am. J. Fish. Manage.* 12(3):559-567. 1992. FR 38(2)
[U.S. For. Serv., Cadillac Ranger Dist., 1800 W. M-55, Cadillac, MI 49601] *Oncorhynchus*
- 93-003854 Miller, Peter. AN ETHICAL FRAMEWORK FOR SUSTAINABLE DEVELOPMENT. *Int. Assoc. Great Lakes Res. Conf.* No. 35, p. 66. 1992. Abstract only. FR 38(2)
[Philosophy Dep., Univ. Winnipeg, Winnipeg, MB, Canada R3J 2E9]
- 93-003855 Murdock, Steve H.; Kenneth Backman; Robert B. Dutton; Md. Nazim Hogue and David Ellis. IMPLICATIONS OF FUTURE DEMOGRAPHIC CHANGE FOR PARTICIPATION IN FISHING IN TEXAS. *N. Am. J. Fish. Manage.* 12(3):548-558. 1992. FR 38(2)
[Dep. Rural Sociol., Agric. Exp. Stn., Tex. A&M Univ., College Station 77843]
- 93-003856 Osburn, Hal R.; Robert B. Dutton; Gary C. Matlock and Jerry L. Clark. A FIELD TECHNIQUE FOR MONITORING THE MARINE RECREATIONAL FISHERY IN TEXAS. *Proc. Gulf Caribb. Fish. Inst.* Vol. 41, p. 310-320. 1992. FR 38(2)
[Parks & Wildl. Dep., 100 Navigation Circle, Rockport, TX 78382]
- 93-003857 Peraza, Enrique Osuna. [VARIATION IN ANNUAL EFFORT AND CATCH OF BILLFISH AND RELATED SPECIES (1979-1990), IN MAZATLAN, SINALOA, MEXICO.] *Cienc. Mar.* 1(12):25-40. 1992. In Spanish. FR 38(2)
Tetrapturus audeax, *Makaira nigricans*, *M. indica*, *Istiophorus platypterus*, *Coryphaena hippurus*, *Thunnus albacares*, *Euthynnus palmis*, *Rhizoprionodon longirostris*, and *Sphyrna tiburo*.
- 93-003858 Ruiz L., Arturo and Lourdes P. Lyle F. [PERIODIC FLUCTUATIONS OF THE CATCH OF THREAD HERRINGS (OPSTHONEMA SPP.) IN THE GULF OF CALIFORNIA, 1972-1990.] *Calif. Coop. Oceanic Fish. Invest. Rep.* Vol. 33, p. 124-129. 1992. In Spanish with English summ. FR 38(2)
[Inst. Cienc. Mar. & Limnol., UNAM, Estac. Mazatlan, A.P. 011, Mazatlan, Sinaloa, Mexico] O. Ibarra, O. Baker, and C. Medina
- 93-003859 Sandweiss, Daniel H. THE ARCHAEOLOGY OF CHINCHA FISHERMAN: SPECIALIZATION AND STATUS IN INKA PERU. *Bull. Carnegie Mus. Nat. Hist.* No. 29, 161p. 1992. FR 38(2)
- 93-003860 Springer, Christine Marie. RISK MANAGEMENT AND RISK COMMUNICATION PERSPECTIVES REGARDING LAKE ONTARIO'S CHEMICALLY CONTAMINATED SPORT FISHERY. *M.S. thesis*, Cornell Univ. 330p. 1990. FR 38(2)

FISHERIES REVIEW

HARVEST, CREEL CENSUS, ETC. (Continued)

93-003861 Tello, Martin Salvador and J. R. Canapa In Sema. [STATUS OF EXPLOITATION OF MAIN ORNAMENTAL FISH SPECIES IN AMAZONIAN PERU.] *Fauna Amazonica* Vol. 3 p. 109-120. 1991. In *Spanish FR 38(2)*

93-003862 Tobias, William. RESOURCE EVALUATION OF THE BIGEYE SCAD, *SILAR CROMBIEI* (BLOCH), IN THE INSULAR SHELF WATERS AROUND ST. CROIX, U.S. VIRGIN ISLANDS. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40, p. 82-98. 1991. FR 38(2)

[Dep. Planning & Nat. Resour., Div. Fish & Wildl., Lagoon St. Complex, Rm. 203, Frederiksted, St. Croix, Virgin Islands 00840]

93-003863 Tobias, William. 1987 SWORDFISH FISHERY LANDINGS, ST. CROIX, U.S. VIRGIN ISLANDS. *Proc. Gulf Caribb. Fish. Inst.* Vol. 41 p. 41-52. 1992. FR 38(2)

[Dep. Planning & Nat. Resour., Div. Fish & Wildl., Lagoon St. Complex, Rm. 203, Frederiksted, St. Croix, Virgin Islands 00840] *Xiphias gladius*.

REGULATIONS

93-003864 Alken, Karl A. and Milton O. Houghton. REGULATING FISHING EFFORT THE JAMAICAN EXPERIENCE. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40, p. 139-150. 1991. FR 38(2)

[Zool. Dep., U.W.I. Mona, Jamaica]

93-003865 Dean, Jan and Garland Wright. BLACK BASS LENGTH LIMITS BY DESIGN. A GRAPHIC APPROACH. *N. Am. J. Fish. Manage.* 12(3):538-547. 1992. FR 38(2)

[Dep. Life Sci., Northwest State Univ., Natchitoches, LA 71457] *Micropterus salmoides* in Oklahoma.

93-003866 Lee, Dennis P.; Ivan Paulsen; Walter Beer and L. B. Boydstun. EVALUATION OF A BLACK BASS SLOT LIMIT AT CROVILLE RESERVOIR, BUTTE COUNTY. *Calif. Dep. Fish Game Inland Fish Adm. Rep. No.* 92-8. 10p. 1992. FR 38(2)

Micropterus salmoides salmoides, *M. punctulatus*, and *M. dolomieu* in California.

93-003867 Moore, Denton R. SELF-REGULATION BY ARTISANAL FISHERMEN IN THE CARIBBEAN. *Proc. Gulf Caribb. Fish. Inst.* Vol. 41 p. 304-309. 1992. FR 38(2)

[Fish & Wildl. Div., Dep. Planning & Nat. Resour., Virgin Islands]

93-003868 Murray, James D. and James J. Bahen. SOME CONSIDERATIONS TO REDUCE KILL IN FISH TOURNAMENTS. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40 p. 190-196. 1991. FR 38(2)

93-003869 Wright, Sam. GUIDELINES FOR SELECTING REGULATIONS TO MANAGE OPEN-ACCESS FISHERIES FOR NATURAL POPULATIONS OF ANADROMOUS AND RESIDENT TROUT IN STREAM HABITATS. *N. Am. J. Fish. Manage.* 12(3):517-527. 1992. FR 38(2)

[Dep. Fish., P.O. Box 43135, Olympia, WA 98504] *Oncorhynchus clarki* and *O. mykiss* in Washington.

FISH CONTROL AND REMOVAL

93-003870 Dunning, Dennis J.; Quentin E. Ross; Paul Geoghegan; James J. Reichle; John K. Menozos and John K. Watson. ALDWIVES AVOID HIGH-FREQUENCY SOUND. *N. Am. J. Fish. Manage.* 12(3):407-416. 1992. FR 38(2)

[Power Authority, 123 Main St., White Plains, NY 10601] *Alosa pseudoharengus*.

93-003871 Holloway, Gale A. THE BRULER RIVER SEA LAMPREY BARRIER AND FISH LADDER, WISCONSIN. *Am. Fish. Soc. Symp.* No. 10, p. 264-267. 1991. FR 38(2)

[Dep. Nat. Resour., P.O. Box 7951, Madison, WI 53752] *Petromyzon marinus*.

93-003872 Huq, M. S.; M. Davlatova and S. S. Begum. STUDIES ON THE TOXICITIES OF TFASEED AND TEASEED CAKE ON THE SINGHI FISH (*HETEROPNEUSTES FOSSILIS* BLOCH) AND GLUTIUM FISH (*LEPIDOCEPHALLUS GUNTEA* HAMILTON-BUCHANAN). *Bangladesh J. Sci. Ind. Res.* 27(1-2):80-86. 1992. FR 38(2)

[Inst. Food Sci. & Technol. ICSIR, Dhaka, Bangladesh]

93-003873 Kindrich, Greg A. and Bill Kirkpatrick. A SMALL ELECTRICAL GRID FOR PREVENTING ESCAPEMENT OF FISH. *J. Appl. Aquacult.* 1(4):103-109. 1992. FR 38(2)

[U.S. Fish & Wildl. Serv., Bozeman Fish Technol. Cent., 4050 Bridger Canyon Rd., Bozeman, MT 59715] *Silurus asotus*.

93-003874 Marsden, J. Ellen. RESPONDING TO AQUATIC PEST SPECIES: CONTROL OR MANAGEMENT? *Fisheries (Bethesda)* 18(1):4-5. 1993. FR 38(2)

[Lake Michigan Biol. Stn., Nat. Hist. Surv., 400-17th St., Zion, IL 60099]

MARKING AND TAGGING

- 93-003875 Morgan, M. J. and S. J. Walsh. EVALUATION OF THE RETENTION OF EXTERNAL TAGS BY JUVENILE AMERICAN FLICE (HYPOGLOSSOIDES PLATESSOIDES) USING AN AQUARIUM EXPERIMENT. *Fish. Res. (Amst.)* 16(1):1-7. 1993. FR 38(2)
[Dep. Fish. & Oceans, P.O. Box 5667, St. John's, NF, Canada A1C 5X1]

STOCKING AND INTRODUCTIONS

- 93-003876 Ando, Sadayuki, Atsushi Horii, Wang Jianhui and Wang Huifang. A BRIEF REPORT ON RELEASE-TRANSPLANTATION EXPERIMENT OF SALMONS IN NORTH YELLOW SEA. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989*. Wang Xing, editor. *Salmon Fish. 1990* (Spec. Issue) 1:57. 1990. Abstract only. FR 38(2)
Oncorhynchus keta and *O. masou*.

- 93-003877 Bain, Mark B. ASSESSING IMPACTS OF INTRODUCED AQUATIC SPECIES: GRASS CARP IN LARGE SYSTEMS. *Environ. Manage.* 17(2):211-224. 1993. FR 38(2)
[Coop. Fish. & Wildl. Res. Unit, Dep. Nat. Resour., Fenow Hall, Cornell Univ., Ithaca, NY 14853-3001]
Ctenopharyngodon idella in Alabama

- 93-003878 Cooper, J., J. E. Crawford and T. Hecht. INTRODUCTION AND EXTINCTION OF BROWN TROUT (SALMO TRUTTA L.) IN AN IMPOVERISHED SUBANTARCTIC STREAM. *Antarctic Sci.* 4(1):9-14. 1992. FR 38(2)
[Perry Fitzpatrick Inst. African Ornithol., Univ. Cape Town, Rondebosch 7700, South Africa]

- 93-003879 Daley, Wayne J. THE USE OF FISH HATCHERIES: POLARIZING THE ISSUE. *Fisheries (Bethesda)* 18(3):4-5. 1993. FR 38(2)
[Kramer, Chin & Mayo, Inc., 3917 First Ave., Seattle, WA 98101-1027]

- 93-003880 DeCeo, Robert O. INVESTIGATIONS ON THE EFFECTS OF INTRODUCED SOCKEYE SALMON ON GROWTH, ABUNDANCE, AND UTILIZATION OF FORAGE RESOURCES IN A SMALL OLIGOTROPHIC LAKE LOCATED IN SOUTHEAST ALASKA. *M.S. thesis*, Utah State Univ. 114p. 1992. FR 38(2)
Oncorhynchus nerka.

- 93-003881 Dunham, Rex A., C. J. Tunser and W. C. Reeves. INTROGRESSION OF THE FLORIDA LARGEMOUTH BASS GENOME INTO NATIVE POPULATIONS IN ALABAMA PUBLIC LAKES. *N. Am. J. Fish. Manage.* 12(3):494-496. 1992. FR 38(2)
[Dep. Fish. & Allied Aquacult., Auburn Univ., Auburn, AL 36849] *Micropterus salmoides salmoides* and *M. s. floridanus*.

- 93-003882 Farnet, G. J. SOME FACTORS WHICH INFLUENCE THE SURVIVAL OF HATCHERY ATLANTIC SALMON (SALMO SALAR) SMOLTS UTILIZED FOR ENHANCEMENT PURPOSES. *Can. Tech. Rep. Fish. Aquat. Sci. No. 1855*. 19p. 1992. In English with French summary. FR 38(2)
[Freshwater & Anadromous Div., Biol. Sci. Branch, Dep. Fish. & Oceans, Halifax, NS, Canada B3J 2S7]

- 93-003883 Hanson, David A. and Terry L. Morganau. MOVEMENT, HABITAT SELECTION, BEHAVIOR, AND SURVIVAL OF STOCKED MUSKELLUNGE. *N. Am. J. Fish. Manage.* 12(3):474-483. 1992. FR 38(2)
[DNR Consult. & Eng., 35 Nagog Park, Acton, MA 01720] *Esox masquinongy* in Wisconsin.

- 93-003884 Hume, Jeremy M. B. and Karji Tamura. FIELD EVALUATION OF TWO RAINBOW TROUT STRAINS INTRODUCED INTO THREE BRITISH COLUMBIA LAKES. *N. Am. J. Fish. Manage.* 12(3):465-473. 1992. FR 38(2)
[Dep. Fish. & Oceans, Biol. Sci. Branch, Cultus Lake, BC, Canada V0X 1H0] *Oncorhynchus mykiss* in Canada.

- 93-003885 Hutchings, Pat. BALLAST WATER INTRODUCTIONS OF EXOTIC MARINE ORGANISMS INTO AUSTRALIA: CURRENT STATUS AND MANAGEMENT OPTIONS. *Mar. Pollut. Bull.* 25(5-8):196-199. 1992. FR 38(2)

[Australian Mus., P.O. Box A285, Sydney South, N.S.W. 2001, Australia] *Acanthogobius flavescens*, *Zoëntiger zgonocapillus*, *Latocóbrus japonicus*, and *Spondentia hastis*.

- 93-003886 Johnson, James H. and David S. Dropkin. PREDATION ON RECENTLY RELEASED LARVAL AMERICAN SHAD IN THE SUSQUEHANNA RIVER BASIN. *N. Am. J. Fish. Manage.* 12(3):504-508. 1992. FR 38(2)

[Nat. Fish. Res. & Dev. Lab., U.S. Fish. & Wildl. Serv., Rural Delivery 4, Box 63, Wellbana, PA 16901] *Alosa sapidissima*, *Micropterus dolomieu*, *Astropis volucellus*, and *Cyprinella spiloptera* in Pennsylvania.

- 93-003887 Macoina, Michael J.; Brian R. Murphy and David P. Philipp. STOCKING FLORIDA LARGEMOUTH BASS OUTSIDE ITS NATIVE RANGE. *Trans. Am. Fish. Soc.* 121(5):686-691. 1992. FR 38(2)

[Dep. Fish. & Allied Aquacult., Auburn Univ., Auburn, AL 36849] *Micropterus salmoides floridanus* in North America.

FISHERIES REVIEW

STOCKING AND INTRODUCTIONS (Continued)

93-003888 Margenau, Terry L. SURVIVAL AND COST-EFFECTIVENESS OF STOCKED FALL FINGERLING AND SPRING YEARLING MUSKELLUNGE IN WISCONSIN. *N. Am. J. Fish. Manage.* 12(3):484-493. 1992. FR 38(2)

[Dep. Nat. Resour., P.O. Box 309, Spooner, WI 54801] *Esox masquinongy*

93-003889 Moring, John R. RECORDS OF LONG-RANGE, DOWNSTREAM MOVEMENTS OF STOCKED RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). *Fish. Res. (Amst.)* 16(2):195-199. 1992. FR 38(2)

[U.S. Fish & Wildl. Serv., Coop. Fish & Wildl. Res. Unit, Dep. Zool., Univ. Maine, 5751 Mummy Hall, Orono 04469-5751]

93-003890 Pepper, V.A. and N. P. Oliver. HISTORICAL PERSPECTIVES ON ATLANTIC SALMON (*SALEMA SALAR*) ENHANCEMENT ACTIVITIES ON INDIAN BROOK, NEWFOUNDLAND (1960-80) AND THEIR RELEVANCE WITH RESPECT TO COMMUNITY INVOLVEMENT. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1461. 66p. 1986. In English with French summ. FR 38(2)

[Fish. Res. Branch, Dep. Fish. & Oceans, P.O. Box 5667, St. John's, NF, Canada A1C 5X1]

93-003891 Stegwarth, Gary L. CHANNEL CATFISH OF THE BUFFALO NATIONAL RIVER, ARKANSAS: POPULATION ABUNDANCE, REPRODUCTIVE OUTPUT, AND ASSESSMENT OF STOCKING CATCHABLE SIZE FISH. M.S. thesis, Univ. Arkansas 107p. 1992. FR 38(2)

Ictalurus punctatus

93-003892 Swachs, E. J. RELATIVE SURVIVAL OF HATCHERY-REARED LAKE TROUT, BROOK TROUT, AND F1 SPLAKE STOCKED IN LOW-PH LAKES. *N. Am. J. Fish. Manage.* 12(3):460-464. 1992. FR 38(2)

[Ontario Minist. Nat. Resour., Coop. Freshwater Ecol. Unit, Dep. Biol., Laurentian Univ., Sudbury, ON, Canada P3E 2C6] *Salvelinus namaycush* and *S. fontinalis* in Canada

93-003893 Wilkowski, Andrzej and Mieczyslaw Kowalewski. BIOLOGICAL CHARACTERISTICS OF THE DANUBE SALMON *HUCHO HUJOYO* (L.) INTRODUCED INTO THE DUNAIEC RIVER DRAINAGE BASIN. *Roczn. Nauk. Pol. Zwiastka Wiedzy Rybniczej* Vol. 2, p. 15-44. 1995. In Polish with English and Russian summ. FR 38(2)

[Mus. Przyrodnicze Univ. Wrocławskiego, ul. Ślaskie Włocławka 21, 50-335 Wrocław, Poland]

93-003894 Xie Yuhao and UBo. THE BIOLOGICAL ASPECTS AND TRANSPLANTATION OF POND SMELT (*HYPOMESUS OLEOIDES*) IN RESERVOIRS IN NORTHERN CHINA. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989*. Wang Xing, editor. *Salmon Fish. 1990* [Spec. Issue]:65-72. 1990. FR 38(2)

[Res. Inst. Freshwater Fish., Liaoning Province, China]

FISHING GEAR AND TECHNIQUES

93-003895 Aadland, Luther P. and Chancel M. Cook. AN ELECTRIC TRAWL FOR SAMPLING BOTTOM-DWELLING FISHES IN DEEP TURBID STREAMS. *N. Am. J. Fish. Manage.* 12(3):652-656. 1992. FR 38(2)

[Dep. Nat. Resour., 1221 E. Fr. Ave., Fergus Falls, MN 56537] *Ictalurus punctatus* in Minnesota

93-003896 Acosta, Alejandro. A PRELIMINARY STUDY OF GILLNET, TRAMMEL NET AND BEACH SCINE CATCHES FROM SOUTHWEST PUERTO RICO WITH NOTES ON LENGTH-FREQUENCY. *Proc. Gulf Caribb. Fish. Inst.* Vol. 41, p. 123-149. 1992. In English with Spanish summ. FR 38(2)

[Dep. Mar. Sci., Univ. Puerto Rico, Mayaguez 00709-5000]

93-003897 Andrew, N. L., S. J. Kennelly and M. K. Broadhurst. AN APPLICATION OF THE MORRISON SOFT TED TO THE OFFSHORE PRAWN FISHERY IN NEW SOUTH WALES, AUSTRALIA. *Fish. Res. (Amst.)* 16(2):101-111. 1993. FR 38(2)

[Fish. Res. Inst., N.S.W. Fish., P.O. Box 21, Cronulla, N.S.W. 2230, Australia] *Platycephalus armatus*

93-003898 Baba, Norihisa; Masashi Kiyota and Kazumoto Yoshida. DISTRIBUTION OF MARINE DEBRIS AND NORTHERN FUR SEALS IN THE EASTERN BERING SEA. *Proceeding of the Second International Conference on Marine Debris, Honolulu, Hawaii, 2-7 April 1989*. Vol. 1, Richard S. Strom and Mary Lynne Godfrey, editors. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 154, p. 419-430. 1990. FR 38(2)

[Nat. Res. Inst. Far Seas Fish., Fish. Agency, Gov. Japan, Shimizu-shi, Shizuoka 424, Japan]

93-003899 Belkoff, Benoit; Max Louis and Jose Souprayen. PRELIMINARY RESULTS ON THE EFFICIENCY AND SELECTIVITY OF THE CHERVON-SHAPED TRAP, A TRADITIONAL FISHING DEVICE IN GUADELOUPE. *Proc. Gulf Caribb. Fish. Inst.* Vol. 41 p. 150-165. 1992. In English with French summ. FR 38(2)

[Lab. Biol. Anim., Univ. Antilles & Guyane, 97159 Pointe-à-Pitre Cedex, Guadeloupe] *Sparisoma chrysapterum*, *S. viride*, and *S. aurofrenatum*

FISHERIES REVIEW

FISHING GEAR AND TECHNIQUES (Continued)

93-003900 Boreman, Stephen M. DOLPHIN-SAFE TUNA: WHAT'S IN A LABEL? THE KILLING OF DOLPHINS IN THE EASTERN TROPICAL PACIFIC AND THE CASE FOR AN INTERNATIONAL LEGAL SOLUTION. *Nat. Resour. J.* 32(3):425-447. 1992. FR 38(2)

[Univ. Calif., Davis]

93-003901 Breen, Paul A. A REVIEW OF GHOST FISHING BY TRAPS AND GILLNETS. *Proceeding of the Second International Conference on Marine Debris, Honolulu, Hawaii, 2-7 April 1989*. Vol. I. Richard S. Shomura and Mary Lynne Godfrey, editors. NOAA (Nat. Oceanic Atmos. Adm.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 154. p. 571-599. 1990. FR 38(2)

[MAF, Fish. Res. Cent., P.O. Box 297, Wellington, New Zealand]

93-003902 Buxton, N. G. and J. T. DeAlteris. QUANTIFICATION OF WATER FLOW AND NET DRAG IN MIDWATER TRAWLS. *Fish. Res. (Amst.)* 16(2):165-178. 1993. FR 38(2)

[Northeast Fish. Sci. Cent., NMFS, Woods Hole, MA 02543]

93-003903 DeLong, Robert L.; Patrick J. Gearin, John L. Bengtson, Pierre Dawson and Steven Q. Feldkamp. STUDIES OF THE EFFECTS OF ENTANGLEMENT ON INDIVIDUAL NORTHERN FLUR SEALS. *Proceeding of the Second International Conference on Marine Debris, Honolulu, Hawaii, 2-7 April 1989*. Vol. I. Richard S. Shomura and Mary Lynne Godfrey, editors. NOAA (Nat. Oceanic Atmos. Adm.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 154. p. 492-493. 1990. FR 38(2)

[Nat. Mar. Mammal Lab., Alaska Fish. Sci. Cent., NMFS, NOAA, Seattle, WA 98115]

93-003904 Dunn, J.; R. B. Mitchell, C. G. Urquhart and B. J. Ritchie. NEW OPENING AND CLOSING NETS FOR SAMPLING FISH LARVAE. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191. p. 450. 1989. Abstract only. FR 38(2)

[DAFS Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen AB9 8DB, Scotland]

93-003905 Friedlander, Alan. A COMPARISON OF FISHING METHODS ASSOCIATED WITH FISH AGGREGATING DEVICES (FADs) OFF PUERTO RICO. *Proc. Gulf Caribb. Fish. Inst.* Vol. 42. p. 233-246. 1992. FR 38(2)

[Dep. Zool., Univ. Hawaii, Honolulu 96822] *Cryptaena hippurus*

93-003906 Georodote, Tere; Barry K. Choy and Lisa M. Hiruki. AN EXPERIMENTAL STUDY OF DERELICT GILLNET FRAGMENTS IN THE CENTRAL PACIFIC OCEAN. *Proceeding of the Second International Conference on Marine Debris, Honolulu, Hawaii, 2-7 April 1989*. Vol. I. Richard S. Shomura and Mary Lynne Godfrey, editors. NOAA (Nat. Oceanic Atmos. Adm.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 154. p. 600-614. 1990. FR 38(2)

[Southwest Fish. Sci. Cent., La Jolla Lab., NMFS, NOAA, La Jolla, CA 92038]

93-003907 Henderson, Bryan A. and Stephen J. Napszy. COMPARISON OF CATCHES IN MONO- AND MULTIFILAMENT GILL NETS IN LAKE ERIE. *N. Am. J. Fish. Manage.* 12(3):618-624. 1992. FR 38(2)

[Ontario Minist. Nat. Resour., Fish. Res. Sta., Box 5000, Maple, ON, Canada L6A 1S9] *Perca flavescens*, *Morone chrysops*, *M. americana*, *Aplodinotus grunniens*, *Stizostedion vitreum*, *Carassius auratus*, *Oreochromis mossambicus*, and *Micropterus dolomieu*

93-003908 Hopkins, Todd E. and Joseph J. Cech, Jr. PHYSIOLOGICAL EFFECTS OF CAPTURING STRIPED BASS IN GILL NETS AND TYKE TRAPS. *Trans. Am. Fish. Soc.* 121(6):819-822. 1992. FR 38(2)

[Div. Mar. Biol. & Fish., Rosenstiel School Mar. & Atmos. Sci., Univ. Miami, 4600 Rickenbacker Causeway, Miami, FL 33149-1098] *Morone saxatilis* in California.

93-003909 Ikushima, Kenji; Tsuboyoshi Seikya, Shigeki Oki; Ikuo Yashiki; Nobuhiro Kawabara; Kozi Hara and Hiroshi Hashimoto. [DEVELOPMENT OF DURABLE BAIT FOR FISH AND CRUSTACEANS.] *Nippon Suisan Gakkaishi* 58(12):2341-2343. 1992. In Japanese with English summ. FR 38(2)

[Dev. Dep., Taiyo Chem. Co., Ltd., Uchiwakai, Chiyoda, Tokyo 100, Japan]

93-003910 Kanehiro, Haruyuki; Hiroshi Fujii; Kazumasa Sato and Makoto Suzuki. [FATIGUE LIFE OF NYLON FILAMENTS AS FISHING GEAR MATERIAL FOR TUNA LONG-LINE.] *Nippon Suisan Gakkaishi* 58(12):2315-2319. 1992. In Japanese with English summ. FR 38(2)

[Tokyo Univ. Fish., Konan, Minato, Tokyo 100, Japan]

93-003911 Kanehiro, Haruyuki; Hiroshi Fujii and Makoto Suzuki. [FATIGUE FRACTURE MORPHOLOGY OF NYLON FILAMENTS.] *Nippon Suisan Gakkaishi* 58(12):2321-2327. 1992. In Japanese with English summ. FR 38(2)

[Tokyo Univ. Fish., Konan, Minato, Tokyo 100, Japan]

FISHERIES REVIEW

FISHING GEAR AND TECHNIQUES (Continued)

93-003912 Kuzin, A. E. A STUDY OF THE EFFECTS OF COMMERCIAL FISHING DEBRIS ON *CALLORHINUS LIRSINUS* FROM BREEDING ISLANDS IN THE WESTERN PACIFIC. *Proceeding of the Second International Conference on Marine Debris, Honolulu, Hawaii, 2-7 April 1989*. Vol. 1 Richard S. Shomura and Mary Lynne Godfrey, editors. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 154. p. 475-482. 1990. FR 38(2)

[Pac. Res. Inst. Fish. & Oceanogr. (TINRO), 4 Shevchenko Alley, Vladivostok, USSR]

93-003913 Lee, Dennis P. GAS BLADDER DEFLATION OF DEPRESSURIZED LARGEMOUTH BASS. *N. Am. J. Fish. Manage.* 12(3):652-664. 1992. FR 38(2)

[Dep. Fish & Game, Inland Fish. Div., 1701 Nimbus Rd., Suite C, Rancho Conejo, CA 95670] *Micropterus salmoides* in California.

93-003914 Losanes, Luel P.; Ko Matsuda and Yasuzumi Fujimori. OUTDOOR TANK EXPERIMENTS ON THE INFLUENCE OF SOAKING TIME ON THE CATCH EFFICIENCY OF GILLNETS AND ENTANGLING NETS. *Fish. Res. (Amst.)* 15(3):217-227. 1992. FR 38(2)

[Res. & Consult. Div., Int. Cent. Cultural & Tech. Exchange Found., Inc., Rm. 807 Peninsula Court Bldg., Malati Ave. Cor. Paseo de Roxas St., Makati, Manila, Philippines] *Oncorhynchus mykiss*

93-003915 Losanes, Luel P.; Ko Matsuda and Yasuzumi Fujimori. ESTIMATING THE ENTANGLING EFFECT OF TRAMMEL AND SEMI-TRAMMEL NET SELECTIVITY ON RAINBOW TROUT (*ONCORHYNCHUS MYKISS*). *Fish. Res. (Amst.)* 15(3):229-242. 1992. FR 38(2)

[Res. Consult. Div., Int. Cent. Cultural & Tech. Exchange Found., Inc., Rm. 807 Peninsula Court Bldg., Malati Ave. Cor. Paseo de Roxas St., Makati, Manila, Philippines]

93-003916 Mattson, N. S. and J. C. Mutale. MULTI-MESH GILLNETS TO ESTIMATE SPECIES COMPOSITION AND CATCH PER UNIT EFFORT OF FISH IN A SMALL WATER BODY IN ZAMBIA. *J. Fish Biol.* 41(6):897-908. 1992. FR 38(2)

[ICLARM, P.O. Box 229, Zomba, Malawi] *Barbus paludinosus*, *B. mwaegweni*, *Labeo cylindricus*, and *Tilapia*.

93-003917 McLean, Kevin R. LOW HORSEPOWER TRAWLING. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40. p. 221-224. 1991. FR 38(2)

[Ocean Affs. Int., 89 Water St., Woods Hole, MA 02543]

93-003918 Mio, Shiroichi, Takashi Demery, Kazumoto Yoshida and Satsuki Matsumura. PRELIMINARY STUDY ON CHANCE IN SHAPE OF DRIFTING NETS EXPERIMENTALLY PLACED IN THE SEA. *Proceeding of the Second International Conference on Marine Debris, Honolulu, Hawaii, 2-7 April 1989*. Vol. 1. Richard S. Shomura and Mary Lynne Godfrey, editors. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 154. p. 615-619. 1990. FR 38(2)

[Nat. Res. Inst. Far Sea Fish., Fish. Agency, Gov. Japan, Shimizu-shi, Shizuoka 424, Japan]

93-003919 Mjund, Ole Arve. AVOIDANCE BEHAVIOUR OF HERRING (*CLUPEA HARENGLUS*) AND MACKEREL (*SCOMBER SCOMBRUS*) IN PURSE SEINE CAPTURE SITUATIONS. *Fish. Res. (Amst.)* 16(2):179-194. 1993. FR 38(2)

[Inst. Mar. Res., Fish Capture Div., P.O. Box 1870, N-5024 Bergen, Norway]

93-003920 Mweneke, Maurice I. SEASONAL HOOKING MORTALITY OF BLUEGILLS CAUGHT ON NATURAL BAITS. *N. Am. J. Fish. Manage.* 12(3):645-649. 1992. FR 38(2)

[Parks & Wildl. Dep., 4200 Smith School Rd., Austin, TX 78744] *Lepomis macrochirus* in Texas.

93-003921 National Marine Fisheries Service. INTERACTIONS BETWEEN SEA TURTLES AND THE SUMMER FLOUNDER TRAWL FISHERY, NOVEMBER, 1991 - FEBRUARY, 1992. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 307. 58p. 1992. Available from NMFS, Southeast Fish. Sci. Cent., Beaufort Lab., 101 Pivers Island Rd., Beaufort, NC 28516. FR 38(2)

Paralichthys dentatus in the Atlantic Ocean.

93-003922 Nuhler, Andrew J. and Gaylord R. Alexander. HOOKING MORTALITY OF TROPHY-SIZED WILD BROOK TROUT CAUGHT ON ARTIFICIAL LURES. *N. Am. J. Fish. Manage.* 12(3):634-644. 1992. FR 38(2)

[Dep. Nat. Resour., Hart Creek Res. Sta., Rt. 2, Box 2295, Lewiston, MI 49756] *Salvelinus fontinalis* in Michigan.

93-003923 Ramen, David C.; Richard P. Mounsey; Yongshun Xiao and Susan E. Poole. USE OF A SEMI-PELAGIC TRAWL IN A TROPICAL DEMERSAL TRAWL FISHERY. *Fish. Res. (Amst.)* 15(4):301-313. 1993. FR 38(2)

[Fish. Div., Dep. Primary Ind. & Fish., GPO Box 993, Darwin, N.T. 0801, Australia] *Lujanus* in Australia.

FISHING GEAR AND TECHNIQUES (Continued)

93-003924 Ribic, Christine A. and Gordon L. Swartzman. AN INDEX OF FUR SEAL ENTANGLEMENT IN FLOATING NET FRAGMENTS. Proceeding of the Second International Conference on Marine Debris, Honolulu, Hawaii, 2-7 April 1989. Vol. 1. Richard S. Shomura and Mary Lynne Godfrey, editors. NOAA (Nat. Oceanic Atmos. Adm'n.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 154, p. 483-491. 1990. FR 38(2)
[Environ. Res. Lab., U.S. Environ. Prot. Agency, 200 S.W. 35th St., Corvallis, OR 97331]

93-003925 Rozas, Lawrence P. BOTTOMLESS LIFT NET FOR QUANTITATIVELY SAMPLING NEKTON ON INTERTIDAL MARSHES. Mar. Ecol. Prog. Ser. 89(2-3):267-292. 1992. FR 38(2)
[NMFS, 4700 Ave. U, Galveston, TX 77551] *Fundulus grandis*, *Cyprinodon variegatus*, *Adinia vesica*, and *Mugil cephalus* in Louisiana.

93-003926 Shaul, Warren and Daniel Reilstock. COMPARISON OF CATCHES BY BAMBOO AND WIRE FISH TRAPS IN JAMAICA. Proc. Gulf Caribb. Fish. Inst. Vol. 40, p. 99-107. 1991. FR 38(2)
[Jones & Stokes Assoc., Inc., Environ. Planning & Nat. Resour. Sci., 1725-23rd St., Suite 100, Sacramento, CA 95816]

93-003927 Sutherland, David L.; James A. Bolmsack; Douglas E. Harper, Christopher M. Holt; Mark W. Hulbeck and David B. McClellan. REEF FISH SIZE AND SPECIES SELECTIVITY BY WIRE FISH TRAPS IN SOUTH FLORIDA WATERS. Proc. Gulf Caribb. Fish. Inst. Vol. 40, p. 108-125. 1991. FR 38(2)
[NOAA, NMFS, Southeast Fish. Cent., 75 Virginia Beach Dr., Miami, FL 33149]

93-003928 Thoroni, S. R. EVALUATING THE PERFORMANCE OF LIGHT TRAPS FOR SAMPLING SMALL FISH AND SQUID IN OPEN WATERS OF THE CENTRAL GREAT BARRIER REEF LAGOON. Mar. Ecol. Prog. Ser. 89(2-3):277-285. 1992. FR 38(2)
[Caribbean Mar. Res. Cent., c/o Dep. Biol. Sci., Fla. Tech., 150 W. University Blvd., Melbourne 32901]

93-003929 Walsh, Stephen J. SIZE-DEPENDENT SELECTION AT THE FOOTGLAR OF A GROUND FISH SURVEY TRAWL. N. Am. J. Fish. Manage. 12(3):625-633. 1992. FR 38(2)
[Sci. Branch, Dep. Fish. & Oceans, P.O. Box 5667, St. John's, NF, Canada A1C 5X1] *Gadus morhua*, *Hippoglossoides platessoides*, *Flaunectes flemingus*, and *Raja radiata* on the Grand Banks.

93-003930 Yoshida, Kazunori; Norihisa Baba; Masashi Kiyota; Masayuki Nakajima; Yasutoshi Fujitani and Akira Funata. STUDIES OF THE EFFECTS OF NET FRAGMENT ENTANGLEMENT ON NORTHERN FUR SEALS. PART 2: SWIMMING BEHAVIOR OF ENTANGLED AND NONENTANGLED FUR SEALS. Proceeding of the Second International Conference on Marine Debris, Honolulu, Hawaii, 2-7 April 1989. Vol. 1. Richard S. Shomura and Mary Lynne Godfrey, editors. NOAA (Nat. Oceanic Atmos. Adm'n.) Tech. Mem. NMFS (Nat. Mar. Fish. Serv.) No. 154, p. 503-512. 1990. FR 38(2)
[Selkai Nat. Fish. Res. Inst., Nagasaki 850, Japan]

FISHWAYS, FISH PASSAGE THROUGH DAMS, ETC.

93-003931 Athearn, James B. DEVELOPMENTS IN TRANSPORTATION FROM DAMS TO IMPROVE JUVENILE SALMONID SURVIVAL. Am. Fish. Soc. Symp. No. 10, p. 335-346. 1991. FR 38(2)
[U.S. Army Corps Eng., N. Pac. Div., P.O. Box 2370, Portland, OR 97208] *Oncorhynchus* and *O. mykiss* in Washington, Oregon and Idaho.

93-003932 Bartal, Ryszard and Stanislaw Bontemps. [DOWNSTREAM MIGRATION OF SEA TROUT (SALMO TRUTTA L.) SMOLTS OVER THE DAM AT WLOCLAWEK ON THE VISTULA RIVER.] *Koc. Nauk. Pol. Zwiastu Wiedzy* Vol. 2, p. 7-14. 1989. In Polish with English and Russian summ. FR 30(2)
[Inst. Rybactwa Srodzladowego Olsztynia, Poland]

93-003933 Bates, Ken. POOL-AND-CHUTE FISHWAYS. Am. Fish. Soc. Symp. No. 10, p. 268-277. 1991. FR 38(2)
[Dep. Fish., 115 Gen. Adm'n. Bldg., Olympia, WA 98504]

93-003934 Behlke, C. E. POWER AND ENERGY IMPLICATIONS OF PASSAGE STRUCTURES FOR FISH. Am. Fish. Soc. Symp. No. 10, p. 289-298. 1991. FR 38(2)
[Univ. Alaska, P.O. Box 82230, Fairbanks, AK 99708]

93-003935 Bomford, Jim A. and Maurice G. Ureton. DESIGN, OPERATION, AND EVALUATION OF AN INVERTED, INCLINED, OUTFLOWING FISH SCREEN. Am. Fish. Soc. Symp. No. 10, p. 228-236. 1991. FR 38(2)
[British Columbia Minist. Environ. & Parks, Recreational Fish. Branch, Parliament Bldg., Victoria, BC, Canada V8V 1X5] *Oncorhynchus mykiss* and *O. kisutch* in Canada.

93-003936 Brown, Randall L. BIOENGINEERING PROBLEMS IN RIVER SYSTEMS OF THE CENTRAL VALLEY, CALIFORNIA. Am. Fish. Soc. Symp. No. 10, p. 19-31. 1991. FR 38(2)
[Dep. Water Resour., 3251 S St., Sacramento, CA 95816] *Oncorhynchus tshawytscha*, *Morone saxatilis*, and data for four other species.

FISHERIES REVIEW

FISHWAYS, FISH PASSAGE THROUGH DAMS, ETC. (Continued)

93-003937 Clark, Robert D and James J Strong. FACTORS AFFECTING PERFORMANCE OF THE CLENN-COLOUSA FISH SCREEN. *Am. Fish. Soc. Symp.* No. 10, p. 249-255. 1991. FR 38(2)

[Clem-Colusa Irrigation Dist., P.O. Box 150, Willows, CA 95980] *Oncorhynchus tshawytscha* in California.

93-003938 Crook, Peter H. DESIGN OF LOW-COST FISHWAYS. *Am. Fish. Soc. Symp.* No. 10, p. 256-263. 1991. FR 38(2)

[Ontario Minist. Nat. Resour., P.O. Box 5463, London, ON, Canada N6A 4L6] *Oncorhynchus mykiss* in Canada.

93-003939 Fleasing, Douglas F and James B Reynolds. EFFECTS OF SPAWNING-RUN DELAY ON SPAWNING MIGRATION OF ARCTIC GRAYLING. *Am. Fish. Soc. Symp.* No. 10, p. 299-305. 1991. FR 38(2)

[Coop. Fish. Res. Unit, U.S. Fish & Wildl. Serv., Univ. Alaska, Fairbanks 99775] *Thymallus arcticus* in Alaska.

93-003940 Hodder, R. Ian. THE FAILURE AND REHABILITATION OF A FISH-CONSERVING DEVICE. *Trans. Am. Fish. Soc.* 121(5):678-679. 1992. FR 38(2)

[Great Salt Bay Exp. Sta., Damariscotta, ME 04543] *Morone saxatilis*.

93-003941 Katopodis, C.; A. J. Devries and B. L. Christensen. ASSESSMENT OF TWO DENIL FISHWAYS FOR PASSAGE OF FRESHWATER SPECIES. *Am. Fish. Soc. Symp.* No. 10, p. 306-324. 1991. FR 38(2)

[Canada Dep. Fish. & Oceans, Freshwater Inst., 501 University Crescent, Winnipeg, MB, Canada R3T 2N6] *Mesostoma macrocephalotus*, *Catostomus commersoni*, *Stizostedion vitreum*, *S. canadense*, *Esox lucius*, and *Coregonus artedii* in Canada.

93-003942 Neltzer, Duane A., C. Scott Abernethy and E. William Lutz. EVALUATION OF ROTATING DRUM SCREEN FACILITIES IN THE YAKIMA RIVER BASIN, SOUTH-CENTRAL WASHINGTON STATE. *Am. Fish. Soc. Symp.* No. 10, p. 325-334. 1991. FR 38(2)

[Pac. Northwest Lab., P.O. Box 999, Richland, WA 99352] *Oncorhynchus mykiss* and *O. tshawytscha*

93-003943 Pearce, Robert D. and Randall T. Lee. SOME DESIGN CONSIDERATIONS FOR APPROACH VELOCITIES AT JUVENILE SALMONID SCREENING FACILITIES. *Am. Fish. Soc. Symp.* No. 10, p. 237-248. 1991. FR 38(2)

[NMFS, Environ. & Tech. Serv. Div., 1002 Northeast Holladay St., Rm. 620, Portland, OR 97232] *Oncorhynchus* and *O. mykiss*.

93-003944 Rainey, William S. RECENT ADULT FISH PASSAGE PROJECTS ON TRIBUTARIES OF THE COLUMBIA RIVER. *Am. Fish. Soc. Symp.* No. 10, p. 279-288. 1991. FR 38(2)

[NMFS, Environ. & Tech. Serv. Div., 1002 Northeast Holladay St., Rm. 620, Portland, OR 97232] *Oncorhynchus* and *O. mykiss*.

93-003945 Schreck, Carl B. APPROACH TO FACILITY AND DESIGN MODIFICATIONS; STRESS MONITORING OF MIGRATORY SALMONIDS. *Am. Fish. Soc. Symp.* No. 10, p. 347-351. 1991. FR 38(2)

[U.S. Fish & Wildl. Serv., Coop. Fish Res. Unit, Oreg. State Univ., Corvallis 97331] *Oncorhynchus* in North America.

MATHEMATICS, STATISTICAL METHODS, AND MODELING

93-003946 Abrams, Peter A. EFFECT OF INCREASED PRODUCTIVITY ON THE ABUNDANCES OF TROPHIC LEVELS. *Am. Nat.* 141(3):351-371. 1993. FR 38(2)

[Dep. Ecol., Evol. & Behav., Univ. Minn., 318 Church St. S.E., Minneapolis 55455]

93-003947 Ault, Gerald S. AGE-STRUCTURED ABUNDANCE/DENSITY EQUATIONS FOR TROPICAL MULTICOHORT POPULATIONS. *Proc. Gulf Caribb. Fish. Inst. Vol.* 41, p. 245-273. 1992. FR 38(2)

[Univ. Md., Chesapeake Biol. Lab., Solomons 20680]

93-003948 Bradford, Michael J. PRECISION OF RECRUITMENT PREDICTIONS FROM EARLY LIFE STAGES OF MARINE FISHES. *U.S. Natl. Mar. Fish. Serv. Fish. Bull.* 90(3):439-453. 1992. FR 38(2)

[Dep. Fish. & Oceans, West Vancouver Lab., 4160 Marine Dr., West Vancouver, BC, Canada V7V 1N6] *Clupea harengus*, *Gadus morhua*, *Neuronectes platessa*, and *Ingraulis noronhai*.

93-003949 Burridge, L. E. and K. Haya. THE USE OF A FUGACITY MODEL TO ASSESS RISK TO AQUATIC ANIMALS OF AGRICULTURAL PESTICIDES USES ON PRINCE EDWARD ISLAND. *Proceedings of the Thirtieth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986.* J. S. S. Lakshminarayana, editor. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1575, p. 136-140. 1987. In English with French summary. FR 38(2)

[Dep. Fish. & Oceans, Biol. Stn., St. Andrews, NB, Canada E0G 2X0]

93-003950 Cappio Borlino, A.; Giulio Di Cola and G. Maras. MATHEMATICAL MODELING OF NATURAL POPULATIONS DYNAMICS. *Mem. Ist. Ital. Idrobiol. Dott. Marco Marchi Vol.* 49, p. 127-162. 1991. FR 38(2)

FISHERIES REVIEW

MATHEMATICS, STATISTICAL METHODS, AND MODELING (Continued)

- 93-003951 Charles, Anthony T. BIO-SOCIO-ECONOMIC DYNAMICS AND MULTIDISCIPLINARY MODELS IN SMALL-SCALE FISHERIES RESEARCH and Small-Scale Fisheries: Symposium International, ORSTOM-FRÉMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemaire, and J. Weber, editors. Vol. 2 p. 603-608 1991. In English with French summ. FR 38[2]
[Dep. Finance & Manage. Sci., Saint Mary's Univ., Halifax, NS, Canada B3H 3C3]
- 93-003952 Coble, David W. PREDICTING POPULATION DENSITY OF LARGEMOUTH BASS FROM ELECTROFISHING CATCH PER EFFORT. *N. Am. J. Fish. Manage.* 12(3):650-652 1992. FR 38[2]
[Coop. Fish. Res. Unit, U.S. Fish & Wildl. Serv., Univ. Wis., Stevens Point 54481] *Micropterus salmoides* in Wisconsin.
- 93-003953 Cresswell, W. J. and C. C. Smith. THE EFFECTS OF TEMPORALLY AUTOCORRELATED DATA ON METHODS OF HOME RANGE ANALYSIS. In *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Inara George Pileole and Susan M. Swift, editors. p. 272-284. 1992. FR 38[2]
[Dep. Zool., Univ. Bristol, Woodland Rd., Bristol BS8 1UG, England]
- 93-003954 Cullen, Reg T. VORTEX MECHANISMS OF LOCAL SCOUR AT MODEL FISHROCKS. *Am. Fish. Soc. Symp.* No. 10 p. 213-218. 1991. FR 38[2]
[Tribay & Assoc., 4180 Trent Blvd., Suite C, Concord, CA 94520]
- 93-003955 Dennis, George D. THE VALIDITY OF LENGTH-FREQUENCY DERIVED GROWTH PARAMETERS FROM COMMERCIAL CATCH DATA AND THEIR APPLICATION TO STOCK ASSESSMENT OF THE YELLOWTAIL SNAPPER (*JOCYRUS CHRYSURUS*). *Proc. Calif. Calif. Fish. Inst.* Vol. 40 p. 126-138 1991. FR 38[2]
[Dep. Mar. Sci., Univ. Puerto Rico, Mayaguez 00709-5000]
- 93-003956 George, Edward I. and Christian P. Robert. CAPTURE-RECAPTURE ESTIMATION VIA GIBBS SAMPLING. *Biometrika* 79(4):677-683. 1992. FR 38[2]
[Dep. MSIS, Univ. Tex., Austin 78712]
- 93-003957 Hannesson, Rognvaldur. OPTIMAL CATCH CAPACITY AND FISHING EFFORT IN DETERMINISTIC AND STOCHASTIC FISHERY MODELS. *Fish. Res. (Amst.)* 5(1):1-21. 1987. FR 38[2]
[Inst. Fish. Econ., Norwegian School Econ. & Business Admin., Bergen, Norway]
- 93-003958 Harada, Yasuaki. GENETIC DIFFERENCE BETWEEN WILD AND RELEASED INDIVIDUALS AND THE RESOURCE ENHANCEMENT (EFFECT OF STOCKING): A THEORETICAL ANALYSIS. *Nippon Suisan Gakkaishi* 58(12):2269-2275. 1992. In English with Japanese summ. FR 38[2]
[Dep. Fish. Resour. Manage., Tokyo Univ. Fish., Konan, Minato, Tokyo 108, Japan]
- 93-003959 Hielinen, H.; K. Ennola; A. Hirvonen and J. Sarvala. FISH STOCK ASSESSMENT IN LAKES BASED ON MASS REMOVAL. *J. Fish Biol.* 42(2):255-263. 1993. FR 38[2]
[Dep. Biol., Univ. Turku, SF-20500 Turku, Finland] *Coregonus albula* in Finland
- 93-003960 Helsel, Thomas Earl. DEVELOPMENT OF VARIOUS QUANTITATIVE AND ANALYTICAL METHODS FOR THE ANALYSIS OF THE DYNAMICS OF FISH POPULATIONS: AN APPLICATION TO THE SPOTTED SEATROUT POPULATION IN COASTAL LOUISIANA. Ph.D. dissertation, La State Univ. Agric. Mech. Coll. 169p. 1992. From *Dis. Abstr. Int. B Sci. Eng.* 53(B):3394 1993. Order No. DA9301061. FR 38[2]
Cynoscion nebulosus.
- 93-003961 Hoentig, J. M.; M. H. Prager and N. B. Payton. COMPUTER PROGRAMS FOR INVESTIGATING THE EFFECTS OF ENVIRONMENTAL EVENTS ON A TIME SERIES OF RECRUITMENT. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1713. 43p. 1989. In English with French summ. FR 38[2]
[Sci. Branch, Dep. Fish. & Oceans, P.O. Box 5667, St. John's, NF, Canada A1C 5X1]
- 93-003962 International Council for the Exploration of the Sea. REPORTS OF THE WORKING GROUP ON METHODS OF FISH STOCK ASSESSMENTS, COPENHAGEN, 9-16 JUNE 1987; RIKYKJAVIK, 6-12 JULY 1988; NANTES, 10-17 NOVEMBER 1989. *Int. Coun. Explor. Sea Coop. Res. Rep.* No. 191. 249p. 1993. FR 38[2]
[Palaeogade 2-4, DK 1261 Copenhagen K, Denmark]
- 93-003963 Jacobson, Lawrence Dean. BIOMASS DYNAMICS OF LAKE TROUT (*SALVELINUS NAMAYCUSH*) IN LAKE SUPERIOR, 1948-1976. Ph.D. dissertation, Univ. Minn. 214p. 1986. From *Dis. Abstr. Int. B Sci. Eng.* 47(12):4736. 1987. Order No. DA8706931. FR 38[2]
Petromyzon marinus
- 93-003964 Jensen, A. L. INTEGRATED AREA SAMPLING AND MARK-RECAPTURE EXPERIMENTS FOR SAMPLING FISH POPULATIONS. *Biometrika* 40(4):1201-1205. 1992. FR 38[2]
[School Nat. Resour., Univ. Mich., Ann Arbor 48109-1115]

FISHERIES REVIEW

MATHEMATICS, STATISTICAL METHODS, AND MODELING (Continued)

- 93-003965 Jowett, Ian G. MODELS OF THE ABUNDANCE OF LARGE BROWN TROUT IN NEW ZEALAND RIVERS. *N. Am. J. Fish. Manage.* 12(3):417-432. 1992. FR 38(2)
[Naif. Inst. Water & Atmos. Res., P.O. Box 8602, Christchurch, New Zealand] *Salmo trutta*
- 93-003966 Kiorboe, Thomas. GROWTH IN FISH LARVAE: ARE THEY PARTICULARLY EFFICIENT? *Rapp. P-V Reun. Cons. Int. Explor. Mer.* Vol. 191. p. 383-389. 1989. FR 38(2)
[Danish Inst. Fish. & Mar. Res., Charlottenlund Castle, DK-2920 Charlottenlund, Denmark]
- 93-003967 Laloe, Francis and Alassane Samba. [SIMULATION MODEL OF A FISHERY INCLUDING THE DETERMINATION OF FISHING EFFORT] Research and Small-Scale Fisheries: Symposium International ORSTOM-FREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 737-746. 1991. In French with English summ. FR 38(2)
[ORSTOM, B.P. 5045, 34032 Montpellier Cedex, France]
- 93-003968 Lanferlock, John and Dale Squires. PLANNING MODELS FOR INDIVIDUAL TRANSFERABLE QUOTA PROGRAMS. *Can. J. Fish. Aquat. Sci.* 49(11):2313-2321. 1992. In English with French summ. FR 38(2)
[Squires: NMFS, Southwest Fish. Sci. Cent., P.O. Box 271, La Jolla, CA 92038] *Anoplopoma fimbria*
- 93-003969 Lee, Darryl C. and Jeffrey B. Hyman. THE STOCHASTIC LIFE-CYCLE MODEL (SLCM): SIMULATING THE POPULATION DYNAMICS OF ANADROMOUS SALMONIDS. *U.S. For. Serv. Res. Pap. INT No. 459*. 30p. 1992. FR 38(2)
[Internat. Res. Sta., For. Sci. Lab., Boise, ID]
- 93-003970 Uste, Thomas E. and Jack Lewis. EFFECTS OF SEDIMENT TRANSPORT ON SURVIVAL OF SALMONID EMBRYOS IN A NATURAL STREAM: A SIMULATION APPROACH. *Can. J. Fish. Aquat. Sci.* 49(11):2337-2344. 1992. In English with French summ. FR 38(2)
[U.S. For. Serv., Pac. Southwest Res. Stn., 170B Bayview Dr., Arcata, CA 95521]
- 93-003971 Lobon-Cerviá, Javier and Carmen G. Utrilla. A SIMPLE MODEL TO DETERMINE STREAM TROUT (*Salmo trutta* L.) DENSITIES BASED ON ONE REMOVAL WITH ELECTROFISHING. *Fish. Res. (Amst.)* 15(4):369-378. 1993. FR 38(2)
[Cent. Invest. Agua, CSIC, La Poveda, 28090 Arganda del Rey, Madrid, Spain]
- 93-003972 MacLennan, D. N.; J. G. Shepherd; J. C. Pope and H. Gislason. FISHING MORTALITY AND THE VARIATION OF CATCHES: A TIME SERIES APPROACH. *J. Cons. Cons. Int. Explor. Mer.* 49(4):425-430. 1992. FR 38(2)
[SCAFD Mar. Lab., P.O. Box 181, Victoria Rd., Aberdeen AB9 8DB, Scotland]
- 93-003973 Ming Liu, Kwang and A. L. Jensen. VALIDATION OF LAKE WHITEFISH CATCH-PER-UNIT-EFFORT DATA WITH TIME SERIES ANALYSIS. *Trans. Am. Fish. Soc.* 121(6):797-801. 1992. FR 38(2)
[Dep. Fish., Naif. Taiwan Ocean Univ., 2 Pei-Ning Rd., Keelung, Taiwan 20224] *Coregonus clupeaformis* in Lake Hron
- 93-003974 Mira, R. K.; J. F. Uhe; C. L. Chou, D. P. Scott and C. J. Mustal. TREND ANALYSIS USING A MULTIVARIATE PROCEDURE FOR DATA WITH UNEQUAL RESIDUAL COVARIANCE AND REGRESSION COEFFICIENT MATRICES: APPLICATION TO CANADIAN ATLANTIC COD CONTAMINANT DATA. *Mar. Pollut. Bull.* 26(2):73-77. 1993. FR 38(2)
[Mar. Chem. Div., Dep. Fish. & Oceans, P.O. Box 550, Halifax, NS, Canada B3J 2S7] *Gadus morhua* in Canada
- 93-003975 Murphy, Brian R.; David W. Wells and W. Michael Childress. PROPER DISTINCTION BETWEEN RELATIVE WEIGHT AND RELATIVE CONDITION FACTOR. *N. Am. J. Fish. Manage.* 12(3):665-666. 1992. FR 38(2)
[Dep. Wildl. & Fish. Sci., Tex. A&M Univ., College Station 77843]
- 93-003976 Pahl-Wood, Claudia. THE HIERARCHICAL ORGANIZATION OF THE AQUATIC ECOSYSTEM: AN OUTLINE HOW REDUCTIONISM AND HOLISM MAY BE RECONCILED. *Ecol. Model.* 66(1-2):81-100. 1993. FR 38(2)
[Swiss Fed. Inst. Technol., Zurich, Inst. Aquat. Sci., Ueberlandstr. 133, CH-8600 Dübendorf, Switzerland]
- 93-003977 Parker, G. A. THE EVOLUTION OF SEXUAL SIZE DIMORPHISM IN FISH. *J. Fish Biol.* 41(Suppl. 0):1-20. 1992. FR 38(2)
[Popul. Biol. Res. Group, Dep. Environ. & Evol. Biol., Univ. Liverpool, Liverpool L69 3BX, England]
- 93-003978 Pascual, Mercedes. DIFFUSION-INDUCED CHAOS IN A SPATIAL PREDATOR-PREY SYSTEM. *Proc. R. Soc. Lond. Ser. B Biol. Sci.* 251(1330):1-7. 1993. FR 38(2)
[Woods Hole Oceanogr. Inst., Biol. Dep., Woods Hole, MA 02543]
- 93-003979 Pascual, Miguel A. and Oscar O. Infante. HOW GOOD ARE EMPIRICAL PREDICTIONS OF NATURAL MORTALITY? *Fish. Res. (Amst.)* 16(1):17-24. 1993. FR 38(2)
[School Fish. WH-10, Univ. Wash., Seattle 98195]

FISHERIES REVIEW

MATHEMATICS, STATISTICAL METHODS, AND MODELING (Continued)

- 93-003980 Pelletier, D. and A. Laurec. MANAGEMENT UNDER UNCERTAINTY. DEFINING STRATEGIES FOR REDUCING OVEREXPLOITATION. *J. Cons. Cons. Int. Explor. Mer* 4(4):389-401 1992. FR 38(2)
[IFREMER, BP 1049, 44037 Nantes Cedex 01, France]
- 93-003981 Papp, Pierre. USING GROWTH HISTORIES TO ESTIMATE LARVAL FISH MORTALITY RATES. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer* Vol 191 p. 324-329 1989. FR 38(2)
[Dep. Fish. & Oceans, Sci. Branch, P.O. Box 5667, St. John's, NF, Canada A1C 5X1]
- 93-003982 Prakash, M. M. and H. Rawat. LENGTH-WEIGHT RELATIONSHIP IN *OXYGASTER BACALA* (HAM.) *J. Inst. Agric. Anim. Sci.* Vol 11 p. 127-131. 1990. FR 38(2)
[Postgrad. Dep. Zool., S.C.A. Gov., P.G. Coll., Jhalusa-457 661 MP., India]
- 93-003983 Ranzala, S. H. and C. R. Brown. A MAXIMUM LIKELIHOOD ESTIMATOR OF DISPERSAL RATE USING MARK-RECAPTURE. *Am. Zool.* 32(5):11A. 1992. Abstract only. FR 38(2)
[Yale Univ., New Haven, CT]
- 93-003984 Rosenberg, A. A.; G. P. Kirkwood; R. M. Cook and R. A. Myers. COMBINING INFORMATION FROM COMMERCIAL CATCHES AND RESEARCH SURVEYS TO ESTIMATE RECRUITMENT: A COMPARISON OF METHODS. *J. Cons. Cons. Int. Explor. Mer* 4(4):379-387 1992. FR 38(2)
[NMFS, Woods Hole, MA 02543]
- 93-003985 Rosland, R.; J. Giske and D. Alsnes. SIMULATION OF THE VERTICAL DISTRIBUTION OF THE MESOPELAGIC FISH, *MULLUS MUELLERI* (GÜNTHER) BY STOCHASTIC DYNAMIC OPTIMIZATION. *J. Fish Biol.* 41 (Suppl. 8):181-182. 1992. Poster abstract only. FR 38(2)
[Dep. Fish. & Mar. Biol., Univ. Bergen, Bergen High Technol. Cent., N-5020 Bergen, Norway]
- 93-003986 Salvanes, Anne Gro Vaa; Dag L. Aksnes and Jarl Giske. ECOSYSTEM MODEL FOR EVALUATING POTENTIAL COD PRODUCTION IN A WEST NORWEGIAN FJORD. *Mar. Ecol. Prog. Ser.* 90(1):9-22. 1992. FR 38(2)
[Dep. Fish. & Mar. Biol., Univ. Bergen, Bergen High Technol. Cent., N-5020 Bergen, Norway]
- 93-003987 Schuur, Anthony M. A. BIOENERGETIC MODEL FOR APPLICATION TO INTENSIVE FISH CULTURE SYSTEM MANAGEMENT. *Am. Fish. Soc. Symp.* No. 10 p. 393-401 1991. FR 38(2)
[2408 18th St., Bakersfield, CA 93301]
- 93-003988 Seijo, G., Juan Carlos. COMPREHENSIVE SIMULATION MODEL OF A TROPICAL DEMERSAL FISHERY: RED GROUPER (*EPINEPHELUS MORIO*) OF THE YUCATAN CONTINENTAL SHELF. Ph.D. dissertation, Mich. State Univ., 224 p. 1986. From *Dis. Abstr. Int. B Sci. Eng.* 47(12):4721 1987. Order No. DA8707188. FR 38(2)
- 93-003989 Soderberg, Richard W. LINEAR FISH GROWTH MODELS FOR INTENSIVE AQUACULTURE. *Prog. Fish-Cult.* 54(4):255-258. 1992. FR 38(2)
[Fish. Program, Mansfield Univ., Mansfield, PA 16933] *Salvelinus fontinalis*, *S. namaycush*, *Oncorhynchus mykiss*, *Salmo salar*, *Ictalurus punctatus*, *Tilapia aurea*, and *Esox masquinongy* x *E. lucius*.
- 93-003990 Tercera, Mark; David A. Frouin and John R. Sibert. COMPARATIVE PERFORMANCE OF MULTIFAN AND SHEPHERD'S LENGTH COMPOSITION ANALYSIS (SRLCA) ON SIMULATED LENGTH-FREQUENCY DISTRIBUTIONS. *Trans. Am. Fish. Soc.* 121(5):667-677. 1992. FR 38(2)
[NMFS, Northeast Fish. Sci. Cent., Woods Hole, MA 02543] *Pomatomus saltatrix*, *Populus trichanthus*, *Carassius auratus*, and *Paralichthys dentatus* in the Atlantic Ocean.
- 93-003991 Thlehaux, M. L. and L. M. Dickko. MODELS OF AQUATIC BIOMASS SIZE SPECTRA AND THE COMMON STRUCTURE OF THEIR SOLUTIONS. *J. Theor. Biol.* 159(2):147-161. 1992. FR 38(2)
[Ocean Prod. Enhancement Network, Dalhousie Univ., Halifax, NS, Canada B3H 4J1]
- 93-003992 Thompson, Grant G. A BAYESIAN APPROACH TO MANAGEMENT ADVICE WHEN STOCK-RECRUITMENT PARAMETERS ARE UNCERTAIN. *U.S. Natl. Mar. Fish. Serv. Fish. Bull.* 90(3):561-573. 1992. FR 38(2)
[Resour. Ecol. & Fish. Manage. Div., Alaska Fish. Sci. Cent., NMFS, NOAA, 7600 Sand Point Way, N.E., Seattle, WA 98115-0070]
- 93-003993 Thompson, Grant G. MANAGEMENT ADVICE FROM A SIMPLE DYNAMIC POOL MODEL. *U.S. Natl. Mar. Fish. Serv. Fish. Bull.* 90(3):552-560. 1992. FR 38(2)
[Resour. Ecol. & Fish. Manage. Div., Alaska Fish. Sci. Cent., NMFS, NOAA, 7600 Sand Point Way, N.E., Seattle, WA 98115-0070]
- 93-003994 Torres, L., Ricardo; Silvia Salas M. and Luis E. Perez. [FECUNDITY AND YIELD, A DIFFERENT FOCUS.] *Proc. Gulf Caribb. Fish. Inst.* Vol. 41, p. 332-348. 1992. In Spanish. FR 38(2)
[Dep. Desarrollo Pesq., Calle 58, No. 514, 970000, Merida Yucatan, Mexico]

FISHERIES REVIEW

MATHEMATICS, STATISTICAL METHODS, AND MODELING (Continued)

- 93-003995 Tward, Daniel J.; W. Clell Guest and Bobby W. Farquhar. SELECTIVE DIPNETTING OF LARGE MOUTH BASS DURING ELECTROFISHING. *N. Am. J. Fish. Manage.* 12(3):609-611. 1992. FR 30(2)
[U.S. Fish & Wildl. Serv., Natl. Wetlands Res. Cent., Vicksburg Field Res. Stn., 900 Clay St., Vicksburg, MS 39180] *Micropterus salmoides* in Texas.
- 93-003996 Westgard, Trond. TWO MODELS OF THE VERTICAL DISTRIBUTION OF PELAGIC FISH EGGS IN THE TURBULENT UPPER LAYER OF THE OCEAN. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 195-200. 1989. FR 30(2)
[Inst. Mar. Res., 5024 Bergen, Norway]
- 93-003997 Wilson, James A.; John French; Peter Kleban; Susan McKay; Noel Roy and Ralph Townsend. ECONOMIC AND BIOLOGICAL BENEFITS OF INTERSPECIES SWITCHING IN A SIMULATED CHAOTIC FISHERY. *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÉMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 709-002. 1991. In English with French summ. FR 30(2)
[Townsend: Dep. Econ. & Cont. Mar. Studies, Univ. Maine, Orono 04469]
- 93-003998 Whay, S.; W. J. Creswell and O. Rogers. DIRICHLET TESSELLATIONS: A NEW, NON-PARAMETRIC APPROACH TO HOME RANGE ANALYSIS. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Avants George Friede and Susan M. Swift, editors. p. 247-255. 1992. FR 30(2)
[Dep. Zool., Univ. Bristol, Woodland Rd., Bristol BS0 1UG, England]

LAKE MANAGEMENT AND RESEARCH

- 93-003999 Beauchamp, David Anthony. ECOLOGICAL RELATIONSHIPS OF HATCHERY RAINBOW TROUT IN LAKE WASHINGTON. Ph.D. dissertation, Univ. Wash. 252p. 1987. From Diss. Abstr., Int. J. Sci. Eng. 47(12):4793. 1987. Order No. DA8706500. FR 30(2)
Oncorhynchus mykiss in Washington.
- 93-004000 Binkowski, Fred P. STOCKING PRACTICES. *Strategies for Rehabilitation of Lake Trout in the Great Lakes: Proceedings of a Conference on Lake Trout Research, August 1983*. Randy L. Eshenroder, Thomas P. Poe, and Charles H. Oliver, editors. *GI Lakes Fish. Comm. Tech. Rep. No. 40*, p. 10-14. 1984. FR 30(2)
[Univ. Wis., Cent. Great Lakes Studies, Milwaukee 53201] *Salvelinus namaycush* in the Great Lakes.
- 93-004001 Bonar, Alina. AN ATTEMPT TO ESTIMATE CHANGES IN THE FISH STOCK OF LAKE JEZIORAK ON THE BASIS OF THE FISHING YIELD OF SEINES. *Acta Ichthyol. Piscatoria* 21(2):75-85. 1991. In English with Polish summ. FR 30(2)
[Akad. Rolniczo-Tech., 10-957 Olsztyn-Kortowo, Poland] *Esox lucius*, *Lucioperca lucioperca*, *Rutilus rutilus*, and *Anguilla anguilla* in Poland.
- 93-004002 Bonar, Alina. THE EFFECT OF EXPLOITATION ON THE LEVEL OF CATCHES AND EFFECTIVENESS OF PIKEPERCH EXPLOITATION IN LAKES. *Acta Ichthyol. Piscatoria* 21(2):65-74. 1991. In English with Polish summ. FR 30(2)
[Akad. Rolniczo-Tech., 10-957 Olsztyn-Kortowo, Poland] *Lucioperca lucioperca* in Poland.
- 93-004003 Brown, Tommy L. SOCIO-ECONOMICS. *Strategies for Rehabilitation of Lake Trout in the Great Lakes: Proceedings of a Conference on Lake Trout Research, August 1983*. Randy L. Eshenroder, Thomas P. Poe, and Charles H. Oliver, editors. *GI Lakes Fish. Comm. Tech. Rep. No. 40*, p. 40-51. 1984. FR 30(2)
[Cornell Univ., Dep. Nat. Resour., Ithaca, NY 14853] *Salvelinus namaycush* in the Great Lakes.
- 93-004004 Casselman, John M. and John M. Gunn. DYNAMICS IN YEAR-CLASS STRENGTH, GROWTH, AND CALCIFIED-STRUCTURE SIZE OF NATIVE LAKE TROUT (*SALVELINUS NAMAYCUSH*) EXPOSED TO MODERATE ACIDIFICATION AND WHOLE-LAKE NEUTRALIZATION. *Can. J. Fish. Aquat. Sci.* 49(Suppl. 1):102-113. 1992. In English with French summ. FR 30(2)
[Ontario Minist. Nat. Resour., Fish. Res., Glenora Fish. Stn., R.R. 4, Picton, ON, Canada K0K 2T0]
- 93-004005 Charbonneau, Robert and Vincent H. Resh. STRAWBERRY CREEK ON THE UNIVERSITY OF CALIFORNIA, BERKELEY CAMPUS: A CASE HISTORY OF URBAN STREAM RESTORATION. *Aquat. Conserv. Mar. Freshwater Ecosyst.* 2(4):293-307. 1992. FR 30(2)
[Environ. Health & Safety, Univ. Calif., Berkeley 94720] *Costeronotus aculeatus*.
- 93-004006 Chen, M. Y. AN APPRAISAL OF THE LAKE DIEFFENBAKER COMMERCIAL WHITEFISH FISHERY, 1976-85. Sask. Parks Renewable Resour. Fish. Tech. Rep. 92-4: 60p. 1992. FR 30(2)
[Saskatchewan Nat. Resour., Fish. Branch, 3211 Albert St., Regina, SK, Canada S4S 5W6] *Coregonus*, *Salvelinus namaycush*, *Esox lucius*, *Oncorhynchus mykiss*, and *Hiodon alosoides* in Canada.
- 93-004007 Dewey, Michael R. and Cecil A. Jennings. HABITAT USE BY LARVAL FISHES IN A BACKWATER LAKE OF THE UPPER MISSISSIPPI RIVER. *J. Freshwater Ecol.* 7(4):363-372. 1992. FR 30(2)
[U.S. Fish & Wildl. Serv., Natl. Fish. Res. Cent., P.O. Box 818, La Crosse, WI 54602] *Lepomis*, *Oreosoma cepedianum*, and *Labidesthes* in Wisconsin.

LAKE MANAGEMENT AND RESEARCH (Continued)

93-004008 Durand, Jean-Rene and Jacques Quenliere [LAKE CHAD FROM ECOSYSTEM STUDIES TO CONTINENTAL FISHERIES MANAGEMENT.] *Research and Small-Scale Fisheries Symposium International, ORSTOM/WREMER, Montpellier, France, 3-7 July 1989.* [J. R. Durand, J. Lemalle, and J. Weber, editors. Vol. 2. p. 981-991. 1991. In French with English summ. FR 38(2)]

[ORSTOM, 213 rue La Fayette, 75480 Paris Cedex 10, France]

93-004009 Dutka, B. J., K. Walsh, K. K. Kwan, A. B-Sharawi, D. L. Liu and K. Thompson. PRIORITY SITE SELECTION FOR DEGRADED AREAS BASED ON MICROBIAL AND TOXICANT SCREENING TESTS. 1. LAKE ONTARIO, CANADIAN INSHORE AREAS. *Proceedings of the Thirteenth Annual Aquatic Toxicity Workshop, Moncton, New Brunswick, November 12-14, 1986.* J. S. S. Lakshminarayana, editor. Can. Tech. Rep. Fish. Aquat. Sci. No. 1573. p. 95. 1987. English and French abstract only. FR 38(2)

[Nat'l. Water Res. Lab., P.O. Box 5050, Burlington, ON, Canada L7R 4A6]

93-004010 Eckartz-Nolden, Gabriele and Michael Nolden. FOOD WEB CONTROL AN ENCLOSURE EXPERIMENT. *Ergeb. Limnol.* No. 38. p. 329-348. 1992. In English with German summ. FR 38(2)

[Nienkamp 25, D-44116 Everswinkel, Germany] *Coregonus* in Germany.

93-004011 Ertel, Thomas A., Charles L. Brown, Gregory W. Kennedy and John R. French III. SUBSTRATE AND BATHYMETRY OF FIVE HISTORICAL LAKE TROUT SPAWNING REEFS IN NEAR-SHORE WATERS OF THE GREAT LAKES. *Can. Lakes Fish. Comm. Tech. Rep. No. 58.* 53p. 1992. FR 38(2)

[Nat'l. Fish. Res. Cent.-Great Lakes, U.S. Fish & Wildl. Serv., 1451 Green Rd., Ann Arbor, MI 48105] *Salvelinus namaycush*

93-004012 Eshenroder, Randy L.; Thomas P. Poe and Charles H. Oliver, editors. STRATEGIES FOR REHABILITATION OF LAKE TROUT IN THE GREAT LAKES: PROCEEDINGS OF A CONFERENCE ON LAKE TROUT RESEARCH, AUGUST 1983. *Gr. Lakes Fish. Comm. Tech. Rep. No. 40.* 62p. 1984. FR 38(2)

[Great Lakes Fish. Comm., 1451 Green Rd., Ann Arbor, MI 48105] *Salvelinus namaycush*. Individual papers indexed in this issue of *Fisheries Review*.

93-004013 Fuller, Kent. REMEDIAL ACTION PLANS AND THE ECOSYSTEM APPROACH. *Int. Assoc. Great Lakes Res. Conf. No. 35.* p. 103. 1992. Abstract only. FR 38(2)

[Great Lakes Nat'l. Program Off., G-9f, U.S. Environ. Prot. Agency, 77 W. Jackson, Chicago, IL 60604]

93-004014 Glouney, B. L. NORTHERN LAKES FISH MONITORING PROGRAM, MIROND LAKE - 1989. *Sask. Parks Renewable Resour. Fish. Tech. Rep. 90-3.* 47p. 1990. FR 38(2)

[Saskatchewan Fish. Lab., Dep. Parks & Renewable Resour., 112 Research Dr., Saskatoon, SK, Canada S7K 2H6] *Stizostedion vitreum*, *Coregonus*, and *C. clupeaformis* in Canada.

93-004015 Glouney, B. L. NORTHERN LAKES FISH MONITORING PROGRAM, JAN LAKE - 1989. *Sask. Parks Renewable Resour. Fish. Tech. Rep. 90-2.* 58p. 1990. FR 38(2)

[Saskatchewan Fish. Lab., Dep. Parks & Renewable Resour., 112 Research Dr., Saskatoon, SK, Canada S7K 2H6] *Stizostedion vitreum*, *Lota lota*, *Perca flavescens*, *Esox lucius*, *Coregonus*, and *C. clupeaformis* in Canada.

93-004016 Glouney, B. L. NORTHERN LAKES FISH MONITORING PROGRAM, LIMESTONE AND HANSON LAKES - 1989. *Sask. Parks Renewable Resour. Fish. Tech. Rep. 91-2.* 52p. 1991. FR 38(2)

[Saskatchewan Fish. Lab., Fish. Branch, Dep. Parks & Renewable Resour., 112 Research Dr., Saskatoon, SK, Canada S7K 2H6] *Stizostedion vitreum*, *Esox lucius*, *Coregonus*, and *C. clupeaformis* in Canada.

93-004017 Glouney, B. L. and M. Y. Chen. STATUS OF THE LAC LA RONGE FISHERY, 1989 AND 1990. *Sask. Parks Renewable Resour. Fish. Tech. Rep. 92-2.* 68p. 1992. FR 38(2)

[Saskatchewan Nat. Resour., Fish. Branch, 122 Research Dr., Saskatoon, SK, Canada S4S 5W6] *Perca flavescens*, *Esox lucius*, *Stizostedion vitreum*, *Salvelinus namaycush*, *Catostomus commersoni*, and *Coregonus clupeaformis* in Canada.

93-004018 Glouney, B. L. NORTHERN LAKES FISH MONITORING PROGRAM, PELICAN LAKE - 1989. *Sask. Parks Renewable Resour. Fish. Tech. Rep. 91-1.* 58p. 1991. FR 38(2)

[Saskatchewan Fish. Lab., Fish. Branch, Dep. Parks & Renewable Resour., 112 Research Dr., Saskatoon, SK, Canada S7K 2H6] *Coregonus*, *C. clupeaformis*, *Esox lucius*, *Stizostedion vitreum*, and *Perca flavescens* in Canada.

93-004019 Hatch, Richard W. POPULATION DYNAMICS AND SPECIES INTERACTIONS. *Strategies for Rehabilitation of Lake Trout in the Great Lakes: Proceedings of a Conference on Lake Trout Research, August 1983.* Randy L. Eshenroder, Thomas P. Poe, and Charles H. Oliver, editors. *Gr. Lakes Fish. Comm. Tech. Rep. No. 40.* p. 4-9. 1984. FR 38(2)

[U.S. Fish & Wildl. Serv., Great Lakes Fish. Lab., Ann Arbor, MI 48105] *Salvelinus namaycush* and *Petromyzon marinus* in the Great Lakes.

FISHERIES REVIEW

LAKE MANAGEMENT AND RESEARCH (Continued)

- 93-004020 Hurley, D. A. FEEDING AND TROPHIC INTERACTIONS OF WHITE PERCH (*MORONE AMERICANA*) IN THE BAY OF QUINTE, LAKE ONTARIO. *Can. J. Fish. Aquat. Sci.* 49(11):2249-2259. 1992. In English with French summ. FR 38(2)
[Ontario Minist. Nat. Resour., Lake Ontario Fish. Unit, R.R. 4, Picton, ON, Canada K0K 2T0]
- 93-004021 Kalbfleiter, J., P. Walline and M. Gophan. SIMULTANEOUS PATTERNS OF TEMPERATURE, OXYGEN, ZOOPLANKTON AND FISH DISTRIBUTION IN LAKE KINNERET, ISRAEL. *Freshwater Biol.* 28(3):337-347. 1992. FR 38(2)
[Mgal Afion Kinneret Limnol. Lab., Israel Oceanogr. & Limnol. Res., P.O. Box 345, Tiberias, Israel]
- 93-004022 Kallomeyn, Larry W. IMPACT OF SPORT FISHING ON WALLEYE IN KABETOGAMA LAKE, VOYAGEURS NATIONAL PARK. *Proc. Conf. Sci. Natl. Parks Vol. 6*, p. 23-39. 1986. FR 38(2)
[Voyageurs Natl. Park, International Falls, MN 56649] *Stizostedion vitreum* in Minnesota.
- 93-004023 Kennedy, Gregory W. and Noel R. Foster. TAWAS BAY ARTIFICIAL REEF AS A FISH SPAWNING SITE, 1989-1991. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 44. 1992. Abstract only. FR 38(2)
[U.S. Fish & Wildl. Serv., Natl. Fish. Res. Cent.-Great Lakes, 1451 Green Rd., Ann Arbor, MI 48105] *Salvelinus namaycush* in Lake Huron.
- 93-004024 Klechnick, Peter. FISH: THE COREGONIDS OF LAKE LAACHER SEE. *Ergeb. Limnol.* No. 36, p. 273-294. 1992. In English with German summ. FR 38(2)
[Michaelstr. 15, D-5300 Bonn, Germany] *Coregonus lavaretus* in Germany.
- 93-004025 Kompowski, Andrzej. CATCHES AND GROWTHRATE OF ABRAMS *BALLERUS* (L., 1758) FROM LAKE DABIE AND THE BIRTH OF *SZCZECIN*. *Acta Ichthyol. Piscator.* 21(2):17-28. 1991. In English with Polish summ. FR 38(2)
[Inst. Oceanogr. Rybackiej & Ochrony Morza, Akad. Rolnicza, ul. Krolewicza 4, 71-550 Szczecin, Poland]
- 93-004026 Levell, Dominique and Benjamin Orlove. COMMUNAL CONTROL OF AQUATIC RESOURCES IN LAKE TITICACA, PERU. *Research and Small-Scale Fisheries: Symposium International, CIRSTOM-FREANER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 757-762. 1991. In English with French summ. FR 38(2)
[CCPM, 11 rue Forge, 75017 Paris, France]
- 93-004027 Liaw, W. K. AN ASSESSMENT OF STOCKED FISH POPULATIONS IN SMLUTS LAKE. *Sask. Parks Renewable Resour. Fish. Tech. Rep.* 89-2: 41p. 1989. FR 38(2)
[Saskatchewan Fish. Lab., Dep. Parks & Renewable Resour., 112 Research Dr., Saskatoon, SK, Canada S7K 2H6] *Stizostedion vitreum* and *Perca flavescens* in Canada.
- 93-004028 Liaw, W. K. AN ASSESSMENT OF THE PINEHOUSE LAKE FISHERY. *Sask. Parks Renewable Resour. Fish. Tech. Rep.* 88-2: 105p. 1988. FR 38(2)
[Saskatchewan Fish. Lab., Fish. Branch, Dep. Parks, Recreation & Culture, 15 Innovation Blvd., Saskatoon, SK, Canada S7K 2H6] *Coregonus*, *Stizostedion vitreum*, *Esox lucius*, *Protopomus*, and *Catostomus commersoni* in Canada.
- 93-004029 Liaw, W. K. EVALUATION OF WALLEYE (*STIZOSTEDION VITREUM*) FINGERLING STOCKING PROGRAMS IN THREE SASKATCHEWAN LAKES. *Sask. Parks Renewable Resour. Fish. Tech. Rep.* 91-4: 87p. 1991. FR 38(2)
[Saskatchewan Fish. Lab., Dep. Parks & Renewable Resour., 112 Research Dr., Saskatoon, SK, Canada S7K 2H6]
- 93-004030 Liaw, W. K. HABITAT SUITABILITY CRITERIA FOR WALLEYE SPAWNING AND EGG INCUBATION IN SASKATCHEWAN. *Sask. Parks Renewable Resour. Fish. Tech. Rep.* 91-2: 24p. 1991. FR 38(2)
[Saskatchewan Fish. Lab., Dep. Parks & Renewable Resour., 112 Research Dr., Saskatoon, SK, Canada S7K 2H6] *Stizostedion vitreum* in Canada.
- 93-004031 Lichtkoppler, Frank R. and Leroy J. Hushak. OHIO'S 1990 LAKE ERIE CHARTER FISHING INDUSTRY. *Fisheries (Bethesda)* 18(1):14-15, 18-21. 1993. FR 38(2)
[Coop. Ext. Serv., Sea Grant Coll. Program, Ohio State Univ., 99 E. Erie St., Painesville 44077]
- 93-004032 Loftus, William F.; James D. Chapman and Rosanne Conrow. HYDROPERIOD EFFECTS ON EVERGLADES MARSH FOOD WEBS, WITH RELATION TO MARSH RESTORATION EFFORTS. *Proc. Conf. Sci. Natl. Parks Vol. 6*, p. 1-22. 1986. FR 38(2)
[Res. Cent., Everglades Natl. Park, P.O. Box 279, Homestead, FL 33030]
- 93-004033 Martinez, Moo Camilan. EFFECTS OF SCALE ON FOOD WEB STRUCTURE. *Ph.D. dissertation, Univ. Calif. (Berkeley)* 125p. 1991. From *Diss. Abstr. Int. B Sci. Eng.* 53(8):3895. 1993. Order No. DA9228762. FR 38(2)

FISHERIES REVIEW

LAKE MANAGEMENT AND RESEARCH (Continued)

- 93-004034 Merikowsky, J. J. and W. W. Sawchyn BIOLOGICAL SURVEY OF MONTREAL LAKE, 1987. *Sask. Parks Renewable Resour. Fish. Tech. Rep.* 88-4: 1-13p. 1988. FR 38(2)
[Saskatchewan Fish. Lab., Fish. Branch, Saskatchewan Parks Recreation & Culture, 15 Innovation Blvd., Saskatoon, SK, Canada S7K 2H6] Data for 15 species in Canada.
- 93-004035 Merikowsky, J. J. and W. W. Sawchyn BIOLOGICAL SURVEY OF SMOOTHSTONE LAKE. *Sask. Parks Renewable Resour. Fish. Tech. Rep.* 90-1: 1-10pp. 1990. FR 38(2)
[Saskatchewan Fish. Lab., Dep. Parks & Renewable Resour., 112 Research Dr., Saskatoon, SK, Canada S7K 2H6] Data for 17 species in Canada.
- 93-004036 Müller, Rudolf and Hans Jung Meng. PAST AND PRESENT STATE OF THE ICHTHYOFAUNA OF LAKE LLICIANO. *Aquat. Sci.* 54(3/4):338-350. 1992. FR 38(2)
[Swiss Fed. Inst., Water Resour. & Water Pollut. Control (EAWAG), CH-6047 Kastanienbaum, Switzerland] Data for 33 species in Italy.
- 93-004037 Murawir, M.; S. Brandt; G. Sprules and D. Stewart LAKE ONTARIO TROPHIC TRANSFER (LOTT) STUDY: AN EMERGENCE OF AN ECOSYSTEMIC AND MULTIDISCIPLINARY RESEARCH STRATEGY IN THE GREAT LAKES. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 155. 1992. Abstract only. FR 38(2)
[Fish. & Oceans Canada, Chasapeake Biol. Stn., Univ. Toronto, Toronto, ON, Canada]
- 93-004038 Penakozza, Ubaldo J. BOATER ATTITUDES AND EXPERIENCES: RESULTS OF THE 1989-1990 WISCONSIN RECREATIONAL BOATING STUDY, PHASE 2. *Wis. Dep. Nat. Resour. Tech. Bull. No. 180*, 50p. 1992. FR 38(2)
[Dep. Nat. Resour., P.O. Box 7921, Madison, WI 53707]
- 93-004039 Perels, Donald Louis. DYNAMICS AND BIOCHRONOLOGY OF FRESHWATER DRUM (APLODINOTUS GRANNIENSIS) IN THE RED LAKES, MINNESOTA. Ph.D. dissertation, Univ. Minn. 129p. 1992. From *Dis. Abstr. Int. B Sci. Eng.* 53(7):3270. 1993. Order No. DA9236957. FR 38(2)
Stizostedion vitreum and *Percas flavescens*
- 93-004040 Persson, Lennart, Lars Johansson, Gunnar Andersson, Sebastian Diehl and Stellan F. Hansén. DENSITY DEPENDENT INTERACTIONS IN LAKE ECOSYSTEMS: WHOLE LAKE PERTURBATION EXPERIMENTS. *Oikos* 66(2):193-206. 1993. FR 38(2)
[Dep. Anim. Ecol., Univ. Umeå, S-901 87, Umeå, Sweden] *Rutilus rutilus* and *Stizostedion vitreum* in Sweden.
- 93-004041 Rand, P.; D. J. Stewart and B. F. Lantry. LOTT STUDY: TEMPORAL AND SPATIAL DYNAMICS OF FISH PREDATION AND PRODUCTION IN LAKE ONTARIO. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 157. 1992. Abstract only. FR 38(2)
[SUNY Coll., Environ. Sci. & For., Syracuse, NY 13210] *Salvelinus namaycush*, *Alosa pseudoharengus*, and *Oncorhynchus tshawytscha*.
- 93-004042 Rand, Peter S.; Charles A. S. Hall; William H. McDowell; Neil H. Ringler and Jonathan G. Kennen. FACTORS LIMITING PRIMARY PRODUCTIVITY IN LAKE ONTARIO TRIBUTARIES RECEIVING SALMON MIGRATIONS. *Can. J. Fish. Aquat. Sci.* 49(11):2377-2385. 1992. In English with French summ. FR 38(2)
[Dep. Environ. & For. Biol. Coll. Environ. Sci. & For., SUNY, Syracuse, NY 13210]
- 93-004043 Sakai, Mitsuo; Eduardo Estay; Aldo Nakazawa; Naoto Okamoto and Akiko Nagasawa. THE FIRST RECORD OF THE SPAWNING RUN OF MASU SALMON *ONCORHYNCHUS MASOU* INTRODUCED INTO THE PATAGONIAN LAKE GENERAL CARRERA, SOUTHERN CHILE. *Nippon Suisan Gakkaishi* 58(11):2009-2017. 1992. In English with Japanese summ. FR 38(2)
[Cent. Ecol. Apl. Neuquen, Junin Los Andes, Neuquen, Argentina]
- 93-004044 Saskatchewan Parks and Renewable Resources. FIVE YEAR FISH FACTS, 1987-1991. *Saskatchewan Parks Renewable Resour. Fish. Tech. Rep.* 91-8: 93p. 1991. FR 38(2)
- 93-004045 Sonstun, D. A. A SURVEY OF SELECTED LAKES IN LABRADOR, WITH AN ASSESSMENT OF LAKE STATUS AND SENSITIVITY IN RELATION TO ACID PRECIPITATION. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1296. 115p. 1994. In English with French summ. FR 38(2)
[Fish. Res. Branch, Dep. Fish. & Oceans, P.O. Box 5667, St. John's, NF, Canada A1C 5X1] *Salvelinus fontinalis*, *S. namaycush*, *S. alpinus*, *Salmo salar*, *Coregonus clupeaformis*, *Protosapium cylindraceum*, *Esox lucius*, *Catostomus commersoni*, *C. commersoni*, and *Lota lota* in Canada.
- 93-004046 Shimizu, Ronald. PROBLEMS AND PROSPECTS OF THE ECOSYSTEM APPROACH TO INTEGRITY IN GREAT LAKES WATER QUALITY MANAGEMENT. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 65. 1992. Abstract only. FR 38(2)
[Inst. Environ. Studies, Univ. Toronto, Toronto, ON, Canada M5S 1A4]

FISHERIES REVIEW

LAKE MANAGEMENT AND RESEARCH (Continued)

93-004047 Sly, Peter G. HABITAT. Strategies for Rehabilitation of Lake Trout in the Great Lakes. Proceedings of a Conference on Lake Trout Research, August 1983. Randy L. Eshenroder, Thomas P. Poe, and Charles H. Olive, editors. *Can. J. Fish. Aquat. Sci.* 41, p. 35-39, 1984. FR 38(2)

[Nat. Water Res. Inst., Cent. Inland Waters, Burlington, ON, Canada L7R 4A6] *Salvelinus namaycush* in the Great Lakes.

93-004048 Spah, Hartmut. FISH FAUNA IN SOME MAAR LAKES. *Ergeb. Limnol.* No. 38, p. 263-272, 1992. In English with German summary. FR 38(2)

[Jüdischewitz, 3, D-4800 Bielefeld 1, Germany] Data for 18 species in Germany.

93-004049 Spangler, George R. and John J. Collins. LAKE HURON FISH COMMUNITY STRUCTURE BASED ON GILL-NET CATCHES CORRECTED FOR SELECTIVITY AND ENCOUNTER PROBABILITY. *N. Am. J. Fish. Manage.* 12(3):585-597, 1992. FR 38(2)

[Dep. Fish. & Wildl., Univ. Minn., St. Paul 55108] Data for 13 species.

93-004050 Stewart, T. J.; J. N. Dawley; J. A. Hoyle; A. Mathers; P. J. Savole and T. Schaner. LAKE ONTARIO FISHERIES SURVEILLANCE PROGRAMS. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 133, 1992. Abstract only. FR 38(2)

[Lake Ontario Fish. Unit, Assessment Group, Ontario Minist. Nat. Resour., R.R. #4, Picton, ON, Canada K0K 2T0]

93-004051 Tremblay, Serge and Yvon Richard. EFFECTS OF ACIDITY ON FISH COMMUNITIES IN SOUTHWESTERN QUEBEC (CANADA). *Water Air Soil Pollut.* 66(3-4):315-331, 1993. FR 38(2)

[Quebec Minist. Environ., 930 chemin Sainte-Foy, 2e etage, Quebec, PQ, Canada G1S 2L4]

93-004052 Westra, Laura. THE GOAL OF 'INTEGRITY' IN THE CONTEXT OF PLURALISTIC DEMOCRACIES, SOME NATIONAL AND INTERNATIONAL CONFLICTS. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 46, 1992. Abstract only. FR 38(2)

[Philosophy, Univ. Windsor, 401 Sunset, Windsor, ON, Canada N9B 3P4]

RIVER AND STREAM MANAGEMENT AND RESEARCH

93-004053 Arbour, David. THREE SPRINGS IN CENTRAL FLORIDA. *Am. Curvants* p. 17-20, Fall 1992. FR 38(2)

Data for 28 species.

93-004054 Armitage, Neil B. RESTRUCTURING STREAMS FOR ANADROMOUS SALMONIDS. *Am. Fish. Soc. Symp.* No. 10, p. 136-149, 1991. FR 38(2)

[U.S. Dep. Interior, Bur. Land Manage., P.O. Box 10226, Eugene, OR 97440] *Oncorhynchus clarki*, *O. kisutch*, and *O. mykiss* in Oregon.

93-004055 Baumann, Eveline. [PRODUCTIVE INVESTMENT AND CONSUMPTION BY FISHERMEN IN THE CENTRAL DELTA OF THE NIGER.] *Research and Small-Scale Fisheries: Symposium International CRISTOM-IFRIMER*, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemaire, and J. Weber, editors. Vol. 2 p. 559-566, 1991. In French with English summary. FR 38(2)

[Antenne CRISTOM, Mus. Nat. Hist. Nat., Lab. Ichtyol. Gen. Appl., 43 rue Cuvier, 75231 Paris Cedex 5, France]

93-004056 Bengen, D.; A. Belaud and P. Lim. [FISH POPULATION STRUCTURE AND TYPOLOGY IN THREE ANCIENT ARMS OF THE GARONNE RIVER.] *Ann. Limnol.* 28(1):35-56, 1992. In French with English summary. FR 38(2)

[Lab. Ichtyol. Appl., ENSA Toulouse, 145 Ave. Muret, 31076 Toulouse Cedex, France] Data for 24 species in France.

93-004057 Bernard, David R.; William D. Arvey and Roland A. Holmes. OPERATIONAL PLANNING: THE DALL RIVER AND RESCUE OF ITS SPORT FISHERY. *Fisheries (Bethesda)* 18(2):6-12, 1993. FR 38(2)

[Dkt. Sport Fish, Dep. Fish & Game, 333 Raspberry Rd., Anchorage, AK 99518] *Esox lucius* in Alaska.

93-004058 Bonnell, R. Gregory. CONSTRUCTION, OPERATION, AND EVALUATION OF GROUNDWATER-FED SIDE CHANNELS FOR CHUM SALMON IN BRITISH COLUMBIA. *Am. Fish. Soc. Symp.* No. 10, p. 109-124, 1991. FR 38(2)

[Dep. Fish. & Oceans, Pac. Reg., Salmonid Enhancement Program, 555 W. Hastings St., Suite 400, Vancouver, BC, Canada V6B 5G3] *Oncorhynchus keta* and *O. kisutch* in Canada.

93-004059 Boyer, Helen A. TRACE ELEMENTS IN THE WATER, SEDIMENTS, AND FISH OF THE UPPER MISSISSIPPI RIVER, TWIN CITIES METROPOLITAN AREA. *Proc. Annu. Meet. Miss. River Res. Consortium* No. 15, p. 195-230, 1992. FR 38(2)

[Water Quality Monitoring Sect., Metropolitan Waste Control Comm., 350 Metro Sq. Bldg., St. Paul, MN 55101] *Cyprinus carpio*, *Sciaenidae canadense*, and *Micropterus dolomieu* in Minnesota.

FISHERIES REVIEW

RIVER AND STREAM MANAGEMENT AND RESEARCH (Continued)

- 93-004060 Breneman, William Max ONTOGENETIC ASPECTS OF UPPER AND LOWER STREAM REACH CYPRINID ASSEMBLAGES IN A SOUTH MISSISSIPPI WATERSHED. Ph.D. dissertation, Univ. South Miss. 106p. 1992. From *Miss. Abst. Int. & Sci. Eng.* 53(8):3891 1993. Order No. DA9239390 FR 38(2)
Luxilus chrysocephalus, *Lyturus roseolatus*, *Cyprinella venusta*, *Moxostoma valenciennesi*, and *N. volucellus* in Mississippi
- 93-004061 Budhwa, Natalja [ECOLOGICAL DIAGNOSIS OF THE SOCA RIVER AND ITS TROUT POPULATION] *Ichthyol.* No. 11, p. 1-22 1992. In Serbo-Croatian with English summ. FR 38(2)
Salmo marmoratus and *S. trutta* fno in Yugoslavia
- 93-004062 Cederholm, C. J. and W. J. Scarler THE BEADED CHANNEL: A LOW-COST TECHNIQUE FOR ENHANCING WINTER HABITAT OF COHO SALMON. *Am. Fish. Soc. Symp.* No. 10, p. 104-108 1991. FR 38(2)
 [Dep. Nat. Resour., Olympia, WA 98504] *Oncorhynchus kisutch* in Washington
- 93-004063 Chao, Ning Labrish. CONSERVATION OF RIO NEGRO ORNAMENTAL FISHES. *Trap. Fish. Hobbyist* 41(5):99-100, 102, 104, 106-108, 110-111, 114 1993. FR 38(2)
- 93-004064 Chelkowski, Zygmunt SEA TROUT (*SALMO TRUTTA* L.) AND SALMON (*SALMO SALAR* L.) CATCHES IN THE LOWER Odra RIVER SYSTEM AS WELL AS STOCKING IN THE YEARS 1973-1987. *Acta Ichthyol. Piscicult.* 22(2):123-147 1992. In English with Polish summ. FR 38(2)
 [Zaklad Gospodarki Lozowej, Akad. Rolniczej, ul. K. Krolewicza 4, 71-550 Szczecin, Poland]
- 93-004065 Cowan, Larry. PHYSICAL CHARACTERISTICS AND INTRAGRAVEL SURVIVAL OF CHUM SALMON IN DEVELOPED AND NATURAL GROUNDWATER CHANNELS IN WASHINGTON. *Am. Fish. Soc. Symp.* No. 10, p. 125-131 1991. FR 38(2)
 [Dep. Fish., 115 Gen. Admin. Bldg., Olympia, WA 98504] *Oncorhynchus keta*
- 93-004066 Craig, James L. ANNUAL REPORT: KLAMATH RIVER FISHERIES ASSESSMENT PROGRAM, JUVENILE SALMON TRAPPING ON THE MAINSTEM TRINITY RIVER AT WILLOW CREEK AND ON THE KLAMATH RIVER AT BIG BAR, 1990. *Klamath River Fish. Resour. Cyl. Publ.* 90(2 51) 50p. 1992. FR 38(2)
 [U.S. Fish & Wildl. Serv., Coastal Fish. Resour. Off., Arcata, CA] *Oncorhynchus tshawytscha*, *O. mykiss*, and *O. kisutch* in California
- 93-004067 de Merona, Bernard and Marla Mercedes Blencourt [ARTISANAL FISHERIES IN CENTRAL AMAZONIA: PRELIMINARY ASSESSMENT AND PROBLEMS] *Research and Small-Scale Fisheries Symposium International, ORSTOM-TREMER, Montpellier, France, 3-7 July 1989* (J. R. Durand, J. Lemoalle, and J. Weber, editors, Vol. 1, p. 433-441, 1991. In French with English summ. FR 38(2)
 [ORSTOM, 213 rue Lafayette, 75480 Paris Cedex 10, France]
- 93-004068 Debowski, Piotr [ICHTHYOFALUNA OF THE UPPER PASLEKA RIVER DRAINAGE BASIN.] *Rocz. Nauk. Pol. Zwiast. Wiedzykologicz.* Vol. 3, p. 115-133 1990. In Polish with English and Russian summ. FR 38(2)
 [Inst. Rybnictwa Sczyladowego & Olsztyne Pracownia Rybnictwa Rzecznego, ul. Bytowska 5, 80-328 Gdansk-Oldwa, Poland]
- 93-004069 Dong Chongzhi, Zhao Chungang and Li Gengang THE STATE OF SALMON RESOURCES AND ARTIFICIAL RELEASING IN SUJIFEN RIVER. *Proceedings of the International Symposium on Coldwater Fish Culture, Beijing, China, 19-23 September 1989*, Wang Xing, editor. *Salmon Fish. 1990(Spec. Issue)*:161. 1990. Abstract only. FR 38(2)
 [Heilongjiang Fish. Res. Inst., Chinese Acad. Fish. Sci., Harbin, China] *Oncorhynchus gorbuscha*, *O. keta*, and *O. masou* in China
- 93-004070 Dudgeon, David ENDANGERED ECOSYSTEMS: A REVIEW OF THE CONSERVATION STATUS OF TROPICAL ASIAN RIVERS. *Hydrobiologia* 240(3):167-191, 1992. FR 38(2)
 [Dep. Zool., Hui Oh Chow Sci. Bldg., Univ. Hong Kong, Pokfulam Rd., Hong Kong]
- 93-004071 Elliott, J. M. VARIATION IN THE POPULATION DENSITY OF ADULT SEA-TROUT, *SALMO TRUTTA*, IN 67 RIVERS IN ENGLAND AND WALES. *Ecol. Freshwater Fish* 1(1):5-11, 1992. In English with Spanish summ. FR 38(2)
 [NERC Inst. Freshwater Ecol., Windermere Lab., Ambleside, Cumbria, LA22 0UP, England]
- 93-004072 Everest, Fred H.; James R. Seckle; Gordon H. Reeves and Mason D. Bryant PLANNING AND EVALUATING HABITAT PROJECTS FOR ANADROMOUS SALMONIDS. *Am. Fish. Soc. Symp.* No. 10, p. 68-77, 1991. FR 38(2)
 [U.S. For. Serv., For. Sci. Lab., P.O. Box 20908, Juneau, AK 99802]

FISHERIES REVIEW

RIVER AND STREAM MANAGEMENT AND RESEARCH (Continued)

- 93-004073 Fay, Claude. [FISH PRODUCTION IN THE CENTRAL DELTA OF THE NIGER (MALI): SYSTEMS OF PERCEPTION AND OWNERSHIP OF TERRITORIES.] *Research and Small-Scale Fisheries: Symposium International*, ORSTOM-IFREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 881-888. 1991. In French with English summ. FR 38(2)
[ORSTOM-B.P. 2528, Bamako, Mali]
- 93-004074 Furtado, Lourdes G. and Maria Cristina Maneschy. [RESEARCH DYNAMICS AND SMALLSCALE FISHERY DYNAMICS IN THE STATE OF PARA, AMAZONIA (BRAZIL).] *Research and Small-Scale Fisheries: Symposium International*, ORSTOM-IFREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 691-698. 1991. In French with English summ. FR 38(2)
[Mus. Paraense Emilio Goeldi, Conselho Nac. Desenvolvimento, Cienc. & Tecnol., Av. Magalhães Barata, 376 CP 195, 66000 Belem-Para, Brazil]
- 93-004075 Gilroy, Ian B.; Matt Longenbaugh and Joseph C. Polos. PROGRESS REPORT FOR INVESTIGATIONS ON BLUE CREEK, FY 1990-1991. *Klamath River Fish. Resour. Off. Publ.* 91(FP-4). 83p. 1992. FR 38(2)
[U.S. Fish & Wildl. Serv., Coastal Fish. Resour. Off., Arcata, CA] *Oncorhynchus tshawytscha*, *O. mykiss*, and *C. kisutch* in California.
- 93-004076 Gober, Donald R.; Gregory J. Langner and Lisa Langelier. QUALITY URBAN FISHERIES MANAGEMENT: MORE THAN JUST TROPHY-SIZED FISH. *Natl. Inst. Urban Wildl. Symp. Ser. No. 2*, p. 251-252. 1991. Poster abstract only. FR 38(2)
[U.S. Fish & Wildl. Serv., Rocky Mt. Arsenal, Bldg. 111, Commerce City, CO 80022-2180]
- 93-004077 Green, Daniel William. THE YAKIMA BASIN FISHERY ENHANCEMENT PROJECT: A BIOECONOMIC ANALYSIS. *Fish. D. dissertation, Univ. Idaho* 248p. 1992. *From Diss. Abstr. Int. B Sc. Eng. S3(7)*:3240. 1993. Order No. DA0234769. FR 38(2)
- 93-004078 Habers, James W. and Richard J. Savage. WILD TROUT RESOURCES AND MANAGEMENT IN THE SOUTHERN APPALACHIAN MOUNTAINS. *Fisheries (Bethesda)* 18(1):6-13. 1993. FR 38(2)
[Univ. Tenn., Dep. For., Wildl. & Fish., P.O. Box 1071, Knoxville 37901] *Salvelinus fontinalis* in the United States
- 93-004079 Harpman, David A.; Edward W. Spaffing and Terry J. Waddie. A METHODOLOGY FOR QUANTIFYING AND VALUING THE IMPACTS OF FLOW CHANGES ON A FISHERY. *Water Resour. Res.* 29(3):575-582. 1993. FR 38(2)
[Econ. Analysis Branch, U.S. Bur. Reclam., Denver, CO] *Salmo trutta* in Colorado.
- 93-004080 Hartley, K. A. and J. R. M. Kelso. HABITAT INFORMATION AND REHABILITATION ALTERNATIVES FOR RESTORING SPAWNING HABITAT OF WALLEY AND SALMONIDS IN STREAMS. *Can. Tech. Rep. Fish. Aquat. Sci.* No. 1813. 59p. 1991. In English with French summ. FR 38(2)
[Great Lakes Lab. Fish. & Aquat. Sci., Dep. Fish. & Oceans, Canal Dr., Ship Canal P.O., Sault Ste. Marie, ON, Canada P6A 1P0] *Stizostedion vitreum*
- 93-004081 Heury, J., Dominique Ombredane and J. L. Bagliniere. [THE HABITAT OF COMMON TROUT (SALMO TRUTTA L.) IN RUNNING WATER.] In: [The Trout: Biology and Ecology.] J. L. Bagliniere and G. Mairin, editors. p. 47-96. 1991. In French. FR 38(2)
[INRA, Lab. Ecol. Hydrobiol. & Stn. Physiol. & Ecol. Poissons, 65 rue de St. Brieuc, 35042 Rennes Cedex, France]
- 93-004082 Helms, Bruce A. HYDRAULIC ANALYSIS AND MODELING OF FISH HABITAT STRUCTURES. *Am. Fish. Soc. Symp.* No. 10, p. 78-87. 1991. FR 38(2)
[Dep. Fish., Olympia, WA 98504]
- 93-004083 Hery, Claude. [THE ROLE OF DEMOGRAPHY IN A MULTIDISCIPLINARY FISHERY RESEARCH PROJECT: THE CENTRAL NIGER DELTA PROJECT.] *Research and Small-Scale Fisheries: Symposium International*, ORSTOM-IFREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 377-384. 1991. In French with English summ. FR 38(2)
[Project Delta Cent. Niger-B.P. 2528 Bamako, Mali]
- 93-004084 Higgins, Diane. KLAMATH RIVER EDUCATIONAL PROGRAM. GRADES 7 & 8, FISCAL YEAR 1990. *Klamath River Fish. Resour. Off. Publ.* 90(3.1), 55p. 1992. FR 38(2)
[Klamath River Educ. Program, 4549 Aster Ave., McKinleyville, CA 95521]
- 93-004085 Holcik, Jusa. FISH COMMUNITIES IN THE SLOVAKIAN SECTION OF THE DANUBE RIVER IN RELATION TO CONSTRUCTION OF THE GABČIKOVO RIVER BARRAGE SYSTEM. *Biological Monitoring of Large Rivers: Documents presented at the International Seminar held in Brno and Gabčíkovo, Czechoslovakia, 3-6 July, 1990*. Milan Penaz, editor. p. 86-89. 1991. FR 38(2)
[Inst. Zool. & Ecosozol., Drienova 3, 626 24 Bratislava, Czechoslovakia]

FISHERIES REVIEW

RIVER AND STREAM MANAGEMENT AND RESEARCH (Continued)

- 93-004086 Holomuzik, Joseph R. and R. Ian Stevenson. ROLE OF PREDATORY FISH IN COMMUNITY DYNAMICS OF AN EPHEMERAL STREAM. *Can. J. Fish. Aquat. Sci.* 49(11):2322-2330. 1992. In English with French summ. FR 38(2)
 [Div. Nat. Sci. & Math., Transylvania Univ., Lexington, KY 40508] *Lepomis*
- 93-004087 House, Robert; Val Crispin and Joan M. Sulist. HABITAT AND CHANNEL CHANGES AFTER REHABILITATION OF TWO COASTAL STREAMS IN OREGON. *Am. Fish. Soc. Symp. No. 10*, p. 150-159. 1991. FR 38(2)
 [U.S. Bur. Land Manage., Salem Dist. Off., 1717 Fabry Rd., S.E., Salem, OR 97306] *Oncorhynchus kisutch*, *O. clarki*, *O. mykiss*, *O. tshawytscha*, *Lampetra tridentata*, and *Cottus*
- 93-004088 Hvidsten, N. A. and O. Ujaedal. INCREASED DENSITIES OF ATLANTIC SALMON SMOLTS IN THE RIVER ORKLA, NORWAY, AFTER REGULATION FOR HYDROPOWER PRODUCTION. *Am. Fish. Soc. Symp. No. 10*, p. 219-225. 1991. FR 38(2)
 [Norskoglan Inst. Nat. Res., Tuengstretta 2, N-7004 Trondheim, Norway] *Salmo salar*
- 93-004089 Kottar, S. K. FOREST TO FISH: A CATCHMENT MODIFICATION APPROACH FOR THE ENVIRONMENTAL MANAGEMENT OF RIVER SYSTEMS. *Environ. Ecol.* 9(2):526-530. 1991. from *Paryvaran Abstr.* B(4):9104-005. 1991. FR 38(2)
 [Fish. Lab., Zool. Dep., Kalyani Univ., Kalyani-741 235, India]
- 93-004090 Koszalkinski, Henryk; Tadeusz Penczek; Wanda Galicka; Jacek Lobon-Cervia and Henryk Jakuciewicz. [ICHTHYOFALUNA OF THE GWDA RIVER DRAINAGE BASIN.] *Rocz. Nauk. Pol. Zwartku Warkawskiego* Vol. 2, p. 71-99. 1989. In Polish with English and Russian summ. FR 38(2)
 [Zaklad Ekol. & Zool. Kregowcow, Univ. Lodzki, 9-237 Lodz, Banacha 12/16, Poland] Data for 31 species in Poland
- 93-004091 KRAT. AGE COMPOSITION OF THE 1991 KLAMATH RIVER FALL CHINOOK RUN BASED ON SCALE SAMPLING PROGRAM. *Klamath River Fish. Resour. Off. Publ.* 92(FP-5). Bp. 1992. FR 38(2)
Oncorhynchus tshawytscha in California.
- 93-004092 Lee, Raymond. [PRELIMINARY SURVEYS IN SAMPLING DISPERSED SMALL-SCALE FISHERIES IN THE NIGER CENTRAL DELTA.] *Research and Small-Scale Fisheries. Symposium International, ORSTOM/IFREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoine, and J. Weber, editors. Vol. 1, p. 395-407. 1991. In French with English summ. FR 38(2)
 [ORSTOM, B.P. 252B, Bamako, Mali]
- 93-004093 Lasso, C. and I. Castrovejo. COMPOSITION, ABUNDANCE AND BIOMASS OF THE BENTHIC FISH FAUNA FROM THE GUARITICO RIVER OF A VENEZUELAN FLOODPLAIN. *Am. Zool.* 28(1):71-84. 1992. In English with French summ. FR 38(2)
 [Asoc. Amigos Donana, 2102, 41080 Sevilla, Espana & Mus. Hist. Nat. Salto, 1930, Caracas 1010-A, Venezuela] Data for 42 species.
- 93-004094 Lewis, Alan G. SCOTT RIVER RIPARIAN ZONE INVENTORY AND EVALUATION. *Klamath River Fish. Resour. Off. Publ.* 91(HF-10). 1992. FR 38(2)
- 93-004095 Lohr, Samuel C. and Jerry L. West. MICROHABITAT SELECTION BY BROOK AND RAINBOW TROUT IN A SOUTHERN APPALACHIAN STREAM. *Trans. Am. Fish. Soc.* 121(6):729-736. 1992. FR 38(2)
 [Coop. Fish. Res. Unit, Dep. Biol., Mont. State Univ., Bozeman 59717] *Salvelinus fontinalis* and *Oncorhynchus mykiss* in North Carolina.
- 93-004096 Lyons, John. USING THE INDEX OF BIOTIC INTEGRITY (IBI) TO MEASURE ENVIRONMENTAL QUALITY IN WARMWATER STREAMS OF WISCONSIN. *U.S. for. Serv. Gen. Tech. Rep. N-C* No. 149. 51p. 1992. FR 38(2)
 [Fish. Res. Biol. Fish. Res. Sect., Bur. Res., Dep. Nat. Resour., 1350 Fernside Dr., Monona, WI 53716]
- 93-004097 Mbata, J. N. A COMPARATIVE STUDY OF THE COST AND RETURNS OF SMALL-SCALE FARMERS IN THE FISHERY AND CROP SUB-SECTORS IN THE RIVERINE AREAS OF RIVERS STATE, NIGERIA. *Trop. Agric.* 70(1):88-94. 1993. FR 38(2)
 [Dep. Agric. Econ. & Business Manage., Egerton Univ., P.O. Box 536, Njoro, Kenya]
- 93-004098 McKern, John L. A METHOD FOR ESTIMATING FISHERY BENEFITS FOR GALLOWAY DAM AND RESERVOIR. *Am. Fish. Soc. Symp. No. 10*, p. 88-103. 1991. FR 38(2)
 [U.S. Army Corps Eng., Walla Walla Dist., Bldg. 602, City-Cty. Airport, Walla Walla, WA 99362] *Oncorhynchus* and *O. mykiss* in Idaho.

FISHERIES REVIEW

RIVER AND STREAM MANAGEMENT AND RESEARCH (Continued)

- 93-004099 Miller, Dale E.; Robert J. O'Brien and Gregory P. Kooser. TWO-PIN METHOD FOR THE LAYOUT OF STREAM HABITAT ENHANCEMENT DESIGNS. *Am. Fish. Soc. Symp. No. 10*, p. 204-212. 1991. FR 38(2)
[Inter-Fluve, Inc., North Grand, Bozeman, MT 59715] *Oncorhynchus mykiss*, *O. klatschi*, and *O. tshawytscha* in California
- 93-004100 Molyneux, Douglas B. and Karen T. Samuelson. KLUKOKWIM MANAGEMENT AREA SALMON CATCH AND ESCAPEMENT STATISTICS, 1989. *Alsk. Dep. Fish Game Tech. Fish. Rep. No. 92-10*. 73p. 1992. FR 38(2)
[Dep. Fish & Game, Div. Commer. Fish., Anchorage, AK] *Oncorhynchus tshawytscha*, *O. nerka*, *O. klatschi*, and *O. gulosus* in Alaska.
- 93-004101 Moore, Stephen E. and Gary L. Larson. NATIVE BROOK TROUT STUDIES IN GREAT SMOKY MOUNTAINS NATIONAL PARK, 1976-1981. *Proc. Conf. Sci. Natl. Parks Vol. 6*, p. 59-69. 1986. FR 38(2)
[Great Smoky Mt. Natl. Park, Gatlinburg, TN 37738] *Salvelinus fontinalis* and *Oncorhynchus mykiss* in Tennessee and North Carolina.
- 93-004102 Naismith, J. A. and B. Knights. THE DISTRIBUTION, DENSITY AND GROWTH OF THE EUROPEAN EEL, *ANGUILLA ANGUILLA*, IN THE FRESHWATER CATCHMENT OF THE RIVER THAMES. *J. Fish Biol.* 42(2):217-226. 1993. FR 38(2)
[WRc Medmenham, P.O. Box 16, Marlow, Bucks SL7 2HD, England]
- 93-004103 Oberdorff, Thierry and Jean-Pierre Pouchet. FISH ASSEMBLAGE STRUCTURE IN BRITANNY STREAMS (FRANCE). *Aquat. Living Resour.* 5(3):215-223. 1992. In English with French summ. FR 38(2)
[Lab. Ichtyol. Gen. & Appl., Mus. Natl. Hist. Nat., 43 rue Cuvier, 75231, Paris Cedex 05, France] Data for 16 species
- 93-004104 Osborne, Lewis L.; Steven L. Kohler; Peter B. Bayley; David M. Day; William A. Bervens; Michael J. Wiley and Randy Sauer. INFLUENCE OF STREAM LOCATION IN A DRAINAGE NETWORK ON THE INDEX OF BIOTIC INTEGRITY. *Trans. Am. Fish. Soc.* 121(5):635-643. 1992. FR 38(2)
[Cent. Aquat. Ecol., Ill. State Nat. Hist. Surv., 607 E. Peabody Dr., Champaign 61820]
- 93-004105 Penczak, Tadeusz; Richard K. H. Mann; Henryk Koszaliński and Monika Pleśniowska. [ICHTHYOFAUNA OF THE NAREW RIVER DRAINAGE BASIN. PART II: THE PISA RIVER AND ITS TRIBUTARIES.] *Roczn. Nauk Pol. Związku Wędkarskiego Vol. 3*, p. 95-114. 1990. In Polish with English and Russian summ. FR 38(2)
[Zakład Ekol. & Zool. Kregowcow, Univ. Łódźki, ul. Banacha 12/16, 90-237 Łódź, Poland] Data for 31 species in Poland.
- 93-004106 Penczak, Tadeusz; Stanisław Zyciel; Wanda Calka and Henryk Jakuciewicz. [ICHTHYOFAUNA OF THE LOWER COURSE OF THE RAWKA RIVER.] *Roczn. Nauk Pol. Związku Wędkarskiego Vol. 1*, p. 61-72. 1988. In Polish with English and Russian summ. FR 38(2)
[Zakład Ekol. & Zool. Kregowcow, Univ. Łódźki, 90-237 Łódź, ul. Banacha 12/16, Poland]
- 93-004107 Penczak, Tadeusz. [THE ICHTHYOFAUNA OF THE PELICA RIVER DRAINAGE BASIN. PART II. POST-IMPONDMENT STUDY.] *Roczn. Nauk Pol. Związku Wędkarskiego Vol. 2*, p. 116-186. 1989. In Polish with English and Russian summ. FR 38(2)
[Zakład Ekol. & Zool. Kregowcow, Univ. Łódźki, 90-237 Łódź, ul. Banacha 12/16, Poland]
- 93-004108 Penczak, Tadeusz. [THE ICHTHYOFAUNA OF THE PELICA DRAINAGE BASIN. PART I. PRE-IMPONDMENT STUDY.] *Roczn. Nauk Pol. Związku Wędkarskiego Vol. 1*, p. 23-59. 1988. In Polish with English and Russian summ. FR 38(2)
[Zakład Ekol. & Zool. Kregowcow, Univ. Łódźki, ul. Banacha 12/16, 90-237 Łódź, Poland]
- 93-004109 Penczak, Tadeusz; Henryk Koszaliński; Monika Buczyńska and Henryk Jakuciewicz. [THE ICHTHYOFAUNA OF THE NAREW RIVER DRAINAGE BASIN. PART I. THE NAREW RIVER.] *Roczn. Nauk Pol. Związku Wędkarskiego Vol. 3*, p. 81-94. 1990. In Polish with English and Russian summ. FR 38(2)
[Zakład Ekol. & Zool. Kregowcow, Univ. Łódźki, ul. Banacha 12/16, 90-237 Łódź, Poland] Data for 25 species in Poland.
- 93-004110 Perat, Henri and Jean-Michel Olivier. THE POINT ABUNDANCE SAMPLING, A FISHING STRATEGY FOR LARGE RIVERS. SHORT PRESENTATION OF THE CONCEPT, ITS APPLICANCE, AND SOME RESULTS. *Biological Monitoring of Large Rivers. Documents presented at the International Seminar held in Brno and Gabčíkovo, Czechoslovakia, 3-6 July, 1990.* Milan Perat, editor, p. 104-113. 1991. FR 38(2)
[Labs. Eau Douces, Univ. Claude Bernard Lyon I, 43 Blvd. du 11 Novembre 1918, F-69622 Villeurbanne Cedex, France]
- 93-004111 Prasolov, P. P. STUDY OF DOWNSTREAM MIGRATION OF WHITEFISH LARVAE IN VOIKAR RIVER BASIN (LOWER OB'). *Sov. J. Ecol. (Engl. Transl.)* 23(2):106-113. 1993. FR 38(2)
Coregonus nasus, *C. pidschian*, *C. pelod*, and *C. agan* in the USSR

FISHERIES REVIEW

RIVER AND STREAM MANAGEMENT AND RESEARCH (Continued)

- 93-004112 Rabert, Charles F., Danny D. McClendon, Wayne E. Probst, Brian Todd, Ann C. Livingstone and David Foster. MANAGING SMALLMOUTH BASS (*Micropterus dolomieu*) HABITAT IN STREAMS OF OZARK NATIONAL SCENIC RIVERWAYS. *Proc. Conf. Sci. Nat. Parks* Vol. 6, p. 40-50. 1986. FR 38(2)
[Dep. Nat. Resour., Fish. Sect., Rt. 2, Box 219R, Richmond Hill, GA 31324]
- 93-004113 Radwan, Stanisław, Barbara Jarzynowa, Włodzisław Zwolski, Krystyna Gierstewicz, Czesław Kowalczyk, Witold Kowalik and Andrzej Półcok. [ECOLOGICAL CHARACTERIZATION OF THE WATERS OF THE UPPER AND MIDDLE COURSES OF THE BYSTRZYCA LUBELSKA RIVER, ITS TRIBUTARIES AND THE ZEMBORZYCKIE LAKE.] *Rocz. Nauk. Pol. Związku Wetkarskiego* Vol. 1, p. 123-156. 1988. In Polish with English and Russian summ. FR 38(2)
[Inst. Biol. Podstaw Prod. Zwierzezy Akad. Rolniczej, Lublin, ul. Akad. 13, Poland] Data for 27 species in Poland.
- 93-004114 Reisenbichler, Reginald Ruben. USE OF SPAWNER-RECRUIT RELATIONS TO EVALUATE THE EFFECT OF DEGRADED ENVIRONMENT AND INCREASED FISHING ON THE ABUNDANCE OF FALL-RUN CHINOOK SALMON, *Oncorhynchus tshawytscha*, IN SEVERAL CALIFORNIA STREAMS. *Ph.D. dissertation, S.D. State Univ.* 1986. *From Diss. Abstr. Int. B Sci. Eng.* 4(721-4722) 1907. FR 38(2)
- 93-004115 Rhine, J. N. PHYSICAL HABITAT UTILIZATION OF FISH IN A SONORAN DESERT STREAM, ARIZONA, SOUTHWESTERN UNITED STATES. *Ecol. Freshwater Fish* 1(1) 35-41. 1992. In English with Spanish summ. FR 38(2)
[U.S. For. Serv., Rocky Mt. For. & Range Exp. Stn., For. Sci. Lab., Ariz. State Univ., Tempe, 65287-1304] *Agosia chrysgaster*, *Rhinichthys ocellus*, *R. cobitis*, *Catostomus insignis*, *C. clarki*, *Gila robusta*, and *Meds fulgida*
- 93-004116 Rovny, Borislav and Vladimír Kováč. A CONTRIBUTION TO THE CONSERVATION MANAGEMENT OF THE EUROPEAN MUDMINNOW (*LIMNA KRAMERII* WALBAUM, 1772) IN THE ZITNY OSTRÓV - LARGE DANUBE ISLAND. *Biological Monitoring of Large Rivers*. Documents presented at the International Seminar held in Brno and Cebokov, Czechoslovakia, 3-6 July, 1990. Milan Penaz, editor. p. 114-115. 1991. FR 38(2)
[Inst. Zool. & Ecosyst., Dřetova 3, 626 24 Brno, Czechoslovakia]
- 93-004117 Sauro, Peter E. A COMMENT ON 'NUTRIENT CYCLING IN A FRESHWATER MARSH: THE DECOMPOSITION OF FISH AND WATERFOWL CARRION' (PARMENTER AND LAMARRA). *Limnol. Oceanogr.* 37(7):1586-1587. 1992. FR 38(2)
[INSTARR, Dep. Geol. Sci., Univ. Colo., Boulder 80304-0450] *Oncorhynchus mykiss*
- 93-004118 Sedell, James R. and Robert L. Beschta. BRINGING BACK THE 'BIO' IN BIOENGINEERING. *Am. Fish. Soc. Symp.* No. 10, p. 160-175. 1991. FR 38(2)
[U.S. For. Serv., Pac. Northwest Res. Stn., 3200 SW Jefferson Way, Corvallis, OR 97331]
- 93-004119 Segura, Gilles and Ricardo Delfino Schenke. [RESEARCH ON THE ARGENTINE ARTISANAL FISHERIES OF THE PLATA BASIN. THE EXAMPLE OF THE FISHERIES OF LOWER PARANA.] *Research and Small-Scale Fisheries. Symposium International, OCEAN-FRIMER, Montpelier, France, 3-7 July 1989.* J. R. Durand, J. Lemoine, and J. Weber, editors. Vol. 1, p. 467-474. 1991. In French with English summ. FR 38(2)
[Lab. Ichtyol.-Enat, 145 Av. Muret, 31076 Toulouse Cedex, France]
- 93-004120 Skora, Stanisław and Jan-Marian Włodok. [ICHTHYOFAUNA OF THE WILPROZOWKA RIVER DRAINAGE BASIN.] *Rocz. Nauk. Pol. Związku Wetkarskiego* Vol. 2, p. 100-115. 1989. In Polish with English and Russian summ. FR 38(2)
[Zakład Biol. Wod. Polskiej Akad. Nauk, 31-016 Kraków, ul. Słowkowska 17, Poland]
- 93-004121 Skora, Stanisław and Jan-Marian Włodok. [ICHTHYOFAUNA OF THE SOLA RIVER AND ITS TRIBUTARIES.] *Rocz. Nauk. Pol. Związku Wetkarskiego* Vol. 1, p. 97-121. 1988. In Polish with English and Russian summ. FR 38(2)
[Zakład Biol. Wod. Polskiej Akad. Nauk, ul. Słowkowska 17, 31-016 Kraków, Poland] Data for 28 species in Poland.
- 93-004122 Sparks, Richard E. THE ROLE OF CONTAMINANTS IN THE DECLINE OF THE ILLINOIS RIVER: IMPLICATIONS FOR THE UPPER MISSISSIPPI. *Proc. Ann. Meet. Miss. River Res. Consortium* No. 15, p. 25-66. 1992. FR 38(2)
[Nat. Hist. Surv., Nat. Resour. Bldg., 607 E. Peabody Dr., Champaign, IL 61820]
- 93-004123 Starmach, Janusz; Marek Jelonek, Grazyna Mazurkiewicz, Tadeusz Pietuch and Antoni Ambrowicz. [INVESTIGATIONS OF THE PRESENT CONDITION OF THE ICHTHYOFAUNA AND POSSIBLE EXPLOITATION OF THE RABA RIVER DRAINAGE BASIN. PART I. BIOLOGICAL - FISHERY CHARACTERIZATION OF THE UPPER PART OF THE RABA RIVER AND ITS TRIBUTARIES.] *Rocz. Nauk. Pol. Związku Wetkarskiego* Vol. 1, p. 73-96. 1980. In Polish with English and Russian summ. FR 38(2)
[Zakład Biol. Wod. PAN, ul. Słowkowska 17, 31-016 Kraków, Poland] Data for 11 species in Poland.

FISHERIES REVIEW

RIVER AND STREAM MANAGEMENT AND RESEARCH (Continued)

- 93-004124 Stevens, David R. and Bruce D. Rosenlund. GREENBACK CLUTHROAT TROUT RESTORATION IN ROCKY MOUNTAIN NATIONAL PARK. *Proc. Conf. So' Nat' Parks* Vol. 6, p. 104-118. 1986. FR 38(2)
[Rocky Mt. Natl. Park, Estes Park, CO 80517] *Oncorhynchus clarki stensioi* in Colorado
- 93-004125 Strango, Elizabeth M.; Peter B. Moyle and Theodore C. Fain. INTERACTIONS BETWEEN STOCHASTIC AND DETERMINISTIC PROCESSES IN STREAM FISH COMMUNITY ASSEMBLY. *Environ. Biol. Fishes* 36(1):1-15. 1993. FR 38(2)
[Dep. Wildl. & Fish. Biol., Univ. Calif., Davis 95616] *Salmo trutta*, *Oncorhynchus mykiss*, *Richardsonia egregia*, *Rhinichthys cataractae robustus*, and *Callostomus taxonensis* in California.
- 93-004126 Stratton, Barry L. and James D. Woolington. BRISTOL BAY SOCKEYE SALMON SPAWNING ESCAPEMENT TEST FISHING IN 1991. *Alask. Dep. Fish Game Tech. Fish. Rep. No. 92-15*. 69p. 1992. FR 38(2)
[Dep. Fish & Game, Div. Commer. Fish., 333 Raspberry Rd., Anchorage, AK 99518] *Oncorhynchus nerka* in Alaska
- 93-004127 Swierczynski, Marek and Grzegorz Matkowiak. AN ATTEMPT ON NEUTRALIZE ACIDIFIED MOUNTAIN WATERS ON EXAMPLE OF THE INVESTIGATED STREAMS: THE CZERWIEN, MYJA AND PODGORNA. *Acta Ichthyol. Piscatorie* 22(1):75-95. 1992. In English with Polish sum. FR 38(2)
[Wydział Biol. & Nauk Morza, Katedra Ekol. Zwierząt, ul. Felicjana 3a, 71-412 Szczecin, Poland] *Cassiois auratus*, *Lebistes reticulatus*, and *Oncorhynchus mykiss* in Poland.
- 93-004128 Szafrzynska, Katarzyna and Arkadiusz Wołos. [ANALYSIS OF ANGLING PRESSURE IN THE BIEBRZA, BUG AND NAREW RIVERS.] *Roczn. Nauk. Pol. Związku Wetnarskiego* Vol. 1, p. 7-22. 1988. In Polish with English and Russian sum. FR 38(2)
[Zakład Ekon. Rybactwa, Inst. Rybactwa Środlodowego Olsztynia, 10-957 Olsztyn-Kortowa, Poland]
- 93-004129 Vinson, Mark R.; Deanna K. Vinson and Ted R. Angold. AQUATIC MACROPHYTES AND INSTREAM FLOW CHARACTERISTICS OF A ROCKY MOUNTAIN RIVER. *Rivers* 3(4):260-265. 1992. FR 38(2)
[Dep. Fish & Wildl., Utah State Univ., Logan 84322-5210]
- 93-004130 Waiters, G. Thomas. UNIONIDS, FISHES, AND THE SPECIES-AREA CURVE. *J. Biogeogr.* 19(5):481-490. 1992. FR 38(2)
[171 Wells St., Marietta, OH 45750-3461]
- 93-004131 Way, Carl M.; Andrew C. Miller; C. Rex Bingham and B. S. Payne. EFFECTS OF SURFACE TEXTURE OF ARTICULATED CONCRETE MATRESS BLOCKS ON THEIR HABITAT VALUE. *Lower Mississippi River Environ. Rep. No. 19*. 38p. 1992. Available from Natl. Tech. Inform. Serv., 5285 Port Royal Rd., Springfield, VA 22161. FR 38(2)
[USAE Waterways Exp. Stn., Environ. Lab., 3909 Halls Ferry Rd., Vicksburg, MS 39180-6190]
- 93-004132 Weathers, Kenneth C. and Mark B. Bain. SMALLMOUTH BASS IN THE SHOALS REACH OF THE TENNESSEE RIVER: POPULATION CHARACTERISTICS AND SPORT FISHERY. *N. Am. J. Fish. Manage.* 12(3):528-537. 1992. FR 38(2)
[U.S. Fish & Wildl. Serv., Coop. Fish & Wildl. Res. Unit., Auburn Univ., Auburn, AL 36849] *Micropterus dolomieu* in Alabama.
- 93-004133 West, J. R.; O. J. Ole; A. D. Olson; M. V. Anderson; S. A. Fox and J. H. Power. EVALUATION OF FISH HABITAT CONDITION AND UTILIZATION IN SALMON, SCOTT, SHASTA, AND MID KLAMATH SLUB-BASIN TRIBUTARIES 1989/1989. *Klamath River Fish. Resour. O.C. Publ.* 89(2.31 & 2.41):89p. plus appendix. 1989. FR 38(2)
[Klamath Natl. For., 1312 Fairlane Rd., Yreka, CA 96097]
- 93-004134 White, Ray J. OBJECTIVES SHOULD DICTATE METHODS IN MANAGING STREAM HABITAT FOR FISH. *Am. Fish. Soc. Symp. No. 10*, p. 44-52. 1991. FR 38(2)
[320 12th Ave. N., Edmonds, WA 98020]
- 93-004135 White, Ray J. RESISTED LATERAL SCOUR IN STREAMS - ITS SPECIAL IMPORTANCE TO SALMONID HABITAT AND MANAGEMENT. *Am. Fish. Soc. Symp. No. 10*, p. 200-203. 1991. FR 38(2)
[320 12th Ave. N., Edmonds, WA 98020] *Oncorhynchus clarki lewisi*, *O. c. bouvieri*, *O. mykiss*, and *Salmo trutta* in Montana.
- 93-004136 White, Ray J. STREAMS, LAKES, AND FISH IN WHITEBARK PINE ECOSYSTEMS. *U.S. For. Serv. Gen. Tech. Rep. INT No. 270*, p. 297-301. 1990. FR 38(2)
[Trout Habitat Specialists, 320 12th Ave. N., Edmonds, WA 98020]

FISHERIES REVIEW

FARM POND AND SMALL IMPOUNDMENT MANAGEMENT AND RESEARCH

93-004137 Bitter, Susan D. and Robert Danahy. A MANAGEMENT PLAN FOR CREATING AND MAINTAINING A FISHERY RESOURCE IN AN URBAN LAKE. *Natl. Inst. Urban Wildl. Symp. Ser. No. 2* p. 250-251, 1991. Poster abstract only FR 30(2)

[Diahabitats Inc., 303 Allegheny Ave., Towson, MD 21204] *Lepomis macrochirus* and *Micropterus salmoides* in Maryland.

93-004138 Iwata, Katsuya; Noriko Takamura; Jia-Le Li; Xue-Bao Zhu and Taizou Miura. [ECOPHYSIOLOGICAL STUDIES OF CHINESE INTEGRATED FISH CULTURE-I. DECOMPOSING PROCESSES OF GRASS CARP FECEs UNDER AEROBIC LABORATORY CONDITIONS.](*pn J. Limnol.* 53(4):341-354, 1992. In Japanese with English summ. FR 30(2)

[Biol. Lab., Fac. Educ., Wakayama Univ., 930 Sakakodani Wakayama-shi 640, Japan] *Ctenopharyngodon idella*, *Cassius auratus*, and *Anistichthys nobilis*

93-004139 Kirk, James P. EFFICACY OF TRIPLOID GRASS CARP IN CONTROLLING NUISANCE AQUATIC VEGETATION IN SOUTH CAROLINA FARM PONDS. *N. Am. J. Fish. Manage.* 12(3):501-504, 1992. FR 30(2)

[U.S. Army-Corps Eng., Waterway Exp. Stn., Environ. Lab., 3009 Halls Ferry Rd., Vicksburg, MS 39100] *Lepomis macrochirus*, *Ctenopharyngodon idella*, and *Micropterus salmoides*.

93-004140 Sloothweg, R.; P. A. Vroeg and S. J. Wiersma. EFFECTS OF MOLLUSCIVOROUS FISH, WATER QUALITY AND POND MANAGEMENT ON THE DEVELOPMENT OF SCHISTOSOMIASIS VECTOR SNAILS IN AQUACULTURE PONDS. *Aquacult. Fish. Manage.* 24(1):123-128, 1993. FR 30(2)

[Cent. Environ. St., P. O. Box 9518, 2300 RA Leiden, Netherlands] *Tropia neotica*, *Cleas galiepinus*, and *Astaireocirrus affundit*.

LARGE IMPOUNDMENT MANAGEMENT AND RESEARCH

93-004141 Błenarz, Krzysztof; Piotr Epler and Jacek Achinger. [FISH CATCHING BY ANGLERS IN THE ŻYWIĘC DAM RESERVOIR.] *Roczn. Nauk. Pol. Związku Wodkarskiego* Vol. 3, p. 7-14, 1990. In Polish with English and Russian summ. FR 30(2)

[Katedra Ichtiologii & Rybactwa, Akad. Rolniczej Krakowie, 30-149 Krakow, ul. Ambrosowa 6, Poland] *Perca fluviatilis*, *Rutilus rutilus*, and data for 9 other species in Poland.

93-004142 Błenarz, Krzysztof; Piotr Epler and Roman Sych. [FISH CATCHING BY ANGLERS IN THE ROZNOW DAM RESERVOIR.] *Roczn. Nauk. Pol. Związku Wodkarskiego* Vol. 3 p. 15-31, 1990. In Polish with English and Russian summ. FR 30(2)

[Katedra Ichtiologii & Rybactwa Akad. Rolniczej Krakowie, 30-149 Krakow, ul. Ambrosowa 6, Poland]

93-004143 Hanna, Nuha S. and Fritz Schlemmer. THE SEASONALITY OF ZOOPLANKTIVOROUS FISH IN AN AFRICAN RESERVOIR (GEBEL AULIA RESERVOIR, WHITE NILE, SUDAN). PART 2. SPATIAL DISTRIBUTION AND RESOURCE PARTITIONING IN ZOOPLANKTIVOROUS FISH ASSEMBLAGES. *Hydrobiologia* 250(3):187-193, 1993. FR 30(2)

[Univ. Vienna, Inst. Zool., Althanstr. 14, A-1090 Wien, Austria] *Aloates baromose*, *A. narse*, and *Brycon dentex*.

93-004144 Hanna, Nuha S. and Fritz Schlemmer. THE SEASONALITY OF ZOOPLANKTIVOROUS FISH IN AN AFRICAN RESERVOIR (GEBEL AULIA RESERVOIR, WHITE NILE, SUDAN). PART 1. LIMNOLOGICAL CYCLE AND THE FISH COMMUNITY DYNAMICS. *Hydrobiologia* 250(3):173-185, 1993. FR 30(2)

[Univ. Vienna, Inst. Zool., Althanstr. 14, A-1090 Wien, Austria] *Aloates narse*, *A. baromose*, and data for 50 other species.

93-004145 Leon, Stuart Clark. RELATIONSHIPS BETWEEN HABITAT AND FISH POPULATIONS OF A NEW RESERVOIR. Ph.D. dissertation, Ohio State Univ. 209p., 1991. From *Dis. Abst. Int. 8 Sci. Eng.* 53(7):3356-3357, 1993. Order No. DA9236749. FR 30(2)

93-004146 Lieberman, Davine. LIMNOLOGY OF A PRAIRIE RESERVOIR: A NEWLY CREATED IMPOUNDMENT. *Bur. Reclam. R-92-14*, 75p., 1992. FR 30(2)

Aloates pseudoharengus, *Pomoxis*, *Silozostedion vitreum*, *Micropterus salmoides*, *Lepomis macrochirus*, *Perca flavescens*, and *Esox lucius*.

93-004147 Lusk, Stanislav and Jiřiluboswarsky. MONITORING OF FISHES IN THE NOVÉ MLYNY MAN-MADE LAKE SYSTEM. *Biological Monitoring of Large Rivers: Documents presented at the International Seminar held in Brno and Cařkovo, Czechoslovakia, 3-6 July, 1990*. Milan Penaz, editor, p. 90-92, 1991. FR 30(2)

[Inst. Syst. & Ecol. Biol., Czechoslovak Acad. Sci., Kvetna 6, 602 65 Brno, Czechoslovakia]

93-004148 Yule, Daniel L. INVESTIGATIONS OF FORAGE FISH AND LAKE TROUT SALVELINUS NAMAYCUSH INTERACTIONS IN FLAMING GORGE RESERVOIR. M.S. thesis, Utah State Univ. 132p., 1992. FR 30(2)

Gila atrata and *Oncorhynchus mykiss* in Wyoming and Utah.

ESTUARY MANAGEMENT AND RESEARCH

- 93-004149 Austin, H. M. CHESAPEAKE BAY STOCK ASSESSMENT: WHO ARE THEY, AND WHERE / THEY? *Proceedings of the Seventeenth Biennial Conference of the International Association on Water Pollution Research and Control*, Washington, DC, USA, 24-30 May 1992. M. Suzuki, D. Balay, A.-G. Dahlberg, W. Gu D. Jenkins, H. Krots, A. C. Di Pinto, K. Zetter, A. Millum, E. J. Izard and P. T. Nagle, editors. *Water Sci. Tech.* 26(12):2705-2709. 1992. FR 38(2)
[School Mar. Sci., Inst. Mar. Sci., Coll. William & Mary, Gloucester Point, VA 23062] *Abraxosiphonina*, *Macr. zonalis*, *Palaemonetes pugio*, *Libinia emarginata*, *Microdeca capillata*, *Paralichthys dentatus*, *Fundul. Anchoa mitchilli*, and *Menidia*.
- 93-004150 Boulton, Ralf H., Jr. USE OF MANGROVE PROP ROOT HABITATS BY FISH IN THE NORTHERN U.S. VIRGIN ISLANDS. *Proc. GuY Caribb. Fish. Inst.* Vol. 41. p. 189-204. 1992. FR 38(2)
[Dep. Planning & Nat. Resour., Div. Fish & Wildl., 101 Estate Nazareth, St. Thomas, Virgin Islands 0006] *Sphyrna barracuda* and *Ocyrops chrysurus*.
- 93-004151 Dennis, George D. ISLAND MANGROVE HABITATS AS SPAWNING AND NURSERY AREAS FOR COMMERCIALY IMPORTANT FISHES IN THE CARIBBEAN. *Proc. GuY Caribb. Fish. Inst.* Vol. 4. p. 205-225. 1992. FR 38(2)
[Dep. Mar. Sci., Univ. Puerto Rico, Mayaguez 00709-5000]
- 93-004152 Gunderson, Donald R. and David A. Armstrong. PATTERNS OF ESTUARINE USE BY JUVENILE ENGLISH SOLE (*PAROPHYS VETULUS*) AND DUNGENESS CRAB (*CANCER MAGISTER*). *Rep. P-N Res. Cons. Int. Explor. Mec.* Vol. 191, p. 46-4. 1989. Abstract only. FR 38(2)
[School Fish., Univ. Wash., Seattle]
- 93-004153 Imperial, Mark T.; Donald Robadue, Jr., and Timothy M. Hennessy. AN EVOLUTIONARY PERSPECTIVE ON THE DEVELOPMENT AND ASSESSMENT OF THE NATIONAL ESTUARINE PROGRAM. *Coast. Manage.* 20(4):311-341. 1992. FR 38(2)
[Coastal Resour. Manage. Council, Wakefield, RI 02879]
- 93-004154 Levings, C. D. and J. S. MacDonald. REHABILITATION OF ESTUARINE FISH HABITAT AT CAMPBELL RIVER, BRITISH COLUMBIA. *Am. Fish. Soc. Symp.* No. 10, p. 176-190. 1991. FR 38(2)
[Dep. Fish. & Oceans, Biol. Sci. Branch, West Vancouver Lab., 4160 Marine Dr., West Vancouver, BC, Canada. V7V 1N6] *Oncorhynchus tshawytscha* in Canada.
- 93-004155 Loeliger, Cindy and Anne Wakon, editors. STATUS AND TRENDS OF SELECTED LYNN RESOURCES IN THE GALVESTON BAY SYSTEM. *Galveston Bay Nat. Estuary Program (U.S. Environ. Prot. Agency & Tex. Water Comm.)* No. 19. 452p. 1992. FR 38(2)
[Parks & Wildl. Dep. Resour. Prot. Div., 3500 S.I.H. 35, Austin, TX 78704] *Micropterus unicolor*, *Anchoa mitchilli*, *Pogonias cromis*, *Bevoortia parsoni*, *Lagodon rhomboides*, *Scaenops ocellatus*, *Cynoscion nebulosus*, *Paralichthys lethostigma* and *Mugil cephalus* in Texas.
- 93-004156 Nelra, F. J. and I. C. Potter. THE ICHTHYOPLANKTON OF A SEASONALLY CLOSED ESTUARY IN TEMPERATE AUSTRALIA. DOES AN EXTENDED PERIOD OF OPENING INFLUENCE SPECIES COMPOSITION? *J. Fish Biol.* 41(6):935-953. 1992. FR 38(2)
[School Biol. & Environ. Sci., Murdoch Univ., Murdoch, W.A. 6150, Australia] *Engraulis australis*.
- 93-004157 Nelson, David M., editor. DISTRIBUTION AND ABUNDANCE OF FISHES AND INVERTEBRATES IN GULF OF MEXICO ESTUARIES VOLUME I. DATA SUMMARIES. NOAA (Nat. Oceanic Atmos. Admin.) *Estuar. (Estuarine Living Resour. Program) Rep.* No. 10. 273p. 1992. FR 38(2)
[Strategic Environ. Assessment Div., Off. Ocean Resour. Conserv. & Assessment, Natl. Ocean Serv., Rockville, MD 20852] Data for 44 species.
- 93-004158 Ngolle, M. A. K. and J. P. Shunula. STATUS AND EXPLOITATION OF THE MANGROVE AND ASSOCIATED FISHERY RESOURCES IN ZANZIBAR. *Hydrobiologia* 247(1-3):229-234. 1992. FR 38(2)
[Inst. Mar. Sci., P.O. Box 664, Zanzibar, Tanzania] Data for 12 species.
- 93-004159 Sasekumar, A.; V. C. Chong; M. U. Leih and R. D'Guze. MANGROVES AS A HABITAT FOR FISH AND PRAWNS. *Hydrobiologia* 247(1-3):195-207. 1992. FR 38(2)
[Dep. Zool., Univ. Malaya, 59100 Kuala Lumpur, Malaysia] *Archi sagor*, *Ambassis gymnocephalus*, *Mugil suburtilis*, *Toxotes jaculator*, *Sphyrna barracuda*, and *Latex calcarifer* in Malaysia.
- 93-004160 Sorally, Joseph E. FISH ASSEMBLAGES AND MACROPHYTES. QUANTITATIVE INVESTIGATIONS IN TIDAL FRESHWATER CHESAPEAKE BAY. Ph.D. dissertation, Univ. Md. (College Park) 275p. 1992. *Freshwat. Abstr. Int. J. Sci. Eng.* 53(7):3271. 1993. Order No. DA9234652. FR 38(2)
- 93-004161 Solarin, B. B. and R. E. K. Udoisa. AN INVESTIGATION OF BRUSH PARK FISHING IN LAGOS LAGOON, NIGERIA. *Fish. Res. (Amst.)* 15(4):331-337. 1993. FR 38(2)
[Nigerian Inst. Oceanogr. & Mar. Res., Victoria Island, Lagos, Nigeria] *Tilapia melanoteron*.

FISHERIES REVIEW

ESTUARY MANAGEMENT AND RESEARCH (Continued)

93-004162 van der Velde, G., M. W. Corlison, C. den Hartog, T. van 't Hoff and G. J. Meijer. IMPORTANCE OF THE LAC-LAGOON (BOINAIRE, NETHERLANDS ANTILLES) FOR A SELECTED NUMBER OF REEF FISH SPECIES. *Hydrobiologia* 247(1-3):139-140. 1992. FR 38(2)
[Lab. Aquat. Ecol., Catholic Univ. Nijmegen, Toernooiveld, 6525 ED Nijmegen, Netherlands]

MARINE MANAGEMENT AND RESEARCH

93-004163 Abrahams, M. V. and M. C. Healey. SOME CONSEQUENCES OF VARIATION IN VESSEL DENSITY: A MANIPULATIVE FIELD EXPERIMENT. *Fish. Res. (Amst.)* 15(4):315-322. 1993. FR 38(2)
[Dep. Zool., Univ. Manitoba, Winnipeg, MB, Canada R3T 2N2] *Oncorhynchus tshawytscha*, *O. kisutch*, and *Squalus acanthias* in Canada.

93-004164 Acero P., Arturo and Marlon Rivera. [FISHES OF THE FAMILIES CHAETODONTIDAE AND POMACANTHIDAE IN THE REGION OF SANTA MARTA (COLOMBIA): DENSITY AND RELATION TO THE QUALITY OF THE REEF.] *Caribb. J. Sci.* 28(3/4):184-190. 1992. In Spanish with English sums. FR 38(2)
[Univ. Nac. Colombia (Inst. Cienc. Nat.), Apdo. 1016 (INVEMAR), Santa Marta, Colombia] *Chaetodon capistratus*, *C. sedentarius*, *C. ocellatus*, *C. striatus*, *Prognathodes aculeatus*, *Molacanthus incolor*, and data for four other species

93-004165 Aguero, Max. SMALL-SCALE FISHERIES RESEARCH IN PACIFIC SOUTH AMERICA. *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 223-241. 1991. FR 38(2)
[ICLARM, M/C P.O. Box 1501, Makati, Philippines]

93-004166 Aiken, K. A.; P. R. Bacon and R. R. Mooyoung. RECOVERY AFTER HURRICANE GLEBERT: IMPLICATIONS FOR DISASTER PREPAREDNESS IN THE FISHING INDUSTRY IN JAMAICA. *Proc. Gulf Caribb. Fish. Inst.* Vol. 42, p. 261. 1992. Abstract only. FR 38(2)
[Dep. Zool., Univ. West. Indies, Mona, Kingston 7, Jamaica]

93-004167 Alcalá, Juan Rusque. [ANNUAL FISHERY STATISTICS 1991.] *Semrap* 216p. 1991. In Spanish. FR 38(2)

93-004168 Alegret, Juan Luis. [THE WORK PROCESS AND CAPITALIST TRANSFORMATION IN CATALAN (SPAIN) FISHERIES.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 927-932. 1991. In French with English sums. FR 38(2)
[Calle Riera 10,2,4, San Cugat del Valles, 08190 Barcelona, Spain]

93-004169 Allison, William R. THE DISCOVERY BAY FISHERIES IMPROVEMENT PROJECT. A STATUS REPORT. *Proc. Gulf Caribb. Fish. Inst.* Vol. 42, p. 331-337. 1992. FR 38(2)
[Discovery Bay Mar. Lab., Discovery Bay, Jamaica]

93-004170 Andrew, N. L. and J. G. Pepperell. THE BY-CATCH OF SHRIMP TRAWL FISHERIES. *Oceanogr. Mar. Biol. Annu. Rev.* Vol. 30, p. 527-565. 1992. FR 38(2)
[Fish. Res. Inst., Off. New South Wales Fish., P.O. Box 21, Cronulla, NSW 2230, Australia]

93-004171 Anthony, Vaughn C. THE STATE OF GROUND FISH RESOURCES OFF THE NORTHEASTERN UNITED STATES. *Fisheries (Bethesda)* 18(3):12-17. 1993. FR 38(2)
[Northeast Fish. Sci. Cent., Water St., Woods Hole, MA 02543] Data for 19 species.

93-004172 Asano, Kenji. SIMULATION STUDY OF THE STOCK-RECRUITMENT RELATIONSHIP OF JAPANESE COMMON MACKEREL (*SCOMBER JAPONICUS* F.). *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 460. 1989. Abstract only. FR 38(2)
[Fac. Obsolesc., Mie Univ., Kamihama-cho 1515, Tsu, Mie 514, Japan]

93-004173 Aul, Aina, Cyrille. [PRODUCTION AND COMMERCIALISATION OF PRODUCTS DERIVED FROM SMALL-SCALE MARINE FISHERIES IN BENIN.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 291-293. 1991. In French with English sums. FR 38(2)
[Projet Modèle, C.O. FAO, C.P. 1369, Cotonou, Benin]

93-004174 Ausler, P. J.; R. J. Malvesta; S. C. LaRosa and L. C. Wehle. VALUE OF CORAL RUBBLE HABITAT TO REEF ASSOCIATED FISHES. *Am. Zool.* 32(5):99A. 1992. Abstract only. FR 38(2)
[Univ. Conn., Groton]

93-004175 Bach, Pascal and Chislaine Lablache-Carras. [HAND-LINE FISHERIES IN THE SEYCHELLES.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 295-307. 1991. In French with English sums. FR 38(2)
[ORSTOM, B.P. 5045, 34032 Montpellier Cedex, France]

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

- 93-004176 Baker, J. T. SCIENTIFIC RESEARCH CONTRIBUTION TO THE DEVELOPMENT OF VU MANAGEMENT OF AUSTRALIA'S TROPICAL MARINE RESOURCES. *Natl. Fish. Forum Exhib. 88/2p* 191 FR 38(2)
[Australian Inst. Mar. Sc., Townsville, Qld, Australia]
- 93-004177 Bakhyzykko, Moussa and Moustapha Kebe [INTERACTIONS BETWEEN ARTISANAL AND INDUSTRIAL FISHERIES: EXPLOITING DEMERSAL RESOURCES IN SENEGAL.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, Lemoalle, and J. Weber, editors. Vol. 2, p. 933-941. 1991. In French with English summary. FR 38(2)
[CROCI-B.P. 2241, Dakar, Senegal]
- 93-004178 Barbieri, Maria Angela; Eleuterio Yanez and Martin Farías. [REMOTE SENSING AND THE CHILEAN SMALL-SCALE ALBACORE AND SWORDFISH FISHERY: AN EXAMPLE OF TECHNOLOGY TRANSFER RESEARCH AND SMALL-SCALE FISHERIES.] *Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 817-824. 1991. In French with English summary. FR 38(2)
[Yanez, Escuela Cienc. Mar., Univ. Católica Valparaíso Casilla 1020, Valparaíso, Chile] *Xiphias gladius* and *Thunnus albacora*.
- 93-004179 Barker, Susan. CONSUMERS: HOW TO NET A GOOD CATCH. *Natl. Fish. Forum Exhib. 88/2p* 1988 FR 38(2)
- 93-004180 Barnes, J. Thomas; Alec D. MacCall; Larry D. Jacobson and Patricia Wolf. RECENT POPULATION TRENDS AND ABUNDANCE ESTIMATES FOR THE PACIFIC SARDINE (*SARDINOPS SAGAX*). *Calif. Coop. Oceanic Fish. Invest. Rep.* Vol. 33, p. 60-75. 1992. In English with Spanish summary. FR 38(2)
[LMR Fish. Res., Inc., 11855 Sorrento Valley Rd., Suite A, San Diego, CA 92121]
- 93-004181 Barry-Gerard, Marlène; Moussa Bakhyzykko; Francis Lake, Aïssane Samb; Hamet Diakhon and Jean-Jacques Lovinex. [HETEROGENEITY AND VARIABILITY OF SMALL-SCALE FISHERIES NETWORKS: STUDYING FISHING ACTIVITY AND INDUCED MORTALITY.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 551-558. 1991. In French with English summary. FR 38(2)
[CROCI - B.P. 2241, Dakar, Senegal]
- 93-004182 Bataille-Benguioul, Marie-Claire [THE TRADITIONAL FISHERY OF THE TONGA ISLANDS (WESTERN POLYNESIA): MARINE TENURE AND RESOURCE MANAGEMENT.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 825-832. 1991. In French with English summary. FR 38(2)
[CETMA, Lab. Ichtyof. Gen. & Appl., 43 rue Curvier, 75231 Paris Cedex 5, France]
- 93-004183 Beardley, Grant L. TOURNAMENTS AS A RESEARCH AND DATA COLLECTION DEVICE. *Proc. Calif. Caribb. Fish. Inst.* Vol. 40, p. 197-199. 1991. FR 38(2)
[NMFS, 75 Virginia Beach Dr., Miami, FL 33149]
- 93-004184 Boets, Jm and Alan Friedlander. STOCK ANALYSIS AND MANAGEMENT STRATEGIES FOR RIBB HIND, *EPINEPHELUS CITTATUS*, IN THE U.S. VIRGIN ISLANDS. *Proc. Calif. Caribb. Fish. Inst.* Vol. 42, p. 66-79. 1992. FR 38(2)
[Dep. Planning & Nat. Resour., Div. Fish & Wildl., 101 Estate Nazareth, St. Thomas, Virgin Islands 00801]
- 93-004185 Bellan, Denise, editor. [SPECIATION AND BIOGEOGRAPHY IN THE MEDITERRANEAN SEA.] *Bull. Inst. Océanogr. (Monaco)* No. 9. 145p. 1992. In French or English. FR 38(2)
[Mus. Océanogr., Ave. Saint-Martin, Monaco-Ville, MC 98000, Monaco] Selected papers indexed in this issue of *Fisheries Review*.
- 93-004186 Berkes, Floret and Mina Kislakoglu. COMMUNITY-BASED MANAGEMENT AND SUSTAINABLE DEVELOPMENT. *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 567-574. 1991. In English with French summary. FR 38(2)
[Inst. Urban & Environ. Studies, Brock Univ., St. Catharines, ON, Canada L2S 3A1]
- 93-004187 Beyer, Jan E. THE STOCK AND RECRUITMENT PROBLEM. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 469. 1989. Abstract only. FR 38(2)
[Danish Inst. Fish. & Mar. Res., Charlottenlund Castle, DK-2920 Charlottenlund, Denmark]
- 93-004188 Biais, Gérard. [SMALL SCALE FISHERIES ON REUNION AND MAYOTTE ISLANDS.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 319-324. 1991. In French with English summary. FR 38(2)
[FREMER, Délégation Réunion, B.P. 60, 97822 Le Port, Le Réunion, France]

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

93-004189 Blanchet, Gilles [EMPIRICAL RESEARCH ON SMALL-SCALE FISHERIES, A RETROSPECTIVE ASSESSMENT] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈRE, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2 p. 957-964. 1991. In French with English summ. FR 38(2)

[NCDS/Australian Natl. Univ., GPO Box 4, Canberra, A.C.T. 2601, Australia]

93-004190 Borno, Vito J. DISTRIBUTION OF ECONOMIC IMPACTS FROM PROPOSED CONSERVATION MEASURES IN THE U.S. ATLANTIC MENHADEN FISHERY. *Fish Res. (Amst.)* 5(1):23-38. 1987. FR 38(2)

[Dep. Econ., E. Carolina Univ., Greenville, NC. 27834] *Bravoctra tyranus.*

93-004191 Solens, Stephen M.; Bruce W. Frost and Heidi R. Schwaminger. SEASONAL ABUNDANCE PATTERNS IN THE ICHTHYOPLANKTON AND ZOOPLANKTON OF A TEMPERATE FJORD, WITH COMMENTS ON THE MATCH/MISMATCH HYPOTHESIS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191 p. 456. 1989. Abstract only. FR 38(2)

[School Oceanogr., W0-10, Univ. Wash., Seattle 98195]

93-004192 Bormoux, J. and J. Bégin, editors. WASTEWATER MANAGEMENT IN COASTAL AREAS. PROCEEDINGS OF THE IAWQRC SPECIALIZED CONFERENCE HELD IN MONTPELLIER, FRANCE, 31 MARCH - 2 APRIL 1992. *Water Sci. Technol.* 25(1):303p. 1992. FR 38(2)

[Dep. Sci. Environ. & Santé Publique, Fac. Pharm., Univ. Montpellier, Ave. Charles Flahaut, 34050 Montpellier, France]

93-004193 Bouma, Willem J. EL NIÑO, THE GREENHOUSE EFFECT, AND THE ANTARCTIC OZONE HOLE. PERTURBATIONS OF THE ATMOSPHERE/OCEAN SYSTEM. *Natl. Fish. Forum Exhib.* 98:15p. 1988. FR 38(2)

[CSIRO Div. Atmos. Res., Aspendale, Vic., Australia]

93-004194 Brouns, J. J. CLIMATIC CHANGE AND THE WADDEN SEA, THE NETHERLANDS. *Wetlands Ecol. Manage.* 2(1/2):23-29. 1992. FR 38(2)

[Inst. For. & Nat. Res., P.O. Box 9201, 6800 HB Arnhem, Netherlands]

93-004195 Burchill, C. H. DEVELOPMENT AND THE FISHING INDUSTRY - LOOKING TO A NEW ERA OF DEVELOPMENT OPPORTUNITIES, ATTITUDES & TECHNOLOGY. *Natl. Fish. Forum Exhib.* 88:16p. 1988. FR 38(2)

93-004196 Butler, M. J. A. and C. Leblanc. A COASTAL AND OCEAN INFORMATION NETWORK FOR CARIBBEAN MARINE RESOURCE MANAGEMENT. *Proc. Gulf Caribb. Fish. Inst.* Vol. 42, p. 279-293. 1992. FR 38(2)

[Champlain Inst., Fredericton, NB, Canada E3B 1K1]

93-004197 Callart, Benoit and Eric Morize. [FISHING POTENTIAL OF AN ATOLL IN FRENCH POLYNESIA] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈRE, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 325-332. 1991. In French with English summ. FR 38(2)

[Morize: Cent. ORSTOM Brest, B.P. 70, 29263 Plouzane, France]

93-004198 Caminas, Juan Antonio; Jordi Leonart; Julio Mas and Pere Oliver. [METHODOLOGICAL CONSIDERATIONS ON SMALL-SCALE FISHERIES IN MEDITERRANEAN SPAIN] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈRE, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 587-592. 1991. In French with English summ. FR 38(2)

[Inst. Espanol Oceanogr., Cent. Costero Fuengirola, Apdo. 285-29640 Fuengirola, Malaga, Spain]

93-004199 Chaboud, Christian and Moustapha Kebe. [THE RELATIONSHIP BETWEEN FISHERMEN AND FISH MERCHANTS OR, ARE THE MERCHANTS EXPLOITERS? THE EXAMPLE OF SENEGAL.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈRE, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 593-602. 1991. In French with English summ. FR 38(2)

[CRODT - B.P. 2241, Dakar, Senegal]

93-004200 Chakala, Bissac. FISHERIES MANAGEMENT IN THE LESSER ANTILLES. *Proc. Gulf Caribb. Fish. Inst.* Vol. 42, p. 294-330. 1992. FR 38(2)

[FAO Reg. Fish. Off., 17 Korte St., Port-of-Spain, Trinidad & Tobago]

93-004201 Chaparro, Ruperto and Manuel Valdes-Pizzini. APPLIED SOCIAL RESEARCH AND RECREATIONAL FISHERIES AND TOURISM DEVELOPMENT IN PUERTO RICO: A MARINE EXTENSION EXPERIENCE. *Proc. Gulf Caribb. Fish. Inst.* Vol. 42, p. 223-232. 1992. FR 38(2)

[Sea Grant Program, Univ. Puerto Rico, RUMUIR, P.O. Box 5000, Mayaguez 00709]

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

93-004202 Charles-Gominique, Emmanuel [FISHERY SCIENCE AND SMALL-SCALE FISHERIES: OLD METHODS, NEW QUESTIONS? THE EXAMPLE OF ABY LAGOON, COTE-D'IVOIRE.] *Research and Small-Scale Fisheries Symposium International ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 965-972. 1991. In French with English summ. FR 38(2)
[ORSTOM, B.P. 5045, 34032 Montpellier Cedex, France]

93-004203 Chevallier, Pierre; Bertrand Gobert and Jean-Marie [HARVEST OF MARINE PRODUCTS IN THE CONTEXT OF SMALL-SCALE ARTISANAL FISHERIES] *Proc. Gulf Caribb. Int. Inst. Vol. 40.* p. 323-337. 1991. In French with English summ. FR 38(2)

[IFREMER, Pointe Fort 07231, Le Robert Martinique, France]

93-004204 Conaty, Peter. MANAGING THE MARINE ENVIRONMENT - A COMMERCIAL FISHING PERSPECTIVE. *Natl. Fish. Forum Exhibit 88:14p.* 1988. FR 38(2)

93-004205 Couchman, D and J. P. Beemer THE COMMERCIAL FISHERY FOR THE COLLECTION OF MARINE AQUARIUM FISHES IN QUEENSLAND STATUS AND MANAGEMENT PLAN. *Queensl. Dep. Fishery Ind. Inf. Ser. Q192034* 24p. 1992. FR 38(2)

[Fish. Div., Dep. Primary Ind., G.P.O. Box 46, Brisbane, Qld 4001, Australia]

93-004206 Crick, Wendy. THE GREAT BARRIER REEF MARINE PARK: ITS ESTABLISHMENT, DEVELOPMENT AND CURRENT STATUS. *Mar. Pollut. Bull.* 23(5-6):122-133. 1992. FR 38(2)

[Great Barrier Reef Mar. Park Authority, P.O. Box 1379, Townsville, Qld 4810, Australia] *Plectropages leopoldus* and *Silago* in Australia.

93-004207 Cury, Philippe and Claude Roy. [KNOWLEDGE AND KNOW-HOW: FISHERY-ENVIRONMENT STUDIES FACED WITH THE MANAGEMENT OF UNSTABLE RESOURCES.] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 631-636. 1991. In French with English summ. FR 38(2)

[CRODT - B.P. 2241, Dakar, Senegal]

93-004208 Cushing, D. H. A SHORT HISTORY OF THE DOWNS STOCK OF HERRING. *J. Cons. Res. Int. Explo. Mar.* 49(4):437-443. 1992. FR 38(2)

[198 Yarmouth Rd., Lowestoft, Suffolk NR32 4AL, England] *Clupea harengus*.

93-004209 Darnell, Reineet M. ECOLOGICAL HISTORY, CATASTROPHISM, AND HUMAN IMPACT ON THE MISSISSIPPI/ALABAMA CONTINENTAL SHELF AND ASSOCIATED WATERS: A REVIEW. *Gulf Res. Rep.* 8(4) 375-386. 1992. FR 38(2)

[Dep. Oceanogr., Tex. A&M Univ., College Station 77843]

93-004210 Darwall, W. R. T.; M. J. Costello, R. Donnelly and S. Lyagh. IMPLICATIONS OF LIFE-HISTORY STRATEGIES FOR A NEW WRASSE FISHERY. *J. Fish Biol.* 41(Suppl. 8):111-123. 1992. FR 38(2)

[Costello: Environ. Sci. Unit, Trinity Coll., Dublin 2, Ireland] *Labrus bergyllii*, *L. mixtus*, *Centrolabrus melanops*, *Centrolabrus exolepis*, and *Centrolabrus rupestris* in Europe

93-004211 Davis, Anthony and Svein Jonstfi. AMBIVALENT CO-OPERATORS. ORGANISATIONAL SLACK AND UTILITARIAN RATIONALITY IN AN EASTERN NOVA-SCOTIAN FISHERIES CO-OPERATIVE. *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 637-640. 1991. In English with French summ. FR 38(2)

[St. Francis Xavier Univ., Dep. Social & Anthropol., P.O. Box 158, Antigonish, NS, Canada]

93-004212 Delaunay, Karine. [A HISTORICAL APPROACH TO THE EXPANSION OF GHANMINY FISHERMEN (FANTE AND BWE) ALONG THE IVORY COAST.] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 649-656. 1991. In French with English summ. FR 38(2)

[Cent. Rech. Africaines, 9 rue Malher, 75004 Paris, France]

93-004213 Deme, Mostapha and Jean Jacques Levenez. [THE OPERATION OF SMALL COASTAL PELAGIC FISHERIES IN GENERAL: REACTION OF RESEARCH TO THE SARDINE CRISIS.] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 657-669. 1991. In French with English summ. FR 38(2)

[CRODT/ISRA - B.P. 2241, Dakar, Senegal]

93-004214 Denovan, Graeme. MANAGING THE MARINE ENVIRONMENT FOR A FISHING FUTURE. *Natl. Fish. Forum Exhibit 88:6p.* 1988. FR 38(2)

[Townsville Seafoods, Townsville, Qld, Australia]

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

93-004215 Department of Agriculture HMSO REPORT ON THE SEA AND INLAND FISHERIES OF NORTHERN IRELAND, 1991. *Dep Agric North Ire* 31p 1992 Available from HMSO Publ Cent, P O Box 276, London SW8 5DT, England FR 38(2)

[Data for 26 species]

93-004216 Department of Conservation and Environment VICTORIA DEPARTMENT OF CONSERVATION AND ENVIRONMENT ANNUAL REPORT 1991-1992. *Dep Conserv Environ Victoria* 170p 1991-1992. Available from P O Box 41, East Melbourne, Vic 3002, Australia FR 38(2)

93-004217 Di Giacomo, Edgardo E., Jorge Calvo, María R Perler and Uba Moriconi SPAWNING AGGREGATIONS OF *MERLUCCIOUS FLABES*, IN PATAGONIAN WATERS: EVIDENCE FOR A SINGLE STOCK? *Fish Res (Amst)* 16(1):9-16 1993 FR 38(2)

[Inst Ocol Mar & Pesq, Alta Storni, C.C. 104, 8520 San Antonio Oeste, Rio Negro, Argentina]

93-004218 Do Chi, Thang and Abdelwahed Idelhal [OVERALL APPROACH TO THE STRUCTURE OF SMALL-SCALE FISHERIES IN MOROCCO AND THE RELATIONSHIPS BETWEEN THE COMPONENTS OF THE SECTOR.] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 333-347 1991. In French with English summ. FR 38(2)

[Univ. Bretagne Occidentale, Lab Oceanogr Ocol, Fac. Sci., 6 Ave. Gergou, 29287 Brest Cedex, France]

93-004219 Doyle, Marian J. PATTERNS IN DISTRIBUTION AND ABUNDANCE OF ICHTHYOPLANKTON IN COASTAL WATERS, SOUTHWEST OF IRELAND, IN RELATION TO OCEANOGRAPHIC CONDITIONS AND PATTERNS IN ZOOPLANKTON DISTRIBUTION. *Rapp. P-V. Reun. Cons. Int. Explor. Mer* 101, p. 449 1989. Abstract only. FR 38(2)

[Dep. Oceanogr., Univ. Coll., Galway, Ireland]

93-004220 Durand, Jean-Louis, Henri Farrugio and Michel Lemoalle. [ANALYSIS AND MANAGEMENT OF COASTAL FISHERIES: THE NEED FOR A NEW APPROACH.] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 671-679 1991. In French with English summ. FR 38(2)

[FREMER, 1 rue Touleuc, 56100 Lorient, France]

93-004221 Durenberger, E. Paul. IT'S ALL POLITICS: SOUTH ALABAMA'S SEAFOOD INDUSTRY. *Univ. Ill. Press* 216p. 1992. Available at \$34.95 (cloth) from Univ. Ill. Press, 54 E. Gregory Dr., Champaign 61820. FR 38(2)

93-004222 Escotin, Jean-Marc. [OPERATING STRATEGIES FOR SMALL-SCALE PURSE-SEINE FISHERIES ON THE COTE-D'IVOIRE. 'WHERE SHALL I FISH TOMORROW?'] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 681-690 1991. In French with English summ. FR 38(2)

[ORSTOM-B.P. 5045, 34032 Montpellier Cedex, France]

93-004223 Everson, Inigo. MANAGING SOUTHERN OCEAN KRILL AND FISH STOCKS IN A CHANGING ENVIRONMENT. *Philos. Trans. R. Soc. Lond. B Biol. Sci.* 338(1285):311-317. 1992. FR 38(2)

[British Antarctic Surv., Nat. Environ. Res. Council, High Cross, Madingley Rd., Cambridge CB3 0ET, England] *Chionocephalus gunnari* in Antarctica

93-004224 Everson, Inigo, Alexei Neyelov and Yuri E. Pennits. BYCATCH OF FISH IN THE SOUTH ATLANTIC KRILL FISHERY. *Antarct. Sci.* 4(4):389-392. 1992. FR 38(2)

[British Antarctic Surv., Nat. Environ. Res. Council, High Cross, Madingley Rd., Cambridge CB3 0ET, England] *Chionocephalus gunnari* and *Chionocephalus oerterus*.

93-004225 Fabre, Nilda Noemí and Vanilck do Silva Batista. [ANALYSIS OF THE ARTISANAL FISHERY FLEET OF RAPOSA, SÃO LUIS, MA.] *Acta Amazonica* 22(2):247-259. 1992. In Portuguese with English summ. FR 38(2)

[Instituto do CNPq, INPA-Max-Planck, C.P. 478, CEP 69080, Manaus-Am, Brazil]

93-004226 Farrugio, Henri and Gilles Le Corre. [FISHERIES RESEARCH AND INTERACTING ARTISANAL FISHERIES IN THE FRENCH MEDITERRANEAN: CHARACTERISTICS AND PERSPECTIVES FOR CHANGE.] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 349-355. 1991. In French with English summ. FR 38(2)

[FREMER, 1 rue Jean Vilar, 34200 Sete, France]

93-004227 Farrugio, Henri. [ARTISAN AND FISHING IN THE MEDITERRANEAN. EVOLUTION AND STATE OF RESEARCH.] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 143-156. 1991. In French. FR 38(2)

[FREMER, 1 rue Jean Vilar, 34200 Sete, France]

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

- 93-004228 Fay, Fabian TOURISM AND THE FISHING INDUSTRY *Natl. Fish. Forum Exhibit* 88:4p. 1983. FR 38(2)
[See World Australia, Ltd., Gold Coast, Qld., Australia]
- 93-004229 Fitzmaurice, Malcolm THE NEW HELSINKI CONVENTION ON THE PROTECTION OF THE MARINE ENVIRONMENT OF THE BALTIC SEA AREA. *Mar. Pollut. Bull.* 26(2):64-67. 1993. FR 38(2)
[Univ. Amsterdam, P.O. Box 12120, 1012 GC Amsterdam, Netherlands]
- 93-004230 Frank, Kenneth T DEMOGRAPHIC CONSEQUENCES OF AGE-SPECIFIC DISPERSAL IN MARINE FISH POPULATIONS. *Can. J. Fish. Aquat. Sci.* 49(11):2222-2231. 1992. In English with French sum. FR 38(2)
[Dep. Fish. & Oceans, Mar. Fish. Div., Bedford Inst. Oceanogr., P.O. Box 1005, Dartmouth, NS, Canada B2Y 4A2] *Gadus morhua*, *Melanogrammus aeglefinus*, and *Clupea harengus*.
- 93-004231 Fredj, C.; D. Bellan-Santini and M. Meinard [KNOWLEDGE ON THE MEDITERRANEAN MARINE FAUNA.] *Bull. Inst. Oceanogr. (Monaco)* No. 9, p. 133-145. 1992. In French with English sum. FR 38(2)
[Lab. Oceanogr. Biol., Univ. Nice, Sophia Antipolis, F-06034 Nice Cedex, France]
- 93-004232 Freon, Pierre; Bertrand Gobet and Robin Malton. [FISHERIES RESEARCH AND ARTISANAL FISHERIES IN THE INSULAR CARIBBEAN.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 195-222. 1991. In French. FR 38(2)
[Gobet, ORSTOM-IFP, 81, 97256 Fort de France, France]
- 93-004233 Friedlander, Alan and Jim Beets. FISHERIES ENHANCEMENT USING ARTIFICIAL HABITATS IN THE U.S. VIRGIN ISLANDS. *Proc. Gulf Caribb. Fish. Inst.* Vol. 41, p. 226-242. 1992. FR 38(2)
[Dep. Planning & Nat. Resour., Div. Fish. & Wildl., 101 Estate Nazareth, St. Thomas, Virgin Islands 00802]
- 93-004234 Geitzdoerfer, Alette. [SOCIAL ANTHROPOLOGY AND SMALL-SCALE FISHERIES: THE EXAMPLE OF THE FISHERMEN OF ST-PIERRE (A FRENCH ISLAND OFF THE CANADIAN COAST).] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 699-707. 1991. In French with English sum. FR 38(2)
[Mus. Hist. Nat., 43 rue Cuvier, 75231 Paris Cedex 03, France]
- 93-004235 Gilmore, Alistair J. MANAGING WHAT? *Natl. Fish. Forum Exhibit* 88:15p. 1988. FR 38(2)
[Cent. Environ. & Urban Studies, MacQuarie Univ., Sydney, Qld., Australia]
- 93-004236 Gonzalez, Jose Antonio. [A GENERAL DESCRIPTION OF SMALL-SCALE FISHERIES IN THE CANARY ISLANDS.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 365-370. 1991. In French with English sum. FR 38(2)
[Cent. Tecnol. Peaq., Apdo. Correos 56, 35200 Telde, Las Palmas, Spain]
- 93-004237 Goodwin, Melvin H.; Sara M. Kau and Gregg T. Waugh, editors. PROCEEDINGS OF THE FORTY-FIRST ANNUAL GULF AND CARIBBEAN FISHERIES INSTITUTE, ST. THOMAS, U.S. VIRGIN ISLANDS, NOVEMBER 1988. *Proc. Gulf Caribb. Fish. Inst.* Vol. 41. 621p. 1992. FR 38(2)
Selected papers indexed in this issue of *Fisheries Review*.
- 93-004238 Goodwin, Melvin H.; Sara M. Kau and Gregg T. Waugh, editors. PROCEEDINGS OF THE FORTY-SECOND ANNUAL GULF AND CARIBBEAN FISHERIES INSTITUTE, OCHO RIOS, JAMAICA, NOVEMBER 1989. *Proc. Gulf Caribb. Fish. Inst.* Vol. 42. 468p. 1992. FR 38(2)
Selected papers indexed in this issue of *Fisheries Review*.
- 93-004239 Gosselin, Louis. [MANPOWER PLANNING IN QUEBEC ARTISANAL FISHERIES: NEED FOR NEW APPROACHES.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 371-376. 1991. In French with English sum. FR 38(2)
[Groupe Etude Ressour. Maritimes, Dep. Econ. Gestion, Univ. Quebec, Rimouski, PQ, Canada G3L 3A1]
- 93-004240 Goyko, Andrew P.; Stephen B. Brandt and Doran M. Mason. ABUNDANCE AND BIOMASS OF PELAGIC PLANKTIVORES IN LAKE ONTARIO, INC. *Assoc. Great Lakes Res. Conf. No.* 35, p. 154. 1992. Abstract only. FR 38(2)
[Chesapeake Biol. Lab., Univ. Md. Syst., P.O. Box 38, Solomons 20688] *Alosa pseudoharengus* and *Clupea mordax*.
- 93-004241 Griffith, Denis. MANAGING THE MARINE ENVIRONMENT: COMPENSATION AND REHABILITATION. *Natl. Fish. Forum Exhibit* 88:5p. 1988. FR 38(2)

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

- 93-004242 Haakonsen, Jon M. THE ROLE OF MIGRATING FISHERMEN IN WEST AFRICA: WHAT WE KNOW AND WHAT WE STILL NEED TO LEARN. *Research and Small-Scale Fisheries. Symposium International, ORSTOM-IFREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 709-715. 1991. In English with French summ. FR 38(2)
[FAO-B.P. 1369, Cotonou, Benin]
- 93-004243 Håkonsen, Jon M. SMALL-SCALE FISHING AND SOCIAL SCIENCE IN NORTHERN WEST EUROPE. A SURVEY OF SOCIAL SCIENCE RESEARCH ON SMALL-SCALE FISHING IN ATLANTIC EUROPE. *Research and Small-Scale Fisheries. Symposium International, ORSTOM-IFREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1. p. 185-194. 1991. FR 38(2)
[Norges Fiskehogskole, Box 3083 Guleng, 5001 Tromsø, Norway]
- 93-004244 Hale, Malcolm B.; Paul E. Bauersfeld; Sylvia B. Galloway and Jeanne D. Joseph. NEW PRODUCTS AND MARKETS FOR MENHADEN, *BREVOORTIA* SPP. *Mar. Fish. Res.* 53(4):42-48. 1991. FR 38(2)
[Charleston Lab., Southeast Fish. Sci. Cent., NMFS, NOAA, P.O. Box 12607, Charleston, NC 29422] *B. tyrannus* and *B. patronus*.
- 93-004245 Hammerschmidt, Paul C., Maury F. Osborn and Joe H. Martin. STATUS OF BLACK DRUM IN TEXAS. *Proc. Gulf Caribb. Fish. Inst. Vol. 41*, p. 382-402. 1992. FR 38(2)
[Park & Wildl. Dep., 4200 Smith School Rd., Austin, TX 78744] *Pogonias cromis*.
- 93-004246 Hanna, Robert Scott. AN EVALUATION OF THE PROCESS OF DETERMINING SALMON ALLOCATIONS FOR THE BRITISH COLUMBIA COMMERCIAL SALMON FISHING SECTOR. *MS thesis, Simon Fraser Univ. (Canada)* 146p. 1991. From *Masters Abstr. Int.* 31(1):195. 1993. Order No. MAMM50442. FR 38(2)
- 93-004247 Heath, M.; K. Richardson; P. Murie; K. Brander and E. Moksness. BIOLOGICAL INVESTIGATIONS DURING THE AUTUMN CIRCULATION EXPERIMENT (ACE) IN THE NORTH SEA, 1987-1988. *Rapp. P.V. Reun. Cons. Int. Explor. Mer. Vol. 151*, p. 451. 1989. Abstract only. FR 38(2)
[DAFS Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen, Scotland]
- 93-004248 Hilden, Mikael and Kaija Sami-Viljo. PRICE FLUCTUATIONS IN A COASTAL FISHERY IN SOUTH-WEST FINLAND. *Research and Small-Scale Fisheries. Symposium International, ORSTOM-IFREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1. p. 385-393. 1991. In English with French summ. FR 38(2)
[Finnish Game & Fish. Res. Inst., P.O. Box 202, SF-00151, Helsinki, Finland]
- 93-004249 Honjo, Tsuneo. HARMFUL RED TIDES OF *HETEROSIGMA AKASHIWO*. *Control of Disease in Aquaculture. Proceedings of the Nineteenth U.S.-Japan Meeting on Aquaculture, Ito, Mie Prefecture, Japan, 29-30 October 1990.* Ralph S. Swetick, editor. NOAA (Nat. Oceanic Atmos. Admin.) Tech. Rep. NMFS (Nat. Mar. Fish. Serv.) No. 111, p. 27-32. 1992. FR 38(2)
[Nansei Nat. Fish. Res. Inst., Fish. Agency, Ohno, Saeki, Hiroshima 739-04, Japan]
- 93-004250 Iversen, S. A.; O. Zhu; A. Johannessen and R. Tøresen. STOCK SIZE, DISTRIBUTION AND BIOLOGY OF ANCHOVY IN THE YELLOW SEA AND EAST CHINA SEA. *Fish. Res. (Amst.)* 16(2):147-163. 1993. FR 38(2)
[Inst. Mar. Res., P.O. 1070 N-5024 Bergen, Norway] *Engraulis japonica*.
- 93-004251 Iwakiri, Shigeru. COASTAL LAND TENURE AND EXPLOITATION OF MARINE RESOURCES IN THE SOUTH PACIFIC ISLANDS. *Third France-Japan Conference in Oceanography, IFREMER, Nantes, 2-5 July 1991.* Economic Policy and Fisheries Management. O. Bailey and K. Kase, coordinators. *Oceanis* 18(4):497-502. 1992. In English with French summ. FR 38(2)
[Kagoshima Univ., 44 Shimoishiki-cho, Kagoshima 890, Japan]
- 93-004252 Kase, Kazutoshi [THE SOCIO-ECONOMIC SITUATION OF THE SUCCESSION OF SMALL-SCALE FISHERY EXPLOITATIONS: THE EXAMPLE OF JAPAN.] *Research and Small-Scale Fisheries. Symposium International, ORSTOM-IFREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 717-722. 1991. In French with English summ. FR 38(2)
[IFREMER, 66 Av. Iena, 75116 Paris, France]
- 93-004253 Kébe, Mountapha. [ADVERSE EFFECTS OF STATE INTERVENTION FOR DEVELOPMENT. THE EXAMPLE OF THE SENEGALESE HAND-LINE FISHERY.] *Research and Small-Scale Fisheries. Symposium International, ORSTOM-IFREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 905-912. 1991. In French with English summ. FR 38(2)
[CRODT/ISRA-B.P. 2241, Dakar, Senegal]

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

- 93-004254 Kennelly, S. J.; K. J. Crabam, S. S. Montgomery, N. L. Andrew and P. A. Brett. VARIANT COST-BENEFIT ANALYSES TO DETERMINE OPTIMAL DURATION OF TOWS AND LEVELS OF EFFORT FOR SAMPLING RELATIVE ABUNDANCES OF SPECIES USING DEMERSAL TRAWLING. *Fish. Res.* 16(1): 51-67. 1993. FR 38(2)
[Fish. Res. Inst., New South Wales Fish., P.O. Box 21, Cronulla, N.S.W. 2230, Australia]
- 93-004255 Kistner, Joseph J. and Richard S. Appeldoorn. A CRITICAL REVIEW OF FISHERIES AND FIS MANAGEMENT POLICY IN PUERTO RICO. *Proc. Gulf Caribb. Fish. Inst.* Vol. 41, p. 340-360. 1992. FR 38(2)
[Fish. Res. Lab., COOREMAR, P.O. Box 3665, Mayaguez, PR 00709]
- 93-004256 Kurien, John. RUINING THE COMMONS: COASTAL OVERFISHING AND FISHWAD ACTIONS IN SOUTH INDIA. *Ecologist* 23(1): 5-11. 1993. FR 38(2)
[Coast. Dev. Studies, Tiruvannam, India]
- 93-004257 Lae, Raymond; Jean-Jacques Albaret and Jean-Rene Durand. [POTENTIAL MISUNDERSTANDING AND THE NECESSITY FOR MULTIDISCIPLINARY RESEARCH: THE EXAMPLE OF THE BONGG (ETHMALOSA FIMBRATA) IN THE EBRIE LAGOON.] *Research and Small-Scale Fisheries: Syny Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 723-735. 1991. In French with English summary. FR 38(2)
[ORSTOM, B.P. 2528, Bamako, Mali] *Ethmalosa fimbriata*, *Elops*, *Chrysochloris*, *Tilapia*, *Polydactylus*, *Tyloschoerus*, and *Sardinella* in the Ivory Coast.
- 93-004258 Lahin, Abdelhak; Michel Bertignac, Stephen Cunningham and Mizrak Zoubi. [A STUDY FOR THE STUDY OF AN ARTISANAL FISHERY: THE CASE OF MOROCCO.] *Research and Small-Scale Fisheries: Syny Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, J. Weber, editors. Vol. 1, p. 409-417. 1991. In French with English summary. FR 38(2)
[ISPM B.P. 21, Casablanca, Morocco]
- 93-004259 Labe, Francis; Jean-Pierre Chauveau and Alissane Samba. [FROM THE DEVELOPMENT TO THE REAL RESULTS, "THE INFORMAL EFFECT" IN THE MANAGEMENT OF SENEGALESE SMALL-SCALE FISHERIES.] *Research and Small-Scale Fisheries: Syny Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 999-1006. 1991. In French with English summary. FR 38(2)
[ORSTOM, B.P. 5045, 34032 Montpellier Cedex, France]
- 93-004260 Lampe, Harlan. SMALL-SCALE FISHERIES AND THE DEVELOPMENT OF RELEVANT PARTICULARLY ECONOMIC RESEARCH IN SOUTHEAST ASIA. *Research and Small-Scale Fisheries: Syny Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 63-97. 1991. FR 38(2)
[ICLARM, P.O. Box 1501, Makati, Metro Manila, Philippines]
- 93-004261 Lantz, Frederic and Fred Cellmeus. [SMALL-SCALE FISHERIES AND EMPLOYMENT: EXAMPLES OF MARTINIQUE AND THE TRINEMEL NET FISHERY AT BOULOGNE.] *Research and Small-Scale Fisheries: Syny Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 419-426. 1991. In French with English summary. FR 38(2)
[FREMER-Technopole 40, 155 rue Jean-Jacques Rousseau, 92138 Issy-les-Moulineaux, France]
- 93-004262 Letanc, Brian D.; Deborah L. Murphy, Robin M. Overstreet and Michael J. Macolina. LONG-TERM ADULT POPULATION FLUCTUATIONS AND DISTRIBUTION OF THE SPOT, *LEOSTOMUS XANTHURUS*. *MISSISSIPPI GULF RES. REP.* 8(4): 387-394. 1992. FR 38(2)
[La. State Univ. Agric. Cent., Coop. Ext. Serv., 8201 W. Judge Perez Dr., Chalmette 70043]
- 93-004263 Leblé, Isabelle. [FISHING, FISHING CLANS AND DEVELOPMENT IN NEW CALEDONIA.] *Research and Small-Scale Fisheries: Syny Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 747-756. 1991. In French with English summary. FR 38(2)
[26 rue Montsolier, 92200 Neuilly, France]
- 93-004264 Lech, Michael. TOURNAMENT RULES: MAKE THEM AND USE THEM. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40, p. 185-189. 1991. FR 38(2)
[Int. Game Fish Assoc., 3060 E. Las Olas Blvd., Fort Lauderdale, FL 33316]
- 93-004265 Leslie, J. K. and C. A. Trzaska. BEACH-SEMI COLLECTIONS OF FRESHWATER LARVAL FISH FROM THE SHORE OF LAKES. *Fish. Res. (Amst.)* 15(3): 243-251. 1992. FR 38(2)
[Dep. Fish. & Oceans, Great Lakes Lab. Fish. & Aquat. Sci., 867 Lakeshore Rd., Burlington, ON, Canada L4A6A6]

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

93-004266 Ungava, Tracy. NORTH SOUND AND KOTZEBUE SOUND MANAGEMENT AREA SALMON CATCH AND ESCAPEMENT REPORT, 1991. *Aisk Dep. Fish Game Tech. Fish. Rep. No. 92-13*. 54p. 1992. FR 38(2)

[Dep. Fish & Game, Div. Commer. Fish., Box 609 Kotzebue Alaska, AK 99752] *Oncorhynchus tshawytscha*, *O. keta*, *O. nerka*, *O. kisutch*, and *O. gorbuscha* in Alaska

93-004267 Loofoert, Benoit. [SMALL-SCALE FISHERIES IN AN URBAN CONTEXT: THE EXAMPLE OF CONAKRY.] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FRÉMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 913-920. 1991. In French with English summ. FR 38(2)

[ORSTOM, 0 P. 1984, Conakry, Guinea]

93-004268 Malson, Robin. DEVELOPING FISHERY DATA COLLECTION SYSTEMS FOR EASTERN CARIBBEAN ISLANDS. *Proc. Gulf Caribb. Fish. Inst. Vol. 40*, p. 309-322. 1991. FR 38(2)

[FAO Fish. Resour. Off., Orléans Res. Inst., St. James, Barbados]

93-004269 Malzic, John R. and Jeffrey Johnson. DETERMINING AND UTILIZING COMMUNICATION NETWORKS IN MARINE FISHERIES: A MANAGEMENT TOOL. *Proc. Gulf Caribb. Fish. Inst. Vol. 41*, p. 274-286. 1992. FR 38(2)

[Dep. Social & Anthropol., Inst. Coastal & Mar. Resour., E. Carolina Univ., Greenville, NC]

93-004270 Mallin, Michael A.; JoAnn M. Burkholder, Michael J. Sullivan, W. E. Schaaf and D. S. Peters. CONTRIBUTIONS OF BENTHIC MICROALGAE TO COASTAL FISHERY YIELD. *Trans. Am. Fish. Soc. 121*(5):691-695. 1992. FR 38(2)

[Dep. Biol. Sci., Univ. N. C., Wilmington 28403]

93-004271 Marichchandi-Helleman, Sherry C. and Richard H. Hubbard. A PRELIMINARY SURVEY OF CLUPEOID FISHES IN TRINIDAD, WEST INDIES, AND THEIR USE IN LIVE BAIT FISHING. *Proc. Gulf Caribb. Fish. Inst. Vol. 41*, p. 403-415. 1992. FR 38(2)

[Inst. Mar. Affairs, P.O. Box 3160, Caranage, Trinidad, West Indies] Data for 12 species.

93-004272 Marlowe, Jeffrey B. EPIBENTHIC ASSOCIATIONS OF MERLUCCIOUS PRODUCTUS LARVAE WITH FJORD WALLS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 146-152. 1989. FR 38(2)

[Vancouver Aquarium, P.O. Box 3232, Vancouver, BC, Canada V6B 3X0]

93-004273 Martín, Paloma and Pilar Sanchez. [ARTISANAL FISHERIES IN CATALUNYA (SPAIN)] *Research and Small-Scale Fisheries Symposium International, ORSTOM-FRÉMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 427-429. 1991. In French with English summ. FR 38(2)

[I.C.M., Paseo Nac. s/n, 08003 Barcelona, Spain] *Mullus surmuletus*, *Sparus aurata*, *Solea vulgaris*, *Dicentrarchus labrax*, *Pagellus erythrinus*, *Merluccius merluccius*, *Solea solea*, *Thunnus thynnus*, *Gymnammodytes obereifur*, and *Leptopus caudatus*.

93-004274 Mas, Julio, Pedro Martínez Bano and Fuensanta Vizuete Cano. RESEARCH AND DYNAMICS OF SMALL-SCALE FISHERIES IN THE REGION OF MURCIA. *Research and Small-Scale Fisheries Symposium International, ORSTOM-FRÉMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 429-432. 1991. In English with French summ. FR 38(2)

[Inst. Español. & Oceanogr., Cent. Oceanogr. Mar. Menor, Aprdo. 22, 30740-San Pedro del Phatar (Murcia), Spain]

93-004275 Mason, Bradley Cornell. AN EVALUATION OF MARINE PROTECTED AREAS AND COASTAL MANAGEMENT IN BRITISH COLUMBIA. M.S. thesis, Simon Fraser Univ. (Canada) 159p. 1990. From *Marine Affairs Int.* 31(1):257. 1993. Order No. MAMM595B0. FR 38(2)

93-004276 McAllister, Don E. GIS, GYO-TAKU AND NETS IN THE CONSERVATION OF CORALS, CLAMS AND CORAL FISHES. *AAZP (Am. Assoc. Zool. Parks Aquariums) Natl. Conf.* p. 517-520. 1992. FR 38(2)

[Ocean Voice Int. & Canadian Cent. Biodiversity, Canadian Mus. Nat., 2003 Ottensow Dr., Ottawa, ON, Canada K1V 7B2]

93-004277 McGill, Ken. TOURISM AND THE FISHING INDUSTRY (SUMMARY POINTS). *Natl. Fish. Forum Exhib. 88*:4p. 1988. FR 38(2)

93-004278 McIntosh, Gregory S. TOURNAMENTS: A MECHANISM FOR RAISING RESEARCH MONEY. *Proc. Gulf Caribb. Fish. Inst. Vol. 40*, p. 167-168. 1991. FR 38(2)

[McIntosh Mar., Inc., Fish. Enhancement Syst., 621 Idlewild Dr., Fort Lauderdale, FL 33301]

93-004279 McKenzie, P. MANAGING THE MARINE ENVIRONMENT - CONSULTATION THE KEY - A COMMERCIAL FISHERMAN'S PERSPECTIVE. *Natl. Fish. Forum Exhib. 88*:1p. 1988. Abstract only. FR 38(2)

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

- 93-004280 Ministry of Agriculture Fisheries and Food. SEA FISHERIES STATISTICAL TABLES, 1990. *Sea Fish. Stat. Tables* Minist. Agric. Fish. Food (London) 42p. 1992. FR 38(2)
[Fish. Stat. Unit, Nobel House, 17 Smith Sq., London SW1P 3JR, England]
- 93-004281 Mikulewicz, A. C. THE DISTRIBUTION OF TROPICAL/CORAL REEF FISH LARVAE IN TEMPERATE WATERS ALONG THE NEW SOUTH WALES COAST OF AUSTRALIA. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 452. 1989. Abstract only. FR 38(2)
[Environ. Sci. Sect., Sydney Water Board, P.O. Box A53, Sydney South, N.S.W. 2000, Australia]
- 93-004282 Morris, Kerwyn and Robin Mahon. SHARING AND EXCHANGE OF FISHERY DATA IN THE LESSER ANTILLES: REPORT OF THE AD HOC WORKING GROUP OF THE FAO WECAFC COMMITTEE FOR THE DEVELOPMENT AND MANAGEMENT OF FISHERIES IN THE LESSER ANTILLES. *Proc. Gulf Caribb. Fish. Inst. Vol. 40*, p. 338-342. 1991. FR 38(2)
[Minist. Trade, Ind. & Agric., Kingstown, St. Vincent & Grenadines]
- 93-004283 Mikhina, N. V. and E. A. Dvina. DYNAMICS OF COD ABUNDANCE IN EARLY ONTOGENY AND ASSESSMENT OF 3-YEAR-OLDS BY THEIR EGGS AND LARVAE. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 470-471. 1989. Abstract only. FR 38(2)
[Polar Res. Inst. Mar. Fish. & Oceanogr. (PINRO), 6 Kriprovich St., 183763 Murmansk, USSR] *Gadus morhua* in Norway.
- 93-004284 Nakashima, Brian S. PATTERNS IN COASTAL MIGRATION AND STOCK STRUCTURE OF CAPELIN (*MALLOLUS VILLOSUM*). *Can. J. Fish. Aquat. Sci.* 49(11):2423-2429. 1992. In English with French summ. FR 38(2)
[Dep. Fish. & Oceans, Sci. Branch, P.O. Box 5667, St. John's, NF, Canada A1C 5X1]
- 93-004285 National Fisheries Forum. MANAGING THE MARINE ENVIRONMENT FOR A FISHING FUTURE: CONFERENCE PROCEEDINGS, BRISBANE, AUSTRALIA, JUNE 28-30, 1988. *Nat. Fish. Forum Exhib. 88:182p.* 1988. FR 38(2)
Selected papers indexed in this issue of *Fisheries Review*.
- 93-004286 Nayak, B. U.; P. Chandramohan and B. N. Desai. PLANNING AND MANAGEMENT OF THE COASTAL ZONE IN INDIA - A PERSPECTIVE. *Coastal Manage.* 20(4):365-375. 1992. FR 38(2)
[Nat. Inst. Oceanogr., Dona Paula, Goa-403 004, India]
- 93-004287 Nikitina, Elena N. and Peter H. Pearse. CONSERVATION OF MARINE RESOURCES IN THE FORMER SOVIET UNION: AN ENVIRONMENTAL PERSPECTIVE. *Ocean Dev. Int. Law* 23(4):369-381. 1992. FR 38(2)
[Inst. World Econ. & Int. Relations, Russian Acad. Sci., Moscow, Russia]
- 93-004288 Nizovtsev, G. P. ON THE RELATIONSHIP BETWEEN RECRUITMENT AND THE MATERNAL STOCK OF GREENLAND HALIBUT IN THE BARENTS AND NORWEGIAN SEAS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 471. 1989. Abstract only. FR 38(2)
[Polar Res. Inst. Mar. Fish. & Oceanogr. (PINRO), 6 Kriprovich St., 183763 Murmansk, USSR]
- 93-004289 O'Connor, Craig R. AN OVERVIEW OF U.S. MANAGEMENT OF LARGE PELAGIC RESOURCES IN THE ATLANTIC GULF OF MEXICO AND CARIBBEAN. *Proc. Gulf Caribb. Fish. Inst. Vol. 40*, p. 37-42. 1991. FR 38(2)
[NMFS, Southeast Reg., 9450 Koger Blvd., St. Petersburg, FL 33702] *Xiphias gladius*, *Thunnus thynnus*, *Makula nigricans*, *Tetrapturus albidus*, *T. pilopterus*, and *Isoporus platypterus*
- 93-004290 Ojivar, M. P. and M. Baranga. VERTICAL DISTRIBUTION OF FISH EGGS AND LARVAE IN THE NORTHERN BENGUELA REGION. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 454. 1989. Abstract only. FR 38(2)
[Inst. Cienc. Mar., Paseo Mar. s/n 08003 Barcelona, Spain] *Trachurus trachurus*, *Engraulis capensis*, *Parablennius pilicornis*, *Symbotichthys*, *Hygophonus macrochelis*, and *Nematogobius barbatus* in the South Atlantic Ocean and Namibia.
- 93-004291 Ong, David. THE NEXT STEP IN THE PROTECTION OF OUR OCEANS? *Mar. Pollut. Bull.* 24(12):583-586. 1992. FR 38(2)
[Law School, Univ. Hull, Hull HU6 7RX, England]
- 93-004292 Ord, Bill. PUBLIC GOODWILL: THE MOST IMPORTANT RESOURCE OF THEM ALL. *Nat. Fish. Forum Exhib. 88:12p.* 1988. FR 38(2)
- 93-004293 Patterson, Kenneth. FISHERIES FOR SMALL PELAGIC SPECIES: AN EMPIRICAL APPROACH TO MANAGEMENT TARGETS. *Rev. Fish. Biol. Fish.* 2(4):321-338. 1992. FR 38(2)
[SOAFD Mar. Lab., P.O. Box 101, Victoria Rd., Tomy, Aberdeen, Scotland]

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

- 93-004294 Pepin, Pierre. BIOLOGICAL CORRELATES OF RECRUITMENT VARIABILITY IN NORTH SEA FISH STOCKS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 472. 1989. Abstract only. FR 38(2)
[Dep. Fish. & Oceans, Sci. Branch, P.O. Box 5667, St. John's, NF, Canada A1C 5X1]
- 93-004295 Phillips, David J. H.; Pat Hutchings and D. I. Walker, editors. THE MARINE ENVIRONMENT AND ITS MANAGEMENT IN AUSTRALIA. *Mar. Pollut. Bull.* 25(3-8):121-218. 1992. FR 38(2)
[Acer Environ., Howard Ct., Manor Park, Daresbury, Nr. Runcorn, Cheshire WA7 1SL, England] Selected papers indexed in this issue of Fisheries Review.
- 93-004296 Pichen, Jacques. [USE OF SHIP LOGBOOKS IN THE STUDY OF FISHING STRATEGIES OF BRETON DEEP-SEA TRAWLERS.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 443-450. 1991. In French with English summ. FR 38(2)
[Univ. Bretagne Occidentale, Dep. Geogr.-Fac. Lettres, Ave. Gorgeu, 29200 Brest, France]
- 93-004297 Pomeroy, Robert S. BUSINESS MANAGEMENT FOR SMALL SCALE FISHERMEN: A PROGRAM IN ST. KITTS, WEST INDIES. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40, p. 225-227. 1991. FR 38(2)
[Dep. Agric. Econ. & Rural Social, Clemson Univ., Clemson, SC 29634-0355]
- 93-004298 Posada L., Juan M. [THE FISHERY RESOURCES OF THE NATIONAL PARK OF THE ROQUES, VENEZUELA.] *Proc. Gulf Caribb. Fish. Inst.* Vol. 41, p. 79-92. 1992. In Spanish. FR 38(2)
[Fund. Cienc. Los Roques, Apdo. 1139, Caramitas, Caracas 1010-A, Venezuela] *Ocyropsis olivacea* and data for 25 other species.
- 93-004299 Provansal, Danielle. [PARENTAGE AND FAMILY STRATEGIES IN COASTAL MEDITERRANEAN FISHERIES.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 775-780. 1991. In French with English summ. FR 38(2)
[Dep. Antropol. Social, Univ. Barcelona, C/Baldil Reix, S.N., 08028 Barcelona, Spain]
- 93-004300 Quezada, Ricardo Delón. [SMALL SCALE FISHERIES IN YUCATAN (MEXICO): THE 'EJIDO' MANAGEMENT.] *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 451-457. 1991. In French with English summ. FR 38(2)
- 93-004301 Quinn, Norman J. and Barbara L. Kojik. A LOW COST, APPROPRIATE TECHNOLOGY METHOD FOR ESTIMATING THE PRODUCTIVITY OF A TRADITIONAL, MULTI-SPECIES FISHERY IN PAPUA NEW GUINEA AND IMPLICATIONS FOR MANAGEMENT. *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 459-464. 1991. In English with French summ. FR 38(2)
[Lizard Island Res. Stn., Privl 37, Cairns, Qld. 407, Australia]
- 93-004302 Ragonesi, Sergio and G. Rivas. THE SMALL SCALE FISHERY OF LINOSA (PELAGIC ISLANDS, MEDITERRANEAN SEA). *Research and Small-Scale Fisheries: Symposium International, ORSTOM-FRÈMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1, p. 465-466. 1991. In English with French summ. FR 38(2)
[Int. Tecnol. Pesca Piscato, Via Luigi Vaccara 61, Mazara 91026 TP, Italy]
- 93-004303 Rangel, Francisco. COZUMEL INVESTIGATION CENTER FOR BILLFISH CONSERVATION. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40, p. 169-184. 1991. FR 38(2)
- 93-004304 Reinert, Jøsep. REVISED INDICES OF THE ABUNDANCE OF COD AND HADDOCK IN THE 0-GROUP SURVEYS IN FAROESE WATERS, 1974-1980. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 472. 1989. Abstract only. FR 38(2)
[Fiskerianstasjonerna, Debesartvei, FR-100 Torshavn, Faroe Islands] *Gadus morhua*, *Melanogrammus aeglefinus*, and *Tripturus etnaei*.
- 93-004305 Reynolds, Alderman Mike. MANAGING THE MARINE ENVIRONMENT - THE LOCAL GOVERNMENT PERSPECTIVE. *Natl. Fish. Forum Exhib. 88:9p* 1988. FR 38(2)
[Townsville, Qld., Australia]
- 93-004306 Rivera Alvarez, Fernando. [MEXICAN FISHERY POLITICS BY THE ADMINISTRATION AND THE PROTECTION OF DOLPHINS AND BARRACUDAS IN THE EEZ AND IN PARTICULAR IN THE GULF OF MEXICO AND THE CARIBBEAN OCEAN.] *Proc. Gulf Caribb. Fish. Inst.* Vol. 41, p. 611-621. 1992. In Spanish. FR 38(2)

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

93-004307 Rogers, S. L. and J. Joudaas. PREY PARTITIONING AMONG JUVENILE FLATFISH WITH PARTICULAR REFERENCE TO THE SOLEIDAE. *Rapp. P-V Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 466. 1989. Abstract only. FR 38(2)

[MAFF, (Dir. Fish. Res., Fish. Lab., Bemarth Rd., Conwy, Gwynedd LL32 8JG, Wales) *Solea solea*, *Limanda limanda*, *Pleuronectes platessa*, and *Buglossidium luteum* in the Irish Sea

93-004308 Rosenberg, Andrew A. and Fanny Damous. THE STRUCTURE AND FUNCTION OF THE OECS FISHERY DATABASE. *Proc. GuY Caribb. Fish. Inst.* Vol. 40, p. 349-359. 1991. FR 38(2)

[Mar. Resour. Assessment Group, Imperial Coll., London, England]

93-004309 Sadovy, Yvonne and Miguel Figuerola. THE STATUS OF THE RED HIND FISHERY IN PUERTO RICO AND ST. THOMAS AS DETERMINED BY YELO-PER-RECRUIT ANALYSIS. *Proc. GuY Caribb. Fish. Inst.* Vol. 42, p. 23-36. 1992. FR 38(2)

[Fish. Res. Lab., CODREMAR, P.O. Box 3665, Mayaguez, Puerto Rico 00708] *Epinephelus guttatus*.

93-004310 Salazar-Ruiz, Alma and Julio A. Sanchez-Chavez. [BIOLOGICAL ASPECTS OF THE RED GROUPER (*EPINEPHALLUS MORIO*) FISHERY OF THE ARTISANAL FLEET OF COASTAL YUCATAN, MEXICO.] *Proc. GuY Caribb. Fish. Inst.* Vol. 41, p. 422-430. 1992. In Spanish. FR 38(2)

[Cent. Invest. & Estudios Avanzados LPN, Unidad Merida, Apdo. Postal No. 73, Suc. Cordemex 97310 Merida, Yucatan, Mexico]

93-004311 Schrank, William E.; Mord Roy, Rosemary Ommen and Blanco Skoda. AN INSHORE FISHERY. A COMMERCIALY VIABLE INDUSTRY OR AN EMPLOYER OF LAST RESORT. *Ocean Dev. Int. Law* 23(4):335-367. 1992. FR 38(2)

[Memorial Univ. Newfoundland, St. John's, NF, Canada A1C 5S7]

93-004312 Seaman, William, Jr. FOURTH INTERNATIONAL CONFERENCE ON ARTIFICIAL HABITATS FOR FISHERIES: A CONVENOR'S PERSPECTIVE. *Proc. GuY Caribb. Fish. Inst.* Vol. 40, p. 9-25. 1991. FR 38(2)

[Sea Grant Coll. Program, Univ. Fla., Gainesville 32611]

93-004313 Serbryakov, V. P. POPULATION FECUNDITY AND YEAR-CLASS STRENGTH OF SOME COMMERCIAL FISH SPECIES. *Rapp. P-V Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 473. 1989. Abstract only. FR 38(2)

[VNIRO, Moscow, Russia]

93-004314 Serchuk, Fredric M. and Susan E. Wigley. ASSESSMENT AND MANAGEMENT OF THE GEORGES BANK COD FISHERY: AN HISTORICAL REVIEW AND EVALUATION. *J. Northwest Atl. Fish. Sci.* Vol. 13, p. 25-52. 1992. FR 38(2)

[NOAA, Northeast Fish. Sci. Cent., NMFS, Woods Hole, MA 02543] *Gadus morhua*.

93-004315 Siches I Cuadra, Carlos. [ARTISANAL FISHING AND TOURISM IN THE WESTERN MEDITERRANEAN.] *Research and Small-Scale Fisheries. Symposium International, ORSTOM-NREMER, Montpellier, France, 3-7 July 1989.* J. R. Durand, J. Lemoine, and J. Weber, editors. Vol. 1, p. 475-482. 1991. In French with English summ. FR 38(2)

[Dep. Antropol. Social. Fiact. Geogr. & Hist., Univ. Barcelona, C/ Baldiri Reixac, S.N., 08028 Barcelona, Spain]

93-004316 Smith, Joseph W. THE ATLANTIC AND GULF MENHADEN PURSE SEINE FISHERIES: ORIGINS, HARVESTING TECHNOLOGIES, BIOSTATISTICAL MONITORING, RECENT TRENDS IN FISHERIES STATISTICS, AND FORECASTING. *Mar. Fish. Rev.* 53(4):20-41. 1991. FR 38(2)

[Beaufort Lab., Southeast Fish. Sci. Cent., NMFS, NOAA, Beaufort, NC 28516-9722] *Brevoortia tyrannus* and *B. patronus*.

93-004317 Sosinski, Jozef and Jacek Salakowski. BIOLOGICAL CHARACTERISTICS AND BIOMASS ESTIMATES OF THE FISH STOCKS ON THE SOUTH GEORGIA SHELF IN THE 1986/87-1988/89 SEASONS. *Acta Ichthyol. Piscatoria* 22(2):77-105. 1992. In English with Polish summ. FR 38(2)

[Sea Fish. Inst., ul. Kiliarska 1, 81-332 Gdynia, Poland] *Chromocephalus gairdneri*, *Chromocephalus aceratus*, *Pseudochannaichthys georgianus*, *Molothrus gibberifrons*, and data for 28 other species.

93-004318 Steh, David L.; Brian N. Tissot; Mark A. Hilton and William Bass. FISH-HABITAT ASSOCIATIONS ON A DEEP REEF AT THE EDGE OF THE OREGON CONTINENTAL SHELF. *U.S. Natl. Mar. Fish. Serv. Fish. Bull.* 90(3):540-551. 1992. FR 38(2)

[Dep. Oceanogr., Oreg. State Univ., Corvallis 97331-2914] *Sebastes wilsoni*, *S. zacentrus*, *S. helvomaculatus*, *S. binnicus*, *Microstomus pacificus*, *Cyclopterus pacificus*, and data for 23 other species.

93-004319 Stoll, Len. RECREATIONAL AND COMMERCIAL FISHING FOR BARRAMUNDI IN THE GULF OF CARPENTARIA. *Natl. Fish. Forum. Coll. Occ. Rep.* 1963. FR 38(2)

[Scott Lodge, Wa. Burketown, Qld., Australia] *Neoceratodus forsteri* in Australia.

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

- 93-004320 Stratton, Barry L., James D. Miller and Beverly A. Cross. ORIGINS OF SOCKEYE SALMON IN EAST SIDE BRISTOL BAY FISHERIES IN 1990 BASED ON LINEAR DISCRIMINANT FUNCTION ANALYSIS OF SCALE PATTERNS. *Alsk. Dep. Fish Game Tech. Fish. Rep. No. 92-16*. 70p. 1992. FR 38(2)
 [Dep. Fish & Game, Div. Commer. Fish., 333 Raspberry Rd., AK 99518] *Oncorhynchus nerka* in Alaska.
- 93-004321 Sullivan, Carl R. MANAGING THE MARINE ENVIRONMENT - THE U.S. EXPERIENCE. *Natl. Fish. Forum Exhibit*. 85Sp. 1988. FR 38(2)
- 93-004322 Teinturier, Bernard. [PROTECTION AND/OR ARRANGEMENT OF THE LITTORAL ZONE: COMPATIBILITY OR CONTRADICTION?] *Equinox* No. 40. p. 4-9. 1992. In French. FR 38(2)
- 93-004323 Thompson, A. B. and M. Hildén. RELATIONSHIP BETWEEN MARCH SEA TEMPERATURE AND YEAR/CLASS STRENGTH FOR SELECTED NORTH SEA FISH STOCKS, 1960-1984. *Rapp. P-V Reun. Cons. Int. Explor. Mer* Vol. 191, p. 473. 1989. Abstract only. FR 38(2)
 [Finnish Game & Fish. Res. Inst., Fish. Div., P.O. Box 202, SF-00151 Helsinki, Finland] *Melanogrammus aeglefinus*, and *Pleuronectes platessa*
- 93-004324 Thomson, J. M. MANAGEMENT AIDS AND STRATEGIES IN ENSURING A FISHING FUTURE. *Natl. Fish. Forum Exhibit*. 86-7p. 1989. FR 38(2)
 [Univ. Coll., N.T., Australia]
- 93-004325 Upton, Harold F. IMPLICATION OF U.S. SWORDFISH OPERATIONS IN THE EASTERN CARIBBEAN. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40, p. 43-52. 1991. FR 38(2)
 [Island Resour. Found., Mar. Affairs Dep., Univ. R. I.] *Xipias gladius*
- 93-004326 Urban, Carole. A BOTTOM TRAWL SURVEY OF CRAB AND GROUNDFISH IN THE KODIAK ISLAND, ALASKA PENINSULA, AND OUTCH HARBOR AREAS, JUNE TO SEPTEMBER, 1990. *Alsk. Dep. Fish Game Tech. Fish. Rep. No. 92-10*. 21Sp. 1992. FR 38(2)
 [Dep. Fish & Game, Div. Commer. Fish., 211 Mission Rd., Kodiak, AK 99615]
- 93-004327 Vaughan, D. S. and J. V. Merriner. ASSESSMENT AND MANAGEMENT OF ATLANTIC AND GULF MENHADEN STOCKS. *Mar. Fish. Rev.* 53(4):49-57. 1991. FR 38(2)
 [Beaufort Lab., Southeast Fish. Sci. Cent., NMFS, NOAA, Beaufort, NC 28516] *Brevoortia patronus* and *B. tyrannus*
- 93-004328 Vaughan, Douglas S. and Joseph W. Smith. BIOLOGICAL ANALYSIS OF TWO MANAGEMENT OPTIONS FOR THE ATLANTIC MENHADEN FISHERY. *Mar. Fish. Rev.* 53(4):58-66. 1991. FR 38(2)
 [Beaufort Lab., Southeast Fish. Sci. Cent., NMFS, NOAA, Beaufort, NC 28516] *Brevoortia tyrannus*
- 93-004329 Vaughan, Douglas S. STATUS OF THE RED DRUM STOCK ON THE ATLANTIC COAST: STOCK ASSESSMENT REPORT FOR 1992. NOAA (Natl. Oceanic Atmos. Admin.) *Tech. Rep. NMFS (Natl. Mar. Fish. Serv.)* No. 313. 60p. 1993. Available from NMFS, Beaufort Lab., 101 Pivers Island Rd., Beaufort, NC 28516-9722] FR 38(2)
Sciaenops ocellatus
- 93-004330 Vestergaard, Torben A. ARE ARTISANAL FISHERIES BACKWARD? ARTISANAL FISHERIES IN MODERN SOCIETY, THE EXAMPLE OF DENMARK. *Research and Small-Scale Fisheries: Symposium International, ORSTOM/WREMER, Montpellier, France, 3-7 July 1989*. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2, p. 701-700. 1991. In English with French summary. FR 38(2)
 [Dep. Ethnogr. & Social Anthropol., Aarhus Univ. Moesgaard, DK 0270 Højbjerg, Denmark]
- 93-004331 Walker, D. I. and A. J. McComb. SEAGRASS DEGRADATION IN AUSTRALIAN COASTAL WATERS. *Mar. Pollut. Bull.* 25(5-8):101-105. 1992. FR 38(2)
 [Dep. Bot., Univ. Western Australia, Nedlands, W.A. 6009, Australia]
- 93-004332 Ward, John M. SHRIMP-FINFISH INTERACTION. *Proc. Gulf Caribb. Fish. Inst.* Vol. 42, p. 263-274. 1992. FR 38(2)
 [NMFS, Southeast Reg. Off., 9450 Koger Blvd., St. Petersburg, FL]
- 93-004333 Ward, Trevor J. and Charles A. Jacoby. A STRATEGY FOR ASSESSMENT AND MANAGEMENT OF MARINE ECOSYSTEMS: BASELINE AND MONITORING STUDIES IN JERVIS BAY, A TEMPERATE AUSTRALIAN EMBAYMENT. *Mar. Pollut. Bull.* 25(5-8):163-171. 1992. FR 38(2)
 [CSIRO Div. Fish., Marmon Mar. Lab., P.O. Box 20, North Beach, W.A. 6020, Australia]
- 93-004334 Waugh, Cregg T. REPORT OF THE ICCAT SWORDFISH WORKSHOP. *Proc. Gulf Caribb. Fish. Inst.* Vol. 40, p. 29-32. 1991. FR 38(2)
 [S. Atl. Fish. Manage. Council, 1 Southpark Circle, Suite 306, Charleston, SC 29407-4699]

FISHERIES REVIEW

MARINE MANAGEMENT AND RESEARCH (Continued)

93-004335 Waugh, Gregg T. and Melvin H. Goodwin, editors. PROCEEDINGS OF THE FORTIETH ANNUAL GULF AND CARIBBEAN FISHERIES INSTITUTE, CURACAO, N.A., NOVEMBER, 1987. Proc. Gulf Caribb. Fish. Inst. Vol. 40. 490p. 1991. FR 38(2)

Selected papers indexed in this issue of Fisheries Review.

93-004336 Wesselman, Mike, Henry R. Maddux and David I. Trimun. STATUS OF SOUTHERN FLOUNDER FISHERY IN TEXAS. Proc. Gulf Caribb. Fish. Inst. Vol. 42 p. 193-221. 1992. FR 38(2)
[Parks & Wildl. Dep., 2200 Hamilton, Palacios, TX 77465] *Paralichthys lethostigma*

93-004337 Wespelaar, Vidar G. THE STATUS OF BERING SEA POLLOCK AND THE EFFECT OF THE "DONUT HOLE" FISHERY fisheries (Bethesda) 18(3) 18-24. 1993. FR 38(2)

[MNFS, Alaska Fish. Sci. Cent., Box C15700, Bldg. 4, 7600 Sandpoint Way, N.E., Seattle, WA 98136] *Theragra chalcogramma* and *T. amercioha*.

93-004338 Wolf, Patricia. RECOVERY OF THE PACIFIC SARDINE AND THE CALIFORNIA SARDINE FISHERY. Calif. Coop. Oceanic Fish. Invest. Rep. Vol. 33, p. 76-86. 1992. In English with Spanish summ. FR 38(2)
[Dep. Fish & Game, 330 Golden Shore, Suite 50, Long Beach, CA 90802] *Sardinops sagax*

93-004339 Wood, Donaric S. ABUNDANCE, AGE, SEX, AND SIZE OF COHO SALMON CATCHES AND ESCAPEMENTS IN SOUTHEAST ALASKA IN 1987. Alsk. Dep. Fish Game Tech. Fish. Rep. No. 92-11. 108p. 1992. FR 38(2)

[Dep. Fish & Game, Div. Commer. Fish., 304 Lake St., Rm. 103, Sitka, AK 99835] *Oncorhynchus kisutch*.

93-004340 Wooster, Warren S. IMMISCIBLE INVESTIGATORS: OCEANOGRAPHERS, METEOROLOGISTS, AND FISHERY SCIENTISTS. Fisheries (Bethesda) 13(4):18-21. 1988. FR 38(2)

[Inst. Mar. Studies, Univ. Wash., Seattle 98195]

93-004341 Zimenes, Marie-Claude. [MEASUREMENT OF FISHING ACTIVITY IN LAGOONS, APPLICATION TO LANGUEDOC (FRANCE)] Research and Small-Scale Fisheries: Symposium International, ORSTOM FREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 1 p. 501-513. 1991. In French with English summ. FR 38(2)

[CEMAGREF, Domaine La Valette, B.P. 5095, 34033 Montpellier Cedex, France]

93-004342 Yahaya, Jshara. SOCIAL SCIENCE RESEARCH IN SMALL-SCALE FISHERIES IN MALAYSIA: CONCEPTUAL AND METHODOLOGICAL ISSUES AND CONSTRAINTS. Research and Small-Scale Fisheries: Symposium International, ORSTOM-FREMER, Montpellier, France, 3-7 July 1989. J. R. Durand, J. Lemoalle, and J. Weber, editors. Vol. 2. p. 1023-1029. 1991. In English with French summ. FR 38(2)

[Inst. Advanced Studies, Univ. Malaya, 59100 Kuala Lumpur, Malaysia]

93-004343 Yuen, Henry J.; Wesley A. Bucher and William R. Bechtel. ABUNDANCE, AGE, SEX, AND SIZE STATISTICS FOR SOCKEYE AND CHUM SALMON IN LOWER COOK INLET, 1991. Alsk. Dep. Fish Game Tech. Fish. Rep. No. 92-12. 41p. 1992. FR 38(2)

[Dep. Fish & Game, Div. Commer. Fish., 333 Raspberry Rd., Anchorage, AK 99518] *Oncorhynchus nerka* and *O. keta* in Alaska

93-004344 Zhang, Chang Fe; Sh. Jee Yoo; Chong Kwan Kim; Soon Mo Ahn and Yang Mun Kim. A STUDY ON FLUCTUATIONS IN BIOMASS OF SMALL YELLOW CROAKER, *PSEUDOSCAENNA POLYACTIS*, OFF KOREA. Bull. Korean Fish. Soc. 25(1):37-44. 1992. In Korean. From Korean Sci. Abstr. 24(5):9205069. 1992. FR 38(2)

93-004345 Zhu Xinhua. [POPULATION DYNAMICS OF THE BASTARD HALIBUT, *PARALICHTHYS OLIVACEUS* (T. & S.) AND MANAGEMENT OF ITS RESOURCE.] *Oceanol. Limnol. Sin.* 23(3):270-279. 1992. In Chinese with English summ. FR 38(2)

[Inst. Oceanol. Acad. Sinica, Qingdao 266071, China]

UTILIZATION OF FISHERY PRODUCTS

93-004346 Ahn, Chang Bum and Eung Ho Lee. UTILIZATION OF CHITIN PREPARED FROM THE SHELL/FISH CRUST [2]: EFFECT OF CHITOSAN FILM PACKING ON QUALITY OF LIGHTLY-SALTED AND DRIED HORSE MACKEREL. *Bull. Korean Fish. Soc.* 25(1):51-57. 1992. In Korean. From Korean Sci. Abstr. 24(5):9205075. 1992. FR 38(2)

[Nat. Fish. Univ. Pusan, Pusan, Korea] *Thunnus dybowskii*.

93-004347 Bartlett, F. M. and E. G. Bligh. EFFECT OF CO₂-O₂ MODIFIED ATMOSPHERE WITH PRESSURIZATION ON THE KEEPING QUALITY OF COD FILLETS AT 2°C. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 64-73. 1988. FR 38(2)

[Canadian Inst. Fish. Technol., Tech. Univ., P.O. Box 1000, Halifax, NS, Canada B3J 2X4] *Gadus morhua*.

UTILIZATION OF FISHERY PRODUCTS (Continued)

- 93-004348 Bhgh, E. G. and K. Spencer SURIMI STUDIES ON WHITE HAKE (*LOROPHYCIS TENUIS*) Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12 p. 672 1988 Abstract only. FR 38(2)
[Canadian Inst. Fish. Technol., Tech. Univ. Nova Scotia, Halifax, NS, Canada B3J 2X4]
- 93-004349 Brooker, James R. and Robert D. Nordstrom DEVELOPMENTS IN ENGINEERED SEAFOODS. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12 p. 485-504. 1988 FR 38(2)
[NMFS, NOAA, 1825 Connecticut Ave., N.W., Washington, DC 20235]
- 93-004350 Chen, C.M.; M. R. Marshall; J. A. Koburger; W. S. Ottwell and C. I. Wei. DETERMINATION OF MINIMAL TEMPERATURES FOR HISTAMINE PRODUCTION BY FIVE BACTERIA. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12 p. 365-376 1988 FR 38(2)
[Dep. Food Sci. & Human Nutr., Univ. Fla., Gainesville, FL 32611]
- 93-004351 Choeng, Boey Chee and Marvin A. Tung THERMAL PROCESSING STUDIES OF PACIFIC HAKE. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12 p. 321-331 1988 FR 38(2)
[Tung: Canadian Inst. Fish. Technol., Tech. Univ., Nova Scotia, Halifax, NS, Canada B3J 2X4] *Merluccius productus*
- 93-004352 Cortez Sails, Juan Pedro [INITIAL STUDY OF FISH SMOKING WITH AMAZONIAN SPECIES.] *Folia Amazonica* Vol. 3, p. 97-107. 1991. In Spanish. FR 38(2)
- 93-004353 Crapo, Charles; Elsie Elliot; Jerry Babbitt; Kermit Reppond and Paul Peyton DEVELOPMENT AND EVALUATION OF SKINLESS, BONELESS PINK SALMON PRODUCTS. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 475-484. 1988. FR 38(2)
[Univ. Alaska, Kodiak] *Oncorhynchus gorbuscha*
- 93-004354 Decker, Eric A. and Herbert O. Hultin IN VITRO LIPID OXIDATION OF SARCOPLASMIC RETICULUM BY IN SITU CONCENTRATIONS OF Fe AND Cu. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 53-63. 1988. FR 38(2)
[Agric. Exp. Stn., Dep. Food Sci. & Nutr., Mar. Foods Lab., Univ. Mass., Gloucester 01930] *Pleuronectes americanus* and *Scorpaenopsis scorpaenoides*
- 93-004355 Dong, F. M.; W. T. Fairgrieve; D. I. Skonberg and B. A. Ransen. PREPARATION AND NUTRIENT ANALYSIS OF LACTIC ACID BACTERIAL INSELED SALMON VISCERA. *Aquaculture* 105(3-4):351-366. 1993. FR 38(2)
[Univ. Wash., Inst. Food Sci. & Technol., School Fish., 3707 Brooklyn Ave., N.E., Seattle 98105] *Oncorhynchus nerka* and *O. gorbuscha*
- 93-004356 Endo, Kenji; Yuji Nagashima; Munehiko Tanaka and Takeshi Taguchi. EFFECT OF GAS TREATMENT ON THE THERMAL GELATION OF FLYING FISH MUSCLE PROTEINS. *Nippon Suisan Gakkaishi* 58(12):2391-2395 1992. In English with Japanese summ. FR 38(2)
[Dep. Food Sci. & Technol., Tokyo Univ. Fish., Minato, Tokyo 108, Japan] *Cyprinus optilopterus*
- 93-004357 Erickson, M. C. LIPID EXTRACTION FROM CHANNEL CATFISH MUSCLE: COMPARISON OF SOLVENT SYSTEMS. *J. Food Sci.* 58(1):84-89. 1993. FR 38(2)
[Dep. Food Sci. & Technol., Food Safety & Quality Enhancement Lab., Univ. Ga. Agric. Exp. Stn., Griffin 30223-1797] *Ictalurus punctatus*
- 93-004358 Eun, Jong-Bang; James O. Heemsberger and Jin M. Kim. ANTIOXIDANTS, ACTIVATORS, AND INHIBITORS AFFECT THE ENZYMIC LIPID PEROXIDATION SYSTEM OF CATFISH MUSCLE MICROSOMES. *J. Food Sci.* 58(1):71-74. 1993. FR 38(2)
[Dep. Food Sci. & Technol., Mississippi State Univ., P.O. Drawer NH, Mississippi State 39762] *Ictalurus punctatus*
- 93-004359 Eun, Jong-Bang; James O. Heemsberger and John A. Boyle. ENZYMIC LIPID PEROXIDATION SYSTEM IN CHANNEL CATFISH (*ICTALURUS PUNCTATUS*) MUSCLE MICROSOMES. *J. Aquat. Food Product Technol.* 1(3/4):91-107. 1992. FR 38(2)
[Dep. Food Sci. & Technol., Miss. State Univ., Mississippi State 39762]
- 93-004360 Fiddler, W. J.; W. Pennabazou; R. A. Gates; M. Hale; M. Jahncke and J. K. Babbitt. ALASKA POLLOCK (*THERACRA CHALCOGRAMMA*) MINCE AS PARTIAL MEAT SUBSTITUTES IN FRANKFURTERS: N-NITROSODIMETHYLAMINE FORMATION. *J. Food Sci.* 58(1):62-65. 1993. FR 38(2)
[ARS, ERRC, 600 E. Memorial Ln., Philadelphia, PA 19118]
- 93-004361 French, John S. MODIFICATION OF FUNCTIONAL PROPERTIES OF SURIMI BY CHANGES IN PROTEIN COMPOSITION. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 181-189. 1988. FR 38(2)
Theragra chalcogramma

FISHERIES REVIEW

UTILIZATION OF FISHERY PRODUCTS (Continued)

- 93-004362 Garrett, E. Spencer and Martha A. Hudak-Ross. MODEL SEAFOOD SURVEILLANCE PROGRAM FOR ANNUAL CONF. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 653-657 1988. FR 38(2)
[NOAA, NMFS, Natl. Seafood Inspection Lab., P.O. Drawer 1207, Pascagoula, MS 39568-1207]
- 93-004363 Gil, T. A.; Marc Saretto and Stephen MacLean. NUCLEOSIDE PHOSPHORYLASE AND ITS ROLE IN FISH SPOILAGE. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 604-619 1988. FR 38(2)
[Canadian Inst. Fish. Technol., Tech. Univ. Nova Scotia, P.O. Box 1000, Halifax, NS, Canada B3J 2X4] Gadus morhua.
- 93-004364 Goldfarb, Susan H. and Joe M. Regenstejn. U.S. FISHERY BYPRODUCTS: A SELECTIVE UPDATE AND REVIEW. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 213-221 1988. FR 38(2)
[Cent. Appl. Reg. Studies, 67 Highland Ave., Cambridge, MA 02139]
- 93-004365 Gomez-Basauri, J. V. and J. M. Regenstejn. VACUUM PACKAGING, ASCORBIC ACID AND FROZEN STORAGE EFFECTS ON HEME AND NONHEME IRON CONTENT OF MACKEREL. *J. Food Sci.* 57(6):1337-1339 1992. FR 38(2)
[Dep. Poultry & Avian Sci., 112 Rice Hall, Cornell Univ., Ithaca, NY 14853-5601] *Scomber scombrus*.
- 93-004366 Gomez-Basauri, J. V. and J. M. Regenstejn. PROCESSING AND FROZEN STORAGE EFFECTS ON THE IRON CONTENT OF COD AND MACKEREL. *J. Food Sci.* 57(6):1332-1336 1992. FR 38(2)
[Dep. Poultry & Avian Sci., 112 Rice Hall, Cornell Univ., Ithaca, NY 14853-5601] *Scomber scombrus* and *Gadus morhua*.
- 93-004367 Gooch, Janet A. and Sylvia B. Galloway. SENSORY ANALYSIS OF EDIBLE FISH OILS. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 541-553 1988. FR 38(2)
[NMFS, NOAA, SEFC, Charleston Lab., P.O. Box 12607, Charleston, SC 29412] *Brevoortia*
- 93-004368 Green, D. P. and T. C. Lanier. EFFECT OF WASHING ON SOLUBLE PROTEIN CONTENT IN DARK AND ORDINARY MUSCLE TISSUES OBTAINED FROM ATLANTIC MENHADEN. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 672. 1988. Abstract only. FR 38(2)
[Food Sci. Dep., N.C. State Univ., Raleigh 27695-7624] *Brevoortia tyrannus*.
- 93-004369 Hale, Malcolm B. and Anthony P. Biribo. THE MENHADEN (SURIMI) DEMONSTRATION PLANT - A PROGRESS REPORT. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 270-278. 1988. FR 38(2)
[NMFS, Charleston, SC 29412] *Brevoortia*.
- 93-004370 Hastings, Rosemary J. and Morag H. Tavendale. THE EFFECT OF PARTICLE SIZE OF MINCE, AND MESH SIZE OF DEWATERING CLOTH, ON THE PROPERTIES OF GELS OF WASHED WHITING (MÉRLANGUS MÉRLANGUS) MINCE. *Int. J. Food Sci. Technol.* 27(6):643-652 1992. FR 38(2)
[Torry Res. Stn., 135 Abbey Rd., Aberdeen, Scotland]
- 93-004371 Higgins, Mylan M.; Tye C. Lanier; Jae W. Park and Joe Montechno. EFFECTS OF PHOSPHATES, NaCl, WATER CONTENT, AND PROCESS TEMPERATURES ON TEXTURE OF SURIMI GELS. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 674 1988. Abstract only. FR 38(2)
[Food Sci. Dep., N.C. State Univ., Raleigh 27695-7624] *Theragra chalcogramma*.
- 93-004372 Hirata, Fumio; Hiroki Saeki; Michio Nonaka; Ken-ichi Kawasaki; Tooru Onozumi and Kaoru Motoe. RECOVERY OF FISH OIL FROM THE MANUFACTURING PROCESS OF HIGHLY NUTRITIONAL FISH MEAT FOR FOODSTUFFS FROM SARDINE. *J. Alippon Suian Gakkaishi* 59(1):111-116. 1993. In Japanese with English sum. FR 38(2)
[Cent. Res. Inst., Taiyo Fish. Co. Ltd., Wada], Tsuruba, Ibaraki 300-42, Japan]
- 93-004373 Homziak, Juri and Benedict C. Poyadas. A PRELIMINARY SURVEY OF TILAPIA MARKETS IN NORTH AMERICA. Proc. Can. Conf. Fish. Inst. Vol. 42, p. 83-102. 1992. FR 38(2)
[Sea Grant Advisory Serv., Coop. Ext. Serv., Miss. State Univ., 2710 Beach Blvd., Suite 1-E, Biloxi 39531] *Tilapia*
- 93-004374 Hudak-Ross, Martha. FISHPAX: A COMPUTERIZED INFORMATION SYSTEM. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 677. 1988. Abstract only. FR 38(2)
[Natl. Seafood Inspection Lab., P.O. Drawer 1207, Pascagoula, MS 39568-1207]
- 93-004375 Hui, M. A.; Z. Hossain; M. Bifa Chowdhury; A. Zaman; P. Seal and M. Maruzen-Khuda. STUDIES ON ELASMOBRANCH SPECIES (SHARK) PART I. PREPARATION OF OLEURIFIED PROTEIN CONCENTRATE FROM SHARK MEAT AND STUDY OF ITS NUTRITIVE VALUE. *Bangladesh J. Sci. Ind. Res.* 27(1-2):8-15. 1992. FR 38(2)
Scoliodon zonatus.

FISHERIES REVIEW

UTILIZATION OF FISHERY PRODUCTS (Continued)

- 93-004376 Hwang, Keum T. and Joe M. Regenstein. CHARACTERISTICS OF MACKEREL MINCE LIPID HYDROLYSIS. *J. Food Sci.* 58(1):79-83. 1993. FR 38(2)
 [ARS, ERRC, 600 E. Mermaid Ln., Wyndmoor, PA. 19118.] *Scomber scombus*
- 93-004377 Inoue, Norio, Kazuma Takatosi, Toshifuro Motoshige and Haruo Shinano. EFFECT OF STORAGE TEMPERATURE ON THE FREEZE DENATURATION OF FISH MYOSIN. *B. Nippon Suisan Gakkaishi* 58(12):2357-2360. 1992. In English with Japanese summ. FR 38(2)
 [Fac. Fish., Hokkaido Univ., Minato, Hakodate, Hokkaido 041, Japan] *Cyprinus carpio*, *Oncorhynchus mykiss*, *Hemigranmus obesus*, *Pleuragrammus azonus*, *Sardinops melanosticta*, and *Scomber japonicus*
- 93-004378 Inoue, Lode. THE EUROPEAN FISH PRICE STABILIZATION SYSTEM. Third France-Japan Conference in Oceanography, FREMER, Nantes, 2-5 July 1991. Economic Policy and Fisheries Management. D. Bally and K. Kase, coordinators. *Oceans* 18(4):427-435. 1992. In English with French summ. FR 38(2)
 [FEDOPA, 24 rue Rocher, 75008, Paris]
- 93-004379 Jehnecke, Michael, Malcolm B. Hale and Janet A. Gooch. QUALITY CHANGES OCCURRING IN HYBRID STRIPED BASS SKINLESS FILLETS AND IN HEADED AND GUTTED HYBRIDS DURING ICED STORAGE. *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12*, p. 309-320. 1988. FR 38(2)
 [NMFS, P.O. Box 12607, Charleston, SC 29412] *Morone chrysops* and *M. saxatilis*
- 93-004380 Joseph, Jeanne D., Sylvia B. Galloway and Robert R. Kifer. BIOMEDICAL TEST MATERIALS FROM MENHADEN OIL. *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12*, p. 677. 1988. Abstract only. FR 38(2)
 [NMFS, Charleston Lab., P.O. Box 12607, Charleston, SC 29412] *Brevoortia*
- 93-004381 Ke, P. J. and B. G. Burns. BIOCHEMICAL FISH QUALITY EVALUATION WITH RECOMMENDED METHODS. *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12*, p. 359-364. 1988. FR 38(2)
 [Dep. Biodesm. (Food Sci. Program), Memorial Univ., St. John's, NF, Canada A1B 3X9]
- 93-004382 Kim, J. M. TEXTURE AND FREEZE-THAW STABILITY OF SURIMI GELS PREPARED WITH A COMBINATION OF ATLANTIC POLLOCK AND WHITE HAKE. *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12*, p. 505-515. 1988. FR 38(2)
 [Dep. Food Sci., Univ. Maine, Orono 04469] *Pollachius virens* and *Urophycis tenuis*
- 93-004383 Krzyznowek, Judith; Daniel L. D'Entremont; Laurie J. Panunzio and Richard S. Maney. PURIFICATION OF OMEGA-3 FATTY ACIDS FROM FISH OILS USING HPLC: AN OVERVIEW. *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12*, p. 74-77. 1988. FR 38(2)
 [NMFS, NOAA, NEFC, Gloucester Lab., 30 Emerson Ave., Gloucester, MA 01930]
- 93-004384 Leo, Chang M.; Jon-Shang Chen and Kang H. Chung. IMPORTANT CONSIDERATIONS IN OPTIMIZING THE FORMULATION OF SURIMI-BASED PRODUCTS. *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12*, p. 176-180. 1988. FR 38(2)
 [Dep. Food Sci. & Nutr., Univ. RL, Kingston 02801]
- 93-004385 Leibovitz, Henry; Richard D. Marlowe and Chong M. Leo. CHANGES IN THE FATTY ACID AND AMINO ACID PROFILES OF FISH MINCE DURING SURIMI PROCESSING. *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12*, p. 535-540. 1988. FR 38(2)
 [Dep. Food Sci. & Nutr., Univ. RL, Kingston 02801] *Urophycis chuss* and *Scomber scombus*
- 93-004386 U. Minguro; Hisaoki Endo, Taisulito Hiyashi and Etsuo Watanabe. [A TRIAL OF pH SENSOR SYSTEM FOR DETERMINATION OF FISH FRESHNESS.] *Nippon Suisan Gakkaishi* 58(11):2039-2044. 1992. In Japanese with English summ. FR 38(2)
 [Dep. Food Sci. & Technol., Tokyo Univ. Fish., Konan, Minato, Tokyo 108, Japan]
- 93-004387 Lo, K. V.; P. H. Liao and Y. Cao. EFFECT OF TEMPERATURE ON SILAGE PRODUCTION FROM SALMON FARM MORTALITIES. *Stressour. Technol.* 4(2):33-37. 1993. FR 38(2)
 [Bio-Resour. Eng. Dep., Univ. British Columbia, 2357 Main Mall, Vancouver, BC, Canada V6T 1Z4]
- 93-004388 Lo, K. V.; P. H. Liao; C. Bullock and Y. Jones. SILAGE PRODUCTION FROM SALMON FARM MORTALITIES. *Aquacult. Eng.* 12(1):37-45. 1993. FR 38(2)
 [Bio-Resour. Eng. Dep., Univ. British Columbia, 2357 Main Mall, Vancouver, BC, Canada V6T 1Z4]
- 93-004389 Ma, Lon Bin; Hisaoki Yamanaka; Shun Wada and Rikuo Takai. [INFLUENCES OF DEATH AND THAWING CONDITIONS ON THAW-RIGOR IN CARP MUSCLE.] *Nippon Suisan Gakkaishi* 59(1):145-150. 1993. In Japanese with English summ. FR 38(2)
 [Dep. Food Sci. & Technol., Tokyo Univ. Fish., Konan, Minato, Tokyo 108, Japan] *Cyprinus carpio*

FISHERIES REVIEW

UTILIZATION OF FISHERY PRODUCTS (Continued)

- 93-004390 MacNeil, J. M., J. C. Wambold and H. J. Sommer. ILLUMINATION STUDIES FOR IMPROVED INSPECTION SYSTEMS FOR DETECTION OF RHIOCANEMA. *Proc Annu Conf Trop Subtrop Fish Technol Soc Am No 12*, p. 678. 1988. Abstract only. FR 38(2)
[Dep. Food Sci. & Mechanical Eng., Pa. State Univ., University Park 16802]
- 93-004391 Maher, Donald R.; James R. Brooker and Mary J. Snyder. NOMENCLATURE AND LABELING OF FISHERY PRODUCTS: A MARKETING DILEMMA. *Proc Annu Conf Trop Subtrop Fish Technol Soc Am No 12*, p. 85-94. 1988. FR 38(2)
[Nat. Seafood Inspection Lab., Pascagoula, MS] *Lutjanus campechanus*
- 93-004392 Miller, H. H. and E. A. Cunn. A TWO-STAGE PROCEDURE FOR PLANNING MARKETING AND FISHING ACTIVITIES IN FISH-PROCESSING FIRMS. *Fish. Res. (Amst.)* 15(3):197-215. 1992. FR 38(2)
[Dep. Finance & Manage. Sci., Saint Mary's Univ., Halifax, NS, Canada B3H 3C3]
- 93-004393 Nettleton, Joyce A. HEALTH MESSAGES ABOUT SEAFOOD. *Proc Annu Conf Trop Subtrop Fish Technol Soc Am No 12*, p. 78-84. 1988. FR 38(2)
[P.O. Box 39, Arlington Heights, MA 02175]
- 93-004394 Otwell, W. Steven, compiler. TWELFTH ANNUAL CONFERENCE, TROPICAL AND SUBTROPICAL FISHERIES TECHNOLOGICAL SOCIETY OF THE AMERICAS. PROCEEDINGS FROM THE FIRST JOINT CONFERENCE WITH ATLANTIC FISHERIES TECHNOLOGICAL SOCIETY, NOV. 9-11, 1987 ORLANDO. *Proc Annu Conf Trop Subtrop Fish Technol Soc Am* 67(9). 1988. FR 38(2)
[Sea Grant Ext. Program, Food Sci. & Human Nutr. Dep., Inst. Food & Agric. Sci., Univ. Fla., Gainesville]
- 93-004395 Pacheco-Aguilar, Ramon and David L. Crawford. THE PRODUCTION OF SURIMI FROM PACIFIC WHITING (*MERLUCCJUS PRODUCTUS*). *Proc Annu Conf Trop Subtrop Fish Technol Soc Am No 12*, p. 190-193. 1988. FR 38(2)
[Oreg. State Univ., Seafood Lab., 250 36th St., Astoria 97103]
- 93-004396 Perkins, Brian E.; Michael H. Eley, Clifford C. Holloway and Melvin V. Kilgore, Jr. PRELIMINARY ASSESSMENTS OF MULLET CARCASS BYPRODUCTS GENERATED BY THE HOLLOWAY PROCESS. *Proc Annu Conf Trop Subtrop Fish Technol Soc Am No 12*, p. 405-420. 1988. FR 38(2)
[Sea Grant Ext. Serv., 3940 Government Blvd., Mobile, AL 36693] *Mugil*
- 93-004397 Ragnarsson, Karl and Joe M. Regenstein. THE EFFECTS OF VARIOUS SALTS ON THE TEXTURAL AND CHEMICAL CHANGES IN FROZEN GADQID AND NON-GADQID FISH MINCES. *Proc Annu Conf Trop Subtrop Fish Technol Soc Am No 12*, p. 671. 1988. Abstract only. FR 38(2)
[Dep. Poultry & Avian Sci., Inst. Food Sci., 112 Rice Hall, Cornell Univ., Ithaca, NY 14853-5601]
- 93-004398 Rainosek, Alvin P. PERFORMANCE CHARACTERISTICS OF FDA'S SAMPLING PLANS FOR DECOMPOSITION OF FISH AND SEAFOOD. *Proc Annu Conf Trop Subtrop Fish Technol Soc Am No 12*, p. 627-652. 1988. FR 38(2)
[NMFS, NOAA, Nat. Seafood Inspection Lab., P.O. Drawer 1207, Pascagoula, MS 39568-1207]
- 93-004399 Ralain, Myles and Malcolm Meabum. AVOIDANCE COSTS DUE TO PUBLIC AWARENESS OF CIGUATERA FISH POISONINGS IN FLORIDA AND HAWAII. *Proc Annu Conf Trop Subtrop Fish Technol Soc Am No 12*, p. 567-582. 1988. FR 38(2)
[NMFS, NOAA, SEFC, Charleston Lab., P.O. Box 12607, Charleston, SC 29412]
- 93-004400 Ratsakulthai, Nongnuch and Norman Haard. CONTRIBUTION OF CATHEPSIN C TO THE FERMENTATION OF FISH SAUCE PREPARED FROM CAPELIN (*MALLOLUS VIGORUS*) AND SQUID HEPATOPANCREAS. *Proc Annu Conf Trop Subtrop Fish Technol Soc Am No 12*, p. 658-670. 1988. FR 38(2)
[Inst. Mar. Resour., Dep. Food Sci. & Technol., Univ. Calif., Davis 95616]
- 93-004401 Reid, R. A. and T. D. Duranco. TEXTURAL CHANGES OF CANNED CHUM SALMON RELATED TO SEXUAL MATURITY. *J. Food Sci.* 57(6):1340-1342. 1992. FR 38(2)
[Inspection Branch, Fish. & Oceans, 4250 Commerce Circle, Victoria, BC, Canada V8Z 4M2] *Oncorhynchus keta*
- 93-004402 Reppond, K. D. and J. K. Babbitt. PROTEASE INHIBITORS AFFECT PHYSICAL PROPERTIES OF ARROWTOOTH FLOUNDER AND WALLEYE POLLOCK SURIMI. *J. Food Sci.* 58(1):96-98. 1993. FR 38(2)
[NMFS, Utilization Res. Lab., 900 Trident Way, Kodiak, AK 99615] *Iberoga chalcogramma* and *Aleostethus stamineus*
- 93-004403 Riley, Robert D.; Kelly M. Slezak, Jon B. Bjarnason and Jay W. Fox. ENZYMES OF COMMERCIAL AND SCIENTIFIC IMPORTANCE FROM COLD WATER FISH INTESTINES. *Proc Annu Conf Trop Subtrop Fish Technol Soc Am No 12*, p. 351-358. 1988. FR 38(2)
[Fac. Univ. Va. School Med., Microbiol. Dep., Charlottesville 22908] *Gadus morhua*

FISHERIES REVIEW

UTILIZATION OF FISHERY PRODUCTS (Continued)

93-004404 Rodman, W. K. and P. Eng. ON BOARD FISH HANDLING SYSTEMS FOR OFFSHORE WET-FISH TRAWLERS, "WORK SMARTER, NOT HARDER." Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 332-342. 1988. FR 38(2)

[Eng. Serv., Fish. Dev. Div., Dep. Fish. & Oceans, P.O. Box 550, Halifax, NS, Canada B3J 2S7]

93-004405 Rose, S. M.; F. M. Bartlett and E. G. Bligh. THE EFFECT OF LACTIC ACID STARTER CULTURES ON FISH SPOilage BACTERIA. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 596-603. 1988. FR 38(2)

[Dep. Food Sci. & Technol., Tech. Univ. Nova Scotia, Halifax, NS, Canada B3J 2X4] *Gadus morhua*.

93-004406 Sarjeev, S. and P. K. Sundran. EVALUATION OF REVERSED PASSIVE LATEX AGGLOUTINATION TEST KITS FOR THE DETECTION OF STAPHYLOCOCCAL ENTEROTOXINS A, B, C AND D IN FISHERY PRODUCTS. J. Food Sci. Technol. 29(5):311-312. 1992. FR 38(2)

[Cent. Inst. Fish. Technol., Cochin-682 025, India]

93-004407 Shindo, Jo; Jun-ichi Nishimoto and Hidemasa Miki. [RELATIONS BETWEEN INSTRUMENTAL MEASUREMENTS AND SENSORY EVALUATIONS OF FISH PASTE PRODUCTS.] Nippon Suisan Gakkaishi 59(1):129-135. 1993. In Japanese with English summ. FR 38(2)

[United Grad. School Agric. Sci., Kagoshima Univ., Shimoarata, Kagoshima 890, Japan] *Carclatidius longimanus*, *hamsu*, and *Saurida undoyakuwa*.

93-004408 Sinha, D. K.; S. P. Choudhary and K. G. Narayan. HYGIENIC QUALITY OF ROHLI FISH (LALHO ROHITA) SOLD IN RANCHI TOWN. J. Food Sci. Technol. 29(5):308-309. 1992. FR 38(2)

[Naryan Dep. Vet. Public Health & Epidemiol., Ranchi Vet. Coll., Birsa Agric. Univ., Ranchi-834 007, India]

93-004409 Slaby, Bohdan M.; Susan A. Ismail and Stefanie O. Slaby. PRELIMINARY REPORT ON APPLICABILITY OF COMMERCIAL MICRO KITS IN DETECTING FECAL COLIFORMS IN SEAFOODS. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 676. 1988. Abstract only. FR 38(2)

[Dep. Food Sci., Univ. Maine, Orono 04469]

93-004410 Terauchi, Kunitaka; Takashi Matsumoto and Nozomu Hirota. [PURIFICATION OF AMP DEAMINASE FROM MUSCLE OF SNAPPER *PACRUS LURATUS*.] Nippon Suisan Gakkaishi 58(11):2069-2073. 1992. In Japanese with English summ. FR 38(2)

[Shoju Women's Univ., Takahiro, Setagaya, Tokyo 154, Japan]

93-004411 Theed, S. T.; M. C. Erickson and R. L. Shewfelt. ASCORBATE ABSORPTION BY LIVE CHANNEL CATFISH AS A FUNCTION OF ASCORBATE CONCENTRATION, pH, AND DURATION OF EXPOSURE. J. Food Sci. 58(1):75-78. 1993. FR 38(2)

[Food Safety & Quality Enhancement Lab., Dep. Food Sci. & Technol., Univ. Ga. Exp. Stn., Griffin 30223] *Ictalurus punctatus*.

93-004412 Toledo-flores, L. J. and R. R. Zail. EXTENDING STORAGE LIFE OF FRESH TROPICAL FISH BY BLANCHING COMBINED WITH STORAGE IN ICE/SALT MIXTURES. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 674. 1988. Abstract only. FR 38(2)

[Dep. Food Sci., Cornell Univ., Ithaca, NY 14853] *Leiostichus xanthurus* and *Aplion macrocephalus*.

93-004413 Toro, Jorge; Tim Hwang and Joe M. Regenstein. INTERACTION OF FROZEN STORAGE TEMPERATURE AND FOOD ADDITIVES WITH COD FILET AND FRAME MINCE. Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 279-293. 1988. FR 38(2)

[Dep. Poultry & Avian Sci., Inst. Food Sci., Rice Hall, Cornell Univ., Ithaca, NY 14853-5601] *Gadus morhua*.

93-004414 Vel, A. Senthil; L. N. Srikar and C. Vidya Sagar Reddy. EFFECT OF FROZEN STORAGE ON PROTEASE AND LIPASE ACTIVITIES OF OIL SARDINE AND RIBBON FISH. J. Food Sci. Technol. 29(6):392-394. 1992. FR 38(2)

[Dep. Biochem., Coll. Fish., Univ. Agric. Sci., Mangalore-575 002, India] *Sardinella longiceps* and *Trichurus*.

93-004415 Vennemann, Ingo Heinrich. MICROBIAL ECOLOGY OF *MERLUCCIVUS CAPENSIS*, *MERLUCCIVUS PARADOXUS* (CAPE HAKE) PROCESSING. M.S. thesis, Univ. Pretoria (South Africa) 1992. From Masters Abstr. Int. 31(1):225. 1993. FR 38(2)

93-004416 Walton, C. G. and T. A. Gil. INTRAMUSCULAR COLLAGEN OF FRESH AND FROZEN ATLANTIC COD (*GADUS MORHUA*). Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12, p. 32-52. 1988. FR 38(2)

[Canadian Inst. Fish. Technol., Tech. Univ. Nova Scotia, P.O. Box 1000, Halifax, NS, Canada B3J 2X4]

93-004417 Wan, Jianrong and Nobuo Seki. [EFFECTS OF SALTS ON TRANSGLUTAMINASE-MEDIATED CROSS-LINKING OF MYOSIN IN SLURRY GEL FROM WALLEYE POLLACK.] Nippon Suisan Gakkaishi 58(11):2181-2187. 1992. In Japanese with English summ. FR 38(2)

[Dep. Food Sci., Fac. Fish., Hokkaido Univ., Minato, Hakodate, Hokkaido 041, Japan] *Theragra chalcogramma*.

FISHERIES REVIEW

UTILIZATION OF FISHERY PRODUCTS (Continued)

93-004418 Weston, D. H., J. K. Babbitt and J. S. French. CHARACTERIZATION OF A HEAT STABLE PROTEASE FROM ARROWTOOTH FLOUNDER, *Atheresthes stomus*. / *Aquac. Food Product Technol.* 1(3/4):167-182, 1992. FR 38(2)

[NMFS, Utilization Res. Lab., 2725 Montlake Blvd. E., Seattle, WA 98112]

93-004419 Weston, D. H., K. D. Reppond, J. K. Babbitt and J. S. French. EFFECTS OF ADDITIVES ON PROTEOLYTIC AND FUNCTIONAL PROPERTIES OF ARROWTOOTH FLOUNDER SURIMI. / *Aquac. Food Product Technol.* 1(3/4):147-165, 1992. FR 38(2)

[NMFS, Utilization Res. Lab., 2725 Montlake Blvd. E., Seattle, WA 98112] *Atheresthes stomus*

93-004420 Weber, J., Todd, Richard G., Hibbs, Jr., Ahmed Darwish, Ban Mikhu, Andrew L. Corvix, Magda Rakha, Charles L. Hatheway, Said El Shorouky, Sobhi Alad El-Rahten, Mohammed Fathi Sheba Al-Hassid, James E. Sarr, Paul A. Blake and Robert V. Tauxe. A MASSIVE OUTBREAK OF TYPE I BOTULISM ASSOCIATED WITH TRADITIONAL SALTED FISH IN CAIRO. / *Infect. Dis.* 167(2): 451-454, 1993. FR 38(2)

[Enteric Dis. Branch, Div. Bacterial & Mycotic Dis., Natl. Cent. Infect. Dis., Cent. Dis. Control, Mail Stop C49, Atlanta, GA 30333]

93-004421 White, David R. L. EFFECT OF REDFEEED CONTENT UPON THE FREQUENCY OF DEGRADATION OF SPAWNING FEMALE CAPLIN DURING STORAGE PRIOR TO FREEZING, DURING FROZEN STORAGE DURING THAWING. / *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am.* No. 12. p. 674, 1988. Abstract only. FR 38(2)

[Inspection Serv. Branch, P.O. Box 5667, St. John's, NF, Canada A1C 5X1] *Mallotus villosus*

93-004422 Wilhelm, Kurt A. and Barbara L. Jobs. SKATE (RAY SPP.) HANDLING, PROCESSING AND STORAGE CHARACTERISTICS. / *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am.* No. 12. p. 676, 1988. Abstract only. FR 38(2)

[NMFS, Gloucester Lab., 30 Emerson Ave., Gloucester, MA 01930]

93-004423 Wilts, Melissa Jane. EFFECTS OF VARIOUS ANTIMICROBIAL AGENTS ON THE QUALITY PARAMETERS OF CHANNEL CATFISH (*ICTALURIUS PUNCTATUS*) M.S. thesis, Mex. State Univ. 66p. 1992. from *Masters Abstr. Int.* 31(1):192, 1993. Order No. MA1349351. FR 38(2)

93-004424 Wong, Kwan and Tom Gil. A RAPID COLOR TEST STRIP FOR ESTIMATING FISH FRESHNESS. / *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am.* No. 12. p. 620-626, 1988. FR 38(2)

[Canadian Inst. Fish. Technol., Tech. Univ. Nova Scotia, P.O. Box 1000, Halifax, NS, Canada B3J 2X4] *Carassius auratus* and *Urophycis tenuis*

93-004425 Yatsunami, Kazuhisa and Takashi Echigo. CHANGES IN THE NUMBER OF HALOTOLERANT HISTAMINE-FORMING BACTERIA AND CDNTENTS OF NON-VOLATILE AMINES IN SARDINE MEAT WITH ADDITION OF NaCl. / *Nippon Suisan Gakkaishi* 59(1):123-127, 1993. In English with Japanese sum. FR 38(2)

[Fac. Agric., Tamagawa Univ., Tamagawa-Campus, Machida, Tokyo 194, Japan] *Sardinops melanosticta*

93-004426 Yoshiwa, Tetsuro, Kyozo Morimoto, Koji Sakamoto and Yukihiko Ishikawa. [ANALYSIS OF VOLATILE COMPONENTS IN SARDINE BY PURGE-AND-TRAP METHOD] / *Nippon Suisan Gakkaishi* 59(11):2105-2110, 1992. In Japanese with English sum. FR 38(2)

[Hiroshima Prefectural Food Technol. Res. Cent., Higiyama, Minami, Hiroshima 732, Japan] *Sardinops melanosticta*

MISC. TECHNIQUES AND EQUIPMENT

93-004427 Alronholz, Dean W., Dorinda L. Dudley and Edon J. Levi. OVERVIEW OF MARK/RECOVERY STUDIES ON ADULT AND JUVENILE ATLANTIC MENHADEN, BRIDGPORTIA TYRANNUS, AND GULF MENHADEN, *B. PATRONUS*. / *Mar. Fish. Rev.* 53(4):20-27, 1991. FR 38(2)

[Beaufort Lab., Southeast Fish. Sci. Cent., NMFS, NOAA, Beaufort, NC 28516]

93-004428 Armstrong, J. D., P. M. Bagley and J. G. Priede. TRACKING DEEP-SEA FISH USING INGESTIBLE TRANSMITTERS AND AN AUTONOMOUS SEA-FLOOR INSTRUMENT PACKAGE. / In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 376-386, 1992. FR 38(2)

[SOAFD, Freshwater Fish Lab., Faskally, Pitlochry, Perthshire PH16 5LB, Scotland] *Nematostomus axatus*

93-004429 Bagley, P. M. A CODE-ACTIVATED TRANSPONDER FOR THE INDIVIDUAL IDENTIFICATION AND TRACKING OF DEEP-SEA FISH. / In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 111-119, 1992. FR 38(2)

[Dep. Zool., Univ. Aberdeen, Tillydrone Ave., Aberdeen AB9 2TN, Scotland] *Coryphaenoides* and *Pleuronectes platessa*

FISHERIES REVIEW

MISC. TECHNIQUES AND EQUIPMENT (Continued)

- 93-004430 Bosak, Alexander SOME NEW DESIGN CONCEPTS FOR SIMPLE LIGHTWEIGHT RADIO-TRACKING EQUIPMENT. In *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Inants George Priede and Susan M. Swift, editors, p. 92-97 1992. FR 38(2)
[P.O. Box 12, Kiev 252123, Ukraine]
- 93-004431 Conry, Jaroslav. THE METHODOLOGICAL PROBLEMS OF ESTIMATING THE JUVENILE FISHES ABUNDANCE IN THE DANUBE MODEL ARM. *Biological Monitoring of Large Rivers Documents presented at the International Seminar held in Brno and Gabčíkovo, Czechoslovakia*, 3-5 July, 1990. Milan Penaz, editor p. 62-85 1991. FR 30(2)
[Inst. Zool. & Ecological, Dřetova 3, 602 24 Brno, Czechoslovakia]
- 93-004432 Clarke, D. and A. S. Gee APPLICATIONS OF TELEMETRIC TRACKING IN SALMONID FISHERIES MANAGEMENT. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Inants George Priede and Susan M. Swift, editors, p. 444-455 1992. FR 38(2)
[Natl. Rivers Authority (Welsh Reg.), Rivers House, St. Mellons Business Park, St. Mellons, Cardiff CF3 6LT, Wales]
- 93-004433 Dunkley, D. A. THE AUTOMATIC DETECTION AND COUNTING OF SALMON IN FRESH WATER USING THE RESISTIVITY COUNTER METHOD. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Inants George Priede and Susan M. Swift, editors, p. 31-34 1992. FR 38(2)
[Freshwater Fish. Lab., Field St., 16 River St., Montrose, Angus DD10 8D1, Scotland] Salmo salar
- 93-004434 Franzin, William G. and A. C. Day DEVELOPMENT OF A REMOTELY-OPERATED SURROUNDING GEAR FOR QUADRAT SAMPLING OF NEARSHORE FISH COMMUNITIES. In: *Assoc. Great Lakes Res. Conf. No. 35*, p. 130. 1992. Abstract only. FR 38(2)
[Fresh Water Inst., Cent. & Arctic Reg., Dep. Fish. & Oceans, 501 University Crescent, Winnipeg, MB, Canada R3T 2N6]
- 93-004435 From, Pierre A. METHODOLOGY FOR VISUAL ESTIMATION OF ABUNDANCE APPLIED TO FLYINGFISH STOCKS. *Proc. Calif. Caribb. Fish. Inst. Vol. 41*, p. 11-35. 1992. FR 38(2)
[Pole Caraïbe, ORSTOM BP 81, 97256 Fort Franco, Martinique]
- 93-004436 Froese, R. THE USE OF VIDEO-BASED MEASUREMENTS IN CONNECTION WITH DISCRIMINANT FUNCTIONS FOR IDENTIFICATION OF FISH LARVAE. *Rep. P.-V. Reun. Cons. Int. Explor. Mer. Vol. 191*, p. 478. 1990. Abstract only. FR 38(2)
[Inst. Meereskunde, Dusterbrookweg 20, D-2300 Kiel 1, Germany]
- 93-004437 Giannarco, D. and K. N. Irvine. THE BUFFALO RIVER DATABASE MANAGEMENT SYSTEM: USE OF A QUASI-GIS STRUCTURE FOR ENVIRONMENTAL RESEARCH. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 103 1992. Abstract only. FR 38(2)
[Buffalo River Environ. Res. Assoc., Dep. Geogr. & Planning, SUNY Coll., 1300 Elmwood Ave., Buffalo, NY 14222]
- 93-004438 Heróld, Scott and Laurence L. Connor. VARIABILITY OF ELECTROFISHING CREW EFFICIENCY, AND SAMPLING REQUIREMENTS FOR ESTIMATING RELIABLE CATCH RATES. *N. Am. J. Fish. Manage.* 12(3):612-617. 1992. FR 38(2)
[Game & Fresh Water Fish Comm., 620 S. Meville St., Tallahassee, FL 32399] *Micropterus salmoides*, *Lepomis macrochirus*, and *L. microlophus* in Florida.
- 93-004439 Haynes, Kelle. SPECIES IDENTIFICATION BY ISOELECTRIC FOCUSING. *Proc. Annu. Conf. Trop. Subtrop. Fish. Technol. Soc. Am. No. 12*, p. 564-566 1990. FR 38(2)
[NOAA, NMFS, Natl. Seafood Inspection Lab., P.O. Drawer 1207, Pascagoula, MS 39568-1207]
- 93-004440 Higgins, Paul Stanish. COUNTING ERRORS IN AERIAL SURVEYS OF SPAWNING SALMON: SOME EFFECTS ON LONG-TERM MANAGEMENT PERFORMANCE AND ECONOMIC BENEFIT FROM WOOD RIVER SOCKEYE SALMON (*ONCORHYNCHUS NEBKA*). *M.S. thesis, Simon Fraser Univ. (Canada)* 90p. 1990. From Masters Abstr. Int. 31(1):156. 1993. Order No. MAMM69427. FR 38(2)
- 93-004441 Hillman, T. W.; J. W. Mullan and J. S. Griffith. ACCURACY OF UNDERWATER COUNTS OF JUVENILE CHINOOK SALMON, COHO SALMON, AND STEELHEAD. *N. Am. J. Fish. Manage.* 12(3):590-603. 1992. FR 38(2)
[Don Chapman Consult., Inc., 3653 Rickenbacker, Suite 203, Boise, ID 83705] *Oncorhynchus tshawytscha*, *O. kisutch*, and *O. mykiss* in North America.
- 93-004442 Juell, Jon-Erik and Håkan Westerberg. AN ULTRASONIC TELEMETRIC SYSTEM FOR AUTOMATIC POSITIONING OF INDIVIDUAL FISH LISTED TO TRACK ATLANTIC SALMON (*SALEMA SALAR L.*) IN A SEA CAGE. *Aquacult. Eng.* 12(1):1-18. 1993. FR 38(2)
[Inst. Mar. Res., P.O. Box 1870, N5024 Berger, Norway]

FISHERIES REVIEW

MISC. TECHNIQUES AND EQUIPMENT (Continued)

- 93-00443 Kenward, Robert E. QUANTITY VERSUS QUALITY: PROGRAMMED COLLECTION AND ANALYSIS OF RADIO-TRACKING DATA. In *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. George Priede and Susan M. Swift, editors. p. 231-246. 1992. FR 38(2)
[Inst. Terrestrial Ecol., Furzebrook Rd., Wareham, Dorset BH20 5AS, England]
- 93-00444 Kerry, Alison Clinton J., Edmunds, Lynne London and Tony L. Yonkos. U.S.-CANADA GREAT LAKE REGIONAL SPECIMEN BANK FEASIBILITY STUDY. *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 140. 1992. Abstract only. FR 38(2)
[LJMA Eng. Ltd., 5080 Commerce Blvd., Mississauga, ON, Canada L4W 4P2]
- 93-00445 Kwak, T. J. MODULAR MICROCOMPUTER SOFTWARE TO ESTIMATE FISH POPULATION PARAMETERS, PRODUCTION RATES AND ASSOCIATED VARIANCE. *Ecol. Freshwater Fish* 1(1):73-75, 1992. In English with Spanish summ. FR 38(2)
[Dep. Fish. & Wildl., Univ. Minn., St. Paul 55108]
- 93-00446 Lucas, M. C. AN ELECTRODE DESIGN FOR USE WITH INTRAGASTRIC HEART RATE TRANSMITTERS IN ATLANTIC SALMON (*SALMO SALAR* L.) AND OTHER FISH. In *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 128-130. 1992. FR 38(2)
[SOAFD, Mar. Lab., P.O. Box 101, Victoria Rd., Torry, Aberdeen AB9 8DB, Scotland]
- 93-00447 Lucas, M. C.; G. G. Urquhart, A. D. F. Johnstone and T. J. Carter. A PORTABLE 24-HOUR RECORDING SYSTEM FOR FIELD TELEMETRY: FIRST RESULTS FROM CONTINUOUS MONITORING HEART RATE OF ADULT ATLANTIC SALMON (*SALMO SALAR* L.) DURING THE SPAWNING MIGRATION. *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 466-473. 1992. FR 38(2)
[SOAFD, Mar. Lab., P.O. Box 101, Victoria Rd., Torry, Aberdeen AB9 8DB, Scotland]
- 93-00448 McKinn, R. S. and G. Power. MEASUREMENT OF ACTIVITY AND OXYGEN CONSUMPTION FOR ADULT LAKE STURGEON (*ACIPENSER FULVESCENS*) IN THE WILD USING RADIO-TRANSMITTED EA SIGNALS. In *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 307-318. 1992. FR 38(2)
[Ontario Hydro Res., 800 Kipling Ave., Toronto, ON, Canada M8Z 5S4]
- 93-00449 Mee, D. and D. Clarke. TAG FAILURE CONTROLS: THEIR IMPORTANCE IN INTERPRETATION OF TRACKING STATISTICS. In *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 441-443. 1992. FR 38(2)
[Nat. Rivers Authority (Welsh Reg.), Rivers House, St. Mellons Business Park, St. Mellons, Cardiff CF3 0E Wales]
- 93-00450 Metcalfe, J. D.; M. Fulcher and T. J. Stornton-West. PROGRESS AND DEVELOPMENTS IN TELEMETRY FOR MONITORING THE MIGRATORY BEHAVIOUR OF PLACE IN THE NORTH SEA. In *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 359-366. 1992. FR 38(2)
[MAFF, Cit. Fish Res., Fish. Lab., Pikefield, Lowestoft, Suffolk NR33 0HT, England] *Plowonectes platessa*.
- 93-00451 Morris, J. A. AN EASILY CONSTRUCTED HAND-HELD DIRECTION-FINDING ANTENNA. In *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 90-91. 1992. FR 38(2)
[Inst. Terrestrial Ecol., Hill of Brathens, Banchory AB31 4BY, Scotland]
- 93-00452 Nedreas, Kjell and Gunnar Naevdal. IDENTIFICATION OF 0- AND 1-GROUP REDFISH BY ELECTROPHORESIS. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 465-466. 1989. Abstract only. FR 38(2)
[Inst. Mar. Res., P.O. Box 1976, Nordnes, N-5011 Bergen, Norway] *Sebastes*.
- 93-00453 Nicholas, K. S.; M. A. Fedak and P. S. Hammond. AN AUTOMATIC RECORDING STATION FOR DETECTING AND STORING RADIO SIGNALS FROM FREE-RANGING ANIMALS. In *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Invertebrate George Priede and Susan M. Swift, editors. p. 76-78. 1992. FR 38(2)
[Sea Mammal Res. Unit, Nat. Environ. Res. Council, Madingley Rd., Cambridge CB3 0ET, England]
- 93-00454 Northcote, T. C.; C. H. Hendy; C. S. Nelson and J. A. T. Bousban. TESTS FOR MIGRATORY HISTORY OF THE NEW ZEALAND COMMON SMELT (*RETROPinna RETROPinna* [RICHARDSON]) USING OTOLITH ISOTOPIC COMPOSITION. *Ecol. Freshwater Fish* 1(1):61-72. 1992. In English with Spanish summ. FR 38(2)
[Fish. Cent., 2204 Main Mall, Univ. British Columbia, Vancouver, BC, Canada V6T 1Z4]
- 93-00455 Olesiad, Victor. SPECIFIC APPLICATION OF MESO- AND MACROCOSMS FOR SOLVING PROBLEMS IN FISHERIES RESEARCH. *Rapp. P.-V. Reun. Cons. Int. Explor. Mer.* Vol. 191, p. 401-402. 1989. Abstract only. FR 38(2)
[LMC-Lagoon Manage. & Construction, A. S. Arken, N-5095 Uiset, Norway]

FISHERIES REVIEW

MISC. TECHNIQUES AND EQUIPMENT (Continued)

93-004456 Olvera-Umas, Rosa Ma.; Martha A. Padilla-Correa and Guillermo Oetuna-Manzanarez. [METHODS MANUAL FOR THE ICHTHYOPLANKTON SURVEYS OF THE NATIONAL INSTITUTE OF FISH.] *Sec. Pesca Manual Metodos* 66p. 1992. In Spanish. FR 38(2)

[Lab. Plancton, Dir. Analisis Pesq., Mexico City, D.F., Mexico]

93-004457 Paragamian, Vaughn L., Edward C. Bowles and Brian Hoelscher. USE OF DAILY GROWTH INCREMENTS ON OTOLITHS TO ASSESS STOCKINGS OF HATCHERY-REARED KOKANEES, *Trans. Am. Fish. Soc.* 121(6):785-791. 1992. FR 38(2)

[Dep. Fish & Game, Reg. 1, Headquarters, 2320 Government Way, Coeur d'Alene, ID 83814] *Oncorhynchus nerka* in Idaho

93-004458 Priede, Imants George and Susan M. Swift, editors. WILDLIFE TELEMETRY, REMOTE MONITORING AND TRACKING OF ANIMALS. Ellis Horwood Ltd 700p. 1992. Available from Prentice Hall Inc., College Park, Englewood Cliffs, NJ 07632. FR 38(2)

Selected chapters indexed in this issue of Fisheries Review

93-004459 Randall, R. G. and B. Valere. EFFECT OF MACROPHYTES, LIGHT AND SPECIES COMPOSITION ON THE EFFICIENCY OF ELECTROFISHING GEAR DURING FISH SURVEYS IN LITTORAL HABITATS OF HAMILTON HARBOUR, *Int. Assoc. Great Lakes Res. Conf. No. 35*, p. 130. 1992. Abstract only. FR 38(2)

[Dep. Fish & Oceans, Great Lakes Lab. Fish. & Aquat. Sci., P.O. Box 5050, Burlington, ON, Canada L7R 4A6]

93-004460 Rooker, Jay and Conrad Rockstock. THE EFFECTS OF TRAINING WITH FISH MODELS IN ESTIMATING LENGTHS OF FISH UNDERWATER. *Proc. Gulf Caribb. Fish. Inst. Vol. 41*, p. 321-331. 1992. FR 38(2)

[Dep. Mar. Sci., Univ. Puerto Rico, Mayaguez 00681-5000]

93-004461 Schramm, Harold L., Jr., Stephen P. Malvesuto and Wayne A. Hubert. EVALUATION OF PROCEDURES FOR BACK-CALCULATION OF LENGTHS OF LARGEMOUTH BASS AGED BY OTOLITHS. *N. Am. J. Fish. Manage.* 12(3):604-608. 1992. FR 38(2)

[U.S. Fish & Wildl. Serv., 1849 C St., N.W., Arlington Sq., Rm. B20, Washington, DC 20240] *Micropterus salmoides floridanus* in Florida

93-004462 Svecboda, Armin. CLOSE-UP PHOTOGRAPHY OF MARINE LIFE ON BOARD RESEARCH VESSELS. *Sci. Mar.* 56(2-3):239-244. 1992. FR 38(2)

[Ruhr-Univ. Bochum, Lehrstuhl Spezielle Zool. & Parasitol., P.O. Box 10 21 48, D-4630 Bochum 1, Germany]

93-004463 Tallado, Michel. ANIMAL TRACKING BY SATELLITE. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Imants George Priede and Susan M. Swift, editors. p. 149-160. 1992. FR 38(2)

[CLS Serv. Argos, 18 Ave. Edouard-Belin, 31055 Toulouse Cedex, France]

93-004464 Thome, Richard E. SOME IMPACTS OF REMOTE SYSTEM TECHNOLOGY ON FUTURE FISHERIES MANAGEMENT. *Fisheries (Bethesda)* 13(4):14-17. 1988. FR 38(2)

[Univ. Wash., School Fish., WB-10, Seattle 98195]

93-004465 Treadway, Mary Anne. SETTING UP AN EFFICIENT DATA MANAGEMENT SYSTEM. *Proc. Gulf Caribb. Fish. Inst. Vol. 40*, p. 343-348. 1991. FR 38(2)

[NOAA, Southeast Fish. Cent., 75 Virginia Beach Dr., Miami, FL 33149]

93-004466 Treasurer, J. W. LENGTH AND WEIGHT CHANGES IN 0+ PERCH, *PERCA FLUMMATUS* L., FOLLOWING FIXATION IN FORMALIN. *J. Fish Biol.* 41(6):1033-1036. 1992. FR 38(2)

[Fish Health, Lochalort, Inverness-shire PH10 4YA, Scotland]

93-004467 Tu Puhang and Xu Chenglan. [AN EXPERIMENTAL REPORT ON THE ECO-ENGINEERING DEVELOPMENT OF LARGE AND MIDDLE-SCALE FISHERY.] *Res. Agric. Modernization* 13(6):346-349. 1992. In Chinese. FR 38(2)

93-004468 Urquhart, G. G. and G. W. Smith. RECENT DEVELOPMENTS OF A FIXED HYDROPHONE ARRAY SYSTEM FOR MONITORING MOVEMENTS OF AQUATIC ANIMALS. In: *Wildlife Telemetry: Remote Monitoring and Tracking of Animals*. Imants George Priede and Susan M. Swift, editors. p. 342-353. 1992. FR 38(2)

[SOAFD Mar. Lab., P.O. Box 101, Victoria Rd., Aberdeen AB9 8DD, Scotland] *Pollachius virens* in Scotland

93-004469 Walser, R. and H. Löffler. [AN "AIRLIFT"-NET TO CATCH JUVENILE FISH IN DENSE SUBMERSE VEGETATION.] *Ostereichs Fischerz.* 46(1):17-22. 1993. In German with English summ. FR 38(2)

[Inst. Seenforschung, D-7994 Langenargen, Untere Seestr. 01, Germany]

FISHERIES REVIEW

MISCELLANEOUS

93-004470 Campbell, R. R. RARE AND ENDANGERED FISHES AND MARINE MAMMALS OF CANADA-COSEWIC FISH AND MARINE MAMMAL SUBCOMMITTEE STATUS REPORTS VIII. *Can. Field-Nat.* 106(1):1-6. 1992. In English with French sum. FR 38(2)

[Convention Int. Trade Endangered Species, Canadian Wildl. Serv., Ottawa, ON, Canada K1A 0H3]

93-004471 Krzykowski, Stanislaw; Beata Wecaszek and Marek Udechowski. ON A FISH COLLECTION IN THE FACULTY OF MARINE FISHERIES AND FOOD TECHNOLOGY OF THE UNIVERSITY OF AGRICULTURE IN SZCZECIN. *Acta Ichthyol. Pisciculta* 22(2):3-24. 1992. FR 38(2)

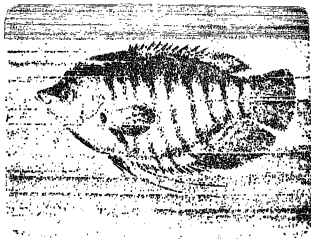
[Zaklad Syst. Ryb, Akad. Rolnicza, ul. K. Krolewicza 4, 71-550 Szczecin, Poland]

93-004472 Wallace, Robert G. SPECIES RECOVERY PLAN FOR LAKE STURGEON IN THE LOWER SASKATCHEWAN RIVER (CLUMBERLAND LAKE AREA). *Sask. Parks Renewable Resour. Fish. Tech. Rep.* 91-3: 51p. 1991. FR 38(2)

[Fish. Branch, Saskatchewan Parks & Renewable Resour., Saskatoon, SK, Canada S7K 2H6] *Acipenser fulvescens* in Canada.

93-004473 Weber, Gregory S. THE ENDANGERED SPECIES ACT- NEW WEAPON ENTERS SIXTY-YEAR FISH FIGHT. *Rivers* 3(4):275-283. 1992. FR 38(2)

[McGeorge School Law, Univ. Pac., Sacramento, CA 95817] *Oncorhynchus tshawytscha* in California.



AUTHOR INDEX

- Aedland, Luthor P
 93-003895
 Aernio, Katri
 93-003177
 Abaumree Equisoain, M. A.
 93-002752
 Abasi, S. A.
 93-003576
 Abd El-Rahim, Sobhi
 93-004420
 Abe, M.
 93-003471
 Abel, R. M.
 93-003542
 Abernethy, C. Scott
 93-003942
 Able, K. W.
 93-003342
 Able, Kenneth W.
 93-003080
 93-003064
 Abraham, M. V.
 93-004163
 Abrams, Peter A.
 93-003940
 Acero P. Arturo
 93-004164
 Achinger, Jacok
 93-004141
 Achard, S.
 93-005410
 Acterna, R.
 93-002546
 Acosta, Alejandro
 93-003090
 Acuna, Enzo S.
 93-002545
 Adam, K. B.
 93-002931
 Adams, A.
 93-003437
 Adams, C. E.
 93-002872
 Adams, Debra A.
 93-003656
 Adams, H.
 93-002925
 Adams, S. Marshall
 93-003577
 Adali, Khosrow
 93-003622
 Aebly, G. S.
 93-003480
 Afifi, H. A.
 93-003421
 Agapova, G. A.
 93-002500
 Agarwal, Beepa
 93-003620
 Agarwal, N. K.
 93-002453
 93-002521
 93-002547
 Agarwal, S. C.
 93-003623
 Agarwal, S. K.
 93-003578
 93-003579
 Aguilera, C.
 93-002546
 Agrawal, Kavita
 93-003601
 Agüero, Max
 93-004165
 Aguirre, P.
 93-002876
 Aho, H.
 93-003534
 Ahlqvist, J. E.
 93-002936
 Ahn, Chong Bum
 93-004346
 Ahn, Soon Mo
 93-004344
 Ahne, V.
 93-003512
 Ahnesjo, I.
 93-003112
 Ahrensholz, Dean W.
 93-003424
 93-004427
 Aida, Katsumi
 93-002844
 93-002866
 Aiken, K. A.
 93-004166
 Aikem, Karl A.
 93-003364
 Akiyama, Toshiro
 93-003401
 Aka, Harry
 93-002360
 93-002371
 Aksnes, O.
 93-003506
 Aksnes, Dag L.
 93-003016
 93-003906
 Al Hajjeh, Ahmad Rashed
 93-002317
 Al-Moadi, A. Y.
 93-002540
 Al-Hamid, Mohammed Fathi Sheba
 93-004426
 Alam, H. K.
 93-003580
 Alanara, A.
 93-002940
 Albarot, Jean-Jacques
 93-004257
 Albright, L. J.
 93-003500
 93-003501
 93-003530
 Alcalá, Juan Rusque
 93-004167
 Alcantara Docuagreg, Fernando
 93-002193
 Alcaraz, Guillermina
 93-003501
 Aldequino, M.
 93-002800
 Alden, Robin
 93-003737
 Alderdice, Gerald F.
 93-002253
 Alderman, B. J.
 93-003359
 Alegret, Jean-Luis
 93-004168
 Alexander, Gaylord R.
 93-003582
 Alford, Simon
 93-002549
 Alheit, Juergen
 93-003113
 Ali, Ahsaedin B.
 93-002270
 Ali, H. A.
 93-002574
 Altes, Brent C.
 93-003114

- Allen, R. Bradford
93-003217
- Allison, William R.
93-004109
- Alnatar, S. M.
93-000660
- Almeida, P. R.
93-003178
93-003183
- Alonso-Bedate, Mercedes
93-002602
- Alonso-Gomez, Angel Luis
93-002602
- Alonso-Rival, Manuel
93-003857
- Alshuth, Sabina
93-003059
- Alston, D. E.
93-002292
- Alston, Gillias
93-002194
- Althaus, Klaus
93-003383
- Alvarez-Felitero, P.
93-003430
93-003455
93-003456
- Alvarez, J. M.
93-003446
- Alvarino, J. M. R.
93-002550
93-002551
- Awardi, A.
93-003402
- Azaro, C.
93-003391
- Aziz, Avil B.
93-002839
- Aznarowicz, Antoni
93-004123
- An, Young Il
93-002942
- Anbu, R. B.
93-003582
- Anctil, M.
93-002574
- Anders, Kerstin
93-003377
- Anderson, Tom
93-003255
- Anderson, Douglas P.
93-003403
- Anderson, H.
93-003601
- Andersen, John T.
93-003079
93-003179
- Anderson, M. E.
93-003345
- Anderson, M. V.
93-004133
- Anderson, Marilyn J.
93-002552
- Anderson, Thomas R.
93-002810
- Anderson, Trevor A.
93-002553
- Andersson, Gunner
93-004040
- Andersson, J.
93-003498
- Ando, Sadayuki
93-003876
- Andres, M. D.
93-002895
- Andrew, E.
93-003700
- Andrew, Fred J.
93-003807
- Andrew, H. L.
93-003897
93-004170
93-004254
- Andrews, Elizabeth F.
93-003730
- Aneshansley, Daniel J.
93-002422
- Anestis, I.
93-003583
- Angeles, Paul L.
93-003222
- Angradi, Ted R.
93-004129
- Anthony, Vaughn C.
93-004171
- Anson, F. A.
93-002584
93-002585
- Antona, Marlene
93-003739
93-003772
- Anzal, Hiroshi
93-002832
- Aoki, Kazuko
93-002554
- Aoki, S.
93-003721
- Aoki, Takashi
93-003384
- Aota, S.
93-002674
- Aoyagi, Kazuhiko
93-002873
- Askanian, Arlette
93-003740
- Appelboom, Richard S.
93-004255
- Arai, Ken-ichi
93-003794
- Arahi, Seiichi
93-002862
- Arevindan, C. M.
93-003225
- Arbour, David
93-004053
- Arias-Gonzalez, J. E.
93-003235
- Arinolo, Misao
93-003462
93-003472
- Arinc, Isel
93-002585
- Armstrong, Neil B.
93-004054
- Arnour, Carl L.
93-002556
- Armstrong, David A.
93-004152
- Armstrong, J. D.
93-002557
93-004420
- Arnold-Reed, O. E.
93-002817
- Arnold, Conita R.
93-003310
- Arnold, Dean E.
93-002709
- Arnold, G. P.
93-003180
- Arr, A. J.
93-002673
- Arratia, G.
93-002454

AUTHOR INDEX

- Arseneault, A. A.
 93-002271
 Aronachalam, S.
 93-003007
 Arvey, William D.
 93-004057
 Asano, Kenji
 93-004172
 Asano, Masayo
 93-002550
 Asgard, Torbjorn
 93-002352
 Ashraf, Muhammad
 93-002353
 Aspinwall, Gavin
 93-003025
 Assis, C. A.
 93-003170
 93-003181
 Assouan, Joseph
 93-002432
 Athanassopoulos, F.
 93-003439
 93-003440
 Athearn, James B.
 93-002931
 Atti Mama, Cyrilaque
 93-004173
 Attramada, Y.
 93-002390
 Audelo Naranjo, Juan Manuel
 93-003071
 Ault, Jerald S.
 93-003047
 Aupertin, B.
 93-002701
 Auster, P. J.
 93-004174
 Austin-Smith, Peter J.
 93-003228
 Austin, B.
 93-003385
 Austin, O. Ian
 93-002995
 Austin, H. M.
 93-004140
 Austin, L. S.
 93-003653
 Austrom, Erlend
 93-002352
 Avault, James W., Jr.
 93-002195
 93-002196
 Avdeyev, V. V.
 93-003482
 Awalla, H.
 93-002559
 Avery, Ernest H.
 93-002943
 Awita, O.
 93-002807
 Awimelech, Yoram
 93-002272
 Awlton, R. R.
 93-002286
 Awiss, A.
 93-002354
 Axel, Richard
 93-002922
 93-002923
 Aysen, Felix G.
 93-002500
 Azam, Pascal
 93-002432
 Azuma, Hiroko
 93-003171
 Azuma, Teruo
 93-003182
 Babs, Nor-Hissa
 93-003608
 93-003930
 Babs, Osamu
 93-003741
 Babalik, John A.
 93-003200
 Babbitt, J. K.
 93-004300
 93-004402
 93-004418
 93-004419
 Babbitt, Jerry
 93-004353
 Babich, H.
 93-003586
 Babine, N.
 93-003476
 Babish, J. G.
 93-003392
 Bach, Pascal
 93-004175
 Backiel, Tadeusz
 93-003183
 93-003537
 Backman, Kenneth
 93-003955
 Bache, Jean
 93-003742
 Bacon, P. B.
 93-004165
 Baden, S. P.
 93-003543
 Bado, Michelle Loretta
 93-002273
 Baekken, Karen
 93-003410
 Bagatto, B.
 93-002619
 Bagley, P. M.
 93-004428
 93-004429
 Baglioni, J. L.
 93-003826
 93-003851
 93-003794
 93-003788
 93-004081
 Bagshaw, J. W.
 93-003449
 Bahen, James J.
 93-003958
 Bailey, Donald S.
 93-002274
 93-002295
 Bailey, M. C.
 93-003087
 Bailly, O.
 93-003743
 Bailly, Denis
 93-003744
 Bailly, Yannick
 93-002489
 Bain, Mark B.
 93-003877
 93-004132
 Baimne, Dominique
 93-002343
 Baiji, V.
 93-003576
 Baker, Donald C., Jr.
 93-003346
 Baker, J. A.
 93-003127

- Baker, J. T.
 93-004176
 Baker, Robert
 93-002756
 Bakhyyokho, Kloussa
 93-003345
 93-004177
 93-004181
 Bakir, M. M.
 93-002355
 Bakker, Theo C. M.
 93-002598
 Bakshi, Neena
 93-003587
 Balbontin, Fernando
 93-003256
 Baldevarona, Rodolfo S.
 93-003286
 Baldwin, L. A.
 93-003598
 Balfry, Shannon Kathleen
 93-003386
 Belmont, R. J.
 93-002561
 93-002782
 Belushkin, A. V.
 93-003347
 Bangbose, O.
 93-003588
 Bandin, J.
 93-003387
 93-003388
 Banerjee, Partha P.
 93-002562
 Banerjee, Subhadro
 93-002562
 Banks, Michael A.
 93-002656
 Banergee, N.
 93-004290
 Barber, Willard E.
 93-003174
 Barbieri, Maria Angela
 93-004170
 Barbour, Andrew
 93-002342
 Barciola, P.
 93-002806
 Barja, J. L.
 93-003387
 Barker, Susan
 93-004179
 Barlaup, D. T.
 93-003137
 Barnes, J. Thomas
 93-004180
 Baroudy, E.
 93-003680
 Barrett, David Thomas
 93-003746
 Barrie, R. J.
 93-003463
 Barry-Gerard, Mariana
 93-004181
 Bars, William
 93-004318
 Bartel, Ryszard
 93-003158
 93-003932
 Bartholomew, J. L.
 93-003441
 Bartlett, F. H.
 93-004347
 93-004405
 Barton, David R.
 93-003787
 Bartsch, Peter
 93-002455
 Baskaran, P.
 93-003589
 Bass, Andrew
 93-002563
 Basti, Ivan
 93-003888
 Basurco, D.
 93-003476
 Bataille-Benguigui, Marie-Claire
 93-004182
 Bates, Ken
 93-003933
 Batty, R. S.
 93-002943
 Baudin Laurencin, Felix
 93-002379
 Bowersfeld, Paul E.
 93-004244
 Baumann, Eveline
 93-004055
 Baumelster, Waifgang
 93-003408
 Baumgartner, Jeffrey Vance
 93-002874
 Baumgartner, Tim R.
 93-003072
 Bax, Nicholas J.
 93-002995
 Baya, A. M.
 93-003388
 Bayley, Peter B.
 93-004184
 Bayliff, William H.
 93-003885
 93-003837
 Bayliss, Jeffrey R.
 93-003021
 Bayse, David R.
 93-002275
 Baynes, S. M.
 93-002330
 93-002356
 Beaches, Terry D.
 93-002564
 Beall, C.
 93-003878
 Beall, Edward
 93-002944
 Beamish, F. W. H.
 93-002665
 Beard, T. W.
 93-002330
 Beardsley, Grant L.
 93-004183
 Beattie, M. S.
 93-003625
 Beauchamp, David A.
 93-003114
 Beauchamp, David Anthony
 93-003095
 Beaudet, L.
 93-002565
 Bebin, J.
 93-004182
 Bechtel, William R.
 93-004343
 Becker, Anthony J., Jr.
 93-002448
 Beckerman, Stephen
 93-003830
 Beer, Walter
 93-003866
 Beets, James
 93-003819

- Beets, James P.
93-062974
- Beets, Jhn
93-053622
93-084184
93-004233
- Beggs, Elaine
93-083640
- Begun, S. S.
93-083872
- Behara, S. C.
93-083668
- Behika, C. E.
93-023934
- Behra, Renata
93-083900
- Behrends, L. L.
93-042276
- Bettinger, Thomas L.
93-063624
- Belaad, A.
93-040056
- Belliaff, Besoff
93-003899
- Bellkov, S. V.
93-003101
- Bell, Mark C.
93-003265
- Bell, M. A.
93-003127
- Bell, Michael A.
93-002456
- Bell, Michael V.
93-002831
- Bellan-Santini, D.
93-004231
- Bellan, Denise
93-004186
- Belles-Isles, Jean-Claude
93-002945
- Bellod, E. B.
93-003175
- Benges, D.
93-004056
- Bengtson, John L.
93-003503
- Bengtsson, A.
93-003116
- Benjamin, L.
93-003406
- Benjamin, Michael
93-002457
- Bennett, A. J.
93-003380
- Bennett, Vernon
93-002449
- Bennett, Wayne A.
93-002566
- Bentzen, E.
93-003536
- Benz, George W.
93-003483
- Beorlegui, C.
93-002458
- Ber, Raphael
93-002875
- Bereslovskiy, E. G.
93-003077
- Berg, Arne E.
93-002812
- Berg, Magnus
93-003199
- Berg, Ole Kristian
93-003159
- Berg, T.
93-002804
- Bergersen, O.
93-002895
- Bergh, Divind
93-003390
- Berghahn, Rudiger
93-002567
- Bergman, H. J. N.
93-003205
- Bergstrom, E.
93-002794
- Berhaas, J.
93-002859
- Berkes, Fikrot
93-004186
- Berman, S. S.
93-003501
- Borniaffas, M.
93-003571
- Boss, H. A.
93-002797
- Boss, Howard A.
93-002568
- Bernard, David R.
93-004057
- Bernardet, J.-F.
93-003414
- Berni, Rodolfo
93-002067
- Bernstein, J. W.
93-003692
- Bertinac, Michel
93-004268
- Bertrand, William A.
93-004104
- Beschta, Robert L.
93-003893
93-004118
- Betsill, Robert K.
93-003184
- Bettger, W. J.
93-003606
- Bettoli, Phillip W.
93-003184
- Baumer, J. P.
93-004286
- Beverton, R. J. H.
93-003117
- Beyer, Jas E.
93-004187
- Bhargava, Y.
93-002677
- Biais, Gerard
93-004188
- Bidlovan, Terry F.
93-003554
- Bieniarz, Krzysztof
93-004141
93-004142
- Billiard, Roland
93-002416
- Billis, Terry G.
93-002277
- Bimbo, Anthony P.
93-004369
- Bindo, Martin
93-003417
- Bindon, S. D.
93-002568
- Bingham, C. Rex
93-004131
- Binkowski, Fred P.
93-002227
93-004080
- Biosca, E. G.
93-003391
- Bird, Kimon T.
93-002417

AUTHOR INDEX

- Birge, Wesley J
 93-03709
 Bireau, A
 93-00348
 Bisogni, James J., Jr.
 93-002822
 Bittencourt, Herta Mercedes
 93-004667
 Bittner, Susan G.
 93-004137
 Bjarnason, Jon B.
 93-004483
 Bjordal, Asmund
 93-002664
 Bjorko, Herman
 93-003357
 93-003344
 Black, Jeffrey A
 93-033709
 Blair, G. R.
 93-002511
 Blaise, C
 93-003725
 Blaise, Christian
 93-003734
 Blake, M. A.
 93-003195
 Blake, Paul A.
 93-004420
 Blake, R. W.
 93-002002
 Blanc, J. M.
 93-002876
 Blanchet, Gilles
 93-004189
 Blanson, Ivonne R
 93-002908
 Blarckenheckler, W. D.
 93-003469
 Blaugrund, E
 93-002569
 Blauster, J. H. S.
 93-002946
 93-003827
 Bleckmann, H.
 93-002570
 Bligh, E. G.
 93-004347
 93-004368
 93-004405
 Block, B. A.
 93-002472
 93-002830
 Block, Barbara A.
 93-002745
 Blom, Geir
 93-002368
 Blom, Vico J.
 93-004199
 Bocquene, Gilles
 93-003536
 Bodenstein, Leo R.
 93-003993
 Boehlert, George W.
 93-003074
 Boerson, Gary
 93-002449
 Boetticher, N.
 93-002705
 Boehsack, James A.
 93-003927
 Bolishto, Ann Amelia P.
 93-003594
 Boisclair, U.
 93-002571
 Boldreghini, Paolo
 93-002197
 Bolker, J. A.
 93-002572
 Bolla, Sylvie
 93-002365
 93-002573
 Bollons, Stephen M.
 93-004191
 Bollies, V.
 93-002574
 Bolton, Brad
 93-003489
 Bols, Niels C.
 93-002804
 Boltz, Jeffrey H.
 93-002459
 Bonford, Jim A.
 93-003935
 Bonar, Aline
 93-004081
 93-004082
 Bond, C.
 93-002575
 93-002636
 Bone, G.
 93-002634
 Bonnell, R. Gregory
 93-004058
 Bonnett, M. L.
 93-003110
 Bonnell, S.
 93-002623
 93-003621
 Boodorff, Erik
 93-003177
 Bontemps, Stanislaw
 93-002537
 93-003932
 Bortoux, J.
 93-004192
 Boser, Ronald
 93-002531
 Boreman, Stephen M.
 93-003900
 Borisenko, E. S.
 93-003807
 Borke, I. V.
 93-003975
 Bonnaclin, M.
 93-002599
 Berodulme, O. D.
 93-003349
 Boren, Alicia
 93-003186
 Boren, Sloweair
 93-002185
 Boraki, Russell J.
 93-002863
 Bosak, Alexander
 93-004430
 Bosch, Albert
 93-003475
 Bosbee, J. A. T.
 93-004454
 Bouch, Gerald
 93-002200
 Bouch, Jean-Pierre
 93-003747
 93-003748
 Bouffie, Michel
 93-002403
 93-002576
 Boulton, Ralf H., Jr.
 93-004150
 Boune, William J.
 93-004193
 Boudillon, A.
 93-002562

- Bouguignon, Gaylaine
93-003744
93-003749
- Boyby, J. N.
93-004050
- Boyles, Edward C.
93-004457
- Bower, Paul R.
93-003392
- Boydall, Geoffrey A.
93-003690
- Boychuk, R. J.
93-003596
- Boyd, Claude E.
93-002380
93-002418
93-002447
- Boyd, Frank L.
93-002442
- Boyd, S. K.
93-002678
- Boydston, L. B.
93-003066
- Boyer, Helen A.
93-004099
- Boyo, V. J.
93-003591
- Boylan, P.
93-002981
- Boyle, John A.
93-004359
- Boza Abarca, J.
93-002363
- Bradbury, Steven P.
93-003596
- Bradford, Michael J.
93-003948
- Bradford, Rodney G.
93-003160
- Bradshaw, Robert F.
93-003126
- Bradfield, Alan E.
93-003198
- Brandard, E. L.
93-002947
- Brasley, Hal
93-002953
- Bresilo, Judy
93-003021
- Breider, K.
93-004247
- Breider, K. H.
93-003004
93-003119
- Breidt, S.
93-004037
- Breidt, Stephen B.
93-004240
- Brennas, E.
93-002948
- Brennas, Eva
93-002949
- Brass, Jane L.
93-002278
- Braun, C. B.
93-002460
- Brauner, C. J.
93-002577
- Bray, K.
93-003810
- Brechtin, J.
93-002657
- Breen, Paul A.
93-003901
- Brenle, Gudrun
93-003652
- Brennan, William Max
93-004060
- Bressanello, Simona
93-002932
- Bretae, Bernard
93-002580
- Bretae, Francoise
93-003750
- Brett, P. A.
93-004254
- Brewer, Don
93-003841
- Briggs, John C.
93-003359
- Grittain, Karen
93-002371
- Britz, Peter J.
93-002298
- Broadhurst, M. K.
93-003897
- Grock, David
93-002419
- Grocklehurst, Lon A.
93-002595
- Brodin, Lansart
93-002840
- Bronage, M. R.
93-002551
- Bron, J. E.
93-003502
- Brozker, James R.
93-004349
93-004391
- Brooks, James M.
93-003538
- Brooks, Robert P.
93-002259
- Brouns, J. J.
93-004194
- Browman, Howard I.
93-003751
- Brown, A.
93-003653
- Brown, C. R.
93-003983
- Brown, Charles L.
93-004011
- Brown, G. E.
93-002950
- Brown, J. A.
93-002999
93-002990
- Brown, J. Anne
93-002461
- Brown, Joseph A.
93-002331
93-002813
93-003022
93-003208
93-003256
- Brown, Michael R.
93-002927
- Brown, Randall L.
93-003906
- Brown, T. C.
93-003550
- Brown, Tommy L.
93-004603
- Brownell, Charles L.
93-002951
- Brugger, Kristin E.
93-002198
93-002298
93-003107
- Brus, Guy
93-003033

AUTHOR INDEX

- Brunner, Paula
 93-002937
 Bruno, D W
 93-003393
 Bruss, Michael L.
 93-002843
 Bruton, M N.
 93-003845
 Bryson, Mason D.
 93-004072
 Bubenheimer-Livolski, L.
 93-002604
 Bubeck, Jehu
 93-002283
 Buchanan, James T.
 93-002731
 Bucher, F.
 93-003442
 Bucher, Franz
 93-003597
 Bucher, Wesley A
 93-004343
 Buck, Linda
 93-002923
 Bucke, D.
 93-003399
 Buckler, Danny R.
 93-003639
 Buckley, A. A.
 93-003600
 93-003006
 Buckner, Richard L
 93-003484
 Buckner, Sharon C.
 93-003484
 Buczynska, Monika
 03-004100
 Budgeington, Randal K.
 93-002578
 Budhia, Natalia
 93-004061
 Budworth, P. R.
 93-002579
 Buesa, C.
 93-002784
 Bulgakova, Yu. V
 93-003188
 Bullock, C.
 93-004388
 Buxol, Denis Tranchard
 93-002835
 Burchill, G. H.
 93-004195
 Burdass, N C.
 93-002588
 Burgnot, Thierry
 93-003536
 Burgess, Karen E.
 93-003351
 Bursin, Toni
 93-002493
 Burke, John S.
 93-003639
 Burkholder, John M.
 93-004278
 Burkow, Ivan C.
 93-002359
 Burns, B G.
 93-004381
 Burns, Kathryn A
 93-003548
 Burnes, P. J.
 93-003156
 Burridge, L. E.
 93-003949
 Burton, Timothy A.
 93-003811
 Bussleres, Dany
 93-003189
 Butler, Ann B.
 93-002581
 93-002743
 Butler, John L.
 93-003182
 Butler, M J. A.
 93-004196
 Butler, P. J
 93-002864
 Buttiker, B
 93-003932
 Butz, Ilse
 93-003842
 Buxton, Colin D.
 93-003878
 Buxton, N. G.
 93-003982
 Buznak, Gerard L.
 93-003257
 Caballero, P.
 93-003886
 93-003161
 Cabrera, D.
 93-002825
 Caddell, M. T.
 93-002604
 Cadwallader, Mark W.
 93-002420
 Cai Guoxiong
 93-002877
 Calliant, Genolt
 93-004157
 Cairns, V W.
 93-003564
 Calabrese, E. J.
 93-003590
 Caldwell, P.
 93-003653
 Call, Susan J.
 93-002775
 Calvo, Jorge
 93-004217
 Camargo, J. A.
 93-003682
 Caminas, Juan Antonio
 93-004198
 Campena, Stevos E
 93-003296
 Campbell, R. E.
 93-003029
 93-003038
 93-003297
 Campbell, R. R.
 93-004470
 Casolin, W. C.
 93-003599
 93-003653
 Caspo, Joseph J
 93-003799
 Caserio, A. V. M
 93-002765
 Canga la Serna, J. R.
 93-003861
 Canfield, J. G.
 93-002582
 Canfield, James G.
 93-003099
 Carrobbio, Alejandro
 93-003256
 Cao Guangbin
 93-002228
 Capisano, Corinne
 93-003263
 Cappio Berlin, A.
 93-003950

AUTHOR INDEX

- Caputi, N.
 93-003529
 Carbonelli, G.
 93-003682
 Caray, J.
 93-003795
 Caric, M.
 93-002357
 Carlos Giegues, Antonio
 93-003752
 Carlson, Bruce Allan
 93-003831
 Carman, Odang
 93-002878
 Carnahan, A.
 93-003388
 Carneiro, M. N.
 93-002739
 Carpenter, Douglas
 93-003825
 Carpenter, Stephen R.
 93-003658
 93-003659
 Carr, O. J.
 93-002541
 Carragher, J. F.
 93-002503
 Carrier, O. R.
 93-002462
 Carrillo, M.
 93-002550
 Carrusozza, A.
 93-002887
 Carrusozza, James E.
 93-003164
 Carss, D. N.
 93-002229
 93-003210
 Carter, Chris G.
 93-003190
 Carter, T. J.
 93-002981
 93-004447
 Cartwright, Wilber F.
 93-002230
 Casselman, J.
 93-002225
 Casselman, John M.
 93-004004
 Castellon, C.
 93-002962
 93-003166
 Castonguay, Martin
 93-003287
 93-003298
 Castrovicic, J.
 93-004093
 Catalano, E.
 93-002930
 Caulfield, James D.
 93-002421
 Cech, Joseph J., Jr.
 93-003988
 Cecil, Robert
 93-003742
 Coderholm, C. J.
 93-004062
 Collinson, Fred
 93-004261
 Corazo, G.
 93-002315
 Cerny, Jaroslav
 93-004431
 Chaboud, Christian
 93-003753
 93-003754
- CONTINUED.
- Chaboud, Christian
 93-004109
 Chacko, V. P.
 93-000636
 Chadwick, E. H. P.
 93-003149
 Chakrali, O.
 93-002279
 Chakrali, Sissasar
 93-004200
 Chandlers, R. Christopher
 93-002504
 93-003258
 Chambers, G.
 93-002962
 93-002992
 93-003166
 Champagnouille, A.
 93-002597
 93-003832
 Chen, J. R.
 93-002318
 Chen, K. H.
 93-003680
 Chandramohan, P.
 93-004280
 Chang Dejong
 93-003134
 Chang, Gees-Dong
 93-002585
 Chang, W.
 93-002586
 Chao, Ning Lobbish
 93-004063
 Chaperro, Ruperto
 93-004201
 Chapleau, Francois
 93-002463
 Chapman, G.
 93-002107
 Chapman, Gregory Charles
 93-003191
 Chapman, James D.
 93-004032
 Chapman, John C.
 93-002570
 Chappaz, Rost
 93-003835
 Chappelle, Daniel E.
 93-003602
 Charbonneau, Robert
 93-004805
 Charles-Dominique, Emmanuel
 93-003754
 93-004282
 Charles, Anthony T.
 93-003755
 93-003951
 Chaturvedi, L. D.
 93-003681
 Chaudhary, M. V.
 93-003688
 Chauhan, R. C.
 93-002302
 Chaussade, Jean
 93-003756
 93-003757
 Chauveau, Jean-Pierre
 93-003758
 93-004259
 Checklay, David M., Jr.
 93-002576
 93-003129
 Chelkowski, Zygmunt
 93-003834
 93-003835

AUTHOR INDEX

...CONTINUED

- Cholkowski, Zygmunt
93-004004
- Chen Shaofan
93-002507
- Chen Song Lin
93-002588
- Chen Yierui
93-003352
- Chen, C-H.
93-004350
- Chen, Joe-Shang
93-004384
- Chen, K.
93-002679
- Chen, M. T.
93-004006
93-004017
- Chen, Mei-Chu
93-003373
- Chen, S.
93-002448
- Chen, S. C.
93-003394
93-003477
- Chen, Shulin
93-002422
- Chen, Steve
93-002387
- Chen, Ti-Mee
93-002820
- Cheong, Boey Chee
93-004351
- Chere, H. S.
93-003677
- Cherr, Gary W.
93-002760
- Cheshevs, Z. A.
93-003036
- Chesney, Edward J.
93-003037
- Chess, Andrew
93-002922
93-002923
- Chevallier, Pierre
93-004203
- Chiang, Shu-Yuen
93-003466
- Chiang, Tseu-Chin
93-002039
- Chien, Chau-Heng
93-003443
- Chien, Eileen J.
93-003443
- Chikhi, D.
93-002992
93-003166
- Chilo, A. R.
93-002658
- Childress, M. Michael
93-003975
- Chlomończyk, S.
93-003464
- Chilton, Earl W. II
93-003759
- Chinnery, L. E.
93-003893
- Chivo, N.
93-002699
93-002704
- Chong, V. C.
93-004159
- Chou, C. L.
93-003682
93-003974
- Choudhury, S. P.
93-004028
- Choudhury, M. Gilla
93-004375
- Choy, Barry K.
93-003906
- Christensen, B.
93-002953
93-003603
- Christensen, B. L.
93-003941
- Christensen, Johan
93-002484
- Christiansen, Jørgen S.
93-002249
- Churko, B. M.
93-003632
- Chung, Kang H.
93-004384
- Chyan-Sueiio, M.
93-003102
- Cierieszko, A.
93-002509
- Cipriano, Rocco C.
93-003430
- Claborn, J. B.
93-002590
- Clark, Jerry E.
93-003856
- Clark, John H.
93-002323
- Clark, Julie A.
93-002391
93-002392
- Clark, Robert D.
93-003937
- Clark, William M.
93-003821
- Clarke, D.
93-004432
93-004449
- Clarke, M. E.
93-002956
93-003076
- Clarke, R.
93-003562
- Clarke, Raymond P.
93-003555
- Clarke, W. C.
93-002948
93-002880
- Clarke, W. Craig
93-003038
- Clayton, R. R.
93-003149
- Clem, L. M.
93-002711
93-002727
- Clemens, J. M.
93-003726
- Clemens, Janine H.
93-003404
- Clelland-Brock, T. H.
93-002964
- Coble, Daniel W.
93-003552
- Cochran, Michael D.
93-002280
- Cochran, Phillip A.
93-003192
- Cockell, K. A.
93-002605
- Coenen, Anthony J. M.
93-002632
- Cohen, Aris H.
93-002591
- Cohen, I.
93-002569

AUTHOR INDEX

- Cohen, Joel E.
 93-003193
 Coker, R. E.
 93-002199
 Cole, Brian P.
 93-003735
 Cole, David N.
 93-003760
 Coleman, G.
 93-003389
 93-003433
 Colasanto, Richard T.
 93-002281
 Colgan, Patrick W.
 93-003019
 Coll, J. M.
 93-002614
 93-003476
 Collin, Shaun P.
 93-002465
 Collins, Charles "Bo"
 93-002202
 Collins, John J.
 93-004049
 Colonbara, D.
 93-002930
 Calc, John
 93-002200
 93-002447
 93-003761
 Comar, Paul
 93-003762
 Conco, S.
 93-003121
 Conaty, Peter
 93-004204
 Case, D. K.
 93-003485
 93-003486
 Conlon, J. Michael
 93-002809
 Conlon, Michael
 93-003606
 Connell, Des
 93-003607
 Connor, Laurence L.
 93-004430
 Coover, D. D.
 93-003122
 Coover, David D.
 93-003123
 Conroy, Roxanne
 93-004032
 Conroy, J. W. H.
 93-003210
 Cook, A. E.
 93-002466
 Cook, Chantel M.
 93-003895
 Cook, R. D.
 93-002467
 Cook, R. M.
 93-003984
 Coombs, Mark J.
 93-003010
 Cooper, J.
 93-003070
 Cooper, J. Andrew
 93-002463
 Cooper, Richard K.
 93-003420
 Cooper, Richard K. II
 93-003395
 Copp, G. H.
 93-003026
 Coristine, Susan
 93-003603
 Corrier-Solen, Marie-Christine
 93-003763
 Cornell, S. C.
 93-002836
 Cortez Solis, Juan Pedro
 93-004352
 Corvin, Andrew L.
 93-004420
 Cossen, Jacky
 93-002416
 Costa-Pierce, Barry A.
 93-002201
 93-002283
 Costa, J. L.
 93-003178
 93-003181
 Costa, M. J.
 93-003178
 93-003381
 Costello, M. J.
 93-004214
 Costello, Mark J.
 93-003194
 Cester, J. M.
 93-003432
 Coughman, O.
 93-004205
 Coughlin, O. J.
 93-002552
 Couriel, Daniel
 93-003547
 Cowan, Larry
 93-004865
 Cows, I. G.
 93-002528
 Cox, D.
 93-003413
 Coyle, Jones J.
 93-003609
 Cozart, Michael D.
 93-002231
 Crafford, J. E.
 93-003070
 Craig, Gerald R.
 93-003210
 Craig, James L.
 93-004096
 Craig, John F.
 93-003260
 Craig, Steven R.
 93-002162
 Craik, Moody
 93-004206
 Crabb, G.
 93-002780
 Crago, Charles
 93-004353
 Craven, J.
 93-002446
 Crawford, David L.
 93-004395
 Crawford, Drew L.
 93-003077
 93-003105
 Crosswell, W. J.
 93-003953
 93-003990
 Crispin, Val
 93-004087
 Crises, John L.
 93-003503
 Crockett, E. L.
 93-002593
 Crook, Peter H.
 93-003930
 Cross, Beverly A.
 93-003077

AUTHOR INDEX

- .. CONTINUED ..
- Cross, Beverly A
93-004320
- Cross, W. L.
93-003444
93-003445
- Crossland, C. J.
93-003542
- Croun, Karine
93-004432
- Crow, Gerald L.
93-003483
- Crozier, W. W.
93-003487
- Crumby, W. D.
93-003577
- Cullen, Reg T.
93-003054
- Cullheim, Staffan
93-002684
- Cummings, Shailer R.
93-003311
- Cunjak, R. A.
93-003039
- Cunningham, Stephen
93-004258
- Dartin, N. A.
93-002594
- Durcis, B. Jones
93-002595
- Dury, Philippe
93-004207
- Dushing, D. H.
93-004208
- Outler, C. P.
93-002708
- Outler, M. Rupert
93-003764
- Cyrino, Jose Eurico Possobon
93-002586
- Czeczuga, R.
93-002587
- Czeczuga, Bazyli
93-002588
- Czerniawska, Izabela
93-002192
- D'Amours, Denis
93-003287
- D'Avila, Rossana
93-002617
- D'Cruz, R.
93-004159
- D'Entremont, Daniel L.
93-004383
- da Silva Batista, Vandick
93-004225
- Debrowski, K.
93-002589
93-002597
- Dady, Julia K.
93-003596
- Dai, Tiansong
93-002652
- Daley, Wayne J.
93-003777
93-003879
- Dalpra, C. N.
93-003556
- Dambo, W. S.
93-002284
- Danesh, Robert
93-004137
- Daniel, E. S.
93-002593
- Daniel, Violet
93-002620
93-002875
- Danielsson, Didrik S.
93-003204
- Dannevig, Birgit H.
93-002696
- Denton, M.
93-003465
- Darnell, Suzanne M.
93-004209
- Darrucq, Fanny
93-004308
- Darveau, Jean-Marc
93-003765
- Derwall, W. R. T.
93-004210
- Derwish, Ahmed
93-004428
- Dasgupta, Aradhana
93-003704
- Daubeze, M. C.
93-003677
- Davoine, P.
93-003078
- Davensport, J.
93-002520
- Davensport, John
93-002608
- Davidson, G. A.
93-002468
- Davidson, W. S.
93-003020
- Davne, P. S.
93-003688
- Davies, Cathleen Penn
93-002881
- Davies, Melissa
93-002601
- Davis, Anthony
93-004211
- Davis, Michael W.
93-002358
- Davison, William
93-002625
- Dawe, S. C.
93-003649
- Davlatova, M.
93-003872
- Dawson, Pierre
93-003903
- Dawson, Richard H.
93-003800
- Day, A. C.
93-004434
- Day, David H.
93-004104
- de Almeida Toledo, L. F.
93-002915
- de Bruijn, Jack
93-003610
- De Gier, H. H. W.
93-003432
- de Jesus, Evelyn Grace T.
93-002924
- de Kinkelin, P.
93-003447
93-003465
- De La Cruz, Rosa R.
93-002756
- de Lafontaine, Yves
93-003162
93-003335
- de Moraes, Bernard
93-004067
- De Pedro, Nuria
93-002602
- De Verpa, Viktor
93-002232

AUTHOR INDEX

- ...CONTINUED -
- Se Veega, Viktor
93-002372
- SeAlteris, J. T.
93-003902
- Seas, Jan
93-003865
- Dean, John Mark
93-003286
- Dobowski, Piotr
93-003259
93-004668
- Ducharing, Koan J.
93-002622
- DeCiso, Robert D.
93-003600
- Decker, Eric A.
93-004354
- Dehn, Paula F.
93-002603
- Dela Cruz, C. R.
93-002886
- Delany, S. G.
93-003433
- Delaunay, Karine
93-004212
- Deleray, Mark A.
93-002955
- Delfino Schenke, Ricardo
93-004119
- Dalgado-Garcia, J. M.
93-002825
- Dalgado, Maria Jesus
93-002602
- Dell, Anne
93-002816
- Dellinger, J. A.
93-003625
- Delong, Robert L.
93-003903
- Delorme, P. D.
93-003611
- Dene, Moastapha
93-003766
93-004213
- Demsey, Clive H.
93-003336
- den Hartog, C.
93-004162
- Den, Ting-Kie
93-002308
- Denaro, M. G.
93-002787
- Denison, Douglas L.
93-003801
- Denizau, F.
93-003725
- Dennicutt, Mahlon C. II
93-003538
- Desais, George D.
93-003955
93-004151
- Desavan, Grahame
93-004214
- Georgy, S. M.
93-003612
- Department of Agriculture HMSO
93-004215
- Department of Conservation and Environment
93-004216
- Dequan Xia
93-002935
- Derksen, A. J.
93-003941
- Desai, S. N.
93-004286
- Desaulniers, M. T.
93-002604
- Desaens, Yves
93-003273
- Devecchi, Monica
93-002834
- Devil, Indiro
93-003693
- DeVoe, M. Richard
93-002262
93-002203
- Dewar, H.
93-002805
- Dewey, Michael R.
93-004907
- Dey, N. C.
93-003552
- Dhawan, Asha
93-003543
93-003546
- Dhara, Philippe
93-002332
- Di Cola, Giulio
93-003658
- Di Giacomo, Edgardo E.
93-004217
- di Frisco, Guido
93-002617
- Diachitau, Hassot
93-004181
- Diaz, R. J.
93-003543
- Dickerson, Terri L.
93-003124
- Dickhoff, M.
93-002606
93-002733
- Dickhoff, W. M.
93-002762
- Dickie, L. M.
93-003991
- Dickson, Frances
93-002330
- Didler, D. A.
93-003353
- Diehl, Sebastian
93-004040
- Dillingner, Robert E., Jr.
93-003813
- Dinand, D.
93-003414
- Dirks-Go, S.
93-003432
- Dittson, Robert B.
93-003786
93-003943
93-003344
93-003955
93-003856
- Dix, O. J.
93-004153
- Dixan, B.
93-003486
- Dixan, D. G.
93-002852
93-003663
93-003884
93-003674
93-003668
93-003729
93-003727
93-003733
- Dixon, D. George
93-003604
93-003694
93-003767
- Dixon, P. M.
93-003632

AUTHOR INDEX

- De Chi, Thang
 93-004218
 Dabasz, S
 93-002880
 Doe, K. G.
 93-003613
 Doggett, Teresa A.
 93-002097
 Doi, J. C.
 93-003725
 Dolina, Marisa
 93-003396
 Domagala, Jozef
 93-003201
 Domier, Michael L.
 93-002082
 Dorenici, P.
 93-002082
 Dominguez, J.
 93-003476
 Domkos, Reka
 93-003163
 Damon, Takashi
 93-003918
 Dan, J.
 93-002286
 Donald, David @
 93-003260
 Donald, John
 93-002635
 Donaldson, Edward M.
 93-002877
 Dong, Chongzhi
 93-004050
 Dong, F. M.
 93-004355
 Donnelly, R.
 93-004210
 Dorfl, Didier
 93-003273
 Dorfner, Beate
 93-002910
 Doroshov, Serge I
 93-002578
 dos Santos, Jorge
 93-002350
 Doumenge, Francois
 93-003040
 Dowd, C.
 93-003076
 Dowd, C. E.
 93-002956
 Dowling, Michael M.
 93-002922
 93-002923
 Downer, R. G. H.
 93-002652
 Doyle, Miriam J.
 93-003125
 93-003299
 93-004219
 Dragesund, D.
 93-003105
 Drinkwater, Kenneth F.
 93-003339
 Drok, S. I.
 93-002680
 Dropkin, David S.
 93-003886
 Du Pasquier, L.
 93-002887
 du Preez, Hein H
 93-003614
 Du Xianyan
 93-003134
 Duan Yihao
 93-002541
 Guan, C.
 93-002609
 93-002764
 Duarte, Ana Paula
 93-003615
 Dubac, Rejman
 93-002549
 Ducey, Ronald D.
 93-002233
 Dudgeon, David
 93-004070
 Dudley, Donnie L.
 93-004427
 Duffy, David Cameron
 93-003767
 Dujackin, Lee Alan
 93-003195
 Duquay, F.
 93-002643
 Dugany, S. J.
 93-002609
 Duncan, Keith
 93-003241
 Dunkel-Erb, Suzanne
 93-002669
 Dunham, Jason B
 93-002323
 Dunham, Rex A.
 93-003881
 Dunkley, D. A.
 93-004433
 Dunn, J.
 93-003904
 Dunning, Dennis J.
 93-003870
 Durance, T. D.
 93-004491
 Durand, J. E.
 93-003769
 Durand, Jean-Louis
 93-004420
 Durand, Jean-Rene
 93-002334
 93-004608
 93-004257
 Durand, P.
 93-003032
 Durvasberger, E. Paul
 93-004221
 Dutton, J.
 93-002610
 Dutka, S. J.
 93-004969
 Dvlatins, E. A.
 93-004293
 Dwyer, William P.
 93-002423
 Dykova, I.
 93-003446
 Eakin, M.
 93-003076
 Eaton, John G.
 93-003616
 Eaton, Robert C.
 93-002657
 Ebad, M.
 93-002644
 Eberle, Mark E.
 93-001303
 93-003302
 Echelle, Anthony A.
 93-003831
 Echeverria, Tina Wylie
 93-002234
 Echigo, Takashi
 93-004425

AUTHOR INDEX

- Eckartz-Molden, Gabriele
93-004810
- Eckmann, Rainer
93-003261
- Ecotrin, Jean-Marc
93-004222
- Edds, David R.
93-003301
- Edwards, Clinton J.
93-004444
- Edwards, Les
93-002396
- Edry-Schiller, Jackie
93-002611
- Edsall, Thomas A.
93-004011
- Egginton, S.
93-002612
93-002819
- Egginton, Stuart
93-002738
- Ehtisham, Amir
93-003123
- Eide, D. M.
93-002934
- Eidnes, T.
93-003495
- Eiler, John H.
93-003126
- Elliottson, H. C.
93-002346
93-003067
- Eisen, Judith S.
93-002512
- Ekaw, Werner
93-003206
- Ekeberg, Dr. Jas
93-002840
- Ekstrom, Peter
93-002685
- El Sharkawy, Said
93-004420
- El-Talawy, I. A.
93-003617
- El-Matbouli, M.
93-003442
- El-Saadany, M. M.
93-003617
- El-Shaarawi, A.
93-004009
- Eley, Michael H.
93-004396
- Elfas, Jerostav
93-002397
- Eliassen, J. E.
93-003057
- Eliaseva, E. O.
93-002793
- Eliertson, Bjornar
93-003079
- Eliet, Elisa
93-004353
- Elliott, D. G.
93-003418
- Elliott, J. K.
93-002967
- Elliott, J. M.
93-003689
93-004071
- Ellis, A. E.
93-002468
93-003387
93-003423
- Ellis, David
93-003885
- Ellis, J.
93-003449
- Ellis, R.
93-002803
- Ellory, J. Clive
93-002675
- Endean, R.
93-003618
- Endo, Hiroaki
93-004386
- Endo, Kenji
93-004356
- Endresen, C.
93-002305
- Eng, P.
93-004404
- England, Goran
93-002950
- Enns, K.
93-003959
- Epifanio, John Michael
93-002883
- Epler, Piotr
93-004141
93-004142
- Epple, August
93-002613
- Eppien, Jorg T.
93-002921
93-003013
- Epstein, Franklin H.
93-002799
93-003710
- Erdahl, Dave
93-002440
- Erhard, S.
93-002360
- Erickson, M. C.
93-004357
93-004411
- Erickson, Russell J.
93-003595
- Eriksson, T.
93-002234
- Ermentrout, G. Bard
93-002501
- Ermolenko, L. N.
93-002804
- Ernst, O. H.
93-002310
- Ernst, Douglas M.
93-002324
93-002325
- Ernst, W. R.
93-002544
- Ernsting, Guy W.
93-003308
93-003302
- Escaffra, A. M.
93-002876
- Eshemroder, Randy L.
93-003372
93-004012
- Espina, Sonia
93-003981
- Estabillo, C. C.
93-002310
- Estay, Eduardo
93-004043
- Estepa, A.
93-002614
- Estayo, C.
93-003591
- Estay, Don F.
93-002235
- Eun, Jong-Bang
93-004368
93-004365

- Euzenat, G
 93-002969
 Evans, David H.
 93-002615
 Everest, Fred H
 93-003029
 93-004072
 Everson, Inigo
 93-004223
 93-004224
 Ewins, P. J.
 93-003251
 Fabre, Widia Naomi
 93-004725
 Fabregas, J
 93-002424
 Fabris, J. G.
 93-003561
 Fagen, P.
 93-003545
 Fagard, J. L.
 93-002959
 Fagbenro, O. A.
 93-002616
 Faggio, C.
 93-002787
 Fagl, Achmad M.
 93-002287
 Fago, Angela
 93-002617
 Fago, Don
 93-003354
 Fahay, Michael P.
 93-002064
 Fairchild, James F.
 93-003509
 Fairgrieve, W. T.
 93-004355
 Fairgrieve, William Thomas, Jr.
 93-002361
 Falk-Petersen, I.-B.
 93-001619
 Falk-Petersen, Inger-Grutt
 93-002018
 93-003041
 93-003307
 Falk-Petersen, Stig
 93-002618
 Falk, G.
 93-002756
 Falk, Emil
 93-003511
 Fan Zhaoping
 93-002885
 FAO of the UN
 93-003769
 93-003770
 Farnas, Martin
 93-004178
 Farnha, Anabela
 93-003309
 Farner, C. G.
 93-002462
 Farner, G. J.
 93-003982
 Farner, Gill J.
 93-003728
 Fargnoli, Eddy W.
 93-003325
 Farr, Ruth A.
 93-003703
 Farre??, A. P.
 93-002628
 93-002671
 93-002822
 93-003488
 Farrugio, Heel
 93-004220
 93-004226
 93-004227
 Fawell, Christian
 93-002416
 Favre, L.
 93-002988
 Fay, Claude
 93-004073
 Fay, Fabian
 93-004228
 Fedak, M. A.
 93-004453
 Fedorov, V. V.
 93-003356
 Feeney, Richard F.
 93-002470
 Feichtinger, Wolfgang
 93-002921
 Feldkamp, Steven D.
 93-003983
 Feltes, Ross M.
 93-003355
 Fens, Karl
 93-003620
 Fenwick, J. C.
 93-002168
 Ferguson, H. W.
 93-003427
 93-003526
 Ferguson, M.
 93-003705
 Ferguson, R. A.
 93-002619
 Fernald, Russell D.
 93-002647
 Fernandez, Maria M.
 93-002760
 Fernandez-Delgado, C.
 93-003044
 Fernandez, A. I. G.
 93-003422
 Ferno, Anders
 93-002964
 Ferrando, M. D.
 93-003700
 Ferreira-Barreira, Vicente
 93-003072
 Ferrelles, Svein Erik
 93-003397
 Fiddler, W.
 93-004380
 Fielding, Eileen
 93-002886
 Figueras, A.
 93-003188
 93-003446
 Figuerola, Miquel
 93-003285
 93-004309
 Fileman, Tim W.
 93-003657
 Files, T.
 93-002471
 Findley, Lloyd T.
 93-003359
 Fine, Mira
 93-002620
 Fine, Roderick Nigel
 93-002774
 Finnerty, J. R.
 93-002472
 Fiore, B.
 93-003681
 Fischer, P.
 93-002621

AUTHOR INDEX

- Fischer, Steven A
93-003631
- Fish, F. E.
93-002947
- Fisher, Mark R.
93-003844
- FitzGerald, Gerard J.
93-002960
- Fitzmaurice, Malgosia
93-004229
- Fitzpatrick, W.
93-002646
- FitzSimons, Patrick N.
93-003596
- Flajšnik, M.
93-002887
- Flajshans, M.
93-002888
- Fleitch, Tadeusz
93-004123
- Fleming, Douglas F.
93-003039
- Fleming, Ian Andrew
93-002889
- Fletcher, Dean E.
93-002961
- Fletcher, D. L.
93-003600
- Fletcher, H. Ian
93-003940
- Fletcher, T. C.
93-003399
- Fletcher, W. J.
93-003450
- Flitk, Gert
93-002622
- Focant, B.
93-002662
- Foin, Theodore C.
93-004125
- Folmer, L. C.
93-002623
93-003621
- Folson, William B.
93-002236
- Fong, Jack
93-002398
- Fonseca, H.
93-002518
- Fontaine, Maurice
93-003642
- Fontana, Roy
93-002399
- Fontenau, Alain
93-003263
- Foresti, F.
93-002915
- Forey, Peter
93-002473
- Formicki, Krzysztof
93-002852
93-002862
- Foreshchak, V. P.
93-003356
- Fornest, John M., Jr.
93-002615
93-002730
- Fortier, L.
93-003338
- Fosse, V. N.
93-002895
- Fossun, Petter
93-002624
93-003079
- Foster, A.
93-002657
- Foster, David
93-004112
- Foster, Noel R.
93-002963
93-004023
- Foster, S. A.
93-003127
- Fournel, Françoise
93-002059
- Fournie, J. W.
93-003449
- Fournier, David A.
93-003990
- Fournirot, Y.
93-003196
- Fowler, Scott W.
93-002741
- Fox, D. P.
93-002665
- Fox, Jay W.
93-004403
- Fox, H.
93-003806
- Fox, S. A.
93-004133
- Francis-Floyd, Ruth
93-003485
- Franch, Jons P. C.
93-002699
- France-Sterna, A.
93-003438
- Frank, Kenneth T.
93-003164
93-003209
93-003330
93-004230
- Franko, Hannes-Joachim
93-002400
93-002401
- Franklin, Craig E.
93-002625
- Frantz, William G.
93-004434
- Fraser, Angus J.
93-002626
- Fraser, Noel C.
93-002237
- Fraser, William
93-003469
- Frazier, D.
93-002629
- Fraser, David
93-003358
- Fredl, G.
93-004231
- Freedland, Richard A.
93-002843
- Freedman, Stephen J.
93-003398
- French, J. S.
93-004418
93-004419
- French, John
93-003997
- French, John R. P. III
93-004011
- French, John S.
93-004361
- Fruon, Pierre
93-004232
93-004435
- Fridley, Robert B.
93-002335
- Friedlander, Alan
93-003965
93-004184

AUTHOR INDEX

...CONTINUED...

- Friedlander, Alan
 93-004233
 Friend, Anthony M.
 93-003845
 Frimeth, J.
 93-003726
 Frisko, Michael Oscar
 93-002208
 Fris, Michael B.
 93-003197
 Frische, Josephine
 93-002474
 Frissell, Christopher Andrew
 93-003812
 Fritsche, Regina
 93-002027
 Fritzsich, Bernd
 93-002465
 Fritzsche, Ronald A.
 93-003304
 Froese, R.
 93-004430
 Frolov, S. V.
 93-002891
 Frost, Bruce W.
 93-004191
 Fryer, J. L.
 93-003402
 93-003441
 Fucile, I.
 93-002787
 Fuentes, J.
 93-002808
 Fulean, L. A.
 93-002946
 Fulman, Lew A.
 93-003337
 Fujii, Hiroshi
 93-003910
 93-003911
 Fujiwaki, Yasutoshi
 93-003930
 Fujiwara, Yasuzumi
 93-003934
 93-003915
 Fujio, Yoshitaka
 93-002892
 Fujita, T.
 93-003721
 Fujiwara, K.
 93-003471
 Fukusako, Hiroe
 93-002475
 Fulcher, M.
 93-004450
 Fuller, Kent
 93-004813
 Furak, Ati
 93-003622
 Furevik, Gop H.
 93-002964
 Furones, H. O.
 93-003398
 Furtado, Lourdes D.
 93-004074
 Furtak, R. C.
 93-003404
 Furuchi, Masayuki
 93-002351
 Furukawa, Kiyoshi
 93-002886
 Furusawa, Iwao
 93-003462
 93-003472
 Furusawa, Toru
 93-003472
 Furuta, Akira
 93-003930
 Fyhn, Hans Jorgen
 93-002774
 Gabaudan, Jacques
 93-002578
 Gabr, S. A.
 93-003817
 Gackart, M. P.
 93-003688
 Gadomski, Gene M.
 93-003190
 Gafny, S.
 93-003120
 Gagne, J. A.
 93-003338
 Gagnon, H. M.
 93-003533
 Galgonn, Jean-Louis
 93-002862
 Galiswad, S. A.
 93-003609
 93-003600
 Gale, G.
 93-002433
 Galpant, Francois
 93-003536
 Galicka, Wanda
 93-004850
 93-004106
 Gallagher, Gregory J.
 93-002284
 Galliaspy, John
 93-003646
 Galliaugher, P.
 93-002620
 Galliaugher, P. E.
 93-002822
 Gallaway, Benny J.
 93-003813
 Gallaway, Sylvia B.
 93-004244
 93-004387
 93-004388
 Gamallo, Y.
 93-002424
 Gamble, J. C.
 93-003027
 Gamble, John C.
 93-003337
 93-003339
 Gamon, M.
 93-003700
 Gancedo, Benigno
 93-002682
 Gao, Y.
 93-004387
 Geratus-Tjeldsto, Oddvard
 93-003199
 Garay, E.
 93-003391
 Garceau, C.
 93-003571
 Garcia de Laaniz, C.
 93-003270
 Garcia-Hogart, F.
 93-002784
 Garcia-Vazquez, E.
 93-002893
 Garcia, Martha A. Padilla
 93-004456
 Garcia, Serge
 93-003771
 Garduno, Rafael A.
 93-003400
 Garg, Wens
 93-003823

AUTHOR INDEX

- Gardner, O. H.
 93-002800
 Garrabe, Michel
 93-003772
 Garrard, Anthony B.
 93-002322
 Garrett, E. Spencer
 93-004362
 Garric, Josno
 93-003738
 Gascon, Dominique
 93-003162
 Gascuel, Didier
 93-003293
 Gasith, A.
 93-003128
 Gates, R. A.
 93-004368
 Gatlin, DeBort M III
 93-002362
 Gazey, William J.
 93-003813
 Ge Ruffang
 93-003434
 Gearin, Patrick J.
 93-003913
 Gebhard, O. H.
 93-002805
 Gee, A. S.
 93-004432
 Geffon, A. J.
 93-002629
 93-002926
 93-003165
 Geistdoerfer, Alifetto
 93-004234
 Gelwick, Francis P.
 93-003248
 Gentusa, Tony C.
 93-003674
 Geoghegan, Paul
 93-003070
 George, Edward I.
 93-003956
 Ger Buschang
 93-002238
 93-002425
 Gerassilev, Y. V.
 93-003692
 Gerrodette, Tim
 93-003966
 Gerstaeberger, S. L.
 93-003625
 Gertler, Arleh
 93-002620
 Gesser, H.
 93-002646
 Govers, Petra
 93-002630
 Guan, D.
 93-003043
 Garrett, Anthony J.
 93-003334
 Ghosh, T. K.
 93-003562
 Gianturco, D.
 93-004437
 Gihb, A. C.
 93-002476
 Gibson, J.
 93-002623
 93-003621
 Gibson, W. A. C.
 93-003628
 Giger, W.
 93-003534
 Gilbert, Walter
 93-002526
 Gile, Stephen R.
 93-003081
 Gill Tejonra, S.
 93-003627
 Gill, A. C.
 93-003357
 Gill, T. A.
 93-004363
 93-004416
 Gill, Tom
 93-004424
 Gillis, G. B.
 93-002477
 Gilmeur, Alistair J.
 93-004235
 Gilroy, Ian B.
 93-004075
 Gintner, N. G.
 93-002840
 Girard, Stephens S.
 93-002631
 Girsztowitz, Krystyna
 93-004113
 Girsztowitz, Zbigniew
 93-003271
 Glako, J.
 93-003985
 Glako, Jerl
 93-003016
 93-003086
 Glasian, H.
 93-003972
 Glusani, G.
 93-002452
 Gjoen, T.
 93-002094
 Gosastor, J.
 93-003395
 Gosastor, Jakob
 93-003294
 Glahn, James F.
 93-002239
 93-002238
 Glass, C. W.
 93-002969
 Glass, Peoples L.
 93-002768
 Glousney, B. L.
 93-004014
 93-004015
 93-004016
 93-004017
 93-004018
 Glove, C. J.
 93-002966
 Gloyd, Joe
 93-002719
 Gobalet, K. W.
 93-003304
 Gober, Donald R.
 93-004076
 Gobert, Bertrand
 93-003773
 93-002847
 93-004283
 93-004732
 Godfrey, Mary Lynn
 93-003668
 Godin, Jose-Guy J.
 93-003195
 Godo, D. B.
 93-003306
 Godwin, John
 93-002632

AUTHOR INDEX

- Gadyin, John Robert
 93-002633
 Goetz, Frederick William
 93-002634
 Goff, G. P.
 93-002506
 Gold, Barry David
 93-003774
 Goldhor, Susan H.
 93-004364
 Goldman, Charles R.
 93-003134
 Goldschmidt, A.
 93-002490
 Gomes, Luiz Antonio
 93-002295
 Gomez-Bassart, J. V.
 93-004365
 93-004366
 Gonzalez, C.
 93-002424
 Gonzalez, Jose Antonio
 93-004236
 Gooch, Janet A.
 93-004367
 93-004379
 Goodpane, Laura S.
 93-002392
 Goodier, John
 93-002941
 Goodrich, J.
 93-002606
 Goodrich, Mark S.
 93-003630
 Goodwin, Melvin H.
 93-004237
 93-004238
 93-004335
 Goelish, Edward Michael
 93-002635
 Gopal, K.
 93-003628
 Gopal, V.
 93-003546
 93-003629
 Gopalakrishnaswamy, G.
 93-003589
 Gophen, M.
 93-004021
 Goren, M.
 93-003128
 Goris, Richard C.
 93-002717
 Gorissen, M. W.
 93-004162
 Gott, Thomas
 93-003358
 Gouzelin, Louis
 93-004239
 Gotchevas, Pytelis
 93-003209
 Goto, Tsuneko
 93-003171
 Boulder, R.
 93-003541
 Goussot, Bernard
 93-002291
 Gowen, Ron
 93-002254
 Gower, M.
 93-003678
 Goyard, Emmanuel
 93-002343
 Goyke, Andrew P.
 93-004240
 Graham, C. E.
 93-002575
 Graham, C. R., Jr.
 93-002636
 Graham, J. B.
 93-002677
 93-002683
 93-002690
 93-002761
 Graham, J. J.
 93-003104
 Graham, K. J.
 93-004254
 Grana-Raffuocci, F. A.
 93-002292
 Grass, Alan F.
 93-002239
 93-002240
 93-002241
 93-002242
 Grativoli, Adriana D.
 93-002478
 Grau, E. Gordon
 93-002560
 93-002846
 93-002863
 Graves, John E.
 93-002904
 Greeley, M. S., Jr.
 93-003577
 Green, Bartholomew W.
 93-002321
 Green, Carol
 93-002461
 Green, D. P.
 93-004368
 Green, Daniel William
 93-004077
 Greenberg, A.
 93-002687
 Greenfield, David W.
 93-003359
 Greer, R. B.
 93-002872
 93-002505
 Greger, P. D.
 93-003494
 Gresswell, Robert E.
 93-003775
 Gresty, Karen A.
 93-003490
 Grewen, Harcourt
 93-002514
 Griepink, B.
 93-003563
 Griffith, David
 93-003787
 Griffith, Dennis
 93-004241
 Griffith, J. K.
 93-003618
 Griffith, J. S.
 93-004441
 Griffiths, William B.
 93-003813
 Brill, Jean-Joel
 93-003730
 Grillner, Sean
 93-002464
 93-002849
 Grishole, U.
 93-002895
 Griswold, M. D.
 93-002579
 Grizzle, John M.
 93-003401
 Greifer, P. A.
 93-003677

AUTHOR INDEX

- Gronstol, Hellstein
93-003417
- Grost, Erick P.
93-002428
93-002774
- Gross, Mart R.
93-003010
- Drover, Jill J.
93-003201
- Gruber, S. J.
93-002637
- Grunwald, David Jonah
93-002686
93-002697
- Grzaliczak, Z.
93-002643
- Gu, Liya
93-002638
- Gudorley, Helga
93-002699
- Gudkovs, Nicholas
93-003383
- Gudmundsson, Andri M.
93-002039
- Guegan, J.-F.
93-003491
- Guest, W. Clrell
93-003995
- Gunderson, Donald R.
93-004152
- Gunn, E. A.
93-004392
- Gunn, J. M.
93-002639
- Gunn, John H.
93-003606
93-003601
93-004004
- Gunther, J.
93-002303
- Gupta, M. P.
93-003516
- Gupta, RnInf
93-003699
- Guthrie, Charles M III
93-003334
- Gutierrez, J.
93-002739
- Guyonard, R.
93-002898
- Ha, Phyllis
93-003211
- Haakonsen, Jan H.
93-004242
- Haard, Norman
93-004400
- Haasch, Mary L.
93-003630
- Hebero, James W.
93-004078
- Heezen, O. L. H.
93-003432
- Haffaer, Doug
93-003608
- Haffaer, Douglas
93-003622
93-003648
- Hafmans, T. G. M.
93-002723
93-002724
- Hagiwara, Atsushi
93-002364
- Haines, Terry A.
93-003640
- Hakansen, John L.
93-002640
- Hakon Hoel, Alf
93-004243
- Halderson, Lewis
93-003264
- Hale, M.
93-004360
- Hale, M. E.
93-002479
- Hale, Malcolm B.
93-004244
93-004369
93-004379
- Hale, S. Scott
93-003257
- Haleem, Khan A.
93-003676
- Hales, L. Stanton, Jr.
93-003265
- Hall-Grissold, Judy A.
93-003108
- Hall, G. S.
93-002504
- Hall, Brian K.
93-002496
- Hall, Charles A. S.
93-004042
- Hall, Lenwood W., Jr.
93-003631
- Hall, Per O. J.
93-002243
- Hall, R. M.
93-003521
- Hall, Robin M.
93-002293
93-002294
- Halligraeff, Gustaaf W.
93-003574
- Halliburton, Paul W.
93-002430
- Halpin, P. M.
93-002967
- Halvorsen, O.
93-003493
- Hanada, Kenichiro
93-002384
- Hamerlyack, O.
93-003282
- Hanisch, R.
93-003776
- Haman, S. W.
93-002821
- Hammersmister, Doan E.
93-003506
- Hammerschmidt, Paul C.
93-004245
- Hammock, Bruce D.
93-003513
- Hammond, P. S.
93-004453
- Hamrin, Stellan F.
93-004040
- Han Shoujun
93-003402
- Han Xifu
93-002641
- Han, Hyun-Sob
93-002899
- Hanley, J. Russell
93-003547
- Hanns, M. S.
93-003654
- Hanns, Muhs S.
93-004143
93-004144
- Hanna, Peter J.
93-003383

AUTHOR INDEX

- Hains, Robert Scott
 93-084246
 Hainesan, Eric N
 93-002642
 Hainsson, Rognvaldur
 93-002857
 Hainrehan, J. W.
 93-002643
 Hansen, Gair Horvik
 93-003190
 Hansen, T.
 93-002267
 Hanson, Tom
 93-002812
 Hansen, David A.
 93-003880
 Hanson, Peter J.
 93-003539
 Rao, R.
 93-002644
 Hara, Akihiko
 93-002664
 Hara Kago
 93-013900
 Hara, Moriyuki
 93-003129
 Harada, Yasushi
 93-003958
 Haraldsson, H.
 93-002244
 Harboe, Torstein
 93-003279
 Harbig, J.
 93-003408
 Hardin, Scott
 93-004438
 Hargreaves, John A.
 93-002274
 93-002295
 Harlow, Heather E.
 93-003548
 Harman, J. S.
 93-002645
 Harold, Antony S.
 93-002489
 Harper, D.
 93-002982
 Harper, Douglas E.
 93-002927
 Harpman, David A.
 93-004079
 Harrall, Ronald H.
 93-002395
 Harriman, R.
 93-003091
 Harrington, Michael E.
 93-002968
 Harris, Jack E.
 93-002887
 Harris, John Lowry
 93-003366
 Harris, Rod
 93-002245
 Hart, P. J. B.
 93-003185
 Hartley, K. A.
 93-004088
 Hartley, S. E.
 93-002930
 Hartmann, T.
 93-002646
 Hartvigsen, R.
 93-003493
 Harvey, Geoffrey W.
 93-003811
 Hasagawa, Sanso
 93-002569
 Hashimoto, Hitoshi
 93-003909
 Hashimoto, Y.
 93-002647
 Hastings, Rosemary J.
 93-004370
 Hastings, W. H.
 93-002298
 Hatai, K.
 93-003435
 Hatai, Kishio
 93-003435
 Hatch, Richard W.
 93-004019
 Hatch, Upton
 93-002305
 93-002314
 Hatheway, Charles L.
 93-004420
 Hattasberger-Gaudouy, A.-N.
 93-003465
 Hattori, Tsutomu
 93-003130
 Hauck, A. K.
 93-003469
 Haug, T.
 93-003131
 Haug, Tore
 93-002628
 93-003041
 93-003307
 Haughton, Milton G.
 93-002901
 93-003864
 Haury, J.
 93-004081
 Hauschild, C.
 93-003535
 Havaste, Karl
 93-002755
 Hawkes, R.
 93-002724
 Hawkins, A. O.
 93-003086
 Hawrystow, C. W.
 93-002565
 93-002592
 93-002648
 93-002719
 93-002753
 Hay, D. W.
 93-003270
 Hay, E.
 93-002646
 Hay, Stephen J.
 93-003339
 Hays, K.
 93-003949
 Hayashi, H.
 93-003122
 Hayashi, S.
 93-002688
 Hayashi, Tetsuhito
 93-004386
 Hayes, R. A.
 93-003526
 Haylor, G.
 93-002649
 Haylor, G. S.
 93-002297
 Haynes, Jody L.
 93-002969
 Haynes, Kellie
 93-004430
 Hazel, Jeffrey R.
 93-002578

AUTHOR INDEX

... CONTINUED ...

- Hazel, Jeffrey R.
93-002851
- Hazon, N.
93-002700
93-002824
- He Batshe
93-002426
- He Xiqin
93-003134
- Heagler, H. G.
93-003632
- Healey, H. C.
93-004163
- Heard, C. S.
93-003667
- Hearnsberger, James D.
93-004350
93-004359
- Heath, M.
93-003360
93-004247
- Heath, Mike
93-003203
- Hecht, T.
93-003070
- Hecht, Thomas
93-002290
- Heckmann, R. A.
93-003494
- Heidrick, Ronald P.
93-003481
- Heise, Tomasz
93-003266
- Heisson, Herb J. L.
93-003002
- Hejlsberg, Tor G.
93-003132
- Hejge, Ole
93-002970
- Hejland, N. C.
93-002462
- Heidinger, Roy C.
93-003240
- Heilgrin, Daniel Joseph
93-002971
- Heins, Carlton E.
93-002481
- Heinen, John M.
93-002419
- Heiner, Bruce A.
93-004002
- Heins, David C.
93-002572
- Heland, M.
93-002973
- Helminen, H.
93-003959
- Helser, Thomas Earl
93-003960
- Hemmingsen, W.
93-003495
- Henderson, Bryan A.
93-003507
- Hendrick, R. P.
93-003447
- Hendy, C. H.
93-004454
- Henson, Paul O.
93-002512
- Hennessey, Timothy M.
93-004153
- Hensen, Roberto R.
93-002206
- Hepkema, F. W.
93-002650
- Hepfall, S. A.
93-002651
- Hewman, Roger L.
93-002367
93-003593
- Hewmans, Joop
93-003610
- Hernandez-Macquez, Sergio
93-003007
- Hernandez, P.
93-002402
- Herra, Tomasz
93-003309
- Herrera, M.
93-003044
- Herry, Claude
93-004003
- Hesselberg, Robert J.
93-003567
- Hesthagen, Trygve
93-002970
- Hetrick, F. H.
93-003300
93-003517
- Hibbs, Richard G., Jr.
93-004420
- Hibler, Michelle
93-002207
- Hickie, B. E.
93-002052
- Hidaka, Iwao
93-002370
- Hidaka, S.
93-002647
- Higgins, Diane
93-004004
- Higgins, Paul Standfish
93-004440
- Higgins, Vivian H.
93-004371
- Hilden, M.
93-004323
- Hilden, Mikael
93-004240
- Hill, Kevin T.
93-002053
- Hilliard, R. W.
93-002667
- Hillman, T. W.
93-004441
- Hilsenhoff, William L.
93-003220
- Hilton, J. W.
93-003626
- Hines, G. A.
93-002694
- Hinckley, Sarah
93-003267
- Hindar, Kjetil
93-002403
- Hinton, David E.
93-003513
93-003717
- Hirano, Reijiro
93-003312
- Hirano, T.
93-002526
- Hirano, Tetsuya
93-002160
93-002783
- Hirata, Fumio
93-003794
93-004372
- Hirayama, Kazutsugu
93-002304
- Hirono, Ikuro
93-003384
- Hirota, Naomasa
93-004410

AUTHOR INDEX

- Hirotsuki, Katsuji
 93-003741
 Hirsch, Lisa M.
 93-003906
 Hirsoren, A.
 93-003959
 Hiser, Curtis A.
 93-002246
 Hitchin, Gordon B.
 93-003716
 Hixon, Mark A.
 93-002974
 93-004318
 Hinch, John B.
 93-003371
 Hoytka, F W.
 93-003821
 Ho, Ju-Shay
 93-002196
 Hought, Charles H.
 93-003318
 Hodsdon, Wendy
 93-002512
 Hodson, P. V.
 93-003633
 93-003733
 Hodson, Peter V.
 93-003548
 Hoelscher, Brian
 93-004457
 Hoening, J H.
 93-003961
 Hoese, Douglass F.
 93-002458
 Hoene, M.
 93-002537
 Hofer, R.
 93-002442
 Hofer, Rudolf
 93-003597
 Hoff, Michael H.
 93-003821
 Hofgaard, P.
 93-002934
 Hofmann, H.
 93-002871
 Hofstetter, Catras
 93-002976
 Hofstetter, Eric G.
 93-001826
 Rogers, William E.
 93-003497
 Hoiland, J.
 93-003498
 Holm, K.
 93-002934
 Holby, Dia
 93-002243
 Holck, Junay
 93-004106
 Holden, K. E.
 93-003145
 Holdway, D. A.
 93-002652
 Holford, G H.
 93-003188
 Holisky, Danielle Linnert.
 93-002902
 Holland, N B.
 93-003241
 Hollabone, J. E.
 93-003894
 Holloway, Clifford C.
 93-004396
 Holloway, Gale A.
 93-003871
 Holloway, Harry L., Jr.
 93-003499
 Hollowed, Anne Balcock
 93-003083
 Holm, J. C.
 93-003015
 Holtefjord, I.
 93-002488
 Holtefjord, Ivar
 93-002365
 Holmes, Rolland A.
 93-004057
 Holmgren, S.
 93-002655
 Holmgren, Susanne
 93-002670
 Holomuzki, Joseph R.
 93-004086
 Holst, R. J.
 93-002484
 Holt, Christopher M.
 93-003927
 Holt, G. Jean
 93-002366
 93-002656
 93-003218
 Holt, John K.
 93-002288
 Holt, R. A.
 93-003402
 Holt, Scott A.
 93-003310
 Holtz, W.
 93-002427
 Holtz, K. E.
 93-003634
 93-003638
 Homjak, Jurij
 93-004373
 Honda, Haruo
 93-002672
 Horjo, Tsunoo
 93-004240
 Honkanen, Tapio
 93-002405
 Hood, Peter B.
 93-003046
 Hop, HeeKon
 93-003174
 93-003204
 Hopkins, P. J.
 93-003266
 Hopkins, Thomas A.
 93-002289
 93-002210
 Hopkins, Todd E.
 93-003908
 Hopp, Peter
 93-003417
 Hoque, Md. Nazrul
 93-003856
 Hora, Marvin E.
 93-003635
 Horak, Pavel
 93-002613
 Hordvik, T.
 93-002885
 Hori, Atsushi
 93-003876
 Hoss, Michael H.
 93-003197
 Horner, Rodney W.
 93-003372
 Horoszwicz, Lidia
 93-003183
 Hoshiai, G.
 93-003435

AUTHOR INDEX

- Hoshiai, Gen-ichi
 93-003436
 Hosking, William
 93-003048
 Hoss, Donald E.
 93-002976
 93-003549
 Hossain, H. A.
 93-003143
 Hossain, Z.
 93-004375
 Houde, Edward D.
 93-003157
 93-003268
 93-003311
 Houghton, R. G.
 93-002858
 Houghton, Walter
 93-002369
 Houlihan, D. F.
 93-002657
 Houlihan, Dominic F.
 93-003190
 House, Robert
 93-004057
 Hausman, J. H.
 93-002085
 Houston, K. A.
 93-003110
 Hoveskamp, Frans
 93-003269
 Hovey, S. J.
 93-002966
 Howard, B. R.
 93-002299
 Howe, George E.
 93-002277
 Howell, G. B.
 93-002330
 93-002356
 93-002658
 93-003133
 Howell, W. Kutting
 93-003649
 Howerton, Robert D.
 93-002309
 Hoyle, J. A.
 93-004858
 Hsu, Ya-Li
 93-003466
 Hu Chuanlin
 93-002587
 Huang Hoenfeg
 93-003134
 Huang, Fore-Lien
 93-002589
 Huang, Liyue
 93-002010
 Huang, Shih-Ling
 93-003373
 Huazhu Yang
 93-002351
 Hubbard, Richard H.
 93-004271
 Huber, Maria
 93-002659
 Hubert, Wayne A.
 93-004461
 Hubold, Gerd
 93-003206
 Hudak-Roes, Martha
 93-004374
 Hudak-Roes, Martha A.
 93-004362
 Hudd, Richard
 93-003723
 Hughes, G. H.
 93-002505
 Hughes, R. H.
 93-002977
 Hughes, Steven G.
 93-002367
 Huh, Hyung-Tack
 93-002430
 Hui Wang
 93-002935
 Hujita, Taku
 93-002380
 Hull, Eugene
 93-002660
 Hulsbeck, Mark W.
 93-002927
 Hultin, Herbert G.
 93-004354
 Hume, Jeremy M. B.
 93-003884
 Humphreys, Robert
 93-002915
 Hunt, J. J.
 93-002485
 Hunt, Philip
 93-002402
 Hunto, Wayne
 93-003096
 Hunter, J. Roe
 93-003124
 Huntingford, F. A.
 93-002072
 93-003062
 93-003270
 93-003293
 Huntingford, Felicity A.
 93-002578
 Huntingford, Felicity Ann
 93-002579
 Huot, Annette
 93-002661
 Huq, H. A.
 93-004375
 Hui, H. S.
 93-003072
 Huriaux, F.
 93-002662
 Hurley, D. A.
 93-004020
 Hurley, Peter C. F.
 93-003296
 Hurrell, R. H.
 93-002903
 Huse, Ingvar
 93-002964
 93-003129
 93-003390
 Husak, Leroy J.
 93-004831
 Hutchings, J. A.
 93-003142
 Hutchings, Pat
 93-003885
 93-004295
 Hutchinson Alan E.
 93-003217
 Hutchinson, N. J.
 93-003634
 93-003636
 93-003637
 93-003638
 Hutson, Pat
 93-002373
 Hvidsten, N. A.
 93-004080
 Hwang, Kuen T.
 93-004376

AUTHOR INDEX

- Kwang, Tin
 93-00413
 Hyman, Jeffrey B.
 93-00309
 Aroda, Susumu
 93-00204
 Idelhaq, Abdelwahed
 93-00428
 Idler, David R.
 93-00273
 Dassen, Peter E.
 93-00294
 Ikeda, Shizunori
 93-00263
 Ikeda, Yayoi
 93-00347
 93-00344
 Ikuhime, Kenji
 93-00309
 Iles, T. Gerrick
 93-00310
 Imazumi, Keinosuke
 93-00264
 Imperial, Mark T.
 93-00415
 Inemo, Yoshino
 93-00186
 Ingersoll, Christopher G.
 93-00309
 Ingersoll, Christopher Glenn
 93-00369
 Inglis, Valerie
 93-00296
 Ingram, B. A.
 93-00224
 Inoue, Noriko
 93-00437
 Inoue, Sadako
 93-00281
 Inoue, Yasuo
 93-00281
 Inter-American Tropical Tuna Commission
 93-00306
 International Council for the Exploration of
 the Sea
 93-00305
 93-00396
 Irizarne, Oscar D.
 93-00399
 Irvine, K. M.
 93-00443
 Isaev, M. A.
 93-00310
 Ishibashi, Yasunori
 93-00263
 Ishida, Rikizo
 93-00384
 Ishikawa, Takatoshi
 93-00254
 Ishikawa, Yukihito
 93-00446
 Ishioka, Hiroko
 93-00264
 93-00374
 Ismail, Susan A.
 93-00449
 Ivanov, Gennadi P.
 93-00354
 Iversen, L.
 93-00344
 Iversen, S. A.
 93-00429
 Ives, Brian
 93-00236
 Iwai, Thomas, Jr.
 93-00268
 Iwakiri, Shigero
 93-00423
 Iwano, D. K.
 93-00206
 Iwano, George K.
 93-00200
 93-00284
 Iwanatsu, Takashi
 93-00281
 Iwaszkiewicz, Michal
 93-00284
 Iwata, Katsuya
 93-00410
 Iwatsuki, Yukio
 93-00312
 Izquierdo, J. I.
 93-00289
 Jaccarini, V.
 93-00244
 Jackson, Gerry A.
 93-00376
 Jackson, Mary E.
 93-00307
 Jacobson, Larry D.
 93-00418
 Jacobson, Lawrence Dean
 93-00393
 Jacoby, Charles A.
 93-00433
 Jago, Charles H.
 93-00364
 Jagot, Loic
 93-00438
 Jahncke, M.
 93-00436
 Jahncke, Michael
 93-00439
 Jakucovic, Henryk
 93-00490
 93-00418
 93-00419
 Jonardiana Rao, N. H. J.
 93-00370
 Jansson, E. R.
 93-00302
 Janssen, Philippe
 93-00247
 Jarzynowa, Barbara
 93-00309
 93-00377
 93-00411
 Jayaraman, P.
 93-00346
 Jayaram, Muthanna G.
 93-00266
 Joyce, B. C.
 93-00247
 93-00298
 Jeffery, S. E. J.
 93-00266
 Jelmer, Anders
 93-00319
 93-00339
 Jelenek, Marok
 93-00412
 Jeney, Galina
 93-00340
 Jenkins, Gregory P.
 93-00326
 Jennings, Cecil A.
 93-00407
 Jensen, A. L.
 93-00394
 93-00393
 Jensen, A. Naagor
 93-00248

AUTHOR INDEX

- Jensen, J.
93-002655
- Jensen, J. O. T.
93-002848
- Jensen, John O. T.
93-002428
93-002438
- Jessen, Jørgen
93-002678
- Jesson, Jørgen O. T.
93-002253
- Jesson, Kathleen M.
93-002718
93-002616
- Jensen, L. B.
93-003468
- Jensen, T. J.
93-002843
- Jentoft, Svefa
93-004211
- Jeston, Roman V.
93-003318
- Jha, B. S.
93-003641
- Jha, D. K.
93-003168
93-003516
- Jiang Weimin
93-003258
- Jiang Yulin
93-003467
- Jiang, Shann-Fzong
93-002841
- Jin Xing
93-002228
- Jinadasa, J.
93-004307
- Jinada, K.
93-003588
- Jobe, Barbara L.
93-004422
- Jobling, Malcolm
93-002240
93-002359
- Jofre, Juan
93-003475
- Johal, H. S.
93-002302
- Johannessen, A.
93-004258
- Johannessen, Tore
93-003884
- Johansen, P. H.
93-003642
- Johansson, Frank
93-002858
- Johansson, Lars
93-004840
- Johson, Peter B.
93-002303
93-002868
- Johnson, Alan W.
93-003777
- Johnson, Allan F.
93-003711
- Johnson, James H.
93-003886
- Johnson, Jeffrey
93-003787
93-004269
- Johnson, Michael R.
93-003404
- Johnson, Robert K.
93-003359
- Johnson, S. C.
93-003500
- . . . CONTINUED . . .
- Johnson, S. C.
93-003581
- Johnson, W. Carter
93-003036
- Johnston, I. A.
93-002691
93-002735
- Johnston, Sheila A.
93-002667
- Johnstone, A. D. F.
93-002668
93-002787
93-002965
93-002981
93-004447
- Jolly, Setsuko O.
93-002227
- Jonasson, Jonas
93-002298
- Jones, M. Lisa
93-002894
- Jones, R. J. M.
93-002666
- Jones, Ronald O.
93-002385
- Jones, S. K. M.
93-003448
- Jones, Y.
93-004308
- Jensdottir, H.
93-003502
- Jonsson, A.-C.
93-002655
- Jonsson, Ann-Cathrine
93-002670
- Jonsson, Bror
93-002483
93-002587
- Jonsson, Claudio M.
93-002643
93-003644
- Joosten, H. W. J.
93-002723
- Jordan, S. J.
93-002650
- Jørgensen, Even H.
93-002249
- Jørgensen, Løif
93-002881
- Jørgensen, P. E. W.
93-003468
- Josefsson, Snorri
93-002669
- Joseph, Jeanne O.
93-004244
93-004389
- Joshi, Purnachattan L.
93-002275
- Jowett, Ian G.
93-003565
- Joyce, John
93-002211
- Juang, S. S.
93-003677
- Judd, Frank W.
93-002566
- Juelli, Jon-Erik
93-004642
- Juulshann, K.
93-003714
- Jungueira-Lopes, Rui
93-003781
- Kai-Ya, Hiroyuki
93-002785
- Kaiser, G. Ellen
93-002429

AUTHOR INDEX

- Kaiser, M. J.
 93-002977
 Kalichman, I.
 93-04421
 Kalifita, Ana Lucia
 93-002768
 Kallamyn, Larry H.
 93-04402
 Kamoi, Etsuo
 93-002857
 Kanehiro, Haruyuki
 93-003910
 93-003911
 Kanehi, Paul
 93-003817
 Kaneko, Toyofu
 93-002568
 Kao, Yung-Hsi
 93-002562
 Kaplan, Lisa A. E.
 93-002788
 Karakiri, Maria
 93-003272
 93-003273
 Karila, P.
 93-002655
 Karila, Paul
 93-002670
 Karlsson, L.
 93-003014
 Kasahara, M.
 93-002887
 Kasai, Koichi
 93-003299
 Kasasi, M. A.
 93-002982
 Kase, K.
 93-003743
 Kase, Kazutoshi
 93-003744
 93-004252
 Kasinsky, H. E.
 93-002699
 Kasitko, Breshna
 93-003778
 Kato, Reitaro
 93-002663
 Katopodis, C.
 93-003941
 Kato, Sora H.
 93-004237
 93-004238
 Kawakami, M.
 93-003065
 Kaw, Kamaldeep
 93-002304
 93-003648
 93-003648
 Kawachi, Ken-ichi
 93-004372
 Kawachi, H.
 93-002733
 Kay, A. M.
 93-003654
 Kay, James J.
 93-003779
 Kay, William W.
 93-003490
 Kaye, Calvin M.
 93-002955
 Ke, P. J.
 93-004381
 Kearn, G. C.
 93-003528
 Kearney, John
 93-002336
 Keats, D. W.
 93-003209
 Keats, Derek W.
 93-002983
 Kobe, Moustapha
 93-003745
 93-004177
 93-004199
 93-004253
 Keeley, Fred W.
 93-002772
 Keen, J. E.
 93-002671
 Kelley-Frage, Sharon
 93-003322
 Kelley, K. M.
 93-002797
 Kelly, Rosemarie
 93-003503
 Kelsay, R.
 93-002936
 Kelsp-Winschler, Leslie C.
 93-003370
 Kelso, J. R. H.
 93-003110
 93-004880
 Kemp, A.
 93-002984
 Kendall, Arthur W., Jr.
 93-003313
 Kennedy, C. R.
 93-003491
 Kennedy, Gregory W.
 93-004011
 93-004023
 Kennelly, S. J.
 93-003897
 93-004254
 Kennes, Jonathan G.
 93-004042
 Kent, M. L.
 93-003449
 Kenward, Robert E.
 93-004443
 Keppler, Dean
 93-002403
 Kere, S. R.
 93-003551
 Kerry, Alison
 93-004444
 Kero, J.
 93-003865
 Kettle, H. George
 93-002369
 Khalil, L. F.
 93-003521
 Khames, Nazim R.
 93-003514
 Khan, R. A.
 93-003647
 Khalil, Soliman H.
 93-002862
 Khlopnikov, M. H.
 93-003210
 Khoo, Kay-Hoof
 93-002816
 Khuda, Bukhsh A. S.
 93-003596
 Kido, Michael H.
 93-003211
 Kieffer, James David
 93-002985
 Klamef, Tim
 93-002591
 Kifer, Robert R.
 93-004380

AUTHOR INDEX

- K1 Jasko, V. I.
 93-002994
 K1 Kouchi, Kiyoshi
 93-002844
 K1 Kouchi, Kotaro
 93-002672
 K1 Kore, Melvin V., Jr.
 93-004395
 K11 S, U.
 93-002621
 Kim, S. U.
 93-002690
 Kim, Chong Kwan
 93-004344
 Kim, J. M.
 93-004382
 Kim, Jia M.
 93-004358
 Kim, Jong-Man
 93-004330
 Kim, Ryong-Kih
 93-004330
 Kim, Susan
 93-003313
 Kim, Sung Chul
 93-002913
 Kim, Yong Man
 93-003111
 93-004344
 Kimmel, Joseph J.
 93-003850
 93-004255
 Kimura, Takahisa
 93-003416
 93-003479
 Kindschi, Greg A.
 93-002423
 93-003873
 King, D. P. F.
 93-002966
 King, David P. F.
 93-002961
 King, David S.
 93-002560
 93-002010
 King, L. A.
 93-002673
 King, T. L.
 93-002907
 King, Tim L.
 93-002908
 93-003005
 Kingsbury, Peter O.
 93-003818
 Kingsley, J. B.
 93-002276
 Kinkaid, R.
 93-002574
 Kinuzuka, Henry
 93-002305
 Kinzle, Robert A. III
 93-004321
 Kiorboe, Thomas
 93-003566
 Kirk, James P.
 93-004139
 Kirk, Kiaron
 93-002575
 Kirkpatrick, Bill
 93-003873
 Kirkwood, G. P.
 93-003904
 Kirsch, Eileen M.
 93-003212
 Kiryu, Yasuaki
 93-004401
 Kirschick, Peter
 93-004024
 Kishida, M.
 93-002576
 Kishida, Mitsuyo
 93-002910
 Kishida, Reiji
 93-002717
 Kishino, Hirohisa
 93-001052
 Kisilloglu, Mina
 93-004184
 Kitada, Yufti
 93-003861
 93-003862
 Kitajima, Chikara
 93-002351
 Kitajima, Ken
 93-002816
 Kitahkado, Manabu
 93-003431
 Kitao, Tadatoshi
 93-002062
 Kittelsen, Arne
 93-002352
 Kiyohara, Sadao
 93-002475
 Kiyono, Hichiyasu
 93-002672
 Kiyota, Masashi
 93-003090
 93-003930
 Kjesbu, Olav S.
 93-002807
 Kjesvik, E.
 93-002487
 93-002488
 93-003131
 93-003213
 93-003619
 Kjesvik, Elie
 93-002618
 Klamath River Fisheries Resource Office
 93-003780
 Klaua, R. J.
 93-003551
 Kleban, Peter
 93-001997
 Kleinschmidt, Traute
 93-003360
 Kleinius, P. H.
 93-003405
 Kloeppe-Sans, P. J.
 93-003633
 Knapp, Roland Alexander
 93-003135
 Knighe, Richard L.
 93-003216
 Knights, B.
 93-003175
 93-004102
 Kneuer, T.
 93-002510
 93-002677
 93-002690
 Keok, C. J.
 93-002678
 Keok, D.
 93-003399
 Ko, David
 93-002740
 Kobara, J.
 93-003471
 Kobayashi, J.
 93-003722
 Koburger, J. A.
 93-004350

- Kobylanckiy, S. G.
 93-003361
 Koch, E. A.
 93-002489
 93-002679
 Kohbara, Jun
 93-002370
 Kohler, Christopher C.
 93-003660
 Kohler, Steven L.
 93-004104
 Kojima, M.
 93-003721
 Kojima, Yutaka
 93-002873
 Kojis, Barbara L.
 93-004381
 Kolar, Zvonimir I.
 93-002622
 Kollberg, Sven
 93-002243
 Kolick, A. S.
 93-002600
 Komev, Victor T.
 93-003640
 Konepowski, Andrzej
 93-001647
 93-003214
 93-004825
 Konar, S. K.
 93-003952
 93-004099
 Koonce, Gregory P.
 93-004099
 Kopell, Nancy
 93-002501
 Kormanik, G. A.
 93-002481
 Korneely, Greg W.
 93-003167
 Korsgaard, Soddil
 93-002887
 Korsmeyer, K. E.
 93-002887
 Koslovski, Susan
 93-003640
 Kostacki, P. T.
 93-003590
 Kozul, Eyo
 93-002664
 Koszaliniski, Henryk
 93-004690
 93-004185
 93-004189
 Kotrschal, K.
 93-002699
 Koutsikopoulos, Constantine
 93-003273
 Kouyama, H.
 93-002647
 Kovac, Vladimir
 93-004116
 Kovacs, T. G.
 93-003848
 Kowalczyk, Czeslaw
 93-004113
 Kowalewski, Mieczyslaw
 93-002304
 93-003893
 Kowalik, Witold
 93-004113
 Kozuchowski, E. S.
 93-003215
 Krajncovic-Djurdic, M.
 93-003650
 93-003684
 Kralovec, Mary L.
 93-003216
 Kramer, C. R.
 93-002604
 Kramer, B. W.
 93-003563
 Kratochvil, W.
 93-002360
 Krael, Syd
 93-002371
 Kraus, Corey
 93-002863
 Krechner, Michael
 93-002404
 Krise, William F.
 93-002259
 93-002431
 93-002439
 93-002440
 Kroese, Alfons B. A.
 93-002685
 Krogstad, P. K.
 93-002346
 Krohn, William B.
 93-003217
 KRITAT
 93-004091
 Kruger, Per Goran
 93-003199
 Kruuk, H.
 93-003218
 Kryul, H.
 93-003213
 Krzykawski, Stanislaw
 93-002481
 93-002492
 93-002509
 93-004471
 Krzynowek, Judith
 93-004383
 Kuang Puren
 93-003504
 Kubaryk, John M.
 93-002306
 Kubota, Tadashi
 93-003553
 Kucklick, John R.
 93-003554
 Kudo, Shigeharu
 93-003429
 Kulak, D.
 93-002699
 Kulkarni, K. M.
 93-003688
 Kulling, David
 93-002586
 Kumagai, Akira
 93-003473
 93-003474
 Kuno, Hidemi
 93-002663
 Kummer, Helmut
 93-002232
 93-002372
 93-002910
 Kuro, Y.
 93-002606
 Kuszmars, Andreas
 93-003348
 Kurien, John
 93-004256
 Kurita, Jun
 93-002911
 Kurtes, Gerald
 93-002373
 Kushima, Jo-Ann M.
 93-002555

AUTHOR INDEX

- Kuwabara, Nobuhiro
 93-00389
 Kuz'mina, Y. V.
 93-00287
 Kuzin, A. E.
 93-00392
 Kveseth, P.
 93-00323
 Kwak, T. J.
 93-00445
 Kwon, K. K.
 93-00429
 Kwon, H. C.
 93-00288
 L'Abbe-Lund, Jan Henning
 93-00297
 Labiache-Carrara, Ghislaine
 93-00475
 Laborda, E.
 93-00394
 93-00395
 Laborda, P.
 93-00394
 93-00395
 Lee, Raymond
 93-00402
 93-00425
 Legardere, Françoise
 93-00243
 93-00327
 Legardere, J.-P.
 93-00298
 Labin, Abdelhak
 93-00428
 Labenstein, F.
 93-00294
 93-00289
 Lai, M. C.
 93-00267
 93-00269
 93-00281
 Lai, Yung-Lin
 93-00343
 Laidley, C. W.
 93-00281
 Laing, A.
 93-00367
 Lakshmi, Jushl
 93-00370
 Lakshminarayana, J. S. S.
 93-00361
 Laliberte, D.
 93-00391
 Lallier, R.
 93-00289
 Laloe, Francis
 93-00397
 93-00418
 93-00429
 Lanekin, John T.
 93-00332
 Lampe, Harlan
 93-00426
 Lando, Lyne
 93-00444
 Landsverk, T.
 93-00340
 Landy, R. B.
 93-00392
 Lane, Hugo C.
 93-00262
 Lanferstock, John
 93-00398
 Langaker, Roy W.
 93-00252
 Langan, Richard
 93-00319

- .. CONTINUED ..
 Langan, Richard
 93-00389
 Langdon, J. S.
 93-00349
 Langecker, T. B.
 93-00249
 Langeland, Arnfinn
 93-00287
 Langolier, Lisa
 93-00426
 Langor, Gregory J.
 93-00426
 Langille, Robert N.
 93-00249
 Langsdale, J. R. N.
 93-00287
 Lanier, T. C.
 93-00368
 Lanier, Tyre, C.
 93-00371
 Lansdell, W.
 93-00386
 Lanson, Anders
 93-00240
 Lantagna, J.
 93-00349
 93-00334
 Lantry, B. F.
 93-00481
 Lantz, Frederic
 93-00378
 93-00421
 Lantz, S. E.
 93-00367
 LaPlace, Joseph A.
 93-00339
 Larkin, P. A.
 93-00376
 93-00378
 LaRosa, S. C.
 93-00417
 LaRouche, Pierre
 93-00330
 Larson, D. A.
 93-00268
 93-00269
 Larson, Donald A.
 93-00269
 Larson, H. J.
 93-00294
 Larson, Hans Jorgen S.
 93-00290
 Larson, E.
 93-00288
 Larson, Gary L.
 93-00410
 Larsson, Per
 93-00382
 Lasse, B. A.
 93-00396
 Lasso, C.
 93-00499
 Lestio, F.
 93-00396
 Louder, B. V.
 93-00286
 93-00287
 93-00287
 93-00288
 Loughton, R.
 93-00316
 Laurec, A.
 93-00380
 Laurec, Alain
 93-00373
 Laurin, Derral J.
 93-00313

- Laurence, Geoffrey C.
 93-00340
 Laurendeau, Jacques
 93-002095
 Laurent, Pierre
 93-002469
 Laury, Anita
 93-002096
 Leves, Patrick
 93-002332
 Lavie, Y.
 93-002569
 Lavie, P. A.
 93-002912
 Law, Robbie J.
 93-003557
 Laxier, C. B.
 93-002709
 Le Bail, Pierre-Yves
 93-002580
 Le Corre, Gildas
 93-004226
 Le Deen, Loïc
 93-003536
 Le D'freach-Bourstier, L.
 93-002962
 93-003166
 Le Gall, Jean-Yves
 93-002432
 Leach, Paul J.
 93-003784
 Lean, D. R. S.
 93-003535
 Leantz, C. G. de
 93-003086
 93-003161
 Leatherland, John F.
 93-002522
 Leblanc, Brian O.
 93-004262
 Leblanc, C.
 93-004196
 Leblanc, Isabelle
 93-004263
 Lech, John J.
 93-003630
 Lederis, Karl P.
 93-002746
 Lee, Chong M.
 93-004104
 93-004305
 Lee, Denny C.
 93-003980
 Lee, Dennis P.
 93-003866
 93-003913
 Lee, Eung Ho
 93-004346
 Lee, Hun Ku
 93-003467
 Lee, Randall T.
 93-003943
 Lee, Robert K. K.
 93-002697
 Leach, Michael
 93-004264
 LeeIpuzra, W.
 93-002307
 Leger, Philippe
 93-002389
 Leger, R.
 93-002090
 Leggett, W. C.
 93-003335
 Leggett, William C.
 93-002584
- CONTINUED -
- Leggett, William C.
 93-003164
 93-003258
 93-003290
 93-003685
 Legler, Juliette
 93-003707
 Leh, M. H.
 93-004159
 Leibovitz, Henry
 93-004385
 Leino, Richard L.
 93-002718
 Leis, Jeffrey M.
 93-002490
 Leisten, Adam A.
 93-003152
 Lening, Thomas
 93-003322
 Lanke, M.
 93-002699
 Lann, Carol A.
 93-002367
 Lenoallie, J.
 93-003768
 Lemetaw, Michel
 93-004220
 Lewis, Leo
 93-002985
 Lenzi, Mauro
 93-003556
 Leo, Julius Witt
 93-002374
 Leon, Stuart Clark
 93-004145
 Leonard, O. A.
 93-003500
 Leonard, D. R. P.
 93-003653
 Leong, J. C.
 93-003463
 Lerner, Sally
 93-003785
 Leslie, J. K.
 93-004265
 Levinson, Arvidor
 93-002620
 Levesque, Jean-Jacques
 93-004181
 93-004213
 Levi, Eldon J.
 93-004427
 Levisil, Dominique
 93-004026
 Levin, P. S.
 93-002990
 Levine, C. O.
 93-004154
 Levy, J. A.
 93-002918
 Levy, M. G.
 93-002805
 Lewis, Alvin G.
 93-004094
 Lewis, J. W.
 93-003654
 Lewis, Jack
 93-003070
 Lewis, William H.
 93-003593
 Li Ho
 93-003894
 Li Gengang
 93-004069
 Li Guoyou
 93-002533

AUTHOR INDEX

- Li Jiacheng
93-002059
 Li Wei
93-003434
 Li Zhenqiu
93-003467
 Li, Jia-Le
93-004138
 Li, Ningjun
93-004386
 Liao, P. H.
93-004387
93-004388
 Liao, W. K.
93-002251
93-004827
93-004828
93-004829
93-004830
 Libosvansky, Jiri
93-004147
 Lichotowich, James A.
93-003792
 Lichtkoppler, Frank R.
93-004031
 Lick, Roland
93-003377
 Licka, J.
93-003566
 Lio, D.
93-002895
 Liebermann, Davine
93-004146
 Lightfoot, C.
93-002285
 Liley, H. R.
93-002750
 Lillehaug, A.
93-003408
93-003409
 Lillehaug, Arle
93-003410
 Lillie, Richard A.
93-003220
 Lilly, G. R.
93-003221
 Lim, Jon Teouli
93-002913
 Lim, P.
93-004056
 Lin Yilin
93-002425
 Lin, Hoo-Ben
93-002701
 Lin, J.-J.
93-002700
 Lin, Sheau-Ling
93-002387
 Lin, Shou-Tzu
93-003456
 Lin, Xin-Wei
93-002701
 Linds, A. R.
93-002093
 Linder, Ralph D.
93-002930
 Ling Bo
93-002388
 Lingnau, Tracy
93-004266
 Linton, Tyler Keith
93-003655
 Lipschitz, Grif
93-002620
 Lirette, Maurice B.
93-003935
 Litman, Diego
93-002991
 Lisle, Thomas E.
93-002970
 Lissner, Claudia
93-002474
 Liu Desheng
93-003584
 Liu Jingwen
93-003531
 Liu Lixin
93-002859
 Liu Liyan
93-002544
 Liu Xiaofang
93-002587
 Liu Xiang
93-002792
93-002289
 Liu Xitai
93-002859
 Liu, D. L.
93-004009
 Liu, W. S.
93-002499
 Livingston, Ann C.
93-004112
 Lleonart, Jordi
93-004190
 Lloyd, Steven W.
93-002383
 Lluich-Belda, Daniel
93-003087
 Lluich-Cote, Daniel B.
93-003087
 Lo, K. W.
93-004387
93-004388
 Loebner, N. L.
93-002313
 Lobon-Cervia, Javier
93-002071
93-004091
 Lochans, Rebecca Thoms
93-002375
 Lockhart, W. L.
93-003695
93-003611
93-003633
93-003819
 Lockridge, L. C.
93-002670
 Lodi, M.
93-002360
 Leeffler, Cindy
93-004155
 Leey, Christina Wahl
93-002702
93-002703
 Leew, E. R.
93-002728
 Loeffler, H.
93-004469
 Loftus, William F.
93-004032
 Loganathan, O.
93-003411
 Lohr, Samuel C.
93-004095
 Loken, S.
93-002346
 Lombardi, J.
93-002471
93-002575
93-002636
 Landravelle, R. L.
93-002704

- Long, J. H., Jr
 93-002478
 93-002706
 Longnebaugh, Matt
 93-004075
 Lookabaugh, Patrick S.
 93-003222
 Loomis, David K.
 93-003788
 Loosvoort, Benoit
 93-004267
 Loransen, N.
 93-003460
 Loretz, C. A.
 93-002586
 Loranos, Lori P.
 93-003014
 93-003915
 Lou, O. C.
 93-003275
 Louis, Max
 93-003899
 Lomas, Saeder
 93-002808
 Lovejoy, D. A.
 93-002706
 Lovell, Tom
 93-002376
 93-002377
 Lu, Y.
 93-002647
 Lu, Zhi-Ping
 93-002308
 Lubbers, Lawrence III
 93-003311
 Lucas, M. C.
 93-002557
 93-002707
 93-002981
 93-004446
 93-004447
 Luckhurst, Brian E.
 93-003362
 Ludwig, B.
 93-002433
 Ludwig, J. P.
 93-003251
 Luke, S.
 93-002708
 93-002824
 Lukasev, E. G.
 93-003688
 Lunder, T.
 93-003409
 Lundstrom, Ronald C.
 93-003656
 Luo Bingzheng
 93-003050
 Luong, Nicolas
 93-002432
 Lupiani, S.
 93-003388
 Lura, H.
 93-003137
 Lusk, Stanislav
 93-004147
 Lusty, E. William
 93-003942
 Lutnesky, Merrin Michael Francis
 93-003138
 Luxon, P. L.
 93-003633
 93-003657
 Lyle F., Lourdes P.
 93-003058
 Lyons, John
 93-003817
- .CONTINUED.
- Lyons, John
 93-004096
 Lysegh, S.
 93-004210
 Lysne, D. A.
 93-003496
 Ma Lailing
 93-003068
 Ma Tao
 93-002014
 Ma, Lon Bin
 93-004389
 Macagno, Eduardo R.
 93-002922
 MacCall, Alec D.
 93-004188
 MacConnell, Elizabeth
 93-003451
 MacDonald, J. S.
 93-004104
 Macleina, Michael J.
 93-003184
 93-003857
 93-004262
 Macowicz, Beverly J.
 93-003124
 Machado, Matthew D.
 93-002972
 MacKay, Kenneth T.
 93-002309
 MacKay, H.
 93-002609
 Mackay, M. E.
 93-002709
 MacKenzie, Duncan S.
 93-002362
 MacKinnlay, Dan D.
 93-002434
 MacKinney, P. A.
 93-002977
 MacLennan, R. S.
 93-003727
 MacLennan, Stephen
 93-004363
 MacLennan, O. M.
 93-003672
 MacLennan, Donald
 93-003711
 MacMillan, J. R.
 93-002829
 MacNeil, J. H.
 93-004390
 Macquart-Moulin, C.
 93-003166
 Macquart-Moulin, Claude
 93-002892
 Macy, Thomas L.
 93-002256
 Maddux, Henry R.
 93-004336
 Madonjian, Charles P.
 93-003658
 93-003659
 Madero Perez, Jose Luis
 93-003071
 Madhavan, K.
 93-003576
 Madjar, Maria
 93-002384
 Maeda, Tatsuki I.
 93-003170
 Mahara, M.
 93-002647
 Maeno, Hiroshi
 93-002475
 Maeno, Yukio
 93-003462

AUTHOR INDEX

- Maestro, J. L.
 93-002739
- Haggese, Maria Christina
 93-002937
- Magliulo Capriano, L.
 93-002710
- Magnan, Pierre
 93-003267
- Magnolia, Stephen J.
 93-003660
- Magalhães, Carin
 93-002993
 93-003253
- Magnusson, Jutta V.
 93-003223
- Magor, B.
 93-002711
- Magor, B. G.
 93-002727
- Mahasvari Devi, K.
 93-003546
- Maher, Donald R.
 93-004391
- Mahasvari Devi, K.
 93-003629
- Mahon, Robin
 93-003046
 93-004232
 93-004260
 93-004282
- Maillet, Gary L.
 93-003120
- Mailloz, Julia
 93-002712
 93-002713
 93-002714
- Makio, John R.
 93-003787
 93-004269
- Makr, G. C.
 93-002510
- Maksey, John G.
 93-003315
- Makso, B.
 93-003026
 93-003051
 93-003780
- Makstro, E. L.
 93-002915
- Maika, Masashi
 93-003473
 93-003474
- Maikil, Anpita
 93-002772
- Maikoev, A. N.
 93-002500
 93-002929
- Maksimovich, A. A.
 93-002891
- Malatesta, R. J.
 93-004174
- Maler, L.
 93-002724
- Maler, Leonard
 93-002667
- Malinin, L. K.
 93-002994
- Malkario, Uma
 93-003669
- Malliga Devi, T.
 93-002697
- Mallin, Michael A.
 93-004270
- Malquist, H. J.
 93-003224
- Malinsson, Torill
 93-002591
- Malvestuto, Stephen P.
 93-004461
- Malonas, E.
 93-002550
- Mancil, William E.
 93-002209
 93-002210
- Maneschy, Maria Cristina
 93-004074
- Maney, Richard S.
 93-004303
- Manfredi, Eugene Trent
 93-003412
- Mangel, M.
 93-003652
- Manickchand-Hollenan, Sherry C.
 93-004271
- Mans, R. H. K.
 93-003053
- Mans, Richard K. H.
 93-004105
- Mansson, Hideyuki
 93-002809
- Manson, Harold
 93-003711
- Mantia, Don P.
 93-002435
- Manzanares, Guillermo Ortuno
 93-004456
- Manzur-I-Rhads, M.
 93-004375
- Marchand, Jocelyne
 93-003316
- Marchant, B.
 93-003726
- Marchant, Tracy A.
 93-002715
- Marchetti, R.
 93-003572
- Marcolino, D. J.
 93-003486
- Marek, Terry R.
 93-003011
- Margaritis, Anargyros
 93-002378
- Margenau, Terry L.
 93-003083
 93-003088
- Marin De Mateo, M.
 93-003437
- Marín, Jean
 93-004203
- Marking, Leif L.
 93-002277
 93-002436
- Markwell, Ross
 93-003607
- Marliano, Jeffrey B.
 93-002337
 93-004172
- Marquet, Gerard
 93-003139
- Marquis, Mick
 93-003241
- Marvas, G.
 93-003550
- Marsden, J. Ellen
 93-003074
- Marsden, H. J.
 93-003413
- Marshall, M. R.
 93-004350
- Marshall, Mary
 93-003303
- Martensdoetler, G.
 93-003342

- Marle?, P. H.
 93-003689
 Marthinsen, I.
 93-003714
 Martia?, J.
 93-002761
 Martin, Andrew P.
 93-002916
 Martin, Christopher
 93-003056
 Martin, O. J.
 93-002995
 Martie, Joe H.
 93-004245
 Martin, P.
 93-003062
 Martin, Paloma
 93-004273
 Martinez Bano, Pedro
 93-004274
 Martinez, A.
 93-002450
 Martinez, E.
 93-003446
 Martinez, J. J.
 93-003086
 Martinez, Neo Damian
 93-004033
 Martinioli, Maria Grazia
 93-002716
 Martinson, Kristen S.
 93-003053
 Marty, Claude
 93-002944
 Mas, Julio
 93-004198
 93-004274
 Masahito, Prince
 93-002554
 Masini, Marie Angela
 93-002834
 Maslan, S.
 93-002729
 Mason, Bradley Cornell
 93-004275
 Mason, C. L.
 93-003463
 Mason, Doran M.
 93-004240
 Mason, Katherine M.
 93-003120
 Messer, Michael P.
 93-002311
 Messon, Gerard
 93-003316
 Masuki, E.
 93-003317
 Mastala, Z.
 93-003566
 Mastynski, Jerzy
 93-003566
 Masunoto, Toshino
 93-002388
 Matey, Victoria E.
 93-003648
 Mathen, Bimco
 93-003225
 Mather, P. G.
 93-002917
 Mathers, A.
 93-004050
 Mathias, J. A.
 93-002313
 Matkowski, Grzegorz
 93-004127
 Matlock, Gary C.
 93-003856
 Matsuda, Hideki
 93-002717
 Matsumoto, N.
 93-003671
 Matsumoto, Takashi
 93-004410
 Matsumura, Satsuki
 93-003518
 Matsuno, Takao
 93-002850
 Matsushita, Katsumi
 93-002996
 93-003226
 Matthews, T. A.
 93-003644
 93-003445
 Matthews, William J.
 93-003248
 Matthiensen, A.
 93-002918
 Matthiessen, Peter
 93-003557
 Mattison, N. S.
 93-003916
 Matuda, Ko
 93-003914
 93-003915
 Matuszek, John E.
 93-002661
 Maughan, D. E.
 93-003589
 Maughan, O. Eugene
 93-003031
 Maximo, V.
 93-002742
 May, E. M.
 93-003388
 May, Richard F.
 93-003820
 May, Thomas W.
 93-003609
 93-003735
 Mazgal, Casary
 93-003208
 Mazurkiewicz, Grazyna
 93-004123
 Mbatia, J. M.
 93-004097
 McAllister, Don E.
 93-004276
 McAndrews, Russ
 93-002413
 McCarter, Nigel
 93-002437
 McCarthy, Ian D.
 93-003190
 McCarty, T. K.
 93-002998
 McCauley, R.
 93-003789
 McClellan, David B.
 93-003927
 McClendon, Denny D.
 93-004112
 McCloskey, John T.
 93-003662
 McComb, A. J.
 93-004331
 McConnell, Laura L.
 93-002554
 McCormick, J. Howard
 93-002710
 93-003616
 McCrimmon, Donald
 93-002730
 McDonald, C. G.
 93-002719

AUTHOR INDEX

- McDonald, Kathy J
93-003832
- McDonald, Susanne J
93-003530
- McDonald, Thomas J.
93-003538
- McDowall, R M
93-002997
- McDowell, Jan R
93-002894
- McDowell, William H
93-004842
- McElroy, Douglas H.
93-002919
- McEvoy, J.
93-003140
93-003534
- McEvoy, L. A.
93-003140
- McFarland, W M
93-002720
- McGeachy, S M
93-003963
93-003664
- McGeer, J. C.
93-002928
- McGill, Ken
93-004277
- McGovern, P.
93-002938
- McGowan, C.
93-002938
- McGowan, Michael F.
93-003322
- McHoney, H. J.
93-002705
- McIninch, Stephen P.
93-003318
- McIntosh, Gregory S
93-004270
- McKay, Susan
93-003997
- McKenzie, Jan C.
93-002625
- McKenzie, P.
93-004279
- McKern, John L.
93-006090
- McKinlay, R. S.
93-004440
- McKinney, C. C.
93-002807
- McKinnon, G. A.
93-003021
- McLean, Kevin R.
93-003917
- McLean, Robert O.
93-003216
- McLean, William E.
93-002253
93-002430
- McManus, M. G.
93-002721
- McMaster, M.
93-003788
- McMaster, M. E.
93-003657
93-003727
- McMaster, Mark Ervin
93-003665
- McNeil, William J.
93-002254
93-002255
- McNicol, D. K.
93-003227
- McPhail, J. O.
93-002912
- McRuar, Jeff
93-003338
- McWilliams, P. G.
93-002722
- McBurn, Malcolm
93-004399
- Meado, James W.
93-002212
93-002264
93-002439
93-002440
93-003712
- Meadows, Dwayne W.
93-002582
- Meo, D.
93-004649
- Meek, J.
93-002723
93-002724
- Meiser, G. J.
93-004162
- Meinardi, W.
93-004231
- Mehtaani, H.
93-001032
- Melle, Weyorn
93-003063
- Melton, S. L.
93-002355
- Melvin, W. T.
93-002650
- Mesler, Gabriela
93-002725
- Mendonca, Elsa
93-003616
- Meneses, Isabel
93-003008
93-003506
- Menezes, John K.
93-003870
- Meng, Hans Jung
93-004036
- Mengel, Leslie J.
93-002431
- Manin, Eliane
93-002478
93-002501
- Markovsky, J. J.
93-004034
93-004036
- Marle, G.
93-002665
- Merriner, J. V.
93-004327
- Message, Jean-Luc
93-002379
- Metcalfe, C. O.
93-003648
93-003666
- Metcalfe, Chris
93-003608
- Metcalfe, J. D.
93-004458
- Metcalfe, H. B.
93-003852
93-003864
- Methven, David A.
93-002331
- Methner, D. A.
93-003633
- Meyer, Axel
93-003858
- Meyer, D. L.
93-002871
- Meyers, Lee S.
93-001167

- Meyers, T. R.
 93-003463
 Meyers, Theodore
 93-003470
 Mhalson, Furhan T
 93-003514
 Mi, Liham
 93-003533
 Micha, J. C.
 93-003198
 Michel, C.
 93-003414
 Middaugh, D. P.
 93-003643
 Middleton, D. L.
 93-002711
 93-002727
 Migeon, Gerard
 93-002730
 Mihara, Shigeru
 93-002664
 Mikhailov, V. S.
 93-002793
 MIKI, Hidemasa
 93-004407
 Miki, Katsuhiko
 93-002338
 Miltzack, Manfred
 93-002506
 93-002999
 Moltzer, C. S.
 93-002726
 Miller, H. H.
 93-004202
 Miller, Andrew C.
 93-004134
 Miller, Dale E.
 93-004099
 Miller, Daniel J.
 93-002295
 Miller, James D.
 93-004320
 Miller, H. W.
 93-002781
 93-002727
 Miller, P. J.
 93-003363
 Miller, Peter
 93-002664
 Miller, William J.
 93-002443
 Milligan, C. Louise
 93-002631
 Milton, G. Sandy
 93-002228
 Mina, Takayoshi
 93-002388
 Miao, Steven Douglas
 93-002312
 Miazra, Olga Martins
 93-002583
 Min, Lou-Mei
 93-002508
 Miuaki, Takashi
 93-003029
 Ming Liu, Xueg
 93-003003
 Mincucci, T.
 93-003486
 Ministry of Agriculture Fisheries and Food
 93-004280
 Miura, C. K.
 93-003564
 Mito, Shin-ichi
 93-003516
 Mishra, S. K.
 93-003668
 Mishra, Shivaker
 93-003669
 Mitsu, Ean
 93-004420
 Miskiewicz, A. G.
 93-003945
 93-004281
 Mishra, R. K.
 93-003974
 Mishra, S. K.
 93-002380
 Misund, Ole Arne
 93-003910
 Misani, Tompak
 93-002386
 Mitchell, Andrew J.
 93-002382
 Mitchell, B. J.
 93-003293
 Mitchell, R. B.
 93-002904
 Miura, Tatzuo
 93-004138
 Miyajima, Toshiaki
 93-002370
 Miyake, T.
 93-002504
 Miyasaki, Taiiko
 93-002386
 93-002728
 Miyazaki, T.
 93-003471
 Mizuno, Nobuhiko
 93-002824
 Mizuta, Yunosuke
 93-003462
 Mo, T. A.
 93-003454
 Moav, Ron
 93-002326
 Moberg, Gary P.
 93-003375
 Modica, Stephen F.
 93-003826
 Mohan, Peter J.
 93-003483
 Moir, Jonathan
 93-002339
 Moiseev, P. A.
 93-002213
 Mojsiewicz, W. R.
 93-002965
 Mokness, E.
 93-004247
 Mokness, Ernest
 93-003041
 93-003255
 Mollist, P.
 93-002729
 Moller, Heino
 93-003377
 Molyneux, Douglas B.
 93-004180
 Monson, Thomas P.
 93-002682
 Monaco, Paul J.
 93-002932
 Monse, O.
 93-003447
 Monks, S. A.
 93-003618
 Monteith-McMaster, Cheryl Ann
 93-003670
 Montejo, Jose
 93-004371
 Montgomery, Caron R.
 93-003050

AUTHOR INDEX

- Montgomery, S. S.
 93-01254
 Moedie, G. E. E.
 93-02313
 Moody, T.
 93-02623
 93-03671
 Moeker, J. M.
 93-02392
 Moon, T. W.
 93-02837
 Moore, A.
 93-03000
 Moore, Denton R.
 93-03867
 Moore, E. A.
 93-02507
 93-03802
 93-03803
 Moore, Karen S.
 93-02730
 Moore, L. E.
 93-02731
 Moore, Stephen E.
 93-04101
 Moyoung, R. R.
 93-04166
 Moran, M.
 93-03529
 Moran, P.
 93-02003
 Moreira, F.
 93-03178
 93-03101
 Moran, J. A. W.
 93-02732
 Morgan, M.
 93-02590
 Morgan, M. J.
 93-03875
 Morimoto, Haruyuki
 93-03541
 Morimoto, Kyoze
 93-04426
 Moring, John R.
 93-03217
 93-03889
 Morishita, Tatsuo
 93-02370
 Moriyama, S.
 93-02733
 Morize, Eric
 93-04197
 Morison, Richard D.
 93-04395
 Morizat, D.
 93-02970
 Morley, Steven O.
 93-02748
 Morrison, Eila
 93-024217
 Morris, Howard R.
 93-02836
 Morris, J. A.
 93-02451
 Morris, J. Robert
 93-02626
 Morris, Kerwon
 93-04282
 Morrison, B. R. S.
 93-02091
 Morrison, C. N.
 93-02453
 Mosello, R.
 93-02452
 Mosheron Dupis, J.
 93-02988
 Moss, Brian
 93-02451
 Mostafa, N. H.
 93-023421
 Motse, Kooru
 93-04372
 Moteshige, Toshihiro
 93-04377
 Mott, Donald F.
 93-02442
 Mounsey, Richard P.
 93-02523
 Mourad, Mohamed Hassan
 93-02801
 93-023671
 93-023672
 Howat, A.
 93-02362
 Moyes, C. D.
 93-02726
 Moyle, Peter B.
 93-04125
 Mozes, Noam
 93-02272
 Muhsistein, Lisa K.
 93-02822
 Mueller, J. B.
 93-02667
 Nagiya, Y.
 93-02268
 Nagiya, Yasuo
 93-02558
 Nair, D. C. G.
 93-02351
 Nair, Derek C. G.
 93-02373
 Nakhina, R. V.
 93-02388
 93-04285
 Mulcahy, M. F.
 93-02375
 Mullas, J. W.
 93-04441
 Muller, Rudolf
 93-04436
 Mulvey, N.
 93-02632
 Munamar, M.
 93-02407
 Mundie, J. H.
 93-02823
 Murk, P.
 93-04267
 Murk, Peter
 93-023655
 Murkittsrick, K.
 93-023705
 Murkittsrick, K. R.
 93-023633
 93-023657
 93-023674
 93-022727
 Muzoz, Jean-Francois
 93-023730
 Munro, A. L. S.
 93-023423
 93-023433
 Munshi, J. S. Datta
 93-02585
 Munzke, Maurice I.
 93-02759
 93-02520
 Mural, Takushi
 93-02214
 Murata, Akina
 93-02215

AUTHOR INDEX

- Murata, Osamu
 93-002663
 Murayama, Tatsuro
 93-003129
 Murdack, Steve H.
 93-003855
 Muroga, Ritsukuni
 93-003378
 93-002862
 93-003472
 Murphy, B. J.
 93-002823
 Murphy, Brian R.
 93-003887
 93-003975
 Murphy, Deborah L.
 93-004262
 Murray, A. P.
 93-003561
 Murray, A. M. A.
 93-003328
 Murray, Clyde B.
 93-002584
 Murray, H. N.
 93-002506
 Murray, James D.
 93-003868
 Murray, P. A.
 93-002587
 93-003092
 93-003093
 Murrin, Faye
 93-002736
 Murthy, C. K.
 93-002724
 Naragon, V.
 93-003686
 Nishitake, Keiichi
 93-003462
 93-003472
 Nishitani, M.
 93-003675
 Nissel, C. J.
 93-003974
 Nisbet, William A.
 93-003260
 Nishida, J. C.
 93-003916
 Nishigaki, G.
 93-002735
 Nizzeil, Patrick M.
 93-003507
 93-003508
 Nyatt, Bewitt B.
 93-003750
 Nyatt, Evelyn M.
 93-003708
 Nyers, R. A.
 93-003142
 93-003984
 Nyquist, Jupp-Go
 93-002435
 Nys, Kjell
 93-002348
 Nachtriv, Joseph V.
 93-003515
 Naeval, Oussar
 93-004452
 Nap, K.
 93-003547
 Nagahama, Yoshitaka
 93-002810
 Nagamatsu, Takeyuki
 93-002664
 Nagano, F.
 93-003471
 Nagasawa, K.
 93-003675
 Nagasawa, Atsuko
 93-004043
 Nagasawa, Kazuya
 93-003490
 93-003509
 Nagashima, Yuji
 93-004356
 Nagata, M.
 93-003082
 Nagayama, Fumio
 93-002792
 Nagler, James J.
 93-002735
 Nahoriak, C. S.
 93-002706
 Naimith, I. A.
 93-004102
 Nami, T. A.
 93-003576
 Nakaf, Toshihiro
 93-003462
 93-003472
 Nakajima, Keiichiro
 93-002785
 Nakajima, Masamichi
 93-002952
 Nakajima, Masayuki
 93-003528
 Nakamura, Makoto
 93-003796
 Nakamura, Motohiko
 93-003050
 Nakamura, Ryosol
 93-003099
 Nakamura, Shunroku
 93-003824
 Nakamura, T.
 93-003722
 Nakanishi, Teruyuki
 93-003578
 Nakano, Toshiki
 93-002737
 Nakashima, Brian S.
 93-004284
 Nakata, Hideaki
 93-003312
 93-003319
 Nakatani, Toshiaki
 93-003179
 Nakatsuru, Yoko
 93-002554
 Nakazawa, Akio
 93-004043
 Namour, Philippe
 93-003730
 Nanda, Indrajit
 93-002921
 93-003013
 Nanda, Sajalendu
 93-003558
 Nandi, Jagabandhu
 93-002793
 Napoli, Laura
 93-002834
 Narayan, K. G.
 93-004408
 Narbonne, J. F.
 93-002677
 Nargis, A.
 93-003143
 Nascimento, P.
 93-002414
 Nash, Gerard B.
 93-002738

AUTHOR INDEX

- Nash, S. D. M.
 93-003165
 Naslund, I.
 93-002966
 Nasu, Toshiro
 93-002663
 Natanson, Lisa J.
 93-002508
 Natarajan, A. V.
 93-003578
 National Fisheries Forum
 93-004285
 National Marine Fisheries Service
 93-003921
 Natural Environment Research Council
 93-003791
 Nawlana, Noll Ariel M.
 93-002509
 Nawarro, I.
 93-002730
 Nawarro, Isabel
 93-002613
 Nayak, B. U.
 93-004286
 Neelis, Nicholas
 93-002922
 Neerhaus, Kjetil
 93-004452
 Nelson, Milla
 93-003792
 Nelson, William H.
 93-002362
 Nelson, John D.
 93-003003
 Nefra, P. J.
 93-004156
 Neftzel, Duane A.
 93-003942
 Neja, Zbigniew
 93-003144
 Nelson, Alan
 93-002371
 Nelson, Bonita D.
 93-003125
 Nelson, C. S.
 93-004454
 Nelson, David M.
 93-004157
 Nelson, Gary A.
 93-003656
 93-003284
 Nelson, P. A.
 93-003684
 Neethi, O. Henriques
 93-003085
 Nepsz, Stephen J.
 93-003987
 Nestleton, Joyce A.
 93-004393
 Neuzner, S. J.
 93-003543
 Neufeld, H. J.
 93-003563
 Neuman, J.
 93-003251
 Neveu, A.
 93-003229
 Neviss, Ahmed E.
 93-002905
 Newman, M. C.
 93-003632
 Newton, Joseph C.
 93-003415
 Noyakov, Alexei
 93-004224
 Ngai, John
 93-002922

..CONTINUED...

- Ngai, John
 93-002923
 Ngalle, M. A. K.
 93-004158
 Nicholas, K. S.
 93-004453
 Nichols, J. H.
 93-003094
 Nicholson, Sandra E.
 93-003583
 Mickus, John G.
 93-002218
 Nielsen, Jennifer L.
 93-003231
 Niemi, Gerald J.
 93-003731
 Nieto, F.
 93-003682
 Nielo, T. P.
 93-003422
 Niimi, A. J.
 93-003679
 93-003608
 Niinimaa, Mikko
 93-002748
 Niittinen, Elena M.
 93-004207
 Niimo, I. A.
 93-002712
 93-002713
 93-002714
 Niimi, Akifumi
 93-002304
 Niishida, Eiichi
 93-002832
 Nishimoto, Jun-ichi
 93-004407
 Nishimura, Akira
 93-003276
 Nishimura, Mitsuhiro
 93-003431
 Nishiyoka, Richard S.
 93-002560
 93-002924
 Nival, P.
 93-003559
 Nizovtsev, G. P.
 93-004288
 Noakes, D. L. G.
 93-002639
 Noakes, David L. G.
 93-002522
 Noble, Richard L.
 93-003184
 Noga, E. J.
 93-002805
 Noguchi, George E.
 93-003565
 Nolan, Conice V.
 93-002741
 Nolden, Michael
 93-004018
 Nomura, Tetsuichi
 93-003416
 Noraka, Michio
 93-003794
 93-003796
 93-004372
 Nonnotte, G.
 93-002742
 Norcross, Brenda L.
 93-003895
 Nordmo, Rolf
 93-003397
 Nordstrom, Robert O.
 93-004349

AUTHOR INDEX

- Narheim, S.
 93-003714
 Marjaga-Curtis, P.
 93-002279
 Marragosa, L.
 93-002754
 93-003718
 Worth, A. W.
 93-003320
 Warthcote, T. G.
 93-004454
 Warthcote, R. G.
 93-002460
 Warthcote, R. Glenn
 93-002581
 93-002743
 Norton, S. F.
 93-003231
 Nose, Yukio
 93-002810
 Novoa, B.
 93-003466
 Novotny, Jerry F.
 93-002296
 Novotny, Tony
 93-002257
 Ntiba, M. J.
 93-002744
 Nuhfer, Andrew J.
 93-003022
 Numachi, Ken-ichi
 93-003340
 Ruzic Torres, M. V.
 93-002752
 Nusibauner, B.
 93-002600
 O'Brien, John
 93-002745
 O'Brien, M.
 93-003483
 O'Brien, Robert J.
 93-004050
 O'Connor, Craig R.
 93-004289
 O'Connor, P. K.
 93-002746
 O'Dacre, T.
 93-003836
 Obendorff, Thierry
 93-004103
 Obfekarzie, Austin J.
 93-003377
 Ocivirk, Jozse
 93-002258
 Ogal, Hideo
 93-002664
 Ogawara, Amy
 93-002371
 Ogawa, Kazuo
 93-003518
 Oguri, Mikio
 93-002747
 Oguro, Chitaru
 93-002785
 Okoshii, Kinzo
 93-003178
 Ohtani, Yoshied
 93-003425
 Ohtsuka, Y.
 93-003722
 Oleskiad, Victor
 93-004455
 O'Leary, E.
 93-003145
 Okamoto, Nobuaki
 93-003473
- ...CONTINUED.
 Okamoto, Nobuaki
 93-003474
 Okawara, Yuji
 93-002748
 Okiyama, Munao
 93-003460
 Okla, Lennart
 93-003052
 Oka, Shigeki
 93-003909
 Okumoto, Naoto
 93-004043
 Olesen, N.
 93-003468
 Oliver, M. P.
 93-003152
 93-004290
 Oliveira, C.
 93-002915
 Oliver, A. S.
 93-002740
 Oliver, D. G.
 93-003679
 Oliver, N. P.
 93-003800
 Oliver, Peter
 93-004198
 Olyvier, J. M.
 93-003026
 Olivier, Jean-Michel
 93-004110
 Olla, B. L.
 93-002318
 Olla, Borri L.
 93-002270
 93-002316
 93-002323
 93-002324
 93-002325
 93-002350
 93-003201
 Ollivier, F.
 93-003527
 Olowolayode, Surajudeen O.
 93-002314
 Olsaker, I.
 93-002805
 Olsen, Anne Berit
 93-003417
 Olsen, K. H.
 93-002750
 Olsen, R. E.
 93-003057
 Olsen, Steinar
 93-003321
 93-003344
 Olsen, Yngvar A.
 93-003511
 Olson, A. D.
 93-004133
 Olsson, Tommy I.
 93-002950
 Oliver, Charles H.
 93-004012
 Oliveira Lima, Rosa M.
 93-004456
 Obredone, Dominique
 93-004081
 Oeljanuk, R. J.
 93-002751
 93-002790
 Omer, Rosemary
 93-004311
 Ong, David
 93-004291
 Ono, Katsumi
 93-002737

AUTHOR INDEX

- Gaizumi, Toru
 93-004372
- Opperhuizen, Antoon
 93-003728
- Øystad, I
 93-002087
- Øystad, Ingegjerd
 93-003199
- Ord, Bill
 93-004292
- Orlis, James T
 93-003662
- Orlove, Benjamin
 93-004025
- Orr, James Wilder
 93-003364
- Ortiz, J. A.
 93-003602
- Ortiz, Jill
 93-002440
- Ortaer, Peter B.
 93-003311
- Orwicz, Kris
 93-002200
- Osborn, Maury F.
 93-004245
- Osborne, Lewis L.
 93-004104
- Osborn, Hal R.
 93-003056
- Oshiro, Takashi
 93-002870
- Osibonjo, O.
 93-003988
- Ostland, V. E.
 93-003427
- Ostes Garrido, M. V.
 93-002752
- Ostrander, Gary Kent
 93-003683
- Otero, A.
 93-002624
- Otero, J.
 93-002906
- Otosako, Mitsuru
 93-003370
- Otwell, W. S.
 93-004390
- Otwell, W. Stevon
 93-004390
- Ouchi, Kazuo-ji
 93-002564
- Overden, J. R.
 93-002925
- Overstreet, Robin H.
 93-004262
- Owsley, David E.
 93-002443
- Oseeford, Hazel
 93-003096
- Oseeford, Hazel A.
 93-003150
- Oyegunwa, O.
 93-002549
- Ozretic, B.
 93-003650
 93-003684
- Pacheco-Aguilar, Ramon
 93-004395
- Packard, Anne Turner
 93-003232
- Page, S. N.
 93-002947
- Pahl-Wostl, Claudia
 93-003976
- Paine, Michael D.
 93-003609
- Pakhomov, E. A.
 93-003233
- Palaco, M. R.
 93-003500
- Palanichamy, R.
 93-003606
- Palanichamy, S.
 93-003657
- Paleolog, Andrzej
 93-004313
- Palicka, Jiri
 93-002405
- Paller, Michael H.
 93-003025
- Palm, Harry
 93-003377
- Palmer, Deborah M.
 93-003631
- Palmers, I.
 93-003146
- Palsson, Olafur K.
 93-003223
- Palumbi, Stephen R.
 93-002916
- Pan Jirngel
 93-003512
- Pan, Connie Sun
 93-002307
- Pasaqiotaki, P.
 93-002920
- Pando, Jaishree
 93-003027
- Parkhurst, N. W.
 93-002503
- Paronizio, Lourie J.
 93-004383
- Papaconstantinou, C.
 93-003247
- Paragomian, Vaughn L.
 93-004457
- Parin, N. V.
 93-003365
- Park, Hans Yang
 93-002444
- Park, Joo W.
 93-004371
- Parke, Clyde W.
 93-002337
- Parker, D. A.
 93-002954
 93-003977
- Parker, Lynn H.
 93-003513
- Parker, Nick C.
 93-002445
- Parker, W. R.
 93-003613
- Parkhurst, James A.
 93-002259
- Parkyn, D. C.
 93-002753
- Parrish, C. C.
 93-002590
- Parrizas, M.
 93-002730
- Parrott, J.
 93-003705
- Parrott, J. L.
 93-003687
 93-003733
- Part, P.
 93-002754
- Part, Petr
 93-002755
- Parzefall, Jakob
 93-003013

AUTHOR INDEX

- Pascho, R. J.
 93-003418
 Pascual, Mercedes
 93-003508
 Pascual, Miguel A.
 93-003979
 Pastor, A. M.
 93-002825
 Pastor, Angel M.
 93-002756
 Pate, Henry O.
 93-003085
 Patil, P. S.
 93-003588
 Patrino, G.
 93-003166
 Patrino, Gilbert
 93-002992
 Patterson, Kenneth
 93-004793
 Patwardhan, S. A.
 93-003689
 93-003690
 Patzner, R. A.
 93-002404
 93-002689
 Paul, A. J.
 93-003264
 93-003277
 Paul, J. M.
 93-003277
 Paul, H.
 93-003691
 Paulson, Ivan
 93-003886
 Pavlov, D. G.
 93-003692
 Payne, S. S.
 93-004131
 Payne, J. F.
 93-003633
 Payne, K. A.
 93-003680
 Payton, W. B.
 93-003961
 Pearce, John E.
 93-003560
 Pearce, Robert O.
 93-003943
 Pearce, William G.
 93-003793
 Pearce, Peter H.
 93-004287
 Pecor, Charles
 93-002369
 Pedersen, Benedikte Hedegaard
 93-002757
 Pedersen, T.
 93-003057
 Peduzzi, Raffaele
 93-003395
 Pell, C. A.
 93-002537
 Pelletier, G.
 93-003980
 Pelster, Bernd
 93-002758
 Penales, Linda J.
 93-004038
 Penez, M.
 93-003826
 Penez, Milan
 93-003627
 93-003828
 Penczak, Tadeusz
 93-004050
 CONTINUED.
 Penczak, Tadeusz
 93-004105
 93-004106
 93-004107
 93-004108
 93-004109
 Pendas, A. M.
 93-002803
 Peng Shihbing
 93-002544
 Pensabene, J. W.
 93-004360
 Papiin, Pierre
 93-003981
 93-004294
 Pepper, V. A.
 93-003803
 Pepporelli, J. G.
 93-004170
 Peraza, Enrique Osuna
 93-003857
 Perceira, Donald Louis
 93-004039
 Perez, Luis E.
 93-003994
 Perier, Marie R.
 93-004217
 Perkins, Brian E.
 93-003848
 93-004356
 Permitt, Yuri E.
 93-004224
 Perrott, M. H.
 93-002782
 Perry, E.
 93-002599
 Perry, K. A.
 93-002759
 Perry, R. Ian
 93-003093
 Perry, S. F.
 93-002568
 93-002674
 Perry, Steve F.
 93-002627
 Persat, Henri
 93-004110
 Persson, L.
 93-002953
 93-003278
 Persson, Lennart
 93-004040
 Peta, Harry C.
 93-003738
 Peter, R. E.
 93-002706
 93-002734
 93-002776
 93-002827
 Peter, Richard E.
 93-002701
 Peters, D. S.
 93-004270
 Peters, David S.
 93-003630
 Petrocci, Charles
 93-002216
 Peyraud, C.
 93-002742
 Payton, Paul
 93-004353
 Pfeiffer, R. F.
 93-002644
 Pfeiffer, Edward
 93-002940
 Phelan, Beth A.
 93-003169

AUTHOR INDEX

- Phelps, R. P.
 93-082315
 93-082388
 Philipp, David P.
 93-033887
 Phillips, O. J. H.
 93-033561
 Phillips, David J. H.
 93-004295
 Phillips, M. J.
 93-003562
 Phillips, Ruth B.
 93-002027
 Phipps, Barry M.
 93-003400
 Pflaseckl, Wojciech
 93-003114
 Pichon, Jacques
 93-004296
 Pietrowska, Monika
 93-004185
 Pihl, E.
 93-003543
 Pillai, Muralidharan C.
 93-082760
 Pinn, Stuart L.
 93-003193
 Pimplicka, Elzbieta
 93-003147
 Pinto, Rosa M.
 93-003475
 Pison, M.
 93-002761
 Piska Ravi, Shankar
 93-003693
 Pitlot, Helene
 93-003739
 Pitman, KarIn
 93-003279
 Pitts, C. S.
 93-002928
 Pitts, John L.
 93-002219
 Planas, J.
 93-002739
 Planas, J. V.
 93-002762
 Planas, Josep V.
 93-002763
 Platt, Christopher
 93-002510
 Plout, J.
 93-002779
 Playle, Richard C.
 93-003694
 Ployto, Kay A.
 93-002027
 Plisetskaya, E. M.
 93-002680
 93-002764
 Plossner, P.-D.
 93-003196
 Plumb, J. A.
 93-003429
 Poe, Thomas P.
 93-004012
 Reisson, H.
 93-002076
 Rollinac, Richard B.
 93-002217
 Rolos, Joseph C.
 93-004075
 Pomeroy, Robert
 93-002202
 Pomeroy, Robert S.
 93-002201

CONTINUED ..

- Pomeroy, Robert S.
 93-004297
 Poonin, P.
 93-003140
 Poonnasarat, Juades
 93-002303
 Ponsford, S. J.
 93-003613
 Poole, Susan E.
 93-003823
 Pope, J. G.
 93-003872
 Popken, Gregory J.
 93-003655
 Poppe, T. T.
 93-003609
 93-003654
 Porcher, Jean-Pierre
 93-004103
 Portesi, D.
 93-002036
 Portt, C. D.
 93-003727
 Posada L., Juan M.
 93-004290
 Posadas, Benedict C.
 93-004373
 Post, S. G.
 93-002538
 Potter, E. C. E.
 93-003000
 93-003006
 Potter, I. C.
 93-002467
 93-004156
 Pottinger, T. G.
 93-002732
 Power, O. M.
 93-002765
 Power, O.
 93-003280
 93-004448
 Power, J. H.
 93-004133
 Power, Michael J.
 93-003328
 Powers, D. A.
 93-002767
 Poynton, S. L.
 93-003453
 Praeger, M. H.
 93-003561
 Prakash, A.
 93-002446
 Prakash, N. N.
 93-003562
 Prastav, P. P.
 93-004111
 Preat, F.
 93-002550
 Prett-Shelley, J.
 93-003625
 Priel, E. I.
 93-002766
 Prestaykov, Y. V.
 93-003867
 Prest, C. McL.
 93-003420
 Prevost, E.
 93-003149
 Price, A. H. III
 93-002276
 Price, O. J.
 93-002903
 Price, Ina M.
 93-002218

AUTHOR INDEX

- Price, W. Wayne
93-003515
- Priddy, T. G.
93-002557
93-004428
- Priddy, Imants George
93-004458
- Probst, Wayne E.
93-004112
- Provensal, Donelle
93-004299
- Prunet, P.
93-002761
- Przybyl, Antoni
93-002384
- Pullin, Roger S. V.
93-002283
- Purchase, H. Graham
93-002219
- Rusch, Martin
93-003260
- Pustovoi, S. P.
93-002329
- Quardokus, Ellen M.
93-003630
- Quattro, J. M.
93-002767
- Queener, Lotc
93-003262
- Queniere, Jacques
93-004008
- Quental, Claire
93-002379
- Quoyvullier, Ph.
93-003563
- Quezada, Ricardo Dalfin
93-004300
- Quins, Norma J.
93-004301
- Quins, T. P.
93-002511
- Rab, P.
93-002888
- Rabesi, Charles F.
93-004112
- Rachonacher, K.
93-003621
- Radford, Keith W.
93-003332
- Rachakrishnan, S.
93-003406
- Radwan, Stanislaw
93-003271
93-004113
- Ragnersson, Karl
93-004397
- Ragonese, Sargno
93-004302
- Rahantmoff, Ramt
93-002611
- Rahman, A.
93-003696
- Rai, Ash K.
93-002275
- Rai, S. C.
93-003350
- Raible, David W.
93-002532
- Raid, T.
93-003145
- Ratney, William S.
93-002944
- Ratnosek, Alvin P.
93-004300
- Ratzin, Nyles
93-004399
- Rakha, Magda
93-004428
- Rakocy, James E.
93-002274
93-002295
- Raksakulchai, Wongnuch
93-004400
- Ralston, Stephen
93-003234
- Ram, Murali D.
93-003628
- Rama Rao Kaza, V.
93-003575
- Ramadon, A.
93-003421
- Ramakrishna Rao, T.
93-002382
- Ramakrishnan, M.
93-003697
- Ramaswamy, M.
93-003502
- Ranbourg, A.
93-002761
- Ramesh, A.
93-003411
- Rams, David C.
93-003923
- Ramos, E.
93-003584
- Ranstad, Anne
93-003410
- Rana, H. B.
93-003536
- Rena, K. J.
93-002284
- Rand, P.
93-004641
- Rand, Peter S.
93-004042
- Randall, C. F.
93-002551
- Randall, O. J.
93-002677
93-002674
- Randall, R. G.
93-003664
93-004459
- Rangel, Francisco
93-004303
- Rankin, M. G.
93-003658
- Rannala, B. H.
93-003983
- Rantin, Francisco Tadeu
93-002768
- Rasch, Ellen M.
93-002932
- Rasco, B. A.
93-004356
- Rasheed, Victoria M.
93-003379
- Rasmussen, Joseph O.
93-003734
- Rascon, Joseph
93-002340
- Rass, T. S.
93-002513
93-003159
- Rawat, H.
93-003982
- Rawat, Manca
93-002772
- Raymond, J. A.
93-002769
- Re, Pedro
93-003088

AUTHOR INDEX

...CONTINUED...

- Ra, Pedro
 93-003997
 93-003998
 Read-Connole, E.
 93-003517
 Roavis, R. H.
 93-003089
 Rackahr, James A.
 93-003058
 Racksteck, Conrad
 93-004480
 Reconeta, R. O.
 93-002310
 Roddy, S. L. N.
 93-003729
 Rodell, Lori A.
 93-002254
 Roed, Peggy
 93-003489
 Reeves, Gordon H.
 93-003029
 93-004072
 Reeves, W. C.
 93-003083
 Refstie, Terje
 93-002938
 93-003397
 Regenstein, J. M.
 93-004365
 93-004368
 Regenstein, Joe M.
 93-004264
 93-004376
 93-004397
 93-004413
 Regler, Henry A.
 93-003565
 Reigo, A. Arandas
 93-003518
 Reich, B. J.
 93-002748
 Reichle, James J.
 93-003070
 Reid, R. A.
 93-004401
 Reifsteck, Daniel
 93-002928
 Reilly, Carol A.
 93-002234
 Reilly, P.
 93-003519
 Reinchen, T. E.
 93-002719
 93-003281
 Reinert, Jekup
 93-004304
 Reisenbichler, Reginald Ruben
 93-004114
 Reitan, Kjell Inge
 93-002365
 Reitan, L. J.
 93-003420
 Reitan, Liv Jarun
 93-003410
 Reits, Dia B.
 93-003511
 Reeder, Jeffrey H.
 93-003151
 Rentler-Deirue, F.
 93-002761
 Reoyo, M. J.
 93-003682
 Rappond, K. D.
 93-004402
 93-004410
 Rappond, Kermit
 93-004353
 Resh, Vincent H.
 93-004005
 Resnick, S. H.
 93-003667
 Reveret, Jean-Pierre
 93-003771
 Rey, Helene
 93-003772
 Reynal, Lionel
 93-003773
 Reynolds, Alderman Mike
 93-004305
 Reynolds, James B.
 93-003174
 93-003930
 Reynolds, John D.
 93-003810
 Reznick, David
 93-003758
 Rhoades, Gobra J.
 93-003656
 Ribes, E.
 93-002784
 Ribic, Christina A.
 93-003524
 Richard, A.
 93-002959
 Richard, Tyon
 93-004051
 Richards, R. H.
 93-003437
 93-003523
 Richards, Robert C.
 93-003114
 Richards, William J.
 93-003302
 Richardson, B. J.
 93-003561
 Richardson, Bruce J.
 93-003576
 Richardson, K.
 93-004247
 Richeux, C.
 93-003235
 Richter, Dietmar
 93-002748
 Ridge, William J.
 93-002431
 Riehl, Rudtger
 93-002514
 Rianjets, L. M.
 93-002645
 Riessen, H. P.
 93-003215
 Rietra, P. J. G. W.
 93-003432
 Rijdsdorp, A. D.
 93-003282
 Rijdsdorp, Adriaan D.
 93-003082
 Riley, Milton W.
 93-003520
 Riley, Robert D.
 93-004403
 Rimmer, N. A.
 93-002247
 Ringler, Neff H.
 93-004042
 Riigo, E.
 93-002770
 Rinne, J. M.
 93-004115
 Risdan, J. R.
 93-002643
 Rippen, P.
 93-002732

AUTHOR INDEX

- Ritchie, B. J.
 93-003984
 Ritter, J. A.
 93-002260
 Rivas, G.
 93-004382
 Rivera Alvarez, Fernando
 93-004305
 Rivera, Marilyn
 93-004164
 Rivier, J. E.
 93-002796
 93-002734
 Rabadae, Donald, Jr.
 93-004153
 Robb, A. P.
 93-002771
 Robert, Christian P.
 93-003956
 Roberts, B. L.
 93-002729
 Roberts, Bruce C.
 93-003343
 93-003838
 Roberts, Daniel E.
 93-002341
 Roberts, J. F.
 93-002651
 Robinette, H. Randall
 93-002419
 Robtas, J. J.
 93-003608
 Robinson, R. D.
 93-003521
 Robinson, Shawn M. C.
 93-003059
 Robison, William A.
 93-003709
 Robson, Paul
 93-002772
 Rode, Richard A.
 93-003894
 Roder, Heinrich
 93-002738
 Rodgers, Duell D.
 93-002046
 Rodgers, John H.
 93-003624
 Rodman, W. K.
 93-004404
 Rodrick, K. J.
 93-002773
 Rodriguez, L. A.
 93-003422
 Reed, K. H.
 93-002934
 Reed, Knut H.
 93-002430
 93-003387
 Rogers, D.
 93-003996
 Rogers, Mark
 93-002738
 Rogers, S. I.
 93-004307
 Rogers, Stuart I.
 93-003336
 Rohovec, J. S.
 93-003482
 93-003461
 Rohovec, John S.
 93-003473
 93-003474
 Rokicki, Jerry
 93-003521
 Rokosh, D. A.
 93-003526
 Roman, Ana
 93-003285
 Rombough, Peter J.
 93-002438
 Ronbout, Jan H. W. M.
 93-002531
 Ronnestad, Ivar
 93-002774
 Roeker, Jay
 93-004460
 Ropke, Andreas
 93-003283
 Rosas, Carlos
 93-003501
 Rosch, R.
 93-002597
 Rose, A. S.
 93-003423
 Rose, G. J.
 93-002582
 Rose, Gary J.
 93-002775
 93-003099
 Rose, George A.
 93-003293
 Rose, S. M.
 93-004405
 Rosenber, A. A.
 93-003904
 Rosenberg, Andrew A.
 93-004308
 Rosenblum, P. M.
 93-002776
 Rosenlund, Bruce D.
 93-004124
 Rosenlund, Grethe
 93-002801
 Rosland, R.
 93-003085
 Ross, Michael R.
 93-003896
 93-003204
 Ross, Quentin E.
 93-003870
 Roth, Anton
 93-002777
 Roth, M.
 93-003485
 93-003523
 Rottiers, Donald V.
 93-002778
 Rountree, Rodney A.
 93-003660
 Roux, A. L.
 93-003826
 Rovny, Borislav
 93-004116
 Roy, Claude
 93-004207
 Roy, Daniel
 93-003765
 Roy, Noel
 93-001987
 93-004311
 Roy, Y.
 93-003571
 Rozas, Lawrence P.
 93-003925
 Rozemizer, M. J. C.
 93-002779
 Rudlock, K. H.
 93-002666
 Rueda, A.
 93-003602
 Ruiz L., Arturo
 93-003858

AUTHOR INDEX

- Ruscoe, W. A.
93-002017
- Russo, A. C.
93-002845
- Rust, Michael B
93-002316
- Rutherford, D. Allen
93-003031
- Rutherford, Edward R.
93-003000
- Ruzicka, James J
93-002780
- Ryan, P. M
93-003061
- Ryon, Thomas A.
93-003299
- Rycyzyn, M
93-002727
- Ryder, R. A.
93-002651
- Saarikokki, Juhani
93-002793
- Saba, J., Mark Henry
93-003011
- Sabates, A.
93-003062
93-003146
93-003152
- Sadovy, Yvonne
93-003285
93-004309
- Saegrov, H.
93-003137
- Saeki, Hiroki
93-003194
93-003706
93-004172
- Safford, Susan Ellen
93-002791
- Sagar Reddy, G. Vidya
93-004414
- Sagar, P. M.
93-002966
- Sahal, Y. N.
93-003699
- Sainbury, R. J.
93-002762
- Saito, Asako
93-003420
- Saitoh, Kahta
93-002962
- Sakaguchi, Norihiko
93-002385
93-002728
- Sakai, Masahiro
93-002862
- Sakai, Mitsuo
93-004043
- Sakaizumi, Mitsuru
93-002911
- Sakakibara, Shunpei
93-002706
- Sakai, Isha
93-002920
- Sakanoto, Koji
93-004426
- Sakanoto, Tatsuya
93-002783
- Sako, Hiroshi
93-003424
- Sakr, S. A.
93-003617
- Sakurai, Junko
93-002664
- Sakurai, Yasunori
93-003130
- Salami, A. A.
93-002616
- Salonki, J.
93-003566
- Salas M. Silvia
93-003094
- Salas, C.
93-002826
- Salazar-Ruiz, Alina
93-004310
- Saldana, Juan
93-003193
- Sallinas-Zavala, Cesar A.
93-003007
- Salliot, A.
93-003509
- Salter-Cid, L.
93-002807
- Salvanes, Anna Gro Vea
93-003160
93-003986
- Sambo, Alassane
93-003967
93-004181
93-004250
- Samuelson, Karen T.
93-004100
- Samuelsson, Mats-Ola
93-002243
- Samy, A. M.
93-003421
- Sarnborn, Eleanor A.
93-002236
- Sanchez-Chavez, Julio A.
93-004310
- Sanchez, Pilar
93-004273
- Sancho, E.
93-003700
- Sanders, I.
93-002708
- Sandhu, Daniel H.
93-003050
- Saseyoshi, Hideo
93-002073
- Sanjeev, S.
93-004106
- Sanku-Njire, J.
93-002357
- Sano, Masaaki
93-002338
- Sanson, S.
93-002643
- Santaren, N.
93-003446
- Santolliet, Riccardo
93-002197
- Sanz, F.
93-003476
- Saperas, M.
93-002784
- Sarbadhikary, Arjuna
93-003701
- Sargent, John
93-002618
- Sargent, R. C.
93-003012
- Sarkar, S. K.
93-002660
93-003702
- Sarkar, Sultan Salauddin
93-003703
- Sarr, James E.
93-004420
- Sarsfi-Vilo, Katje
93-004240

AUTHOR INDEX

- Sarslow, Boris
93-00323
- Sarvala, J.
93-003959
- Sasagawa, Ichiro
93-002515
- Sasayama, Yuchi
93-002785
- Sasekumar, A.
93-004159
- Saskatchewan Parks and Renewable Resources
93-003324
93-004044
- Sastry, K. V.
93-003704
- Sathyabama, P. G.
93-003569
- Sato, Ayumi
93-002554
- Sato, K.
93-002087
- Sato, Kaname
93-003910
- Sato, Masoru
93-002386
93-002728
- Sato, Taiji
93-003250
- Satoh, Shuichi
93-002386
- Sauer, Peter E.
93-004117
- Sauer, Randy
93-004104
- Saunders, Elizabeth H.
93-003157
- Saunders, R. L.
93-002610
- Saunders, Richard L.
93-002261
93-002812
- Saviole, P. J.
93-004050
- Sawhya, W. W.
93-004034
93-004035
- Saylor, C. F.
93-003577
- Scarlett, W. J.
93-004062
- Schaaf, W. E.
93-004270
- Schaefer, S. A.
93-003524
- Schaffner, L. C.
93-003543
- Schauer, T.
93-004250
- Schartl, Manfred
93-002921
93-003013
- Scheid, Peter
93-002750
- Schelde, John I.
93-002786
- Schelder, W.
93-003535
- Schellart, Nico A. H.
93-002886
- Schelling, T.
93-002787
- Schlemmer, Fritz
93-004143
93-004144
- Schilli, William B.
93-003430
- Schipper, Hank
93-002630
- Schliefeder, Rodric A.
93-003046
- Schlupp, Ingo
93-003013
- Schmale, M.
93-003076
- Schmid, Michael
93-002921
93-003013
- Schmidt, Larry J.
93-003567
- Schmidt, Wymen C.
93-003032
- Schmitz, S. J.
93-002516
- Schneider, Eric O.
93-003779
- Schoonmakers, Theo J. H.
93-002622
- Schwam, Harold L., Jr.
93-004461
- Schrank, William E.
93-004311
- Schreck, Carl O.
93-002082
93-003945
- Schreiber, Roland
93-002406
- Schreibman, M. P.
93-002710
- Schreyer, D. J.
93-002569
- Schultz, Mary E.
93-002780
- Schultz, R. Jack
93-002700
- Schurmann, H.
93-002789
- Schuur, Antonie M.
93-003987
- Schwaninger, Heidi R.
93-004191
- Schwartz, Frank J.
93-003525
- Schwartz, M.
93-002569
- Schwartzentruber, R. S.
93-002790
- Schwartzlose, Richard A.
93-003007
- Scott, A.
93-002906
- Scott, A. P.
93-003133
- Scott, O. P.
93-003074
- Scott, Martin
93-002342
- Scottish Office Agriculture and Fisheries
Department
93-003705
- Scruton, O. A.
93-004045
- Seal, P.
93-004375
- Seale, O. B.
93-002845
- Seaman, William, Jr.
93-004312
- Secombes, C. J.
93-002460
93-002690
93-003387
93-003413

AUTHOR INDEX

- CONTINUED
- Secoabas, C. J.
93-003425
- Socor, David H.
93-003286
- Sudell, James R.
93-003029
93-004072
93-004110
- Sedmak, J. James
93-002227
- Seoley, K. R.
93-002791
- Segner, Helmut
93-002531
- Segura, Gilles
93-004119
- Seklov, N.
93-002619
- Schoel, Gurpreet K.
93-002304
- Selto G., Juan Carlos
93-003360
- Selkai, Tadahisa
93-002517
93-003089
- Seki Nobuo
93-004417
- Sekiya, Tadayoshi
93-003909
- Seko, Akira
93-002616
- Semlitsch, Raymond O.
93-003207
- Sen, Alzattia
93-002555
- Seeger, P. L.
93-002579
- Serafy, Joseph E.
93-004160
- Serbryakov, V. P.
93-004313
- Serchak, Fredric M.
93-003176
93-004314
- Serrano, Augusto E., Jr.
93-002792
- Serwas, M.
93-003633
93-003705
93-003727
- Sesau, P.
93-002458
- Setcia, Lawrence R.
93-002976
93-003549
- Sewerson, Richard
93-002254
- Savillaja, R. C.
93-002285
93-002310
- Shabetai, R.
93-002677
93-002990
- Shadwick, R. E.
93-002518
93-002677
93-002683
- Sharma, D.
93-003669
- Sharma, R. M.
93-003706
- Sharma, Vijay
93-003676
- Sharova, N. P.
93-002793
- Sharp, G. J. E.
93-003425
- Shaul, Warren
93-003926
- Shaw, Megan
93-003236
- Shawron, Karl G.
93-002352
- Shoshan, Robert J.
93-003593
- Shelburne, J. E.
93-002000
- Shelburne, John E.
93-003038
- Shelby, Bo
93-002853
- Shen, San-Tai
93-002562
- Shepherd, Bruce G.
93-002262
- Shepherd, J. G.
93-003972
- Sharidan, M. A.
93-002645
93-002746
- Shaman, K. M.
93-003164
- Sherry, David M.
93-002519
- Shenwood, N. M.
93-002706
- Shevchenko, A. V.
93-003101
- Shewfelt, R. L.
93-004411
- Shi Jiannan
93-002869
- Shi Duanfang
93-002794
- Shi Zhenquang
93-003426
- Shiau, Shi-Yen
93-002367
- Shiazaki, Hiroyuki
93-003473
- Shields, R. J.
93-002520
93-002795
- Shields, Tamy S.
93-002760
- Shields, R. A.
93-002796
- Shimazaki, Kenji
93-003130
- Shineno, Sadao
93-002368
- Shinizu, Makoto
93-002527
93-002818
- Shinizu, Ronald
93-004046
- Shinano, Haruo
93-004377
- Shindo, Jo
93-004467
- Shoemaker, Craig A.
93-003499
- Shoji, Teotsu
93-003794
93-003796
- Shomura, Richard S.
93-003568
- Short, Terry M.
93-003709
- Shotts, Emmett B., Jr.
93-003395
93-003428
- Shrestha, M. K.
93-003360

AUTHOR INDEX

- Shrepton, J. M.
 93-002577
 Shugart, L. R.
 93-003577
 Shun, B.
 93-002807
 Shumstova, A. A.
 93-003233
 Shuntov, V. P.
 93-003325
 Shuzula, J. P.
 93-004150
 Shupliakov, Oleg
 93-002484
 Sibert, John R.
 93-003940
 Sibley, Paul K.
 93-003707
 Siches I Cuadra, Carlos
 93-004315
 Sick, L. V.
 93-003708
 Sick, Lowell V.
 93-003656
 Siddiel, S. Z.
 93-002575
 Siddiqui, Abdul Qayyum
 93-002317
 Sidell, B. D.
 93-002593
 93-002604
 93-002704
 93-002773
 Siegel-Causey, Douglas
 93-002220
 Siegwirth, Gary L.
 93-003891
 Sigwardt, Karen A.
 93-002591
 Sih, Andrew
 93-003237
 Siharath, K.
 93-002797
 Sikkel, Paul C.
 93-002790
 Silberhorn, Eric M.
 93-003709
 Silva, Patricia
 93-002790
 93-003710
 Simard, Patrick
 93-003287
 Simon, Raymond C.
 93-002263
 Simonsen, Timothy D.
 93-003616
 Simovitch, Florie A.
 93-002881
 Sincclair, A.
 93-003326
 Sincclair, M.
 93-003100
 Singh, B. F.
 93-003366
 Singh, H. R.
 93-002453
 93-002547
 Singh, M.
 93-002453
 93-002521
 93-002547
 Singh, Neera
 93-003623
 Singh, Sarita
 93-002500
 Simha, G. K.
 93-004406
 Sitara, Eva
 93-002772
 Sitja-Bobadilla, A.
 93-003430
 93-003435
 93-003466
 Sivertsen, Anne
 93-002001
 Sjobert, P.
 93-002794
 Skaarup, Bo
 93-003655
 Skaravica, B.
 93-002357
 Skidmore, J. F.
 93-003733
 Skiftesvik, Anne Berit
 93-003279
 Skjoldal, Rein Rune
 93-003063
 Skladany, Mike
 93-002221
 Skoda, Bianca
 93-004311
 Skonberg, O. I.
 93-004355
 Skora, Stanislaw
 93-004120
 93-004121
 Skorpning, A.
 93-003495
 Skreslet, Stig
 93-003327
 Skulason, S.
 93-002244
 Skurdal, Jostein
 93-002970
 Slabyj, Bohdan M.
 93-004400
 Slabyj, Stefanie D.
 93-004405
 Slaton, Caleb H.
 93-002832
 Sledz, Kelly M.
 93-004403
 Slonley, B. D.
 93-002652
 93-002827
 Slotweg, R.
 93-004140
 Sly, Peter G.
 93-004047
 Smell, Kathy
 93-002803
 Smedsrod, B.
 93-002804
 Smietana, Przemyslaw
 93-003288
 Smith, C. A.
 93-003517
 Smith, C. Lavett
 93-003367
 Smith, Charise E.
 93-002423
 93-003451
 Smith, G. C.
 93-003953
 Smith, G. W.
 93-002955
 93-003136
 93-004468
 Smith, I. R.
 93-003526
 93-003633
 93-003726
 Smith, Ian R.
 93-003711

AUTHOR INDEX

- Seftt, Joseph W.
 93-004316
 93-004328
 Seftt, Katherine L.
 93-003404
 Seftt, Michael M.
 93-003174
 Seftt, N.
 93-003406
 Smith, P. L.
 93-002520
 Smith, Paul C.
 93-003102
 Smith, R. L.
 93-003277
 Smith, S. A.
 93-002805
 Smith, S. J.
 93-002318
 Smith, Stephen J.
 93-002526
 Smith, T. J.
 93-003732
 Snoon, Martin E.
 93-003192
 Snowden, R. J.
 93-002031
 Snucias, E. J.
 93-003692
 Snyder, Mary J.
 93-004351
 Snyder, R. J.
 93-003215
 Sobocinski, Andrzej
 93-002852
 Soderback, Bjorn
 93-003238
 Soderberg, Richard W.
 93-002264
 93-003712
 93-003980
 Soengas, J. L.
 93-002006
 Sofuni, T.
 93-003722
 Sogard, Susan M.
 93-003004
 Sola, Luciana
 93-002032
 Solar, Igor I.
 93-002877
 Solartin, B. B.
 93-004161
 Soldat, Aud Vold
 93-003321
 93-003344
 Solomda, P.
 93-003103
 Solomda, Par
 93-002807
 93-003879
 93-003153
 Solotchnik, Patrick
 93-002343
 Sollows, J.
 93-002307
 Solomon, A.
 93-002569
 Solomon, D. J.
 93-003006
 Solomon, Richard J.
 93-003710
 Somero, G. N.
 93-002700
 93-002060
 93-002061
 Somerton, D. C.
 93-002509
 Somerton, Darra C.
 93-002331
 Somner, H. J.
 93-004300
 Somerville, C.
 93-003430
 93-003440
 93-003523
 Somnath, Boona
 93-003713
 Son, Jae Hag
 93-002265
 Sosl, R.
 93-003576
 Sozogni, W.
 93-003681
 Songelons, Patrick
 93-002332
 93-002309
 Sorimachi, Minoru
 93-003452
 Sosinski, Jozaf
 93-004317
 Soto, Cristina B.
 93-002522
 Souprayon, Jose
 93-003809
 Soundino, P.
 93-002800
 Soutar, Andy
 93-003072
 Sower, S. A.
 93-002670
 93-002750
 Sower, Stacia A.
 93-002000
 Spah, Hartmut
 93-004040
 Spangler, George R.
 93-004049
 Sparks, Richard E.
 93-004122
 Sparksman, R.
 93-003483
 Sparling, Edward W.
 93-004079
 Spatzler, Elja1111
 93-002531
 Spoons, D. J.
 93-003427
 Spocker, J. L.
 93-002676
 93-002836
 Spocker, Jennifer L.
 93-002011
 Spector, Sydney
 93-002013
 Speer, C. A.
 93-003451
 Spencer, K.
 93-004348
 Speller, R. E.
 93-002845
 Spitzer, R. H.
 93-002400
 93-002679
 Sprague, J. B.
 93-003007
 Springer, Christine Marie
 93-003000
 Springer, Craig B.
 93-002420
 Sprules, O.
 93-004037

AUTHOR INDEX

- Sprules, W. G.
 93-003943
 Spry, D. J.
 93-003733
 Squiro, James L., Jr.
 93-003569
 Squiros, Dale
 93-003960
 Squires, Donald F.
 93-003833
 Srikar, L. N.
 93-004414
 Srivastav, Ajai K.
 93-002800
 Srivastava, R. K.
 93-002960
 Srivastava, Rakesh K.
 93-002817
 Stas, A.
 93-003295
 Stark, Bill J.
 93-003308
 Starliper, Clifford E.
 93-003395
 93-003428
 Starnach, Janusz
 93-004123
 Stauffer, Jay R., Jr.
 93-002458
 Staveland, G.
 93-003714
 Steadman, Bryan Lynn
 93-003715
 Steeby, James A.
 93-002322
 Steele, G. H.
 93-003289
 Steele, Donald H.
 93-002983
 Steele, R. D.
 93-003521
 Stefanescu, C.
 93-003337
 Stefansson, Sigurd O.
 93-002832
 Stuffleman, J. F.
 93-002789
 Stegman, John J.
 93-003620
 Stehr, Carla
 93-003457
 93-003458
 Stein, David L.
 93-004708
 Stephan, Germaine
 93-002799
 Stephenson, Robert L.
 93-003328
 Stephenson, Sam A.
 93-003329
 Sterligova, O. P.
 93-003965
 Stern, A.
 93-003586
 Sterritt, David
 93-003264
 Stevens, David R.
 93-004126
 Stevenson, D. K.
 93-003104
 Stevenson, Michael H.
 93-003239
 Stevenson, R. Jan
 93-004066
 Stewart, G.
 93-004037
 Stewart, D. J.
 93-004041
 Stewart, T. J.
 93-004050
 Steyn, G. J.
 93-002938
 Stickley, Allen R., Jr.
 93-002899
 93-002319
 Stickney, Robert R.
 93-002344
 Stoble, M.
 93-003386
 Stock, David Whalen
 93-002523
 Stockel, Joseph N.
 93-003248
 Stokes, M. G.
 93-003241
 Stolk, Len
 93-004319
 Stoppini, Monica
 93-002867
 Storeton-West, T. J.
 93-004460
 Stott, Wendy Lee
 93-002933
 Stotttrup, Josianne G.
 93-002390
 Stoutsook, C. P.
 93-003432
 Strackland, Robert George
 93-002524
 Strange, Elizabeth M.
 93-004125
 Strange, Richard J.
 93-004078
 Stratton, Barry L.
 93-003105
 93-004126
 93-004320
 Stratton, Richard F.
 93-002407
 93-002468
 93-002489
 93-002410
 Strehlov, David
 93-002525
 Streifinger, George
 93-002892
 93-002897
 Stroband, H. W. J.
 93-002813
 Stroband, Harf W. J.
 93-002630
 Stronheim, A.
 93-002934
 Strong, James J.
 93-003937
 Su Shredao
 93-002238
 Su Shieao
 93-002425
 Su Zegu
 93-002587
 Subasingha, R. P.
 93-003459
 Sudo, Hiroyuki
 93-003171
 Sulek, Kenneth J.
 93-003097
 Sullivan, C. V.
 93-002051
 93-002749
 93-002853
 Sullivan, Carl R.
 93-004321

AUTHOR INDEX

- Sullivan, John A.
93-003631
- Sullivan, Michael J.
93-004270
- Summerfelt, Robert C.
93-002856
- Sun Da Jiang
93-002393
- Sun Da Jing
93-002286
- Sun, L. Charles
93-003074
- Sun, R.
93-002655
- Sundby, Svein
93-003679
93-003344
- Sunens, K.
93-003105
- Suns, Karlits R.
93-003716
- Sun, Robin Kumar
93-003791
- Sunasa, O.
93-002980
- Sunendran, P. K.
93-004406
- Surette, Marc
93-004263
- Surjapemana, Sadelli
93-002287
- Suteau, P. H.
93-003677
- Suther, Joan M.
93-004087
- Sutherland, D. R.
93-003565
- Sutherland, David L.
93-003927
- Sutherland, Leslie A.
93-002610
- Suthers, Iain M.
93-002289
- Sutinen, Jon O.
93-003783
- Suzuki, Mikoto
93-003910
93-003911
- Suzuki, Yuzuru
93-002814
- Sveinbjornsson, D.
93-002804
- Sveinsson, T.
93-002244
- Svoboda, Armin
93-004462
- Svrjcek, Ralph S.
93-003380
- Swanson, P.
93-002526
93-002523
93-002733
93-002742
93-002015
93-002050
- Swanson, Perry
93-002094
93-002763
- Swanson, S. M.
93-002592
- Swartzman, Gordon L.
93-003524
- Sweeney, Bernard W.
93-003834
- Sweeney, Mary
93-002411
- Sweetman, John W.
93-002346
- Swenson, William A.
93-003610
- Swierczynski, Marak
93-002192
93-004127
- Swift, Susan M.
93-004450
- Swingle, Hugh A.
93-003040
- Sych, Roman
93-004142
- Sydenhen, D. H. J.
93-002616
- Syed, M.
93-002895
- Szpakowski, Jacek
93-004217
- Szlazynska, Katarzyna
93-004128
- Szypula, Jerzy
93-003242
- Tachikawa, Hiroyuki
93-002010
- Tago, Yasushi
93-003852
- Tagawa, H.
93-002526
- Tagawa, Masatomo
93-002950
- Taggart, Christopher T.
93-003330
- Taguchi, Takashi
93-004356
- Taguchi, Tomohiko
93-002816
- Tajiri, Michel
93-004463
- Takahashi, Kiyotaka
93-003473
93-003474
- Takahashi, Toyomi
93-003170
- Takai, Rihuro
93-004309
- Takami, Tetsuya
93-003505
- Takamura, Noriko
93-004130
- Takano, Kazumi
93-002857
- Takashiwa, Fumio
93-002878
93-002911
- Takatori, Kazuma
93-004377
- Takatsu, Tetsuya
93-003170
- Takeda, Shigenobu
93-002672
- Takei, Y.
93-002561
93-002817
- Takei, Yoshio
93-002786
- Takuchi, Masaaki
93-002737
- Takuchi, Yoshio
93-002306
- Takita, Toru
93-003290
- Tanai, Kyoichi
93-002208
- Tanai, Nobuyuki
93-003824

AUTHOR INDEX

- Tamura, Osamu S
 93-002543
 Tan Tzi
 93-002544
 Tan Zhenbo
 93-002329
 Tanaka, H
 93-002526
 Tanaka, Mikoto
 93-003473
 Tanaka, Masaru
 93-003371
 Tanaka, Masuru
 93-003889
 Tanaka, Huzehiko
 93-004356
 Tanangson, J. B.
 93-002526
 Tanasichuk, R. W.
 93-003155
 Tande, K. S
 93-003346
 93-003057
 Tang, J.
 93-002797
 Tang, M.
 93-002571
 Taniguchi, Mubuhiko
 93-002899
 Taniguchi, Toru
 93-002527
 93-002838
 Tanser, C. C.
 93-003835
 Teo, Y.
 93-002651
 Taquet, Marc
 93-003331
 Taranger, G. L.
 93-002267
 Tarazona, J. V.
 93-003682
 Tate, P. M.
 93-003545
 Tatar, Mary F.
 93-002669
 Tauxe, Robert V.
 93-004428
 Tave, Douglas
 93-002328
 Tavesdale, Mervyn H.
 93-004378
 Taylor, E. W.
 93-002819
 93-002864
 Taylor, Peter W.
 93-003395
 93-003428
 Taylor, S. E.
 93-002819
 Te Kroonle, G.
 93-002813
 Teh, Swee J.
 93-003717
 Teichert-Coddington, David R.
 93-002321
 Teinturier, Bernard
 93-004332
 Telfair, Ray C. II
 93-003799
 Teliechea, E.
 93-002918
 Tello, Martin Salvador
 93-003861
 Temple, Elisabeth
 93-003767
 Teo, Lang-Hong
 93-002828
 Ter Laak, E. A.
 93-003432
 Terauchi, Kunitko
 93-004410
 Tercelro, Mark
 93-003090
 Terlecki, Janusz
 93-003243
 Tesch, F.-W.
 93-003014
 Teshima, Chiseto
 93-003429
 Teske, Jeffrey D.
 93-003430
 Tewari, Nima
 93-003627
 Teysse, Jean-Louis
 93-002741
 Theils, John E.
 93-003957
 Thed, S. T.
 93-004411
 Thibault, M.
 93-003798
 Thiebaut, M. L.
 93-003991
 Thomas, K.
 93-003527
 Thomas, M. J.
 93-002821
 Thomas, Margaret G.
 93-002222
 Thomas, P.
 93-002691
 93-002740
 Thomas, Peter
 93-002632
 Thomas, R. Glenn
 93-002347
 Thomas, Serge
 93-002627
 Thompson, A. B.
 93-004323
 Thompson, Bruce C.
 93-003799
 Thompson, D.
 93-002906
 Thompson, Geoffrey B.
 93-003570
 Thompson, Grant G.
 93-003922
 93-003959
 Thompson, A.
 93-004089
 Thompson, Patsy A.
 93-002661
 Thomson, J. M.
 93-004324
 Thorenson, H.
 93-002626
 93-002822
 Thorisson, Konrad
 93-003244
 Thorne, Richard E.
 93-004464
 Thorne, T.
 93-003450
 Thorpe, J. E.
 93-003862
 93-003863
 93-003864
 93-003270
 Thorrold, S. R.
 93-003928

AUTHOR INDEX

- Thozard, Emanuel
 93-002343
 Thue, Edith D.
 93-003000
 Thuesler, Thomas F.
 93-003167
 Thuvendor, A
 93-003710
 Tibbitts, G. F.
 93-002671
 93-002726
 93-002021
 93-002023
 Tidwell, James H.
 93-002391
 93-002392
 Tierney, Mary
 93-002824
 Tikhonrova, L. I
 93-003710
 Tilak, K. S.
 93-003720
 Tilman, James T
 93-003000
 Tilzath, Snorre
 93-002348
 Tilton, Donald L.
 93-003001
 Timmerons, Lucy P. H
 93-002530
 Timms, C. A.
 93-004265
 Timons, M. B.
 93-002448
 Timons, Michael B.
 93-002422
 Tindall, Donald R.
 93-003660
 Tingling, Ma
 93-002935
 Tissot, Brian N
 93-004318
 Tobias, William
 93-003062
 93-003063
 Todd, Brian
 93-004112
 Tokranov, A. M.
 93-003106
 93-003245
 Toledo-Flores, L. J
 93-004412
 Toledo, Maria Cecilia F.
 93-003643
 93-003644
 Tomasco, J. R.
 93-003732
 Tomlitter, Joseph R.
 93-003300
 Tomiyama, Minoru
 93-003171
 Tompan, W.
 93-002307
 Toskopy, V. D.
 93-003692
 Toop, Tes
 93-002615
 Toor, H. S.
 93-003646
 Toranzo, A. E
 93-003388
 93-003446
 Tordry, C
 93-003465
 Torsen, R.
 93-004250
 Toro, Jorge
 93-004413
 Torreale, Els
 93-002531
 Torres L., Ricardo
 93-003004
 Torres, B.
 93-002825
 Tota, O.
 93-002546
 Toulonant, Anne
 93-003040
 Tourang, J. H.
 93-003235
 Townsend, Ralph
 93-003007
 Trapp, John L.
 93-002223
 Traven, Hans
 93-002840
 Travis, P. B.
 93-003700
 Treodway, Mary Anne
 93-004465
 Treasurer, J. W.
 93-004466
 Treasblay, Serge
 93-004051
 Traxler, Joel C.
 93-002520
 Tricas, Timothy Carl
 93-003066
 Triche, Patricia L.
 93-003415
 Trim, David L.
 93-004336
 Trinkaus, J. P.
 93-002826
 Trischitta, F.
 93-002787
 Trusk, Thomas
 93-002490
 Truchot, J. P.
 93-002742
 Trudrau, V. L.
 93-002827
 Trummel, Donald Eugene
 93-002828
 Truquet, Philippe
 93-003536
 Trzebiatowski, Rajmund
 93-003291
 Tsai, S. S.
 93-003477
 Tsai, Shi-Chuan
 93-002505
 Tsang, Chao-Kuang
 93-003431
 Tsuda, T
 93-003721
 Tsujimura, Akio
 93-002809
 Tsukamoto, Katsumi
 93-003460
 Tsukamoto, Youichi
 93-003460
 Tsunura, Kanji
 93-002084
 Tu Puhang
 93-004467
 Yuana, B. S.
 93-002823
 Tucker, C. S.
 93-002020
 Tucker, Craig S.
 93-002322

- Tucker, John W., Jr
93-002349
93-003154
- Tuena, S
93-003015
- Tufts, S. L.
93-002619
- Tullis, A.
93-002830
- Tung, M. C.
93-001394
93-003477
- Tung, Marvin A.
93-004351
- Turingan, R. G.
93-003246
- Turingan, Ralph G.
93-002520
- Turnbull, J. F.
93-002602
- Turner, C. J.
93-003881
- Tursor, John F.
93-002223
- Tursor, T. F.
93-002936
- Tuurala, Heikki
93-002795
- Tynte, Stein
93-003084
- Tweid, Daniel J.
93-003995
- Tyagi, S. D.
93-003623
- Tytler, Peter
93-002831
- Uchida, Masuyuki
93-002812
- Uchichowski, Marek
93-004471
- Udell, R. E. K.
93-004161
- Ueda, Hiroshi
93-002810
- Ueda, T.
93-003722
- Ueno, Shin-ichi
93-002388
- Ueno, Yasuhiko
93-003172
- Ugedal, O.
93-004088
- Ugedal, Ole
93-002987
- Ukawa, Ken-ichi
93-002785
- Ullsang, Oyvind
93-003188
- Umegawa, Akira
93-003460
- Upton, Harold F.
93-004325
- Urawa, Shigehiko
93-003461
- Urban, Daniel
93-004325
- Urho, Lauri
93-003723
93-003724
- Urquhart, G. G.
93-003984
93-004447
93-004468
- Ushio, Hideki
93-002813
- Utho, J. F.
93-003682
- ...CONTINUED...
- Utho, J. F.
93-003974
- Utse, Anne Christine W.
93-003016
- Utrilla, Carmen G.
93-003971
- Uva, Bianca Maria
93-002834
- Uys, Wynand
93-002290
- v. Westernhagen, H.
93-003027
- V.-Balogh, K.
93-003566
- Vaaranen, P. L.
93-002994
- Vadstein, Olav
93-002801
- Valcarlos, Alberto
93-002937
- Valdes-Pizzini, Manuel
93-004201
- Valo, W.
93-002734
- Valero, B.
93-004460
- Valero, E.
93-003086
- Vallarino, Mauro
93-002035
- Vallee, F.
93-002876
- van 't Hoff, T.
93-004162
- Van Dillie, R.
93-003571
93-003725
- van den Heuvel, M. R.
93-003720
93-003727
- van den Heuvel, Michael R.
93-003604
- van der BEEK, F. H.
93-002938
- Van Der Kraak, G. J.
93-003657
93-003727
- Van Der Kraak, Glen
93-002838
- van der Meer, F.
93-003213
- Van der Sluiszen, Ad
93-002531
- van der Veer, H. W.
93-003295
- van der Velde, G.
93-004162
- Van Der Velde, Joan A.
93-002622
- van der Walt, L. D.
93-002938
- Van Esmerpaen, Joël
93-002578
- van Gestel, W.
93-002813
- van Ginckel, F.
93-002727
- Van Hoogen, Geertjan
93-003728
- Van Landschoote, E.
93-003202
- van Loosven, P. I.
93-003282
- Van Muiswinkel, W. B.
93-003448
- van Rensburg, E.
93-003614

AUTHOR INDEX

- Van Voorhees, David A.
 93-003123
 van Varen, J. H. J.
 93-003614
 Vandameulen, John R.
 93-002626
 Vandewalle, P.
 93-002662
 Varanka, I.
 93-003906
 Vashdi, Dorit
 93-002620
 Vasil'ev, V. P.
 93-003368
 Vasil'eva, E. O.
 93-003368
 Vasil'yeva, Ye. O.
 93-002530
 Vassilogoulou, V.
 93-003247
 Vaudry, Hubert
 93-002835
 Vaughan, D. S.
 93-004327
 Vaughan, Douglas S.
 93-004326
 93-004329
 Vaughan, J. D. A.
 93-003615
 Vaughn, Caryn C.
 93-003248
 Vecino, E.
 93-002424
 Venstra, J.
 93-002432
 Vellizette, P. A.
 93-002836
 Vel, A. Senthil
 93-004414
 Velzig, E.
 93-002729
 Venmans, Ingo Helertich
 93-004415
 Venugopal, N. B. R. K.
 93-003729
 Verbost, Pieter M.
 93-002622
 Verchaux, Francois
 93-002304
 Verdon, R.
 93-003571
 Verges, Pierrotto
 93-003740
 Verrath, Johan A. J.
 93-002531
 Verzola, Roberto M. M.
 93-002768
 Vestergaard, Torben A.
 93-004330
 Vitanon, G.-M.
 93-002671
 Vlerka, Jorg
 93-002412
 Vijayan, H. M.
 93-002837
 Vila, I.
 93-003121
 Vinclman, Eric
 93-003730
 Vinitanharat, S.
 93-003419
 Vinson, Deanna K.
 93-004129
 Vinson, Mark R.
 93-004129
 Vinyard, Gary L.
 93-003023
 Vittori, R.
 93-002930
 Vivas, Stephen P.
 93-003017
 Viviani, R.
 93-003572
 Vlyskars, Vranop
 93-002386
 Vizuetto Casa, Fuensanta
 93-004274
 Volt, Michelle M.
 93-003596
 Volkenwender, R. A.
 93-003572
 Volodin, V. M.
 93-003087
 Volponi, Stefano
 93-002197
 von der Ende, Gerhard
 93-003018
 von Harling, Inge Huet
 93-002534
 von Westershausen, Hein
 93-003272
 Voss, R. H.
 93-003649
 Vrijenhoek, Robert C.
 93-002940
 Vroeg, P. A.
 93-004140
 Waas, Joseph R.
 93-003019
 Wada, Shun
 93-004389
 Waddie, Terry J.
 93-004079
 Wade, Mike
 93-002838
 Wade, Terry L.
 93-003538
 Wagh, S. B.
 93-003612
 Waghray, Sarola
 93-003693
 Wahle, L. C.
 93-004174
 Watnwright, P. C.
 93-002532
 93-003246
 Watnwright, Peter C.
 93-002529
 Watnwright, S. A.
 93-002537
 Wakamada, Acsushi
 93-003790
 Waldrop, John E.
 93-002322
 Wales, Conna L.
 93-003661
 Walker, A. F.
 93-002872
 93-002980
 93-003173
 Walker, A. M.
 93-003173
 Walker, D. I.
 93-004296
 93-004331
 Walker, H. J., Jr.
 93-002535
 93-003332
 Walker, Susan H.
 93-003108
 Wallace, Jeff C.
 93-002839
 Wallace, Kendall B.
 93-003731

AUTHOR INDEX

- Wallace, Richard K.
93-003040
- Wallace, Robert G.
93-004472
- Walton, Peter
93-002840
- Walline, P.
93-004021
- Wallis, Jerry G.
93-003351
- Walser, R.
93-004469
- Walsh, K.
93-006009
- Walsh, S. J.
93-003875
- Walsh, Stephen J.
93-003929
- Walters, C.
93-003529
- Walton, Anne
93-004193
- Walton, C. G.
93-004416
- Wambold, J. C.
93-004390
- Wan, Jianrong
93-004417
- Wang Bingqian
93-002269
- Wang Genze
93-002533
- Wang Huirong
93-003876
- Wang Jianhui
93-003876
- Wang Hongliang
93-002869
- Wang Suan
93-002534
93-002641
- Wang Weijue
93-003512
- Wang Xing
93-002268
- Wang Zhaocong
93-002269
- Wang Jeng-Hwen
93-002841
- Wang Zhu-Xuen
93-002308
- Wanzenbock, J.
93-002842
- Wanzenbock, S.
93-002842
- Warburton, K.
93-002977
- Ward, David L.
93-003363
- Ward, F. J.
93-003611
- Ward, John M.
93-004332
- Ward, Paul J.
93-002976
- Ward, Rocky
93-002908
- Ward, Trevor J.
93-004333
- Wardle, C. S.
93-002668
- Ware, D. H.
93-003155
- Warren, Stanley M.
93-003292
- Warraults, Douglas I.
93-002413
- Warr, G. W.
93-002711
93-002727
- Washburn, Barbara Shayne
93-002943
- Wasson, D. H.
93-004418
93-004419
- Watabe, Shugo
93-002835
93-002844
- Watanabe, Etsuo
93-004386
- Watanabe, Ken-ichi
93-003249
- Watanabe, Takashi
93-002383
93-002386
- Watanabe, Takushi X.
93-002785
- Watanabe, M. O.
93-002318
- Watanabe, Mado D.
93-002323
93-002324
93-002325
- Watheo, B. M.
93-002452
- Watson, John K.
93-003870
- Watson, William
93-002535
93-003074
93-003109
- Watt, W. D.
93-003406
- Watten, Darnaby J.
93-002439
93-002447
- Watters, G. Thomas
93-004130
- Watts, John
93-003284
- Watts, S. A.
93-002654
- Wauth, Gregg T.
93-004237
93-004238
93-004334
93-004335
- Way, Carl H.
93-004131
- Wayland, H.
93-003277
- Weathers, Kenneth C.
93-004132
- Webb, J. H.
93-002885
- Weber, Baruch
93-002272
- Weber, D. N.
93-002845
- Weber, Gregory H.
93-002845
- Weber, Gregory S.
93-004473
- Weber, J.
93-003768
- Weber, J. Todd
93-004420
- Weber, Jacques
93-003758
- Webster, Carl D.
93-002301
93-002302
- Webster, Henry H.
93-003092

AUTHOR INDEX

- Webster, Ian
93-003070
- Weeks-Perkins, B. A.
93-002791
- Weeks, N. C.
93-002448
- Weeks, Priscilla
93-002224
- Wehrli, Suzanne
93-002730
- Weil Lixian
93-002393
- Weil Shang
93-003250
- Weil, C. I.
93-004350
- Weinberg, Eric S.
93-002536
- Weinrich, C. R.
93-003732
- Weise, J. B.
93-003110
- Weismann, T.
93-002494
- Weixelman, Mike
93-004326
- Walsh, P. G.
93-003733
- Wandelhaar Bonga, Sjoerd E.
93-002622
- Wendt, T.
93-003014
- Wenke, Thomas L.
93-003380
93-003382
- Weseloh, D. V.
93-002225
93-003251
- Wessstad, Vidar G.
93-004337
- West, J. R.
93-004133
- West, Jerry L.
93-004095
- West, Robin L.
93-003174
- Westcott, K.
93-003836
- Westerberg, Hakan
93-004442
- Westers, Harry
93-002309
93-002449
- Westgard, Trond
93-003996
- Westlake, G. F.
93-002639
- Westmeat, M. W.
93-002537
- Weston, James A.
93-002512
- Westra, Laure
93-004052
- Wetherington, Jeffrey O.
93-002940
- Wetzal, J.
93-002538
- Wheaton, Fred W.
93-002429
- Whitlans, T.
93-003836
- Whitaker, O. J.
93-003449
93-003457
- Whitby, P. W.
93-003369
- CONTINUED..
- Whitby, P. W.
93-003433
- White, A.
93-003199
- White, David R. L.
93-004421
- White, E.
93-003175
- White, M. G.
93-003156
93-003333
- White, N. M.
93-002936
- White, Martie G.
93-002633
- White, Paul A.
93-003734
- White, R. J.
93-002836
- White, S. W. G.
93-002925
- White, Ray J.
93-003761
93-004134
93-004135
93-004136
- White, Robert G.
93-003343
- White, Stephanie A.
93-002047
- Whitcaskle, Bobby
93-002373
- Whitmas, C. J.
93-002996
- Whittington, I. O.
93-003526
- Whoriskey, F. G.
93-003629
- Whyte, J. M. C.
93-002846
- Wichert, Gordon A.
93-003565
- Vicklund, P. I.
93-002318
- Vicklund, Robert I.
93-002270
93-002316
93-002323
93-002324
93-002325
93-003201
- Wickramasinghe, S. M.
93-002049
- Wiczaszek, Genia
93-002539
93-004471
- Wiegand, H. D.
93-002394
- Wiegortjes, G. F.
93-003448
- Wiegmann, Daniel O.
93-003021
- Wieser, James G.
93-003735
- Wiersma, S. J.
93-004140
- Wierzbicka, Jachrgo
93-002909
93-003381
- Wiesenburg, Denis A.
93-003538
- Wieser, N.
93-002657
- Wieser, Wolfgang
93-002725
- Wigley, Susan E.
93-003176

AUTHOR INDEX

. CONTINUED.

- Wigley, Susan E
93-004314
- Wildenburg, G.
93-002686
- Wildewich, Bruce H
93-002350
- Wiley, Michael J.
93-004104
- Wilhelm, Kurt A
93-004422
- Wilkinson, Klaus
93-002414
- Wilkie, Michael P.
93-002850
- Wilkinson, Dan
93-003538
- Willes, R F.
93-003649
- Williford, Wayne A.
93-003573
- Williams, A.
93-003529
- Williams, E. Eugene
93-002051
- Williams, Jack E.
93-003792
- Williams, John C.
93-002275
- Williams, P. Jones
93-003022
- Williams, P. Jones
93-003252
- Williams, Thelma L.
93-002501
- Williot, P.
93-002742
- Willis, David W.
93-003075
- Willits, Melissa Jane
93-004423
- Willis, Paul S.
93-003593
- Wilson, Charles A.
93-003151
- Wilson, J. L.
93-002355
- Wilson, James A.
93-003557
- Wilson, M. H.
93-002727
- Wilson, Mark V. H.
93-003369
- Wilson, R. N.
93-003687
- Winder, Bruce
93-003513
- Winnemiller, Kirk O.
93-003370
- Wing, Bruce L.
93-003334
- Winnicki, Aleksander
93-002852
- Winterbottom, Richard
93-002540
- Winton, J. R.
93-003464
- Winton, James R.
93-003470
- Wiss, E.
93-003705
- Witthler, R. E.
93-002809
- Witthler, Ruth E.
93-003038
- Witkowski, Andrzej
93-002803
- Wlodek, Jan Marian
93-004121
- Wlodek, Jan-Marian
93-004129
- Wohlfaerth, Gloria W
93-002326
- Wohlgenuth, Evzen
93-003827
- Wolledge, R. C.
93-002594
- Wolf, Patricia
93-004181
- 93-004330
- Wolos, Arkadiusz
93-004128
- Wolters, William R.
93-002347
- Wong, A. D. L.
93-002827
- Wong, Kwan
93-004424
- Wood, Andrew
93-002512
- Wood, Chris M.
93-002595
- 93-002850
- 93-002854
- Wood, Damaris S.
93-004339
- Woodland, D. J.
93-003357
- Woods, H. A.
93-002767
- Woods, L. Curry III
93-002853
- Woolington, James D.
93-003077
- 93-004126
- Wooster, G. A.
93-003392
- Wooster, Hannon S.
93-004340
- Wossten, R.
93-003582
- Wortman, Brian
93-002425
- Wourms, J. P.
93-002538
- Wrschmell, Renette B.
93-002587
- Wray, S.
93-003958
- Wright, G. H.
93-002506
- Wright, Garland
93-003865
- Wright, Glenda M.
93-002772
- Wright, Jonathan M.
93-002890
- Wright, P. J.
93-003867
- 93-003293
- Wright, Patricia A.
93-002850
- 93-002854
- Wright, Peter J.
93-002978
- Wright, Tom
93-003869
- Wrist, P. E.
93-003649
- Wrobel, David
93-002415
- Wu Hsueang
93-002254
- Wu, Jen-Lieh
93-003466

- Wurts, William A.
 93-002311
 93-002327
 93-002450
- Wurtsbaugh, Wayne A.
 93-003114
- Wynne, Forrest
 93-002326
- Wypyszynski, Alex M.
 93-002203
- Xiangke Lu
 93-002226
- Xiao, Tongshun
 93-003923
- Xie, Yuhao
 93-003004
- Xie, X. J.
 93-002855
- Ximeres, Marie-Claude
 93-004341
- Xu, Bohai
 93-003434
- Xu, Chengjian
 93-004467
- Xu, Fuxian
 93-002329
- Xu, Guocai
 93-003352
- Yager, Timothy K.
 93-002856
- Yahya, Jahara
 93-004342
- Yamada, Akiko
 93-002857
- Yamada, Masayuki
 93-002032
- Yamaguchi, KunSko
 93-003431
- Yamaha Outboards
 93-003693
- Yamamoto, Kohji
 93-002832
- Yamonaka, Hideaki
 93-004389
- Yamashita, EiJi
 93-002856
- Yamazaki, Fumio
 93-002941
- Yamazaki, Yoshio
 93-002300
- Yan Tao
 93-003302
- Yan, L.
 93-002059
- Yanagisachi, Ryuzo
 93-002760
- Yancey, Daniel R.
 93-002392
- Yanez, Eleuterio
 93-004176
- Yang Junxing
 93-003352
- Yang Maoshan
 93-002541
 93-002542
 93-003531
- Yang Shuxun
 93-003058
- Yang, C. Z.
 93-003530
- Yang, T. H.
 93-002860
- Yang, T.-H.
 93-002861
- Yang, Yong Rhu
 93-002942
- Yarechevski, Aivie L.
 93-003673
- Yashiki, Ikuo
 93-003900
- Yasukochi, Kenzo E.
 93-002968
- Yatsunami, Kazuhisa
 93-004425
- Yazdani, G. M.
 93-003365
- Yazella, Stephen
 93-002519
- Yi, Ting-Chi
 93-003373
- Yin Yuanhong
 93-002542
 93-003531
- Yingxue Fang
 93-002301
- Ylonen, Hannu
 93-002253
- Yodanis, Peter
 93-003193
- Yokoya, Sachihiko
 93-002543
- Yorker, Terry L.
 93-004444
- Yoo, Sin Jae
 93-004344
- Yoon, Jong Man
 93-002444
- Yoshiida, Kazumoto
 93-003300
 93-003910
 93-003920
- Yoshida, Terutayo
 93-002002
- Yoshikawa, Joanne S. M.
 93-002863
- Yoshimatsu, Takao
 93-002351
- Yoshimizu, Masoru
 93-003416
 93-003479
- Yoshinaga, Tomoyoshi
 93-003532
- Yoshinaka, NaJi
 93-002585
 93-002726
- Yoshiwa, Tetsuro
 93-004426
- Young, C.
 93-002520
- Young, James D.
 93-002675
- Young, M. J.
 93-002864
- Young, R. J.
 93-003110
- Youngson, A. F.
 93-002865
- Youson, John H.
 93-002772
- Yowell, Douglas W.
 93-003023
- Yu, Hiao-Ling
 93-002367
- Yu, John Yuh-Lin
 93-002552
- Yuan, An-Xiu
 93-002368
- Yuan, Henry J.
 93-004343
- Yule, Daniel L.
 93-004148
- Zachmann, A.
 93-002574

AUTHOR INDEX

- Zairin, Muhammad, Jr
93-00286
- Zall, R R
93-004412
- Zaman, A.
93-004375
- Zanudio Armenta, Olga Olivia
93-002071
- Zan Yanan
93-002230
- Zan Yaelon
93-002625
- Zarotti, Giuseppe
93-002867
- Zany, S
93-002550
- Zapponi, Maria Carla
93-002867
- Zaslloff, Michael
93-002730
- Zastrow, Colleen E.
93-003157
- Zavarina, S V
93-003106
- Zdzitlowecki, Krzysztof
93-003522
93-003533
- Zelick, R
93-002570
- Zeman, S
93-002871
- Zhao Bing
93-003533
- Zhang Bin
93-002869
- Zhang Juejin
93-003884
- Zhang Junglin
93-003533
- Zhang Jingzhi
93-002728
- Zhang Shuyuan
93-002507
- Zhang Zhong
93-003382
- Zhang, Chang Ek
93-003111
93-004344
- Zhao Chungang
93-004099
- Zhao Weixin
93-002544
- Zheng Xiaoyin
93-003512
- Zhonglin Chen
93-002301
- Zhou Hongyi
93-002868
- Zhou Yangting
93-003254
- Zhu Bingren
93-003434
- Zhu Caibao
93-002869
- Zhu Xinhua
93-004345
- Zhu, D.
93-004250
- Zhu, Xue-Bao
93-004138
- Zidack, Walter
93-002385
93-002314
- Ziegenfuss, Michael C.
93-002631
- Zietara, Marek S.
93-002870
- Zimmerman, E G
93-002907
- Zimmermann, Christopher
93-003048
- Zippel, H P.
93-002871
- Zohar, Y.
93-002906
- Zottoli, Steven J.
93-002697
- Zoviri, Mbarek
93-004258
- Zuliana, D.
93-003295
- Zuniga, Humberto N.
93-002545
- Zwolski, Wlodzislaw
93-004113
- Zydek, Slawomir
93-004106



GEOGRAPHICAL INDEX

- Africa
93-003742
93-003776
- Africa, Western
93-003754
93-004242
- Africa: Lake Chad
93-004008
- Africa: Niger River and Basin
93-004855
93-004873
93-004683
93-004692
- Alabama
93-003848
93-003881
- Alabama, Coastal
93-004269
93-004221
- Alabama, Western
93-002972
- Alabama: Guntersville Reservoir
93-003877
- Alabama: Tennessee River
93-004132
- Alaska
93-003336
93-003469
93-003470
93-003930
- Alaska, Southeastern
93-004672
93-004339
- Alaska, Western
93-003738
- Alaska: Alaska Peninsula
93-004326
- Alaska: Arctic Natl. Wildlife Refuge
93-003174
- Alaska: Auke Bay
93-003264
- Alaska: Bristol Bay
93-003077
93-003105
93-004126
93-004320
- Alaska: Cook Inlet
93-004343
- Alaska: Dall River
93-004657
- Alaska: Egegik River
93-003677
- Alaska: Fish Creek
93-003939
- Alaska: Gulf of Alaska
93-003313
93-003924
- Alaska: Iliamna Lake
93-002511
- Alaska: Jakof Bay
93-002995
- Alaska: Kodiak Island
93-004326
- Alaska: Kotzebue Sound
93-004266
- Alaska: Kuskokwim River
93-004109
- Alaska: Kvichak River
93-003077
- Alaska: Margaret Lake
93-003888
- Alaska: Norton Sound
93-004266
- Alaska: Prince William Sound
93-003549
93-003647
- Alaska: Prudhoe Bay
93-003613
- Alaska: Shelikof Strait
93-003313
- Alaska: Teku River
93-003126
- Alaska: Unerik River
93-003877
- Alaska: Wood River
93-003877
93-004640
- Antarctica
93-002593
93-002617
93-002789
93-002804
93-003870
93-003156
93-003233
93-003320
93-003333
93-003870
93-004223
- Antarctica: Lazanav Bay
93-003048
- Arctic Ocean
93-002513
93-002608
- Argentina
93-002937
93-003636
93-004217
- Argentina: Parana River
93-004119
- Arizona: Aravaipa Creek
93-004115
- Arkansas: Buffalo River
93-003893
- Asia
93-004079
- Asia, Southeastern
93-002221
93-004260
- Atlantic Ocean
93-002504
93-002573
93-002685
93-003253
93-003399
93-003598
93-004316
93-004327
93-004354
93-004427
- Atlantic Ocean, North
93-002336
93-002350
93-002513
93-002694
93-003161
93-003176
93-003369
93-003844
93-004269
93-004289
93-004328
- Atlantic Ocean, North: Gulf of Maine
93-003856
- Atlantic Ocean, North: Middle Atlantic Bight
93-002664
93-003095
- Atlantic Ocean, Northeastern
93-002037
93-002308
93-002536
93-004218

GEOGRAPHICAL INDEX

- CONTINUED
- Atlantic Ocean, Northeastern
93-034283
93-034452
- Atlantic Ocean, Northwestern
93-032486
93-032491
93-032992
93-032999
93-032999
93-033104
93-033122
93-033144
93-033287
93-033326
93-033359
93-033497
93-033921
93-034190
93-034234
93-034329
- Atlantic Ocean, South
93-032603
93-033036
93-034217
93-034224
93-034290
93-034317
- Atlantic Ocean, Southeastern
93-033152
- Australia
93-032455
93-032542
93-033570
93-033574
93-033794
93-033805
93-033923
93-034176
93-034179
93-034195
93-034204
93-034214
93-034235
93-034241
93-034277
93-034279
93-034285
93-034292
93-034295
93-034305
93-034324
93-034331
- Australia: Great Barrier Reef
93-033275
93-033528
93-033929
93-034208
- Australia: Gulf of Carpentaria
93-034319
- Australia: Jervis Bay
93-034333
- Australia: New South Wales
93-033545
93-033897
93-034254
93-034281
93-034333
- Australia: Northern Territory
93-033547
- Australia: Port Phillip Bay
93-033236
93-033561
- Australia: Queensland
93-032984
93-033618
93-034205
- Australia: South Australia
93-033359
- Australia: Swan Bay
93-033236
- Australia: Victoria
93-033236
93-033561
93-034216
- Australia: Western Australia
93-033357
93-033459
93-033529
93-033820
93-034156
- Australia: Wilson Inlet
93-034156
- Austria
93-032842
93-032918
93-033842
- Austria: River Traun
93-033442
- Bahama Islands
93-032324
93-033201
- Baltic Sea and Area
93-032734
93-032939
93-032621
93-032949
93-033034
93-033116
93-033145
93-033158
93-033177
93-033210
93-033242
93-033498
93-033723
93-033724
93-033932
93-034025
93-034229
- Bangladesh
93-033143
- Barbados
93-033168
- Barents Sea
93-032492
93-032909
93-033973
93-033975
93-033997
93-033991
93-034203
93-034208
93-034313
- Bay of Bengal
93-034286
- Belgium
93-033527
- Benin
93-032334
93-034173
- Bering Sea
93-033182
93-033325
93-033998
93-034337
- Bermuda Islands
93-033362
- Black Sea and Area
93-032539
93-032687
93-033188
- Brazil
93-032918

GEOGRAPHICAL INDEX

CONTINUED

- Brazil
 93-003594
 93-003752
 93-003840
 93-004074
 93-004225
 Brazil, Rio Demini
 93-004063
 Brazil, Rio Negro
 93-004063
 California
 93-002230
 93-002243
 93-002246
 93-002273
 93-002372
 93-002383
 93-002912
 93-004005
 93-004338
 California, Coastal
 93-002470
 93-002881
 93-003083
 93-003607
 93-003109
 93-003125
 93-003234
 93-003569
 California, Northern
 93-002874
 93-004894
 93-004114
 California, California Bight
 93-002840
 California, Carmel Bay
 93-002971
 California, Eel River
 93-002241
 California, Klamath River
 93-003853
 93-004866
 93-004875
 93-004884
 93-004891
 93-004133
 California, Martis Creek
 93-004126
 California, Merced River
 93-002231
 California, Mokelumne River
 93-002235
 California, Noyo River
 93-002239
 93-002240
 93-002242
 California, Orville Reservoir
 93-003086
 California, Pajaro River
 93-003394
 California, Sacramento River
 93-002280
 93-003936
 93-003937
 93-004473
 California, Sacramento-San Joaquin Estuary
 93-003394
 California, Salmon River
 93-004133
 California, San Francisco Bay
 93-003406
 California, San Joaquin River
 93-003908
 California, Scott River
 93-004133
 California, Shasta River
 93-004133
 California; Southern California Bight
 93-002535
 93-003182
 93-003124
 93-004180
 California; Tarap Creek
 93-004099
 California, Trinity River
 93-004066
 Canada
 93-002245
 93-002350
 93-003030
 93-003133
 93-003748
 93-003818
 93-003019
 93-003983
 93-003974
 93-004009
 93-004196
 93-004479
 Canada, Alberta
 93-003260
 Canada, Athabasca River
 93-003260
 Canada; Bay of Fundy
 93-003160
 93-003328
 Canada; Beaver River
 93-003938
 Canada; Beaverlodge Lake
 93-003592
 Canada; Bessard Lake
 93-002251
 Canada; Bonavista Bay
 93-002983
 Canada; British Columbia
 93-002333
 93-002912
 93-003025
 93-003029
 93-003069
 93-003126
 93-003127
 93-003156
 93-003281
 93-003297
 93-003485
 93-003807
 93-003884
 93-003935
 93-004058
 93-004154
 93-004183
 93-004246
 93-004272
 93-004275
 93-004351
 Canada; Campbell River
 93-004154
 Canada; Canaan River
 93-003486
 Canada; Colubator River
 93-003807
 Canada; Conception Bay
 93-002983
 Canada; Coquihalla River
 93-003807
 Canada; Cowen River
 93-003941
 Canada; Credit River
 93-003716
 Canada; Crystal Lake
 93-003127
 Canada; Delacorde Lake
 93-004029

- Canada: Orizaba Lake
93-00381
- Canada: Fairford River
93-00394
- Canada: Greig Lake
93-00402
- Canada: Hamilton Harbour
93-00455
- Canada: Hanson Lake
93-004016
- Canada: Hotel Lake
93-003127
- Canada: Howe Sound
93-004272
- Canada: Indian Brook
93-003850
- Canada: Jan Lake
93-004015
- Canada: Lac la Ronge
93-004017
- Canada: Lake Diefenbaker
93-004506
- Canada: Limestone Lake
93-004016
- Canada: Little Codroy River
93-003349
- Canada: Manitoba
93-003649
93-003314
93-003611
93-003941
93-004434
- Canada: Miss Gasin
93-003160
- Canada: Mineral Lake
93-004014
- Canada: Misty Lake
93-002912
- Canada: Montreal Lake
93-004634
- Canada: Peon River
93-003698
- Canada: Peose Lake
93-004434
- Canada: New Brunswick
93-002760
93-003613
93-003862
- Canada: Newfoundland
93-002350
93-002491
93-002589
93-002583
93-003039
93-003061
93-003149
93-003209
93-003221
93-003890
93-004645
93-004284
93-004311
- Canada: North Lake
93-003127
- Canada: Northwest Territories
93-003821
- Canada: Nova Scotia
93-002336
93-003160
93-003228
93-003280
93-003256
93-003326
93-003453
93-003486
93-004211
- Canada: Ontario
93-002225
93-003681
93-003698
93-003227
93-003314
93-003329
93-003648
93-003566
93-003595
93-003506
93-003661
93-003666
93-003674
93-003711
93-003716
93-003727
93-003785
93-003810
93-003852
93-003938
93-004054
93-004455
- Canada: Peace River
93-003269
- Canada: Pelican Lake
93-004018
- Canada: Pinehouse Lake
93-004028
- Canada: Prince Edward Island
93-003949
- Canada: Puskwakau River
93-004030
- Canada: Qu'Appelle River
93-003049
- Canada: Quebec
93-003189
93-003314
93-003330
93-003691
93-003765
93-004051
93-004239
- Canada: Queen Charlotte Islands
93-003020
93-003281
- Canada: Red River
93-003049
- Canada: Salmon River
93-003936
- Canada: Saskatchewan
93-002251
93-002271
93-002299
93-003660
93-003334
93-003592
93-003941
93-004006
93-004014
93-004015
93-004016
93-004017
93-004018
93-004027
93-004028
93-004029
93-004030
93-004034
93-004035
93-004044
93-004472
- Canada: Saskatchewan River
93-004472
- Canada: Smoothstone Lake
93-004035

GEOGRAPHICAL INDEX

Canada: Snuts Lake
93-004027

Canada: Sproat Lake
93-003127

Canada: St. Lawrence Seaway
93-002933
93-003162
93-003290
93-003330
93-003891

Canada: St. Marys River
93-003810

Canada: Stavo Lake
93-003025

Canada: Taku River
93-003126

Canada: Thomas River
93-003711

Canada: Timber Lake
93-003498

Canada: Turtle Lake
93-004029

Canada: Ungava Bay
93-003331

Canada: Vancouver Island
93-002912
93-003536

Canada: West Arm Brook
93-003839

Canary Islands
93-004236

Caribbean Area
93-002268
93-002341
93-002349
93-003056
93-003168
93-003285
93-003359
93-003843
93-003863
93-003867
93-003988
93-004151
93-004183
93-004184
93-004196
93-004232
93-004237
93-004238
93-004264
93-004268
93-004269
93-004297
93-004508
93-004509
93-004325
93-004335
93-004435

Caspian Sea and Area
93-003368

Cayman Islands
93-003154

Central America
93-003532

Chile
93-003256
93-004167
93-004170

Chile: Bay of Coquimbo
93-002545

Chile: Choapa River
93-003121

Chile: Lake General Carrera
93-004043

China
93-002226

.CONTINUED

China
93-002252
93-002268
93-002269
93-002301
93-002329
93-002393
93-002534
93-002794
93-003050
93-003804

China: Changjiang River
93-003254

China: Heilongjiang Province
93-003068
93-004060

China: Hubei Province
93-002641

China: Jilin Province
93-003134

China: Lake Jingpo
93-003068

China: Muddy River
93-003068

China: Shanxi Province
93-003467

China: Tulligan River
93-002641

China: Tumen River
93-003894

China: Yalu River
93-003134

China: Yunnan Province
93-003352

Colombia
93-004164

Colorado
93-003216

Colorado: Rocky Mountain Natl. Park
93-004124

Colorado: Taylor River
93-004070

Costa Rica
93-003058

Czechoslovakia
93-003828
93-004065
93-004118
93-004451

Czechoslovakia: Dyje River
93-004147

Czechoslovakia: Ipeľ River
93-003808

Czechoslovakia: Morava River
93-003808
93-003827

Denmark
93-004330

Dominica
93-003168

East China Sea and Area
93-003319
93-004258
93-004345

Egypt
93-004428

England
93-003101
93-003439
93-003491
93-003541
93-003599
93-004071
93-004280

England: Itchen River
93-002906

GEOGRAPHICAL INDEX

- England: Lake Windermere
 93-00308
 England: River Avon
 93-00309
 93-00306
 93-003175
 England: Severn River
 93-003175
 England: Tamar Estuary
 93-002963
 England: Thames River
 93-004182
 Europe
 93-002975
 93-003026
 93-003559
 93-003815
 93-004210
 93-004370
 Europe, Northern
 93-004243
 Europe, Western
 93-004243
 Europe: Danube River and Basin
 93-002842
 93-003808
 93-003828
 93-004085
 93-004116
 93-004431
 Faeroe Islands
 93-004304
 Fiji Islands
 93-004251
 Finland
 93-004248
 Finland: Lake Pyhäjärvi
 93-003959
 Finland: Lake Vesijärvi
 93-003985
 Florida
 93-002188
 93-004399
 93-004438
 93-004461
 Florida: Central
 93-004053
 Florida: Northcentral
 93-003867
 Florida: Southern
 93-003676
 93-003927
 Florida: Stockwater River
 93-003515
 Florida: Everglades Natl. Park
 93-003800
 93-003822
 93-004832
 Florida: Shark River
 93-004032
 Florida: Tampa Bay
 93-003241
 France
 93-002888
 93-002959
 93-003051
 93-003465
 93-003536
 93-003730
 93-003739
 93-003740
 93-003743
 93-003744
 93-003747
 93-003798
 93-004226
 CONTINUED ..
 France
 93-004296
 93-004322
 93-004341
 France: Bay of Biscay
 93-003273
 France: Brittany Estuary
 93-004183
 France: Garonne River
 93-004056
 France: Lac Lanin
 93-003032
 France: Lake Paroloup
 93-003235
 France: Rhone River
 93-003026
 93-003828
 93-004110
 France: River Duranco
 93-003033
 France: Villedaine Bay
 93-003273
 93-003316
 French Polynesia
 93-003139
 93-004189
 93-004197
 93-004251
 Georges Bank
 93-003056
 93-003176
 93-003284
 93-004171
 93-004314
 Germany
 93-004018
 93-004024
 93-004048
 Germany: Lake Constance
 93-003261
 Ghana
 93-004212
 93-004222
 Grand Banks
 93-003164
 93-003929
 Great Lakes
 93-002984
 93-002983
 93-003188
 93-003189
 93-003251
 93-003371
 93-003372
 93-003664
 93-003567
 93-003573
 93-003705
 93-003810
 93-003874
 93-004000
 93-004063
 93-004011
 93-004012
 93-004013
 93-004019
 93-004046
 93-004047
 93-004052
 93-004285
 93-004464
 Greece
 93-003267
 93-003439
 Greenland
 93-003223

GEOGRAPHICAL INDEX

...CONTINUED

- Greenland
 93-004288
- Greenland: Narsaq River
 93-003603
- Guadeloupe and Marie-Galante
 93-003869
- Guinea
 93-004267
- Gulf of Mexico
 93-002623
 93-002907
 93-003046
 93-003085
 93-003151
 93-003310
 93-003322
 93-003644
 93-003856
 93-003960
 93-004157
 93-004209
 93-004237
 93-004238
 93-004245
 93-004262
 93-004289
 93-004306
 93-004316
 93-004327
 93-004335
 93-004336
 93-004427
- Haiti
 93-002278
 93-002316
- Hawaii
 93-003211
 93-003483
 93-003555
 93-003596
 93-004399
- Hawaii: Hanalei Bay
 93-003831
- Honduras
 93-002991
- Hungary: Zala River
 93-003566
- Iceland
 93-002248
 93-003244
- Idaho
 93-003811
 93-003931
- Idaho: Clearwater River
 93-003410
- Idaho: Henry's Fork
 93-004129
- Idaho: Pond Crocodile Lake
 93-004457
- Idaho: Weiser River
 93-004098
- Illinois
 93-003240
 93-004104
- Illinois: Illinois River
 93-004122
- India
 93-002302
 93-002505
 93-003366
 93-003496
 93-003552
 93-003558
 93-004256
 93-004286
 93-004488
- India: Ataknando River
 93-002521
- India: Hussainsagar Lake
 93-003575
- Indian Ocean
 93-003356
 93-003361
 93-003365
- Indian Ocean, South
 93-003233
- Indonesia
 93-002201
 93-002207
- Iraq
 93-003514
- Ireland
 93-003269
 93-004219
- Ireland: Corrib Catchment Area
 93-002958
- Irish Sea
 93-002795
 93-003119
 93-003283
 93-003336
 93-003487
 93-004387
- Israel: Lake Kinneret
 93-003128
- Israel: Sea of Galilee
 93-004021
- Italy
 93-002197
- Italy: Lake Lugano
 93-004036
- Italy: Ligurian Sea
 93-002538
- Italy: Orbetello Lagoon
 93-003556
- Ivory Coast
 93-002534
 93-004212
 93-004222
- Ivory Coast: Ebrie Lagoon
 93-004257
- Ivory Coast: Lagune Aby
 93-004202
- Jamaica
 93-002279
 93-002293
 93-002981
 93-003521
 93-003684
 93-003926
 93-004166
- Jamaica: Discovery Bay
 93-004169
- Japan
 93-002214
 93-002215
 93-002291
 93-002338
 93-003129
 93-003172
 93-003249
 93-003374
 93-003376
 93-003424
 93-003439
 93-003462
 93-003473
 93-003479
 93-003510
 93-003741
 93-003743
 93-003744

GEOGRAPHICAL INDEX

- CONTINUED
- Japan
 93-003749
 93-003824
 93-004172
 93-004252
- Japan: Arisake Bay
 93-003290
- Japan: Hokkaido
 93-003138
 93-003276
 93-003416
- Japan: Mitsu Bay
 93-003178
- Japan: Sagami Bay
 93-003319
- Japan: Suruga Bay
 93-003553
- Japan: Tokyo Bay
 93-002527
 93-003312
 93-003319
 93-003512
- Japan: Tosa Bay
 93-003141
- Kansas, Western
 93-003200
- Kansas: Neosho River
 93-003302
- Kentucky
 93-002311
 93-002327
 93-002328
 93-003257
- Kentucky, Western
 93-004086
- Kenya
 93-002340
 93-002744
- Kerguelen Islands
 93-003078
- Korea
 93-002205
 93-002430
 93-003111
 93-004344
- Kuwait
 93-003379
- Lake Erie
 93-003081
 93-003215
 93-003622
 93-003648
 93-003907
 93-004031
- Lake Huron
 93-003622
 93-003973
 93-004023
 93-004049
- Lake Michigan
 93-003165
 93-003650
 93-003650
 93-003681
- Lake Ontario
 93-002225
 93-003526
 93-003535
 93-003540
 93-003565
 93-003666
 93-003679
 93-003726
 93-003836
 93-003860
 93-004039
- ...CONTINUED...
- Lake Ontario
 93-004020
 93-004037
 93-004041
 93-004042
 93-004059
 93-004249
 93-004450
- Lake Superior
 93-003320
 93-003665
 93-003707
 93-003963
- Lesser Antilles
 93-004200
 93-004282
- Louisiana
 93-003404
- Louisiana, Coastal
 93-003025
 93-003960
- Maine, Coastal
 93-003104
- Maine: Gulf of Maine
 93-003219
 93-003849
 93-004171
- Maine: Penobscot River
 93-003217
- Malawi
 93-002203
- Malawi: Lake Malawi
 93-002919
- Malaysia
 93-002270
 93-004159
 93-004342
- Mali
 93-004055
 93-004073
- Mart Inique
 93-003773
 93-003847
 93-004203
 93-004261
- Maryland
 93-003011
 93-004137
- Maryland: Choptank River
 93-002395
- Maryland: Delmarva Peninsula
 93-003318
- Massachusetts: Merrimack River
 93-002778
- Mediterranean Region
 93-002490
 93-002530
 93-003062
 93-003115
 93-003146
 93-003162
 93-003247
 93-003317
 93-003363
 93-003438
 93-003465
 93-004185
 93-004190
 93-004218
 93-004226
 93-004227
 93-004231
 93-004299
 93-004307
 93-004315
 93-004334

GEOGRAPHICAL INDEX

- Mexico
 93-002495
 93-002879
 93-002932
 93-003332
 93-004303
 93-004306
 Mexico: Baja California Norte
 93-002470
 93-004100
 Mexico: Gulf of California
 93-003857
 93-003858
 Mexico: Laguna Chichancanab
 93-003259
 Mexico: Sinaloa
 93-003071
 93-003857
 Mexico: Yucatan
 93-003239
 93-004320
 93-004310
 Michigan
 93-003891
 93-003922
 Michigan: Pere Marquette River
 93-003507
 93-003508
 Michigan: St. Marys River
 93-003810
 Michigan: Tawas Bay
 93-004023
 Micronesia
 93-003346
 Minnesota
 93-003323
 93-003856
 93-004059
 Minnesota: Kabetogama Lake
 93-004022
 Minnesota: Red Lakes
 93-004039
 Minnesota: Voyageurs Natl. Park
 93-004022
 Mississippi
 93-002229
 93-003484
 Mississippi: Coastal
 93-004289
 93-004262
 Mississippi: Little Creek
 93-004060
 Missouri: Current River
 93-004112
 Montana
 93-003830
 93-004135
 Montana: Deer Lake
 93-002965
 Morocco
 93-004218
 93-004258
 Gambia
 93-004290
 Nebraska
 93-002969
 Nebraska: Calamus Reservoir
 93-004146
 Nepal
 93-005360
 93-005516
 Nepal: Gandaki River
 93-003301
 Netherlands
 93-002958
 93-003432
- .. CONTINUED ..
 Netherlands
 93-004194
 Netherlands: Arctilles
 93-002286
 93-004162
 Netherlands: Wadden Sea
 93-003280
 Nevada
 93-003494
 Nevada: Lake Tahoe
 93-003114
 Nevada: Pyramid Lake
 93-002850
 93-002854
 New Caledonia
 93-004251
 93-004263
 New Hampshire
 93-003841
 New Hampshire: Mirror Lake
 93-003232
 New Jersey: Great Bay
 93-003060
 93-003064
 New Jersey: Hudson River
 93-003833
 New Jersey: Mullica River
 93-003064
 New York
 93-003060
 New York: Buffalo River
 93-004437
 New York: Chautauque Lake
 93-002281
 New York: Hudson River
 93-003833
 New York: New York Bight
 93-003169
 New York: Oneida Lake
 93-003043
 New Zealand
 93-002563
 93-003110
 93-003859
 93-003905
 93-004494
 New Zealand: Lake Taupo
 93-002931
 New Zealand: Rakata River
 93-003653
 New Zealand: Waikakariri River
 93-003653
 New Zealand: Waitaki River
 93-003200
 New Zealand: Weydon Burn
 93-002966
 Nigeria
 93-003377
 93-004097
 Nigeria: Lagos Lagoon
 93-004161
 North America
 93-002257
 93-002426
 93-002463
 93-002920
 93-003024
 93-003122
 93-003142
 93-003369
 93-003560
 93-003534
 93-003755
 93-003759
 93-003782
 93-003835

GEOGRAPHICAL INDEX

.CONTINUED .

- North America
 93-003867
 93-004373
 North America Columbia River and Basin
 93-002256
 93-003418
 93-003441
 93-003531
 93-003944
 93-003945
 93-004000
 93-004441
 North Carolina
 93-004101
 North Carolina: Beaufort Inlet
 93-003292
 North Carolina: Cape Hatteras
 93-003497
 North Carolina: Great Smoky Mountains Natl. Park
 93-004095
 North Carolina: Palmer Creek
 93-004005
 North Carolina: Pigeon River
 93-003577
 North Dakota
 93-003816
 North Sea
 93-003055
 93-003069
 93-003082
 93-003994
 93-003115
 93-003202
 93-003205
 93-003207
 93-003208
 93-003563
 93-004297
 93-004294
 93-004323
 93-004450
 Northern Ireland
 93-004215
 Northern Ireland: Lough Neagh
 93-003090
 Norway
 93-002254
 93-002348
 93-002618
 93-002624
 93-002906
 93-002987
 93-003041
 93-003057
 93-003075
 93-003079
 93-003084
 93-003100
 93-003103
 93-003132
 93-003153
 93-003204
 93-003205
 93-003307
 93-003321
 93-003327
 93-003409
 93-003493
 93-003495
 93-003905
 93-003906
 93-004293
 93-004298
 93-004313
 Norway: Glomsa River
 93-003714
 Norway: Lake Tesse
 93-002970
 Norway: Orkla River
 93-004088
 Norway: Vardnes River
 93-003159
 Norway: Vosso River
 93-003137
 Ohio
 93-004031
 Oklahoma
 93-003865
 Oklahoma, Southern
 93-003831
 Oklahoma: Copas Reservoir
 93-004145
 Oregon
 93-003823
 93-003931
 93-004054
 93-004072
 Oregon, Coastal
 93-003083
 93-003125
 93-003012
 Oregon: Copas Bay
 93-002254
 Oregon: Elk Creek
 93-004067
 Oregon: Heceta Bank
 93-004318
 Oregon: Hill Creek
 93-003889
 Oregon: Kestucca River
 93-004067
 Oregon: Willamette River
 93-003393
 Oregon: Yaquina Bay
 93-002254
 Pacific Ocean
 93-002648
 93-003085
 93-003319
 93-003349
 93-003746
 93-003900
 93-003906
 Pacific Ocean, North
 93-002333
 93-002640
 93-002810
 93-002914
 93-003009
 93-003074
 93-003083
 93-003087
 93-003102
 93-003106
 93-003124
 93-003155
 93-003172
 93-003245
 93-003249
 93-003267
 93-003276
 93-003334
 93-003406
 93-003469
 93-003555
 93-003793
 93-003916
 93-003924
 93-004172
 93-004180
 93-004318
 Pacific Ocean, North: California Current
 93-003129

GEOGRAPHICAL INDEX

- Pacific Ocean, Northeastern
 93-082700
 93-083332
 93-083485
 93-083792
- Pacific Ocean, Northwestern
 93-083460
 93-083912
- Pacific Ocean, South
 93-082600
 93-083139
 93-083482
 93-084165
 93-084251
- Papua New Guinea
 93-084301
- Paraguay
 93-083524
- Pennsylvania
 93-082259
- Pennsylvania: Susquehanna River
 93-083886
- Pennsylvania: White Clay Creek
 93-083834
- Peru
 93-082193
 93-083859
 93-083861
- Peru: Lake Titicaca
 93-084026
- Philippines
 93-082285
- Poland
 93-084082
 93-084127
- Poland: Bialbrza River
 93-084128
- Poland: Bug River
 93-084128
- Poland: Bystrzyca River
 93-084113
- Poland: Dnna Sec River
 93-083893
- Poland: Jeziorak Lake
 93-083266
 93-084001
- Poland: Lake Dobie
 93-084025
- Poland: Lake Orzackie
 93-083147
- Poland: Lutka River
 93-083259
- Poland: Murew River
 93-084189
 93-084128
- Poland: Odry River
 93-082192
 93-083034
 93-084064
- Poland: Osowka River
 93-083035
- Poland: Posluka River
 93-084068
- Poland: Pillica River
 93-084187
 93-084188
- Poland: Pissa River
 93-084185
- Poland: Pomeranian Bay
 93-082539
- Poland: Rabe River
 93-084123
- Poland: Rawka River
 93-084186
- Poland: Roga River
 93-083291
- Poland: Roznow Dam Reservoir
 93-084142
- Poland: Skawa River
 93-084120
- Poland: Sola River
 93-084121
- Poland: Tysmienica River
 93-083208
- Poland: Vistula Lagoon
 93-083210
- Poland: Vistula River
 93-083183
 93-083537
 93-083932
- Poland: Warta River
 93-083266
 93-084690
- Poland: Wierza River
 93-083158
- Poland: Wierzewska River
 93-084120
- Poland: Wroclawek Dam Reservoir
 93-083186
 93-083243
 93-083537
 93-083932
- Poland: Zemboryce Reservoir
 93-083271
- Poland: Zywloc Dam Reservoir
 93-084141
- Polynesia
 93-084182
- Portugal
 93-083088
 93-083526
 93-083615
- Portugal: Mira Estuary
 93-083057
- Portugal: Tagus Estuary
 93-083178
 93-083181
- Puerto Rico
 93-082194
 93-082386
 93-083285
 93-083858
 93-083896
 93-083905
 93-083955
 93-084151
 93-084201
 93-084255
 93-084309
- Reunion
 93-083331
 93-084188
- Rwanda: Lake Ihema
 93-083196
- Saudi Arabia
 93-082317
- Scotland
 93-082229
 93-083154
 93-083388
 93-083389
 93-083439
 93-083562
 93-083795
 93-084280
- Scotland: Don River
 93-083218
- Scotland: Blinnoch Burn
 93-082981
 93-083270
 93-084447
- Scotland: Graveland River
 93-083173

GEOGRAPHICAL INDEX

- Scotland: Loch Ewe
93-002565
93-004468
- Scotland: Loch Rannoch
93-002872
93-002900
- Scotland: North Esk River
93-003341
- Scotland: River Oas
93-002865
93-003691
93-003136
93-003210
- Scotland: Shetland Islands
93-003067
- Scotland: Spey River
93-003091
93-003136
- Scotland: Tay River
93-002865
- Sea of Japan
93-003509
93-004249
- Senegal
93-003766
93-004177
93-004181
93-004190
93-004213
93-004253
93-004259
- Seychelles Islands
93-004175
- South Africa
93-002298
93-003028
93-003345
- South America
93-004165
- South America: Amazon River and Basin
93-002193
93-003518
93-003861
93-004863
93-004867
93-004074
93-004352
- South Carolina
93-004139
- South Carolina: Par Pond
93-003265
- South Carolina: Savannah River
93-002561
93-003825
- South Georgia
93-003047
93-003156
93-003214
93-003320
93-003535
93-004317
- South Orkney Islands
93-003156
- Spain
93-003686
93-003115
93-003146
93-003476
93-003682
93-003750
93-004168
93-004198
93-004273
93-004274
- Spain: Bay of Biscay
93-002037
- Spain: Guadalquivir River
93-003044
- Spain: Umla River
93-003161
- St. Lucia
93-002507
93-003092
93-003093
- St. Pierre and Miquelon
93-004234
- Sudan: Jebel Aulia Reservoir
93-004143
93-004144
- Sweden
93-002254
93-002243
93-002254
93-003408
93-003652
- Sweden: Gulf of Bothnia
93-003116
- Sweden: Gullmar Bay
93-003112
- Sweden: Lake Sövegorg
93-004040
- Switzerland: Glott River
93-003534
- Switzerland: Lac Lemon
93-003032
- Taiwan
93-002295
93-003394
93-003477
- Tanzania
93-002925
- Tanzania: Zanzibar Islands
93-004158
- Tennessee: Great Smoky Mountains Natl. Park
93-004101
- Tennessee: Little River
93-003577
- Tennessee: Pigeon River
93-003577
- Texas
93-003799
93-003855
93-003856
93-003990
93-004245
93-004336
- Texas: Coastal
93-003685
- Texas: Cedar Lake Reservoir
93-003920
- Texas: Choke Canyon Reservoir
93-003920
- Texas: Galveston Bay
93-003538
93-003539
93-004155
- Texas: Lake Conroe
93-003184
- Texas: Port Aransas
93-003310
- Thailand
93-002307
93-003191
- Trinidad and Tobago
93-003168
93-004271
- U.S. Virgin Islands
93-002974
93-003285
93-003822
93-003839
93-003862

GEOGRAPHICAL INDEX

CONTINUED

U S Virgin Islands
 93-00363
 93-004150
 93-004184
 93-004201
 93-004233
 93-004399

United Kingdom
 93-002451
 93-003057

United Kingdom: Channel Islands
 93-002653

United States
 93-002335
 93-002746
 93-003762
 93-003832
 93-003843
 93-004153
 93-004269
 93-004289

United States, Eastern
 93-002203
 93-003120
 93-003314
 93-003921
 93-004190
 93-004328

United States, Northeastern
 93-002902
 93-004171

United States, Northwestern
 93-003777
 93-003889
 93-003829

United States, Southeastern
 93-002442
 93-003964

United States: Appalachian Area
 93-004070

United States: Chesapeake Bay
 93-003095
 93-003157
 93-003311
 93-003543
 93-003550
 93-003631
 93-004149
 93-004160

United States: Middle Atlantic States
 93-002894

United States: Mississippi River and Basin
 93-003212
 93-003635
 93-003735
 93-004007
 93-004059
 93-004122
 93-004131

United States: Missouri River and Basin
 93-003825

United States: New England
 93-003175
 93-003217

United States: Ohio River and Basin
 93-004130

United States: Pacific and Mountain States
 93-004135

USSR
 93-002994
 93-003368
 93-004287

USSR: Ivan'kovo Reservoir
 93-003107

USSR: Kamchatka
 93-002929

CONTINUED

USSR: Kamchatka
 93-003106
 93-003245

USSR: Kamchatka River
 93-002929

USSR: Lake Baykal
 93-003554

USSR: Lake Glubokoe
 93-003007

USSR: Ob River
 93-004111

USSR: RSFSR
 93-003047
 93-004111

USSR: Rybinskoye Reservoir
 93-003107

USSR: Siberia
 93-003554

Utah: Flaming Gorge Reservoir
 93-004140

Venezuela
 93-002838
 93-004290

Venezuela: Apure River
 93-004093

Virgin Islands
 93-002067

Virginia
 93-003011

Virginia: James River
 93-003222

Virginia: Potomac River
 93-003631

Virginia: York River
 93-003543

Nadden Sea
 93-002567
 93-003269
 93-003265
 93-004194

Wales
 93-004071
 93-004200

Washington
 93-003023
 93-003059
 93-003933

Washington: Coastal
 93-003083
 93-003125

Washington: Clearwater River
 93-004062

Washington: Dabob Bay
 93-004191

Washington: East Fork Satsop River
 93-004065

Washington: Grays Harbor
 93-004152

Washington: Huckleberry Creek
 93-003230

Washington: Lake Washington
 93-003999

Washington: Snake River
 93-003931

Washington: Willapa Bay
 93-004162

Washington: Yakima River
 93-003942
 93-004077

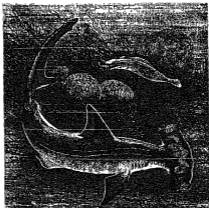
Mediterranean Sea
 93-003048
 93-003205

West Indies
 93-004273
 93-004297

Wisconsin
 93-003192

...CONTINUED .

- Wisconsin
 93-00354
 93-00361
 93-00388
 93-00407
 93-00495
- Wisconsin, Worthen
 93-003625
- Wisconsin: Beaver Creek
 93-003167
- Wisconsin: Big Rib River
 93-003817
- Wisconsin: Brule River
 93-005071
- Wisconsin: Little Rock Lake
 93-003616
 93-004033
- Wisconsin: Rockland Lake
 93-003952
- Wisconsin: Trego Lake
 93-003883
- Wisconsin: Whitefish Lake
 93-003883
- Wisconsin: Wisconsin River
 93-003220
- Wyoming, Southeastern
 93-003216
- Wyoming: Flaming Gorge Reservoir
 93-004148
- Wyoming: Yellowstone Natl. Park
 93-002985
 93-003775
- Yellow Sea and Area
 93-003250
 93-003976
 93-004250
 93-004345
- Yugoslavia: Soca River
 93-004061
- Zambia
 93-003370
 93-003916



SYSTEMATIC INDEX

- Abramis ballerus*
 Catch Per Unit Effort
 93-004025
 Stock Assessment
 93-004025
- Abramis brucei*
 Age/Growth
 93-003266
 93-003271
 Grain
 93-003692
 Diets/Feeds
 93-003692
 Distribution/Vertical
 93-002994
 Echo Sounding
 93-002994
 Feeds/Feeding
 93-003692
 Habitat Selection
 93-002994
 Hybridization
 93-002920
 Hypoxia
 93-002994
 Insecticides
 93-003692
 Management/Research--Reservoirs
 93-003107
 93-003271
 Meristic Studies
 93-002920
 Movements
 93-002994
 Organophosphates
 93-003692
 Population Studies
 93-003107
 Post-Impoundment Studies
 93-003266
 Taste and Odor Problems
 93-003537
- Acanthopagrus flavimanus*
 Exotic Species/Australia
 93-003085
Hysterichthys maculata
 93-003532
 Neotodes
 93-003532
 Parasites/Diseases
 93-003532
- Acanthopagrus australis*
 Bacterial Diseases
 93-003379
 Cryptocaryon Irritants
 93-003379
 Culture/Propagation
 93-003379
 Diets
 93-003379
 Parasites/Diseases
 93-003379
 Protozoan Diseases
 93-003379
 Treatment
 93-003379
 Vibrio
 93-003379
- Acanthopagrus schlegelii*
 Bacterial Diseases
 93-003376
 Culture/Propagation
 93-003376
 Early Development
 93-003471
 Epidermal Lesions
 93-003471
- ...CONTINUED ...
- Acanthopagrus schlegelii*
 Flexibacter
 93-003376
 Larvae
 93-003376
 Light
 93-002942
 Parasites/Diseases
 93-003370
 93-003471
 Protozoan
 93-002942
 Vibrio
 93-003376
 Viral Diseases
 93-003376
 93-003471
- Acanthopagrus kuhlbi*
 Aquariums
 93-002403
 Culture/Propagation
 93-002403
 Epidemics
 93-002679
 Necrosis
 93-002679
- Acanthuridae*
 Evolution
 93-002540
 Species Identification
 93-002540
 Taxonomy
 93-002540
- Acanthurus bahianus*
 Clusters
 93-003660
 Feeds/Feeding
 93-003660
- Acanthurus chirurgus*
 Clusters
 93-003660
 Feeds/Feeding
 93-003660
- Acarina cernua*
 Predator/Prey Relationships
 93-002008
- Acipenser*
 Distribution/Geographical
 93-003304
- Acipenser baeri*
 Hypoxia
 93-002742
 Respiratory System
 93-002742
- Acipenser brevirostrus*
 Nervous System
 93-002516
 Variation Studies
 93-002516
- Acipenser fulvescens*
 Activity Patterns
 93-004448
 Endangered Populations
 93-004472
 Habitat Protection
 93-004472
 Marking/Tagging
 93-004448
 Respiration
 93-004448
 Stock Assessment
 93-004472
- Acipenser medirostris*
 Bacterial Diseases
 93-003406
 Mycobacterium
 93-003406

SYSTEMATIC INDEX

CONTINUED

- Acipenser medirostris*
Parasites/Diseases
93-003406
- Acipenser transmontanus*
Early Development
93-002578
Thermal Tolerance
93-002578
- Acipenseridae
Bycatch
93-004006
Commercial Fishing
93-003804
Production
93-003804
- Adinia xenica*
Sampling
93-003925
- Aequidens portulectrae*
Taxonomy
93-003351
- Aethiopsis mitosteryx*
Distribution/Geographical
93-003848
Life History/General
93-003848
- Ageniosus brevifiliis*
Cestodes
93-003510
Gibsonella mandubi
93-003510
Parasites/Diseases
93-003510
- Agatha*
Evolution
93-002473
Jaws
93-002473
Osteology
93-002473
Paleontology
93-002473
- Agostia chrysoptera*
Habitat Selection
93-004115
Microhabitat
93-004115
- Agrammus agrammus*
Distribution/Factors of
93-003312
Distribution/Geographical
93-003312
Larval Drift
93-003312
Ocean Fronts
93-003312
Population Studies
93-003312
- Atdabianus sphyx*
Teeth
93-002490
- Atburnus alburnus*
Foods/Feeding
93-003186
Management/Research--Reservoirs
93-003186
Predator/Prey Relationships
93-003200
Trophic Relationships
93-003186
- Ateplaxus farde*
Foods/Feeding
93-003553
Ocean Dumping
93-003553
Plastics
93-003553
- Alestes baremose*
Abundance/Factors of
93-004143
Abundance/Seasonal
93-004144
Competition
93-004143
Distribution/Factors of
93-004143
Foods/Feeding
93-004143
Habitat Selection
93-004143
Management/Research--Reservoirs
93-004143
93-004144
Species Diversity
93-004144
- Alestes nurse*
Abundance/Factors of
93-004143
Abundance/Seasonal
93-004144
Competition
93-004143
Distribution/Factors of
93-004143
Foods/Feeding
93-004143
Habitat Selection
93-004143
Management/Research--Reservoirs
93-004143
93-004144
Season
93-004143
Species Diversity
93-004144
- Allotompenus hypochromus*
Distribution/Geographical
93-003297
Population Studies
93-003297
- Allonichosomus*
Early Development
93-002498
Meristic Studies
93-002498
Morphometry
93-002498
- Alosa fallax*
Foods/Feeding
93-003181
- Alosa pseudoharengus*
Acoustic Barriers
93-003870
Auditory Sense
93-003870
Slowness
93-004260
Bird Predation
93-003251
Fish Control/Removal
93-003870
Limnology
93-004146
Management/Research--Lakes
93-004041
93-004210
Management/Research--Reservoirs
93-004146
Population Studies
93-004260
Fort-impoundment Studies
93-004146
Predator/Prey Relationships
93-004041

SYSTEMATIC INDEX

..CONTINUED..

- Aloia pseudoharengus*
Trophic Relationships
93-004861
93-004260
- Aloia sapidissima*
Larvae
93-003886
Management/Research--Estuaries
93-004143
Predator/Prey Relationships
93-003886
Stock Assessment
93-004143
Stocking/Introductions
93-003886
Survival
93-003886
- Alticus kirkii*
Excretory System
93-002779
Starvation
93-002779
Terrestrial Behavior
93-002779
Urea
93-002779
- Ambassis compressus*
Bacterial Diseases
93-003411
Parasites/Diseases
93-003411
Vibrio anguillarum
93-003411
Vibriosis
93-003411
- Ambassis gymnacephalus*
Management/Research--Estuaries
93-004159
Mangroves
93-004159
Nursery Areas
93-004159
- Ambloplites rupestris*
Acidification
93-002718
93-003616
Aluminum
93-003616
Early Development
93-002718
Gills
93-002718
Management/Research--Lakes
93-003616
Osmoregulation
93-002718
Recruitment
93-003616
- Ameia splendens*
Eggs
93-002514
- Ameiurus nebulosus*
Biological Monitoring
93-003525
Carcinogens
93-003526
Neoplasms
93-003526
Papillomas
93-003526
Parasites/Diseases
93-003526
93-003666
Tumors
93-003666
- Ameocrypta clara*
Distribution/Geographical
93-003325
- Ameodytes marinus*
Age/Growth
93-003867
Early Development
93-003067
Hatching
93-003867
Life History/General
93-003867
Survival
93-003067
- Ameodytes personatus*
Feeds/Feeding
93-003250
- Amphipneus cucula*
Air Breathing
93-002505
Life History/General
93-002505
- Amphiprion melanopus*
Hormones
93-002632
Sex Reversal
93-002632
93-002633
Steroids
93-002632
- Anabas scandens*
Biochemical Composition
93-003729
Chromium
93-003729
Enzymes
93-003729
Kidneys
93-003729
Liver
93-003729
- Anabas testudineus*
Air Breathing
93-002595
Life History/General
93-002595
Reproductive Cycle
93-003143
- Anarhichas lupus*
Age/Growth
93-003056
Brookishweater Culture
93-002348
Culture/Propagation
93-002348
Distribution/Geographical
93-003056
Early Development
93-003041
Feeds/Feeding
93-003056
Invertebrate Forage
93-002348
Larvae
93-002348
Life History/General
93-003041
- Anarhichas minor*
Brookishweater Culture
93-002348
Culture/Propagation
93-002348
Invertebrate Forage
93-002348
Larvae
93-002348
- Ancha lyolepis*
Saltfish
93-003039

SYSTEMATIC INDEX

- CONTINUED..
- Anchoa hepsetus
 - Harvest
 - 93-003839
 - Management/Research--Marine
 - 93-003835
 - Anchoa mitchilli
 - Distribution/Geographical
 - 93-003311
 - Distribution/Vortical
 - 93-003311
 - Egg Counting
 - 93-003311
 - Life History/General
 - 93-004155
 - Management/Research--Estuaries
 - 93-004149
 - 93-004155
 - Population Studies
 - 93-003311
 - Stock Assessment
 - 93-004149
 - Anchoaella lepidostola
 - Batfish
 - 93-004271
 - Management/Research--Marine
 - 93-004271
 - Anguilla
 - Parasites/Diseases
 - 93-003470
 - Viral Diseases
 - 93-003479
 - Anguilla anguilla
 - Activity Patterns
 - 93-002988
 - 93-003014
 - Age/Growth
 - 93-004182
 - Angiotensin
 - 93-002824
 - Anguillicola crassus
 - 93-003498
 - 93-003527
 - Bacterial Diseases
 - 93-003414
 - 93-003432
 - Bioturbation
 - 93-003700
 - Brain
 - 93-002729
 - Cardiovascular System
 - 93-002750
 - 93-003671
 - Catch Per Unit Effort
 - 93-004001
 - Colonization
 - 93-004102
 - Culture/Propagation
 - 93-002291
 - Detoxification
 - 93-003700
 - Diazinon
 - 93-003700
 - Digestive System
 - 93-002787
 - Distribution/Factors of
 - 93-004102
 - Drinking Behavior
 - 93-002824
 - Drugs
 - 93-003671
 - Enzymes
 - 93-002708
 - 93-002729
 - Foods/Feeding
 - 93-005210
 - Heated Water
 - 93-003498
 - ..CONTINUED
 - Anguilla anguilla
 - Monotology
 - 93-003498
 - Insecticides
 - 93-003700
 - Ion Transport
 - 93-002787
 - Leptons
 - 93-003210
 - Lunar Influences
 - 93-003014
 - Magnetic Fields
 - 93-003014
 - Management/Research--Lakes
 - 93-002990
 - 93-004001
 - Management/Research--Marine
 - 93-003210
 - Management/Research--Rivers and Streams
 - 93-004102
 - Marketing
 - 93-002291
 - Marking/Tagging
 - 93-002990
 - Migration
 - 93-003175
 - Movements
 - 93-002998
 - Nematodes
 - 93-003498
 - 93-003527
 - Orientation/Nocting
 - 93-003014
 - Osmoregulation
 - 93-002708
 - 93-002787
 - 93-002824
 - Parasites/Diseases
 - 93-002291
 - 93-003414
 - 93-003432
 - 93-003498
 - 93-003527
 - Pollution Abatement
 - 93-004102
 - Pond Culture
 - 93-002291
 - Population Studies
 - 93-003175
 - 93-004102
 - Potassium
 - 93-002708
 - Predator/Prey Relationships
 - 93-003185
 - Production
 - 93-002291
 - Pseudomonas anguilliseptica
 - 93-003414
 - Public Health Problems
 - 93-003432
 - Restoration of Anadromous Runs
 - 93-004102
 - Salinity
 - 93-002708
 - 93-002824
 - Sampling
 - 93-004001
 - Sodium
 - 93-002708
 - Spawning Migration
 - 93-003175
 - Stock Assessment
 - 93-004001
 - Swirladder
 - 93-002750

- CONTINUED.
- Anguilla anguilla*
 Temperature
 93-003458
 Toxic Algae
 93-002192
Vibrio vulnificus
 93-003432
- Anguilla australis*
 Predator/Prey Relationships
 93-003185
- Anguilla japonica*
 Cortisol
 93-002817
 Culture/Propagation
 93-002291
 Early Development
 93-003460
 Excretory System
 93-002561
 Heart
 93-002561
 93-002817
 Hematology
 93-002017
 93-003443
 Larvae
 93-003460
 Marketing
 93-002291
 Parasites/Diseases
 93-002291
 93-003443
 Peptides
 93-002817
 93-002817
Pleistophora anguillarum
 93-003443
 Pond Culture
 93-002291
 Production
 93-002291
 Protozoan Diseases
 93-003443
- Anguilla marmorata*
 Culture/Propagation
 93-002291
 Distribution/Geographical
 93-003139
 Marketing
 93-002291
 Parasites/Diseases
 93-002291
 Pond Culture
 93-002291
 Production
 93-002291
 Recruitment
 93-003139
 Spawning
 93-003139
- Anguilla megastosa*
 Distribution/Geographical
 93-003139
 Recruitment
 93-003139
 Spawning
 93-003139
- Anguilla obscura*
 Distribution/Geographical
 93-003139
 Recruitment
 93-003139
 Spawning
 93-003139
- Anguilla rostrata*
 Acidification
 93-003486
- ...CONTINUED...
- Anguilla rostrata*
 Cestodes
 93-003486
 Chromaffin Cells
 93-002613
 Endocrinology
 93-002613
 Epidermis
 93-002679
 Foods/Feeding
 93-003222
 Management/Research--Rivers and Streams
 93-003486
 Morphine
 93-002613
 Mucus
 93-002679
 Nemertodes
 93-003486
 Parasites/Diseases
 93-003486
 Parasitic Copepods
 93-003486
 Trematodes
 93-003486
- Anguillidae
 Culture/Propagation
 93-003940
 Life History/General
 93-003040
 93-003042
 Production
 93-003040
- Anisotremus davidsoni*
 Early Development
 93-002535
 Morphology
 93-002535
 Osteology
 93-002535
 Pigments
 93-002535
 Species Identification
 93-002535
- Ameiuchrois thomasi*
 Aquatics
 93-002405
 Courtship
 93-002405
 Culture/Propagation
 93-002405
 Early Development
 93-002405
 Spawning
 93-002405
- Ameiopsis katoptron*
 Biofluorescence
 93-002524
- Anpilopoma flabria*
 Marketing
 93-003668
 Placing
 93-003660
- Aphrodoros sayanus*
 Distribution/Geographical
 93-002459
 Variation Studies
 93-002459
- Apollinotus grunniens*
 Catch Per Unit Effort
 93-004039
 Commercial Fishing
 93-004039
 Gear Efficiency
 93-003907

- CONTINUED
- Aplodinotus grunniens*
Management/Research--Lakes
93-00409
Nematodes
93-00393
Parasites/Diseases
93-003503
Phylometra
93-003503
Stock Assessment
93-00409
- Aprion macrophthalus*
Fish Spoilage
93-00442
Storage Effects
93-00442
- Asteronotus albifrons*
Cell Culture
93-00252
Nervous System
93-00252
Regeneration
93-00252
- Asteronotus laptarhynchus*
Electrolocation
93-002570
Endocrinology
93-00267
Hypothalamic-Hypophysial System
93-00267
Lateral Line System
93-002570
Nervous System
93-00267
Pituitary Gland
93-00267
- Archonargus probatocephalus*
Algae
93-00325
Algal Infections
93-00325
Diatoms
93-00325
Early Development
93-002482
Fecundity
93-003151
Foods/Feeding
93-002482
Genesatetic Index
93-003151
Jaws
93-002482
Maturation
93-003151
Reproduction
93-003151
Variation Studies
93-002482
- Argyropelcus*
Evolution
93-002480
Osteology
93-002480
Variation Studies
93-002480
- Aristichthys nobilis*
Cage Culture
93-002275
Culture/Propagation
93-002275
Diplostomum shanensis
93-002512
Gonadotropin
93-002562
Hybridization
93-002275
- CONTINUED
- Aristichthys nobilis*
Management/Research--Ponds
93-004138
Parasites/Diseases
93-003512
Pituitary Gland
93-002562
Production
93-002275
Trematodes
93-003512
Trophic Relationships
93-004130
Trophic Status
93-002275
- Artus saepe*
Management/Research--Estuaries
93-004159
Mangroves
93-004159
Nursery Areas
93-004159
- Artedidreconidae*
Evolution
93-003347
Taxonomy
93-003347
- Aseichthys Layardi*
Evolution
93-003231
Foods/Feeding
93-003231
- Aspius aspius*
Foods/Feeding
93-003103
Predator/Prey Relationships
93-003183
- Astatoreochromis aluaulti*
Management/Research--Ponds
93-004140
Molluscs
93-004140
Stocking/Introductions
93-004140
Vector Control
93-004140
- Astromesthes gibbsi*
Distribution/Geographical
93-003349
Meristic Studies
93-003349
New Species
93-003349
- Astromesthes nigricauda*
Distribution/Geographical
93-003349
Meristic Studies
93-003349
Taxonomy
93-003349
- Astyanax fasciatus*
Caves
93-002495
Mouth Parts
93-002478
Pharynx
93-002478
Photoreception
93-002495
Pinnal Body
93-002495
- Astyanax scabripinnis paranae*
Chromosomes
93-002915
- Ataniobius loweri*
Eggs
93-002514

- Atheresthes stomus*
Enzymes
93-094418
Fish Preservation
93-094419
Fish Spoilage
93-094418
Food Technology
93-094402
93-094419
Musculature
93-094418
- Aulorhynchus flavidus*
Gonads
93-002699
Sperm
93-002699
Variation Studies
93-002699
- Awous stamineus*
Foods/Feeding
93-003211
- Ballistapus undulatus*
Aquariums
93-002398
Culture/Propagation
93-002398
- Ballistes bursa*
Aquariums
93-002398
Culture/Propagation
93-002398
- Ballistes carolinensis*
Evolution
93-002939
Karyotypes
93-002939
- Ballistes vetula*
Aquariums
93-002398
Culture/Propagation
93-002398
Dentition
93-002529
Foods/Feeding
93-002529
93-003246
Jaws
93-002529
- Ballistoides conspicillum*
Aquariums
93-002398
Culture/Propagation
93-002398
- Barbus barbatus*
Bioaccumulation
93-003534
Carotenoids
93-002598
Ligals
93-003148
Management/Research--Rivers and Streams
93-004123
Muscle Proteins
93-002662
Phenols
93-003534
Photoperiodism
93-003148
Reproductive Cycle
93-003148
Surfactants
93-003534
Variation Studies
93-002662
- Barbus barbatus sciateri*
Age/Growth
93-003944
Life History/General
93-003944
Reproduction
93-003944
- Barbus conchatus*
Muscle Proteins
93-002662
Variation Studies
93-002662
- Barbus morequensis*
Catch Per Unit Effort
93-003916
Management/Research--Reservoirs
93-003916
Nets/Gill Nets
93-003916
Nets/Netting
93-003916
Sampling
93-003916
- Barbus meridionalis*
Muscle Proteins
93-002662
Variation Studies
93-002662
- Barbus meridionalis petroyi*
Carotenoids
93-002598
- Barbus paludinosus*
Catch Per Unit Effort
93-003916
Management/Research--Reservoirs
93-003916
Nets/Gill Nets
93-003916
Nets/Netting
93-003916
Sampling
93-003916
- Barbus petroyi*
Management/Research--Rivers and Streams
93-004123
- Barbus sachsii*
Muscle Proteins
93-002662
Variation Studies
93-002662
- Barbus tetrazoni*
Muscle Proteins
93-002662
Variation Studies
93-002662
- Barbus tistaya*
Muscle Proteins
93-002662
Variation Studies
93-002662
- Darinius bendelisis*
Musculature
93-003612
Pesticides
93-003612
Thiodan
93-003612
- Darinius vagra*
Diazinon
93-003500
Malathion
93-003589
Organophosphates
93-003500
Pesticides
93-003500

SYSTEMATIC INDEX

- Basilichthys microlepidotus*
 Recolonization
 93-003121
 Spawning
 93-003121
- Bathyracoonidae*
 Evolution
 93-003347
 Taxonomy
 93-003347
- Belontiidae*
 Management/Research--Marine
 93-004303
 Sport Fishing
 93-004303
- Bidyanus bidyanus*
 Electrophoresis
 93-002917
 Genetic Markers
 93-002917
- Bleennius adriaticus*
 Teeth
 93-002490
- Bleennius canevae*
 Gonads
 93-002689
 Histology
 93-002689
 Phoronoes
 93-002689
 Reproductive Cycle
 93-002689
 Teeth
 93-002490
- Bleennius dalmatinus*
 Teeth
 93-002490
- Bleennius galerita*
 Teeth
 93-002490
- Bleennius gattorugine*
 Teeth
 93-002490
- Bleennius incognitus*
 Teeth
 93-002490
- Bleennius nigriceps*
 Teeth
 93-002490
- Bleennius pavo*
 Gonads
 93-002689
 Histology
 93-002689
 Phoronoes
 93-002689
 Reproductive Cycle
 93-002689
 Teeth
 93-002490
- Bleennius roulei*
 Teeth
 93-002490
- Bleennius sanguinolentus*
 Teeth
 93-002490
- Bleennius tentacularis*
 Teeth
 93-002490
- Bleennius trigloides*
 Teeth
 93-002490
- Bleennius zosteris*
 Teeth
 93-002490
- Blicca bjoerkna*
 Age/Growth
 93-003266
- . CONTINUED .
- Blicca bjoerkna*
 Post-Implantment Studies
 93-003266
- Boleophthalmus pectinirostris*
 Cardiovascular System
 93-002543
 Epidermis
 93-002543
 Histology
 93-002543
 Terrestrial Behavior
 93-002543
- Boreogadus*
 Latitude
 93-002600
 Temperature
 93-002600
 Thermal Tolerance
 93-002600
 Thermoregulation
 93-002600
- Bovichtidae*
 Evolution
 93-003347
 Taxonomy
 93-003347
- Brachydania rerio*
 Auditory Sense
 93-002510
 Chlorophylls
 93-003649
 Cloning
 93-002896
 93-002897
 Embryology
 93-002512
 93-002525
 93-002530
 93-002642
 93-002086
 Endosulfan
 93-003643
 Enzymes
 93-002942
 Gills
 93-003643
 Mutations
 93-002896
 93-002897
 Nervous System
 93-002512
 Otoliths
 93-002510
 Pulp Hill Effluents
 93-003649
 Radiation
 93-002897
 Spore
 93-002896
 93-002897
 Swimming Performance
 93-003643
- Brachygyxus* Teeth
 Age/Growth
 93-002641
 Habitat Evaluation
 93-003134
 Length-Weight Relationships
 93-002641
 Management/Research--Rivers and Streams
 93-003134
 Metabolism
 93-002641
 Scales
 93-002634

SYSTEMATIC INDEX

- .. CONTINUED...
- Brachyplatystax ionak
 - Spawning
 - 93-003134
 - Spawning Migration
 - 93-003134
 - Variation Studies
 - 93-002534
- Brachyplatystoma flavescens
 - Bioaccumulation
 - 93-003594
 - Commercial Fishing
 - 93-002504
 - Mercury
 - 93-003504
- Brachyraphis rhabdophora
 - Life History/General
 - 93-003058
 - Variation Studies
 - 93-003058
- Brevoortia
 - Egg Size
 - 93-003150
 - Fatty Acids
 - 93-004367
 - Food Technology
 - 93-004369
 - Latitude
 - 93-003150
 - Nutrition
 - 93-004367
 - Oil Production
 - 93-004367
 - 93-004380
 - Pharmacology
 - 93-004367
 - 93-004380
 - Taste and Odor Problems
 - 93-004367
 - Temperature
 - 93-003150
 - Variation Studies
 - 93-003150
- Brevoortia guntari
 - Life History/General
 - 93-003024
 - Species Identification
 - 93-003024
- Brevoortia patronus
 - Buoyancy Control
 - 93-002976
 - Commercial Fishing
 - 93-004244
 - 93-004316
 - 93-004327
 - Economic Value
 - 93-004244
 - Forecasting
 - 93-004316
 - Harvest
 - 93-004316
 - Larval Behavior
 - 93-002976
 - Larval Drift
 - 93-002976
 - Life History/General
 - 93-003024
 - 93-004155
 - Management/Research--Estuaries
 - 93-004155
 - Management/Research--Marine
 - 93-004244
 - 93-004316
 - 93-004327
 - Mark/Recapture
 - 93-004427
 - Marketing
 - 93-004244
- . CONTINUED...
 - Brevoortia patronus
 - Marking/Tagging
 - 93-004427
 - NatL/Hyrse Seines
 - 93-004316
 - Species Identification
 - 93-003024
 - Stock Assessment
 - 93-004316
 - 93-004327
 - Brevoortia smithi
 - Life History/General
 - 93-003024
 - Species Identification
 - 93-003024
 - Brevoortia tyrannus
 - Age/Growth
 - 93-003292
 - Buoyancy Control
 - 93-002976
 - Commercial Fishing
 - 93-004244
 - 93-004316
 - 93-004327
 - 93-004328
 - Early Development
 - 93-003120
 - 93-003292
 - Economic Value
 - 93-004244
 - Economics
 - 93-004190
 - Food Technology
 - 93-004350
 - Food/Fooding
 - 93-003540
 - Forecasting
 - 93-004310
 - Harvest
 - 93-004316
 - 93-004328
 - Larval Behavior
 - 93-002976
 - Larval Drift
 - 93-002976
 - 93-003292
 - Laws/Low Enforcement
 - 93-004150
 - Life History/General
 - 93-003024
 - Management/Research--Marine
 - 93-004190
 - 93-004244
 - 93-004316
 - 93-004327
 - 93-004320
 - Mark/Recapture
 - 93-004427
 - Marketing
 - 93-004244
 - Marking/Tagging
 - 93-004427
 - NatL/Hyrse Seines
 - 93-004316
 - Nursery Areas
 - 93-003292
 - Plastics
 - 93-003540
 - Regulations/Limited Entry
 - 93-004320
 - Spawning
 - 93-003120
 - Species Identification
 - 93-003024
 - Stock Assessment
 - 93-004316

SYSTEMATIC INDEX

. . . CONTINUED . . .

Brewortia tyrannus
Stock Assessment
93-004327
93-004328
Weather
93-005120

Brycon crenex
Abundance/Factors of
93-004143
Competition
93-004143
Distribution/Factors of
93-004143
Foods/Feeding
93-004143
Habitat Selection
93-004143
Management/Research--Reservoirs
93-004143
Season
93-004143

Buglossidium luteum
Competition
93-004307
Foods/Feeding
93-004307
Interspecies Relationships
93-004307
Management/Research--Marine
93-004307
Nursery Areas
93-004307

Callinectes
Taxonomy
93-003353

Capostoma ancahu
Competition
93-003248
Interspecies Relationships
93-003248
Management/Research--Rivers and
Streams
93-003248
Trophic Relationships
93-003248

Capota tetrazona
Aquariums
93-002367

Carassius auratus
Acidification
93-004127
Age/Growth
93-002715
Amino Acids
93-002786
Auditory Sense
93-002510
Bacterial Diseases
93-003406
Biological Monitoring
93-004127
Brain
93-002697
93-002776
Calcitonin
93-002765
Caption
93-003585
Carbofuran
93-003584
Carotenoids
93-002638
Culture/Propagation
93-002394
Diet
93-002394

. . . CONTINUED . . .

Carassius auratus
Endocrinology
93-002734
93-002827
93-002838
Enzymes
93-002659
Exercise
93-002659
Eyes
93-002756
93-002825
Foods/Feeding
93-002582
93-002602
Fungicides
93-003565
Gene Expression
93-002716
Gonadotropin
93-002734
93-002776
93-002827
Growth Hormone
93-002716
Hematology
93-003722
Hormones
93-002634
93-002715
93-002734
93-002776
93-002827
Induced Meturation
93-002634
93-002838
Insecticides
93-003584
Insulin
93-002715
93-002716
Larvae
93-002394
Liming
93-004127
Lipid Content
93-002394
Management/Research--Ponds
93-004138
Melatonin
93-002716
Musculature
93-002659
Mutagenesis
93-003722
Mycobacterium
93-003406
Nervous System
93-002619
93-002659
93-002682
93-002697
93-002756
93-002825
93-002871
Nutrition
93-002394
Bifactorion
93-002871
Otoliths
93-002610
Parasites/Diseases
93-003406
Peptides
93-002602
Pituitary Gland
93-002776

SYSTEMATIC INDEX

.. CONTINUED ..

- Carassius auratus
 - Predator/Prey Relationships
 - 93-00282
 - Protein Synthesis
 - 93-00284
 - Proteins
 - 93-00283
 - Regeneration
 - 93-00289
 - 93-00287
 - Reproduction
 - 93-00234
 - Steroids
 - 93-00282
 - 93-00283
 - Swimming Performance
 - 93-00271
 - Techniques
 - 93-00372
 - Temperature
 - 93-00289
 - 93-00284
 - Thermoregulation
 - 93-00284
 - Trophic Relationships
 - 93-00413
 - Vision
 - 93-00289
 - 93-00286
- Carassius carassius
 - Age/Growth
 - 93-00326
 - Carotenoids
 - 93-00290
 - Post-Emigration Studies
 - 93-00326
 - Predator/Prey Relationships
 - 93-00320
 - Toxic Algae
 - 93-00292
- Carassius gibelio
 - Age/Growth
 - 93-00327
 - Carotenoids
 - 93-00298
 - Management/Research--Reservoirs
 - 93-00327
- Carcharias longimanus
 - Fish Processing
 - 93-00407
- Catla catla
 - Hematology
 - 93-00367
 - Insecticides
 - 93-00367
 - Quinoline
 - 93-00367
- Catostomus commersoni
 - Acidification
 - 93-00404
 - Habitat Alterations
 - 93-00382
 - Management/Research--Lakes
 - 93-00404
 - Management/Research--Rivers and Streams
 - 93-00382
 - Water Quality
 - 93-00382
- Catostomus clarki
 - Habitat Selection
 - 93-00411
 - Microhabitat
 - 93-00411
- Catostomus commersoni
 - Acidification
 - 93-00364

..CONTINUED..

- Catostomus commersoni
 - Acidification
 - 93-00404
 - Age/Growth
 - 93-00271
 - Biological Monitoring
 - 93-00326
 - 93-00372
 - Bird Prediction
 - 93-00327
 - Compheclor
 - 93-00361
 - Catch Per Unit Effort
 - 93-00407
 - Chlordane
 - 93-00361
 - Copper
 - 93-00364
 - Detoxification
 - 93-00365
 - Dibenzofuran
 - 93-00361
 - Dioxin
 - 93-00372
 - Endocrinology
 - 93-00274
 - Enzymes
 - 93-00369
 - 93-00370
 - Fish Passage
 - 93-00391
 - Fishways
 - 93-00391
 - Gear Efficiency
 - 93-00367
 - Heavy Metals
 - 93-00374
 - Hematology
 - 93-00367
 - Histology
 - 93-00367
 - Hormones
 - 93-00271
 - Hypothalamic-Hypophysial System
 - 93-00274
 - Insulin
 - 93-00271
 - Interspecies Relationships
 - 93-00327
 - Life History/General
 - 93-00364
 - Liver
 - 93-00365
 - Management/Research--Lakes
 - 93-00364
 - 93-00407
 - 93-00402
 - 93-00404
 - Maturation
 - 93-00365
 - Neoplasms
 - 93-00326
 - Populations
 - 93-00326
 - Parasites/Diseases
 - 93-00326
 - 93-00362
 - Pollution
 - 93-00364
 - Polychlorinated Diphenyls
 - 93-00365
 - Pulp Mill Effluents
 - 93-00365
 - 93-00370
 - 93-00372
 - Radiation
 - 93-00362

SYSTEMATIC INDEX

- .. CONTINUED
- Catostomus commersoni*
 Reproduction
 93-003611
 93-003665
 RNA
 93-002748
 Season
 93-003505
 Sport Fishing
 93-004017
 Stock Assessment
 93-004017
 93-004028
 Stress
 93-003705
 Toxicity Testing
 93-003634
 Uranium
 93-003592
 Zinc
 93-003674
- Catostomus insignis*
 Habitat Selection
 93-004115
 Microhabitat
 93-004115
- Catostomus platyrhynchus*
 Distribution/Geographical
 93-003830
 Life History/General
 93-003830
- Catostomus sahoensis*
 Management/Research--Rivers and
 Streams
 93-004125
 Population Studies
 93-004125
- Cabidochthys violaceus*
 Age/Growth
 93-003197
 Food Conversion Efficiency
 93-003197
 Food Digestibility
 93-003197
 Foods/Feeding
 93-003197
- Centrarchidae*
 Blind Predation
 93-003251
 Parasites/Diseases
 93-003520
- Pretetronetra sacrostroma*
 93-003520
- Trematodes
 93-003520
- Centrarchus macropterus*
 Fatty Acids
 93-002608
 Lipid Composition
 93-002608
 Sperm
 93-002608
- Centretobius exoletus*
 Cleaning Behavior
 93-004210
 Exploitation Rates
 93-004210
 Life History/General
 93-004210
 Management/Research--Marine
 93-004210
- Centropomus undecimalis*
 Cannibalism
 93-002856
 Mortality Factors
 93-002856
- .. CONTINUED
- Centropomus undecimalis*
 Swimming Performance
 93-002571
- Centropyge peltieri*
 Reproduction
 93-003130
 Sex Reversal
 93-003130
- Cephaloscyllium variegatum*
 Embryology
 93-002673
 Hematology
 93-002673
 Oxygen
 93-002673
- Chaenocephalus aceratus*
 Bycatch
 93-004224
 Commercial Fishing
 93-004317
 Distribution/Vertical
 93-003320
 Hematology
 93-002612
 Hooking/Handling Stress
 93-002612
 Management/Research--Marine
 93-004224
 93-004317
 Population Studies
 93-003320
 Stock Assessment
 93-004317
 Stress
 93-002612
- Chaenodraco wilsoni*
 Foods/Feeding
 93-003231
- Chaetodon*
 Parasites/Diseases
 93-003480
 Plagiosarus
 93-003480
 Trematodes
 93-003480
- Chaetodon capistratus*
 Abundance/Factors of
 93-004164
 Colonization
 93-002502
 Defensive Mechanisms
 93-002502
 Habitat Selection
 93-004164
 Variation Studies
 93-002502
- Chaetodon multilineatus*
 Foods/Feeding
 93-003056
 Life History/General
 93-003056
 Reproduction
 93-003056
 Territorial Behavior
 93-003056
- Chaetodon ocellatus*
 Abundance/Factors of
 93-004164
 Habitat Selection
 93-004164
- Chaetodon sodastarius*
 Abundance/Factors of
 93-004164
 Habitat Selection
 93-004164
- Chaetodon striatus*
 Abundance/Factors of
 93-004164

- ...CONTINUED...
- Cheilodactylus striatus*
Habitat Selection
93-004164
- Chemoscephalus gunnerti*
Abundance/Factors of
93-004223
Bycatch
93-004224
Commercial Fishing
93-004317
Currents
93-004223
Distribution/Vertical
93-003320
Management/Research--Marine
93-004223
93-004224
93-004317
Maximum Sustainable Yield
93-004223
Mortality Factors
93-004223
Population Studies
93-003320
Stock Assessment
93-004317
Trophic Relationships
93-004223
- Channichthyidae*
Evolution
93-003347
Taxonomy
93-003347
- Chanos chanos*
Culture/Propagation
93-002296
93-002387
93-002901
Diets
93-002387
Feeding Experiments
93-002387
Food Conversion Efficiency
93-002387
Nutrition
93-002387
Site Suitability
93-002901
- Chavacidae*
Subsistence Fishing
93-003838
- Chelon labrosus*
Metabolism
93-003677
Polychlorinated Biphenyls
93-003677
- Chilassara*
Taxonomy
93-003353
- Chionoichthys homatus*
Heart
93-002834
Hematology
93-002934
Peptides
93-002834
- Chirocentrodon bleekeri*
Saltfish
93-004271
Management/Research--Marine
93-004271
- Chondrostoma toxostoma*
Early Development
93-002657
Management/Research--Rivers and Streams
93-004123
- ...CONTINUED...
- Chondrostoma toxostoma*
Protein Synthesis
93-002657
- Chrysiichthys*
Management/Research--Marine
93-004257
- Chrysoblephus cristiceps*
Exploitation Rates
93-003028
Management/Research--Marine
93-003028
Marine Reserves
93-003028
Recruitment
93-003028
Reproduction
93-003028
Sex Reversal
93-003028
Variation Studies
93-003028
- Chrysoblephus tetricops*
Exploitation Rates
93-003020
Management/Research--Marine
93-003020
Marine Reserves
93-003020
Recruitment
93-003020
Reproduction
93-003020
Sex Reversal
93-003020
Variation Studies
93-003020
- Cichla*
Osteoaccumulation
93-003594
Commercial Fishing
93-003594
Mercury
93-003594
- Cichlasoma*
Taxonomy
93-003351
- Cichlasoma bimaculatum*
Bacterial Diseases
93-003406
Mycobacterium
93-003406
Parasites/Diseases
93-003406
- Cichlasoma cyanoguttatum*
Taxonomy
93-003351
- Cichlasoma doryi*
Aquariums
93-002410
Culture/Propagation
93-002410
- Cichlasoma nebulosum*
Bacterial Diseases
93-003406
DNA
93-002890
Gene Mapping
93-002890
Mycobacterium
93-003406
Parasites/Diseases
93-003406
- Cichlasoma severum*
Taxonomy
93-003351
- Cichlidae*
Aquariums
93-002370

SYSTEMATIC INDEX

CONTINUED
 Cichlidae
 Aquariums
 93-002412
 Culture/Propagation
 93-002370
 93-002412
 Osets
 93-002370
 Foods/Feeding
 93-002370
 Ciliata mustela
 Age/Growth
 93-003288
 Otoliths
 93-003288
 Cichhrus nigala
 Egg Survival
 93-003646
 Industrial Wastes
 93-003646
 Clarias batrachus
 Air Breathing
 93-002505
 Digestive System
 93-003676
 Endosulfon
 93-003676
 Gonads
 93-002866
 Insecticides
 93-003676
 Life History/General
 93-002505
 Maturation
 93-002866
 Temperature
 93-002866
 Clarias gariepinus
 Air Breathing
 93-002649
 Allotypes
 93-002938
 Culture/Propagation
 93-002297
 93-002354
 93-002649
 Digestive System
 93-002531
 Early Development
 93-002531
 93-002649
 Fry Production
 93-002297
 Gills
 93-002649
 Histology
 93-002531
 Incubation
 93-002297
 Induced Maturation
 93-002297
 Invertebrate Forage
 93-002354
 Larvae
 93-002297
 93-002354
 Management/Research--Ponds
 93-004140
 Metionics
 93-004140
 Proteins
 93-002938
 Stocking/Introductions
 93-004140
 Temperature
 93-002649

CONTINUED ..
 Clarias gariepinus
 Variation Studies
 93-002938
 Vector Control
 93-004140
 Clarias ishervilleensis
 Culture/Propagation
 93-002646
 Hormones
 93-002646
 Induced Maturation
 93-002646
 Clinocottus analis
 Early Development
 93-002470
 Larval Identification
 93-002470
 Clupea harengus
 Abundance/Factors of
 93-003094
 93-003337
 Age/Growth
 93-002926
 93-003184
 Age/Sex Relationships
 93-002624
 93-002831
 Bays
 93-003180
 Body Form
 93-002497
 Condition Factors
 93-002624
 93-002626
 Currents
 93-003388
 Cytology
 93-002581
 Defensive Mechanisms
 93-002497
 Digestive System
 93-002757
 Distribution/Factors of
 93-003094
 Distribution/Geographical
 93-003094
 93-003388
 93-003328
 Distribution/Vertical
 93-003203
 93-003328
 Early Development
 93-002497
 93-002757
 93-002831
 93-002926
 93-002943
 93-002946
 93-003094
 Egg Production
 93-003205
 Egg Size
 93-003150
 Enzymes
 93-002757
 Eyes
 93-002497
 93-002743
 93-002943
 Fish Behavior
 93-003919
 Foods/Feeding
 93-003203
 93-003285
 93-003242
 Forecasting
 93-003104

SYSTEMATIC INDEX

CONTINUED

Clupea harengus
 Forecasting 93-003940
 Harvest 93-003104
 Ichthyoplankton 93-003160
 Larval Drift 93-003160
 93-003100
 93-004230
 Latitude 93-003065
 93-003150
 Life History/General 93-003065
 Lipid Composition 93-002626
 Management/Research--Marine 93-003160
 93-003940
 93-004200
 93-004230
 Migration 93-003155
 Melanophorus 93-002497
 Morphology 93-002406
 Mortality Rates 93-003357
 Movements 93-003320
 Nervous System 93-002603
 93-002763
 93-002966
 Notolepine Scales 93-001019
 Nursery Areas 93-003160
 Osmoregulation 93-002031
 Otoliths 93-002406
 Parasites 93-002752
 Photosynthesis 93-003320
 Population Studies 93-003904
 93-003184
 93-003380
 Predator/Prey Relationships 93-002497
 93-002946
 93-003205
 93-003337
 Recruitment 93-003940
 93-004200
 Reproduction 93-003145
 Respiration 93-002600
 Selective Breeding 93-002026
 Sense Organs 93-002946
 Spawning 93-003155
 Stock Assessment 93-004200
 93-004230
 Survival 93-003145

CONTINUED

Clupea harengus
 Temperature 93-003150
 Tides 93-003200
 93-003320
 Variation Studies 93-003055
 93-003150
 Vision 93-002943
 Year Class Strength 93-003104
 93-004200
Clupea harengus harengus
 Invertebrate Predation 93-003330
 Population Studies 93-003330
 Predator/Prey Relationships 93-003330
Clupea pallasi
 Egg Size 93-003150
 Eggs 93-002760
 Larval Drift 93-003060
 Latitude 93-003150
 Management/Research--Marine 93-003060
 Mortality Factors 93-003400
 Nursery Areas 93-003060
 Parasites/Diseases 93-003400
 Spawning 93-003060
 Sperm 93-002760
 Temperature 93-003150
 Variation Studies 93-003150
 Viral Diseases 93-003400
 Viral Erythrocytic Necrosis 93-003400
Clupeidae
 Age/Growth 93-003255
 Dinoflagellates 93-003506
 Eggs 93-003060
 Faculty 93-003113
 Fish Processing 93-004372
Ichthyodinus chabaudi
 93-003506
 Larval Drift 93-003330
 93-004247
 Management/Research--Marine 93-003330
 93-004247
 93-004323
 Mortality Factors 93-003506
 Oil Production 93-004372
 Otoliths 93-003255

SYSTEMATIC INDEX

- .. CONTINUED..
- Clupeidae
 - Parasites/Diseases
 - 93-083606
 - Recruitment
 - 93-084323
 - Spawning
 - 93-002113
 - Stock Assessment
 - 93-003338
 - 93-004247
 - Survival
 - 93-003338
 - Variation Studies
 - 93-002113
 - Year Class Strength
 - 93-004323
 - Clupeiformes
 - Age/Growth
 - 93-003117
 - Evolution
 - 93-003117
 - Maturation
 - 93-003117
 - Coelacanthiformes
 - Evolution
 - 93-003358
 - Hematology
 - 93-003358
 - Taxonomy
 - 93-003358
 - Collosoma macroponum
 - Bioaccumulation
 - 93-003594
 - Commercial Fishing
 - 93-003594
 - Culture/Propagation
 - 93-002363
 - Feeding Experiments
 - 93-002363
 - Mercury
 - 93-003594
 - Production
 - 93-002363
 - Conger cinereus
 - Activity Patterns
 - 93-003163
 - Distribution/Geographical
 - 93-003163
 - Light
 - 93-003163
 - Photoperiodism
 - 93-003163
 - Conger conger
 - Anaesthesia
 - 93-002546
 - Gills
 - 93-002546
 - Respiratory System
 - 93-002546
 - Coregonus
 - Catch Per Unit Effort
 - 93-004006
 - Commercial Fishing
 - 93-004006
 - 93-004015
 - 93-004016
 - 93-004018
 - Limnology
 - 93-004016
 - Management/Research--Lakes
 - 93-004006
 - 93-004016
 - 93-004014
 - 93-004016
 - 93-004016
 - 93-004026
 - Coregonus
 - Reproductive System
 - 93-002494
 - Sperm
 - 93-002494
 - Spentfishing
 - 93-004015
 - Stock Assessment
 - 93-004006
 - 93-004010
 - 93-004014
 - 93-004015
 - 93-004016
 - 93-004018
 - 93-004026
 - Trophic Relationships
 - 93-004010
 - Variation Studies
 - 93-002884
 - Coregonus albula
 - Catch Per Unit Effort
 - 93-003950
 - Management/Research--Lakes
 - 93-003950
 - Population Studies
 - 93-003950
 - Predator/Prey Relationships
 - 93-002953
 - Coregonus artedii
 - Fish Passage
 - 93-003941
 - Fishways
 - 93-003941
 - Coregonus autumnalis
 - Age/Growth
 - 93-003813
 - Causeways
 - 93-003813
 - Condition Factors
 - 93-003813
 - Habitat Alterations
 - 93-003813
 - Coregonus clupeaformis
 - Acidification
 - 93-002634
 - 93-004045
 - Catch Per Unit Effort
 - 93-003973
 - 93-004017
 - Commercial Fishing
 - 93-004015
 - 93-004016
 - 93-004018
 - Digestive System
 - 93-002635
 - Food Digestibility
 - 93-002635
 - Harvest
 - 93-004015
 - Hematology
 - 93-002592
 - Histology
 - 93-002592
 - Management/Research--Lakes
 - 93-004014
 - 93-004016
 - 93-004018
 - 93-004045
 - Maturation
 - 93-002665
 - 93-003973
 - Nutrition
 - 93-002695
 - Parasites/Diseases
 - 93-002592
 - Population Studies
 - 93-003973

SYSTEMATIC INDEX

... CONTINUED ...

- Corogonus clupeaformis
 - Pulp Mill Effluents
 - 93-093665
 - Radiation
 - 93-093592
 - Reproduction
 - 93-093665
 - Spawns
 - 93-092589
 - Sport Fishing
 - 93-094815
 - 93-094817
 - Stock Assessment
 - 93-094814
 - 93-094815
 - 93-094816
 - 93-094817
 - 93-094818
 - Toxicity Testing
 - 93-093634
 - Trace Metals
 - 93-093634
 - Uranium
 - 93-093592
- Corogonus lavaretus
 - Age/Growth
 - 93-093261
 - Carotenoids
 - 93-092587
 - Culture/Propagation
 - 93-092332
 - 93-092372
 - 93-092910
 - Feeding Experiments
 - 93-092372
 - Feeds
 - 93-092372
 - Foods/Feeding
 - 93-093261
 - Genetic Diversity
 - 93-092910
 - Genetics
 - 93-092910
 - Hatchery/Wild Populations
 - 93-092910
 - Larvae
 - 93-092372
 - 93-092910
 - Management/Research--Lakes
 - 93-094824
 - Miscellaneous
 - 93-092587
 - Population Studies
 - 93-094824
 - Production
 - 93-092332
 - Stock Assessment
 - 93-094824
 - Temperature
 - 93-092332
 - 93-093261
- Corogonus nasus
 - Age/Growth
 - 93-093813
 - Causeways
 - 93-093813
 - Condition Factors
 - 93-093813
 - Habitat Alterations
 - 93-093813
 - Larval Drift
 - 93-094111
 - Management/Research--Rivers and Streams
 - 93-094111
 - Nursery Areas
 - 93-094111
- Corogonus pelid
 - Larval Drift
 - 93-094111
 - Management/Research--Rivers and Streams
 - 93-094111
 - Nursery Areas
 - 93-094111
- Corogonus plidschian
 - Larval Drift
 - 93-094111
 - Management/Research--Rivers and Streams
 - 93-094111
 - Nursery Areas
 - 93-094111
- Corogonus veighardti
 - Larval Parasitism
 - 93-093108
 - Population Studies
 - 93-093108
- Corogonus tobus
 - Larval Drift
 - 93-094111
 - Management/Research--Rivers and Streams
 - 93-094111
 - Nursery Areas
 - 93-094111
- Coris Julis
 - Head
 - 93-092530
- Corydoras aeneolus
 - Aquariums
 - 93-092491
 - Culture/Propagation
 - 93-092491
- Coryphaena hippurus
 - Agonistic Behavior
 - 93-092951
 - Baits/Baiting
 - 93-093905
 - Catch Per Unit Effort
 - 93-092667
 - Culture/Propagation
 - 93-092368
 - 93-092371
 - 93-092901
 - Feeding Experiments
 - 93-092371
 - Feeds
 - 93-092368
 - Fish Aggregation Devices
 - 93-093905
 - Gear Efficiency
 - 93-093905
 - Incidental Entrapment
 - 93-093555
 - Invertebrate Forage
 - 93-092371
 - Larvae
 - 93-092368
 - 93-092371
 - Mortality
 - 93-093555
 - Nets/Baiting
 - 93-093555
 - Nets/Trawls
 - 93-093905
 - Nutrition
 - 93-092371
 - Ocean Dumping
 - 93-093555
 - Site Suitability
 - 93-092901
- Coryphaenidae
 - Harvest
 - 93-094395

- CONTINUED
- Coryphaenidae*
 Management/Research--Marine
 93-004306
 Sportfishing
 93-004396
- Coryphaenoides*
 Marking/Tagging
 93-004429
- Cottidae*
 Body Form
 93-002513
 Distribution/Factors of
 93-003330
 Distribution/Geographical
 93-003330
 Egg Size
 93-002513
 Fish Lists/Keys
 93-002470
 Gones Fronts
 93-003330
 Vertebral Counts
 93-002513
- Cottus*
 Habitat Improvement/General
 93-004087
 Management/Research--Rivers and
 Streams
 93-004087
- Cottus cognatus*
 Habitat Alterations
 93-003821
 Management/Research--Rivers and
 Streams
 93-003821
 Water Quality
 93-003821
- Cottus gobio*
 Liver
 93-003442
 Management/Research--Rivers and
 Streams
 93-004123
 Parasites/Diseases
 93-003442
 Pollution
 93-003442
 Protozoan Diseases
 93-003442
Zschokkella nova
 93-003442
- Cottus poecilopus*
 Management/Research--Rivers and
 Streams
 93-004123
- Coxeius plumbeus*
 Habitat Alterations
 93-003821
 Management/Research--Rivers and
 Streams
 93-003821
 Water Quality
 93-003821
- Crotalaria maculata*
 Aquariums
 93-002399
 Culture/Propagation
 93-002399
- Crenilabrus cimerus*
 Head
 93-002530
- Crenilabrus melops*
 Cleaning Behavior
 93-004210
 Exploitation Rates
 93-004210
- CONTINUED
- Crenilabrus exoigis*
 Life History/General
 93-004210
 Management/Research--Marine
 93-004210
- Crenilabrus ocellatus*
 Head
 93-002530
- Crenilabrus quinquemaculatus*
 Head
 93-002530
- Crenilabrus roissali*
 Head
 93-002530
- Crenilabrus tinca*
 Head
 93-002530
- Danochaeetus binotatus*
 Colonization
 93-003275
 Larval Growth
 93-003275
- Otoliths
 93-003275
- Ctenolabrus rupestris*
 Cleaning Behavior
 93-004210
 Exploitation Rates
 93-004210
 Life History/General
 93-004210
 Management/Research--Marine
 93-004210
- Ctenopharyngodon idella*
 Age/Growth
 93-003501
 Anesthetics
 93-000437
 Aquatic Plant Control
 93-003759
 93-004139
 Biochemical Composition
 93-002587
 Bioenergetics
 93-002587
 Breed Stock
 93-002437
 Carcass Traits
 93-002587
 Control/Octological
 93-003104
 93-004139
 Culture/Propagation
 93-002355
 93-002437
 Detergents
 93-003501
 Egg Collection
 93-002437
 Environmental Impacts
 93-003077
 Exotic Species
 93-003577
 Exotic Species/North America
 93-003759
 Fatty Acids
 93-002355
 93-002608
 Foods
 93-002355
 Foods/Feeding
 93-003190
 Gonadotropin
 93-002794
 Ictyofyes
 93-002935

SYSTEMATIC INDEX

- ...CONTINUED...
- Ctenopharyngodon idella*
Lactate Dehydrogenase
93-002935
Life History/General
93-003759
Lipid Composition
93-002355
93-002608
Management/Research--General
93-003759
Management/Research--Ponds
93-004138
93-004439
Management/Research--Reservoirs
93-003184
93-003877
Maturation
93-002794
Nutrition
93-002355
Reproduction
93-002794
Social Behavior
93-003190
Spawning
93-002608
Stocking/Introduction
93-003259
93-003877
Surfactants
93-003581
Thermal Tolerance
93-003581
Tripleloid Fish
93-003877
Trophic Relationships
93-004138
- Clupea inconstans*
Clupea inconstans
93-003505
Parasites/Diseases
93-003505
Tromatodes
93-003505
- Cyprinidae
Body Form
93-002513
Distribution/Factors of
93-003330
Distribution/Geographical
93-003330
Egg Size
93-002513
Ocean Fronts
93-003330
Vertebral Counts
93-002513
- Cyprinus carpio*
Competition
93-002954
Culture/Propagation
93-002331
Invertebrate Fauna
93-002331
Larvae
93-002331
Race Selection
93-002954
Natural Selection
93-002954
Parasite Behavior
93-002954
Reproduction
93-002954
- Cynoscion arenarius*
Life History/General
93-004155
- ...CONTINUED...
- Cynoscion arenarius*
Management/Research--Estuaries
93-004155
Cynoscion nebulosus
Allotopes
93-003885
Biological Monitoring
93-003838
Commercial Fishing
93-003008
Early Development
93-002650
Endocrinology
93-002691
Genetic Strains
93-002987
Genetics
93-002691
Harvest
93-003000
Life History/General
93-004155
Management/Research--Estuaries
93-003530
93-004155
Management/Research--Marine
93-003008
93-003008
Osmoregulation
93-002856
Pollution
93-003530
Population Studies
93-002960
Salinity
93-002856
Sampling
93-003000
Spawning
93-003000
Steroids
93-002691
Stock Assessment
93-003885
93-003000
Stock Identification
93-003005
Supplemental Stocking
93-002907
Variation Studies
93-002907
- Cynoscion regalis*
Population Genetics
93-002894
Stock Identification
93-002894
- Cyphotilapia frontosa*
Aquariums
93-002411
Culture/Propagation
93-002411
- Cyprinella lutrensis*
Boleophthalmus achemmophthalmi
93-003494
Costodes
93-003494
Habitat Selection
93-003817
Management/Research--Rivers and Streams
93-003817
Parasites/Diseases
93-003494
Spawning
93-003817
Spawning Substrates
93-003817

SYSTEMATIC INDEX

- Cyprinella spiloptera*
 Predator/Prey Relationships
 93-033886
- Cyprinella venusta*
 Management/Research--Rivers and
 Streams
 93-004066
 Recruitment
 93-004066
 Stock Assessment
 93-004066
- Cyprinidae*
 Commercial Fishing
 93-003804
 Eyes
 93-002647
 Nervous System
 93-002647
 Production
 93-003804
 Ultraviolet Light
 93-002647
- Cyprinodon baltmani*
 Foods/Feeding
 93-003239
- Cyprinodon labrosus*
 Foods/Feeding
 93-003239
- Cyprinodon mayi*
 Foods/Feeding
 93-003239
- Cyprinodon stans*
 Foods/Feeding
 93-003239
- Cyprinodon variegatus*
 Phenols
 93-003655
 Salinity
 93-003655
 Sampling
 93-003655
 Temperature
 93-003655
 2,4-dinitrophenol
 93-003655
- Cyprinus carpio*
 Abundance/Factors of
 93-003664
 Acidification
 93-003002
 Age/Growth
 93-002326
 Antigens
 93-003444
 Argulus japonicus
 93-003400
 Biological Monitoring
 93-003526
 Bird Predation
 93-003216
 Cage Culture
 93-002326
 Carcaryl
 93-003645
 Carbofuran
 93-003645
 Carcass Fraits
 93-004309
 Cardiovascular System
 93-002687
 Culture/Propagation
 93-002326
 93-002374
 93-002383
 93-002386
 93-003191
- . . . CONTINUED . . .
- Cyprinus carpio*
 Cytology
 93-002878
 Diazepam
 93-003680
 Diets
 93-002383
 93-003191
 Digestive System
 93-002607
 Egg Survival
 93-003646
 Embryology
 93-002630
 93-002813
 Endocrinology
 93-002620
 93-002701
 Enzymes
 93-002833
 Eutrophication
 93-003664
 Fatty Acids
 93-002698
 Feeding Experiments
 93-002374
 Foods
 93-002374
 93-002383
 93-002386
 Food Conversion Efficiency
 93-002374
 93-002383
 Food Technology
 93-003794
 Foods/Feeding
 93-003191
 Fry Production
 93-002374
 Gonadotropin
 93-002585
 93-002701
 Growth Hormone
 93-002620
 93-002701
 Hormones
 93-002585
 93-002701
 Horseradish Peroxidase
 93-002627
 Ichthyophthirius multifiliis
 93-003444
 93-003445
 Immune Response
 93-003444
 93-003440
 Induced Maturation
 93-002384
 Industrial Wastes
 93-003646
 Insecticides
 93-002645
 Lateral Line System
 93-002475
 Lindane
 93-002672
 Lipid Composition
 93-002605
 Melathion
 93-002680
 93-003645
 Management/Research--Lakes
 93-003664
 Management/Research--Rivers and
 Streams
 93-003735

SYSTEMATIC INDEX

...CONTINUED...

Cyprinus carpio
 Masculature
 93-002813
 Neoplasms
 93-003526
 Nervous System
 93-002475
 Organophosphates
 93-003580
 Papillomas
 93-003526
 Parasites/Diseases
 93-003444
 93-003445
 93-003448
 93-003479
 93-003498
 93-003526
 Parasitic Copepods
 93-003400
 Pesticides
 93-003680
 pH
 93-003001
 Phosphamidon
 93-003645
 Phosphorus
 93-002386
 Pituitary Gland
 93-002585
 Platy Levels
 93-002888
 Pollution
 93-003564
 93-003735
 93-004059
 Polychlorinated Biphenyls
 93-003635
 Production
 93-002326
 Protein Metabolism
 93-002607
 Protein Synthesis
 93-002844
 Protozoan Diseases
 93-003444
 93-003445
 93-003448
 Rice/Fish Culture
 93-003191
 Species Diversity
 93-003504
 Sperm
 93-002608
 Storage Effects
 93-004377
 93-004389
 Swimming Performance
 93-003001
 93-003672
 Temperature
 93-002033
 93-002044
 93-003001
 Thermoregulation
 93-002833
 93-002844
 Toxic Algae
 93-002192
 Toxicity Testing
 93-002645
 Trace Contaminants
 93-004059
 Trace Metals
 93-003735
 93-004959

...CONTINUED...

Cyprinus carpio
 Triploid Fish
 93-002178
 93-002188
 Trypanosoma borellii
 93-003448
 Vaccination
 93-003445
 Variation Studies
 93-002326
 Viral Diseases
 93-003479
 Cyprinus carpio communis
 Cypermethrin
 93-002693
 Deltamethrin
 93-002697
 Food Conversion Efficiency
 93-003697
 Foods/Feeding
 93-003607
 Pesticides
 93-003657
 Pyrethroids
 93-002693
 Cypselurus cynnopterus
 Abundance/Factors of
 93-003006
 Distribution/Factors of
 93-003006
 Management/Research-Marine
 93-003006
 Stock Assessment
 93-003006
 Cypselurus opisthopterus
 Food Technology
 93-004356
 Dasystis akajoi
 Dentition
 93-002527
 Foods/Feeding
 93-002527
 Sexual Dimorphism
 93-002527
 Dasystis americana
 Foods/Feeding
 93-002621
 Dentax dentax
 Culture/Propagation
 93-002345
 Invertebrate Forage
 93-002345
 Larvae
 93-002345
 Bicentrarchus labrax
 Artisanal Fisheries
 93-004273
 Culture/Propagation
 93-002345
 93-002379
 93-003438
 Eggs
 93-002550
 Foods
 93-002379
 Fish Silage
 93-002379
 Fusigillin
 93-003456
 Hatchery/Wild Populations
 93-003438
 93-003455
 Hematology
 93-002379
 Histology
 93-002379

CONTINUED.

- Dicentrarchus labrax*
 Hormones 93-002550
 Induced Maturation 93-002550
 Invertebrate Forage 93-002345
 Larvae 93-002345
 Nutrition 93-002370
 Nutritional Diseases 93-002370
 Parasites/Diseases 93-002370
 93-003430
 93-003455
 93-003456
 Proteins 93-002784
 Protozoan Diseases 93-003430
 93-003455
 93-003456
 Spermatogenesis 93-002784
Sphaerospora dicentrarchi 93-003455
Sphaerospora testicularis 93-003455
 93-003456
 Treatment 93-003456
- Odogobius schlieeni*
 Distribution/Geographical 93-003363
 Meristic Studies 93-003363
 New Species 93-003363
 Species Identification 93-003363
- Diodontidae
 Inflation 93-002532
 Musculature 93-002532
- Diploodus annularis*
 Sperm 93-002600
- Dorosoma cepedianum*
 Age/Growth 93-003257
 Bird Production 93-003187
 Habitat Selection 93-004007
 Larval Behavior 93-004007
 Management/Research--Lakes 93-004007
 Management/Research--Reservoirs 93-003257
 Trophic Relationships 93-003257
 Variation Studies 93-003257
 Year Class Strength 93-003257
- Eigenmannia*
 Cytology 93-002775
 Electric Organs 93-002775
 Nervous System 93-002775
- Eigenmannia virescens*
 Electrolocation 93-002570
 Lateral Line System 93-002570
- Elassobranchii
 Blood Pressure 93-002690
 Cardiovascular System 93-002690
 Evolution 93-002456
 Heart 93-002690
 Olfaction 93-002456
 Variation Studies 93-002456
- Electrona antarctica*
 Distribution/Vertical 93-003320
 Population Studies 93-003320
- Eleginopsidae
 Evolution 93-003347
 Taxonomy 93-003347
- Elops
 Management/Research--Marine 93-004257
- Enchelyopus elongatus*
 Foods/Feeding 93-003250
- Engraulidae
 Fecundity 93-003113
 Spawning 93-003113
 Variation Studies 93-003113
- Engraulis australis*
 Abundance/Factors of 93-004150
 Ichthyoplankton 93-004150
 Kidney Nephritis 93-003450
 Management/Research--Estuaries 93-004150
 Nursery Areas 93-004150
 Parasites/Diseases 93-003450
 Protozoan Diseases 93-003450
 Recruitment 93-004150
 Regulations/Limited Entry 93-004150
 Regulations/Season 93-004150
- Engraulis capensis*
 Distribution/Vertical 93-004290
 Management/Research--Marine 93-004290
- Engraulis encrasicolus*
 Abundance/Seasonal 93-003097
 Distribution/Geographical 93-003146
 Early Development 93-003097
 93-003146
 Eggs 93-003146

- ..CONTINUED..
- Engraulis encrasicolus
 - Food Digestibility
 - 93-003108
 - Foods/Feeding
 - 93-003188
 - Ichthyoplankton
 - 93-003097
 - Management/Research--Estuaries
 - 93-003097
 - Nursery Areas
 - 93-003097
 - Spawning
 - 93-003146
 - 93-003188
 - Engraulis japonica
 - Diseases
 - 93-004250
 - Distribution/Biographical
 - 93-004250
 - Foods/Feeding
 - 93-003250
 - Kidney Nephritis
 - 93-003450
 - Life History/General
 - 93-004250
 - Management/Research--Marine
 - 93-004250
 - Parasites/Diseases
 - 93-003450
 - Protozoan Diseases
 - 93-003450
 - Stock Assessment
 - 93-004250
 - Engraulis mordax
 - Abundance/Factors of
 - 93-003509
 - Condition Factors
 - 93-002640
 - Fecundity
 - 93-003140
 - Forecasting
 - 93-003940
 - Kidney Nephritis
 - 93-003450
 - Lipid Content
 - 93-002640
 - Management/Research--Marine
 - 93-003940
 - Oil Pollution
 - 93-003509
 - Paleontology
 - 93-003872
 - Parasites/Diseases
 - 93-003450
 - Population Studies
 - 93-003672
 - Protozoan Diseases
 - 93-003450
 - Reconditioning
 - 93-003140
 - Recruitment
 - 93-003040
 - Reproductive Cycle
 - 93-003140
 - Spawning
 - 93-003140
 - Epinephelus
 - Culture/Propagation
 - 93-002901
 - Site Suitability
 - 93-002901
 - Epinephelus amblycephalus
 - Lymphocystis
 - 93-003477
 - Parasites/Diseases
 - 93-003477
 - ..CONTINUED..
 - Epinephelus amblycephalus
 - Viral Diseases
 - 93-003477
 - Epinephelus guttatus
 - Age/Growth
 - 93-003205
 - Exploitation Rates
 - 93-004104
 - Management/Research--Marine
 - 93-004104
 - 93-004309
 - Population Studies
 - 93-004104
 - 93-004309
 - Yield-per-Recruit
 - 93-004309
 - Epinephelus noro
 - Artisanal Fisheries
 - 93-004310
 - Commercial Fishing
 - 93-003005
 - Exploitation Rates
 - 93-004310
 - Management/Research--Marine
 - 93-004310
 - Mortality Rates
 - 93-004310
 - Population Studies
 - 93-004310
 - Stock Assessment
 - 93-003008
 - Epinephelus striatus
 - Culture/Propagation
 - 93-002309
 - Early Development
 - 93-002154
 - 93-003281
 - Foods/Feeding
 - 93-003201
 - Habitat Selection
 - 93-003201
 - Lunar Influences
 - 93-003154
 - Production
 - 93-002309
 - Spawning
 - 93-003154
 - Epinephelus tauvina
 - Bacterial Diseases
 - 93-003379
 - Cryptocaryon irritans
 - 93-003379
 - Culture/Propagation
 - 93-003379
 - Diets
 - 93-003379
 - Parasites/Diseases
 - 93-003379
 - Protozoan Diseases
 - 93-003379
 - Treatment
 - 93-003379
 - Vibrio
 - 93-003379
 - Eplatretus bursarii
 - Nervous System
 - 93-002717
 - Eplatretus stouti
 - Eggs
 - 93-002409
 - Embryology
 - 93-002409
 - Evolution
 - 93-002409
 - Lateral Line System
 - 93-002409

SYSTEMATIC INDEX

- Erythraea*
 Distribution/Geographical
 93-003306
 Taxonomy
 93-003306
 Variation Studies
 93-003306
Erythraea distillata
 Distribution/Geographical
 93-003306
 Taxonomy
 93-003306
 Variation Studies
 93-003306
Erythraea harrisi
 Distribution/Geographical
 93-003306
 Taxonomy
 93-003306
 Variation Studies
 93-003306
Erythraea insignis
 Distribution/Geographical
 93-003306
 Taxonomy
 93-003306
 Variation Studies
 93-003306
Erythraea succetta
 Leeches
 93-003515
 Parasites/Diseases
 93-003515
Piscicola ruficeps
 93-003515
Erythraea tenuis
Acanthocephala
 93-003484
Neochlamydomyx carinatus
 93-003484
 Parasites/Diseases
 93-003484
 Erythraea
 Commercial Fishing
 93-003884
 Production
 93-003884
Esox lucius
 Acidification
 93-002652
 93-004045
 Age/Growth
 93-003266
 93-003271
 93-003889
 Age/Sex Relationships
 93-002557
 Bioabsorption
 93-003652
 Bird Predation
 93-003216
 93-003251
 Bycatch
 93-004006
 Catch Per Unit Effort
 93-004001
 93-004017
 Commercial Fishing
 93-004015
 93-004016
 93-004018
 Culture/Propagation
 93-003969
 Exercise
 93-002557
 Fish Passage
 93-003941
- . . . CONTINUED . . .
Esox lucius
 Fishways
 93-003541
 Foods/Feeding
 93-003183
 93-003208
 93-003210
 Habitat Alterations
 93-003021
 Harvest
 93-004015
 93-004057
 Heavy Metals
 93-003601
 Hybridization
 93-003889
 Industrial Wastes
 93-003552
 93-003734
 Lagoons
 93-003210
 Limnology
 93-004145
 Lipid Content
 93-003734
 Management/Research--Lakes
 93-004001
 93-004016
 93-004017
 93-004018
 93-004020
 93-004045
 Management/Research--Marine
 93-003210
 Management/Research--Reservoirs
 93-003271
 93-004146
 Management/Research--Rivers and
 Streams
 93-003021
 93-004057
 Mercury
 93-003691
 Metabolic Rates
 93-002557
 Oxbow Lakes
 93-003208
 Oxygen
 93-002557
 Pentachlorophenol
 93-003652
 Polychlorinated Biphenyls
 93-003691
 Population Studies
 93-004057
 Post-Insessment Studies
 93-003266
 93-004146
 Predator/Prey Relationships
 93-003183
 Respiratory System
 93-002557
 Sampling
 93-004001
 Sport Fishing
 93-004015
 93-004017
 93-004057
 Stock Assessment
 93-004001
 93-004016
 93-004018
 93-004017
 93-004018
 93-004028
 Water Quality
 93-003821

- Esox masquinongy
 Age/Growth
 93-003989
 Culture/Propagation
 93-002281
 93-003989
 Economics
 93-003888
 Fingerling Production
 93-002281
 Habitat Selection
 93-003853
 Hybridization
 93-003989
 Management/Research--Lakes
 93-002281
 Movements
 93-003853
 Production
 93-002281
 Raceway Culture
 93-002281
 Season
 93-003888
 Size at Release
 93-003060
 Stocking/Introductions
 93-003003
 93-003060
 Supplemental Stocking
 93-002281
 Survival
 93-003883
 93-003888
 Etelis oculatus
 Age/Growth
 93-003992
 Commercial Fishing
 93-003993
 Exploitation Rates
 93-003992
 Fish Spoilage
 93-004412
 Length-Weight Relationships
 93-002507
 Management/Research--Marine
 93-003892
 93-003893
 Morphometry
 93-002507
 Mortality Rates
 93-003892
 Recruitment
 93-003892
 93-003893
 Storage Effects
 93-004412
 Etheostoma caeruleum
 Distribution/Geographical
 93-003323
 Etheostoma exile
 Colonization
 93-003329
 Distribution/Geographical
 93-003329
 Glaciers
 93-003329
 Management/Research--Lakes
 93-003329
 Species Diversity
 93-003329
 Etheostoma nigrum
 Colonization
 93-003329
 Distribution/Geographical
 93-003329
- .CONTINUED.
 Etheostoma nigrum
 Glaciers
 93-003329
 Management/Research--Lakes
 93-003329
 Ovarium
 93-002463
 Species Diversity
 93-003329
 Variation Studies
 93-002463
 Zoogeography
 93-002463
 Etheostoma vitreum
 Distribution/Geographical
 93-003318
 Etheostoma whipplei
 Sex Ratios
 93-002972
 Sexual Dimorphism
 93-002972
 Spawning
 93-002972
 Ethmalosa fimbriata
 Management/Research--Marine
 93-004257
 Etroplus maculatus
 DNA
 93-002950
 Gene Mapping
 93-002950
 Etruscanus teras
 Kudua thyrallia
 93-003456
 Protozoan Diseases
 93-003456
 Euthymus pelagicus
 Catch Per Unit Effort
 93-003857
 Food Technology
 93-003794
 Eviota epiphaga
 Distribution/Factors of
 93-003074
 Islands
 93-003074
 Management/Research--Marine
 93-003074
 Nursery Areas
 93-003074
 Population Studies
 93-003074
 Recruitment
 93-003074
 Sampling
 93-003074
 Exallia brevis
 Life History/General
 93-003031
 Reproduction
 93-003031
 Exocoetidae
 Population Studies
 93-004435
 Exoglossum laurae
 Nests/ nesting
 93-003011
 Spawning
 93-003011
 Fugu niphobles
 Inflammatory Response
 93-002834
 Leucocyte Migration
 93-002834
 Fugu rubripes
 Culture/Propagation
 93-003374

SYSTEMATIC INDEX

- CONTINUED
- Fagus sibiricus*
- Parasites/Diseases
 - 93-083374
 - 93-083479
- Season
 - 93-083374
- Temperature
 - 93-883374
- Viral Diseases
 - 93-083479
- Fundulus*
- Embryology
 - 93-882826
- Management/Research--Estuaries
 - 93-084149
- Stock Assessment
 - 93-084149
- Fundulus grandis*
- Sampling
 - 93-083925
- Fundulus heteroclitus*
- Electrophysiology
 - 93-882786
- Epidermis
 - 93-082786
- Evolution
 - 93-882767
- Eyes
 - 93-882767
- Gills
 - 93-882786
- Habitat Selection
 - 93-882967
- Intraspecies Relationships
 - 93-882967
- Lactate Dehydrogenase
 - 93-882767
- Photoperiodism
 - 93-882786
- Population Studies
 - 93-082967
- Predator/Prey Relationships
 - 93-083668
- Fundulus heteroclitus heteroclitus*
- Egg Size
 - 93-083342
- Egg Survival
 - 93-083342
- Embryology
 - 93-083342
- Fundulus heteroclitus macrolepidotus*
- Egg Size
 - 93-083342
- Egg Survival
 - 93-083342
- Embryology
 - 93-083342
- Gobiidae
- Body Form
 - 93-082513
- Carcass Traits
 - 93-084367
- Commercial Fishing
 - 93-883804
- Egg Size
 - 93-882513
- Production
 - 93-883804
- Storage Effects
 - 93-884367
- Troch Neutals
 - 93-083599
- Vertebral Counts
 - 93-082513
- Gobiiformes
- Age/Growth
 - 93-083117
- CONTINUED
- Gobiiformes
- Evolution
 - 93-083117
- Maturaton
 - 93-083117
- Gobius macrocephalus*
- Bonossamic Index
 - 93-083130
- Maturaton
 - 93-083130
- Reproductive Cycle
 - 93-083130
- Gobius normae*
- Abundance/Factors of
 - 93-084283
- Age/Growth
 - 93-082359
 - 93-083057
 - 93-083153
 - 93-083289
- Age/Sex Relationships
 - 93-082831
 - 93-083176
 - 93-083286
- Amino Acids
 - 93-082856
- Arsenic
 - 93-083714
- Bacterial Flora
 - 93-083199
- Biological Monitoring
 - 93-083663
 - 93-083974
- Brackishwater Culture
 - 93-082748
- Buoyancy Control
 - 93-082807
- Bycatch
 - 93-083849
- Cage Culture
 - 93-082339
 - 93-083695
- Commercial Fishing
 - 93-084314
- Condition Factors
 - 93-883889
- Culture/Propogation
 - 93-882330
 - 93-882346
 - 93-882348
 - 93-882359
 - 93-882487
 - 93-083199
 - 93-083213
 - 93-083495
- Digestive System
 - 93-882487
 - 93-082856
 - 93-082678
 - 93-083199
 - 93-083213
 - 93-084403
- Disease Susceptibility
 - 93-883496
- Distribution/Factors of
 - 93-883176
 - 93-883280
 - 93-883286
- Distribution/Geographical
 - 93-883076
 - 93-883119
 - 93-883305
 - 93-883321
 - 93-883336
 - 93-883327
- Distribution/Seasonal
 - 93-083176

SYSTEMATIC INDEX

...CONTINUED

Gadus morhua
 Distribution/Ventical
 93-003003
 Early Development
 93-002487
 93-002831
 93-002943
 93-002957
 93-003075
 93-003119
 93-003213
 93-003244
 93-003252
 93-003344
 93-003619
 93-004283
 Ecological Analysis
 93-003100
 Egg Survival
 93-003079
 93-003082
 Eggs
 93-002807
 93-003119
 Embryology
 93-002504
 Enzymes
 93-000403
 Exploitation Rates
 93-003100
 Eyes
 93-002943
 Focality
 93-003082
 93-003140
 93-003344
 Feeding Experiments
 93-002350
 93-003213
 Feeds
 93-002350
 93-002487
 93-003199
 Fish Freshness Testing
 93-004424
 Fish Preservation
 93-004347
 Fish Processing
 93-004366
 Fish Spoilage
 93-004363
 93-004423
 93-004405
 Food Technology
 93-004347
 93-004413
 Foods/Feeding
 93-002487
 93-002983
 93-003057
 93-003079
 93-003110
 93-003204
 93-003213
 93-003223
 93-003244
 93-003252
 Forecasting
 93-003948
 93-003985
 Gear Selectivity
 93-003929
 Gills
 93-002504
 Gaussia
 93-003453

...CONTINUED...

Gadus morhua
 Groundfish
 93-003929
 Habitat Selection
 93-003200
 93-003395
 Hatchery/Wild Populations
 93-003405
 Heavy Metals
 93-003563
 93-003714
 Histology
 93-003619
 Hydrocarbons
 93-003619
 Hypoxia
 93-002780
 Intraspecific Relationships
 93-003221
 93-003280
 Invertebrate Fauna
 93-002340
 93-002350
 Kidneys
 93-003453
 Larvae
 93-002346
 93-002340
 Larval Behavior
 93-003321
 Larval Drift
 93-003280
 93-003706
 93-004230
 Length Frequencies
 93-002990
 Lipid Composition
 93-003057
 Lipid Content
 93-002350
 Liver
 93-003453
 Management/Research--Marine
 93-003075
 93-003084
 93-003100
 93-003200
 93-003223
 93-003940
 93-003929
 93-003940
 93-003986
 93-004230
 93-004283
 93-004304
 93-004323
 Management/Research--Rivers and
 Streams
 93-003714
 Mercury
 93-003714
 Migration
 93-003803
 93-003100
 Morphometry
 93-002486
 Mortality Factors
 93-003199
 Mortality Rates
 93-003344
 Movements
 93-002983
 Multivariate Analysis
 93-003974
 Musculature
 93-002661

SYSTEMATIC INDEX

.. CONTINUED. .

Gadus morhua
 Mesopelagic 93-003406
 Neontades 93-003495
 Nervous System 93-002670
 Nets/Trawls 93-003929
 Nursery Areas 93-003075
 Nutrients 93-003057
 Nutrition 93-002359
 93-004413
 Osmoregulation 93-002031
 Otoliths 93-002406
 Oocytes 93-003057
 Parasites/Diseases 93-003453
 93-003495
 Peat Ides 93-002655
 Photoperiodism 93-002963
 93-003083
 Pollution 93-003714
 Pond Culture 93-003213
 Population Studies 93-003079
 93-003092
 93-003120
 93-003164
 Predator/Prey Relationships 93-003209
 93-003221
 93-003223
 93-003252
 93-003327
 Production 93-002346
 93-002906
 Protozoan Diseases 93-003453
 Recrudescence 93-003149
 Recruitment 93-003084
 93-003326
 93-003943
 93-004323
 Reproductive Cycle 93-003140
 Salinity 93-003057
 93-004283
 Sampling 93-003094
 93-003029
 Schooling Behavior 93-003321
 Seasons 93-003204
 Spawning 93-003079
 93-003119
 93-003140
 93-003153
 Stock Assessment 93-004230

.. CONTINUED...

Gadus morhua
 Stock Assessment 93-004283
 93-004304
 93-004314
 Storage Effects 93-004347
 93-004366
 93-004403
 93-004413
 93-004436
 Survival 93-003057
 Temperature 93-002789
 93-003057
 93-003079
 93-004283
 93-004403
 Temperature Selection 93-002789
 Vision 93-002943
 Year Class Strength 93-003121
 93-003144
 93-004304
 93-004323
Gadus morhua macrocephalus
 Food/Feeding 93-003245
Galaxias aeneus
 Allozymes 93-002925
 Evolution 93-002925
 Landlocked Populations 93-002925
 Variation Studies 93-002925
Galaxias paucispondylus
 Fecundity 93-003118
 Spawning 93-003118
Galaxias progressus
 Fecundity 93-003118
 Spawning 93-003118
Galaxias tanycephalus
 Allozymes 93-002925
 Evolution 93-002925
 Landlocked Populations 93-002925
 Variation Studies 93-002925
Galaxias vulgaris
 Coexistence 93-002966
 Food/Feeding 93-002966
 Interspecific Relationships 93-002966
 Management/Research--Rivers and Streams 93-002966
 Microhabitat 93-002966
 Trophic Relationships 93-002966
Galeoides decadactylus
 Biological Monitoring 93-003589

SYSTEMATIC INDEX

- CONTINUED
- Galeoides decedactylus*
Chlorinated Hydrocarbons
93-003588
- DOT
93-003588
- Heptachlor
93-003588
- Lindane
93-003588
- Polychlorinated Biphenyls
93-003588
- Gambusia affinis*
Overwintering
93-002969
- Reproduction
93-002969
- Gambusia affinis affinis*
Age/Sex Relationships
93-003650
- Fertilization
93-003659
- 93-003659
- Heratology
93-003659
- Liver
93-003659
- Pancreas
93-003659
- Gambusia holbrooki*
Allozymes
93-003632
- Heavy Metals
93-003632
- Mercury
93-003632
- Pollution Tolerance
93-003632
- Gasterochisma melampus*
Evolution
93-002472
- Thermogenic Tissue
93-002472
- Gasterosteus*
Cannibalism
93-003020
- Gasterosteus aculeatus*
Age/Growth
93-003061
- 93-003281
- 93-003283
- Aggressive Behavior
93-003010
- Bioenergetics
93-002999
- Body Form
93-002912
- 93-003127
- Cannibalism
93-002945
- Chemoreception
93-003019
- Colonation
93-002999
- Communication
93-003019
- Courtship
93-002945
- Egg Predation
93-002945
- Enzymes
93-002070
- Evolution
93-002912
- 93-003127
- Fecundity
93-003127
- CONTINUED
- Gasterosteus aculeatus*
Food/Feeding
93-003061
- Fright Behavior
93-002978
- Gonads
93-002699
- Habitat Improvement/General
93-004005
- Histology
93-002485
- Lactate Dehydrogenase
93-002870
- Management/Research--Rivers and Streams
93-004005
- Mate Selection
93-002999
- Morphometry
93-002874
- Olfaction
93-002485
- Otoliths
93-003012
- Predator/Prey Relationships
93-002978
- 93-002996
- 93-003208
- Reproduction
93-002969
- 93-003127
- Sperm
93-002699
- Territorial Behavior
93-003019
- Toxic Algae
93-002152
- Ultraviolet Light
93-002719
- Variation Studies
93-002699
- 93-002874
- 93-002912
- 93-003127
- Vision
93-002719
- Water Quality
93-004005
- Gasterosteus wheatlandi*
Gonads
93-002699
- Sperm
93-002699
- Variation Studies
93-002699
- Gonia australis*
Barbels
93-002467
- Gorras*
Management/Research--Marine
93-004257
- Gila atraria*
Bioenergetics
93-004148
- Management/Research--Reservoirs
93-004148
- Predator/Prey Relationships
93-004148
- Trophic Relationships
93-004148
- Gila crassicauda*
Distribution/Geographical
93-003304
- Gila robusta*
Botriocephalus acheilognathus
93-003494

SYSTEMATIC INDEX

- CONTINUED
- Gila robusta*
 - Cestodes
 - 93-003494
 - Habitat Selection
 - 93-004115
 - Microhabitat
 - 93-004115
 - Parasites/Diseases
 - 93-003494
 - Gillichthys mirabilis*
 - Distribution/Geographical
 - 93-002881
 - Population Genetics
 - 93-002881
 - Gillichthys seta*
 - Distribution/Geographical
 - 93-002881
 - Population Genetics
 - 93-002881
 - Glyptostoma cirratum*
 - Immune Response
 - 93-002847
 - Girardinichthys multiradiatus*
 - Eggs
 - 93-002514
 - Girardinichthys viviparus*
 - Eggs
 - 93-002514
 - Glyptostephus cynoglossus*
 - Breatch
 - 93-003849
 - Management/Research--Marine
 - 93-003849
 - Gnathomus potersi*
 - Adrenergic System
 - 93-002723
 - Brain
 - 93-002723
 - Cyanide
 - 93-003654
 - Electric Organs
 - 93-003654
 - Electrolocation
 - 93-003654
 - Nervous System
 - 93-002724
 - Swimming Performance
 - 93-003018
 - Gnathomus tanandaa*
 - Cyanide
 - 93-003654
 - Electric Organs
 - 93-003654
 - Gnathopogon caeruleus*
 - Biosorption
 - 93-003721
 - Organochosphates
 - 93-003721
 - Pesticides
 - 93-003721
 - Gobiidae
 - Digestive System
 - 93-002586
 - Ion Transport
 - 93-002586
 - Gobius albiguttatus*
 - Age/Growth
 - 93-002842
 - Incubation
 - 93-002842
 - Temperature
 - 93-002842
 - Gobio gobio*
 - Age/Growth
 - 93-002842
 - Agricultural Drainage
 - 93-003730
- CONTINUED
- Gobio gobio*
 - Culture/Propagation
 - 93-002354
 - Cytochrome P450
 - 93-003730
 - Incubation
 - 93-002842
 - Invertebrate Forage
 - 93-002354
 - Larvae
 - 93-002354
 - Pesticides
 - 93-003730
 - Temperature
 - 93-002342
 - Gobiusculus flavescens*
 - Food/Feeding
 - 93-003016
 - 93-003194
 - Fright Behavior
 - 93-003016
 - Habitat Selection
 - 93-003016
 - Predator/Prey Relationships
 - 93-003016
 - Gysammatedes cicorellus*
 - Artisanal Fisheries
 - 93-004273
 - Haliutaea stellata*
 - Cytelegy
 - 93-002747
 - Histology
 - 93-002747
 - Kidneys
 - 93-002747
 - Haplochromis
 - Competition
 - 93-003196
 - Food/Feeding
 - 93-003196
 - Habitat Selection
 - 93-003196
 - Management/Research--Lakes
 - 93-003196
 - Haplochromis burtoni*
 - Genadotropin
 - 93-002047
 - Hormones
 - 93-002047
 - Pituitary Gland
 - 93-002047
 - Reproductive Cycle
 - 93-002047
 - Haplochromis stellis*
 - DNA
 - 93-002890
 - Gene Mapping
 - 93-002890
 - Harengula clupeiola*
 - Beltfish
 - 93-003839
 - 93-004271
 - Harvest
 - 93-003839
 - Management/Research--Marine
 - 93-003839
 - 93-004271
 - Harengula humeralis*
 - Beltfish
 - 93-003839
 - 93-004271
 - Harvest
 - 93-003839
 - Management/Research--Marine
 - 93-003839
 - 93-004271

SYSTEMATIC INDEX

- Harengula jaguana*
 Gairfish
 93-004271
 Management/Research--Marine
 93-004271
- Harpagifer antarcticus*
 Larval Growth
 93-003156
 Reproduction
 93-003156
- Harpagiferidae*
 Evolution
 93-003347
 Taxonomy
 93-003347
- Harringtonia*
 Taxonomy
 93-003353
- Hemiramphus brasiliensis*
 Gairfish
 93-003339
 Harvest
 93-003339
 Management/Research--Marine
 93-003339
- Hemirhamphus villosus*
 Foods/Feeding
 93-003245
- Heterodontus francisci*
 Heart
 93-002677
- Heteropneustes fossilis*
 Air Breathing
 93-002505
 Atrial
 93-003601
 Behavior
 93-003507
 Calcitonin
 93-002809
 Calcium
 93-002809
 Carbery
 93-003699
 Chemical Reclamation
 93-003672
 Copper
 93-003587
 Culture/Propagation
 93-002382
 Diagnostic Techniques
 93-003699
 Dimethoate
 93-003601
 Endosulfan
 93-003699
 Feeds
 93-002382
 Heavy Metals
 93-003587
 Hematology
 93-003623
 Herbicides
 93-003601
 Industrial Wastes
 93-003623
 Insecticides
 93-003601
 93-003699
 Invertebrate Forage
 93-002382
 Larvae
 93-002382
 Life History/General
 93-002505
 Malathion
 93-003699
- . CONTINUED .
Heteropneustes fossilis
 Phosphate
 93-002000
 Saponins
 93-003672
 Survival
 93-002382
 Thallium
 93-003623
- Hexagrammos decagrammus*
 Foods/Feeding
 93-003005
 Oil Pollution
 93-003647
 Predator/Prey Relationships
 93-003605
- Hexagrammos otakii*
 Distribution/Factors of
 93-003312
 Distribution/Geographical
 93-003312
 Larval Drift
 93-003312
 Ocean Fronts
 93-003312
 Population Studies
 93-003312
 Storage Effects
 93-004377
- Hiodon alosoides*
 Age/Growth
 93-003260
 Bycatch
 93-004000
 Management/Research--Rivers and
 Streams
 93-003260
 Otoliths
 93-003260
 Scales
 93-003260
 Stock Assessment
 93-003260
 Year Class Strength
 93-003260
- Hippoglossoides elassodon*
 Age/Growth
 93-003277
 Biomergetics
 93-003277
 Larval Growth
 93-003264
 Predator/Prey Relationships
 93-003264
 Recruitment
 93-003264
 Season
 93-003264
- Hippoglossoides platessoides*
 Bycatch
 93-003849
 Distribution/Vertical
 93-003164
 Gear Selectivity
 93-003929
 Groundfish
 93-003929
 Larval Behavior
 93-003164
 Larval Drift
 93-003164
 Management/Research--Marine
 93-003164
 93-003849
 93-003929
 Marking/Tagging
 93-003675

SYSTEMATIC INDEX

- CONTINUED
- Hippoglossoides platessoides
 - Morphometry
 - 93-002486
 - Nets/Trawls
 - 93-003929
 - Otoliths
 - 93-002486
 - Population Genetics
 - 93-002933
 - Sampling
 - 93-003929
 - Spawning Migration
 - 93-003164
 - Variation Studies
 - 93-002933
 - Hippoglossoides platessoides limandoides
 - Age/Growth
 - 93-003873
 - Maturat ion
 - 93-003073
 - Stock Assessment
 - 93-003073
 - Hippoglossus hippoglossus
 - Age/Growth
 - 93-003279
 - Bacterial Diseases
 - 93-003390
 - Brookiswater Culture
 - 93-002348
 - Condition Factors
 - 93-002573
 - 93-002518
 - Culture/Propagation
 - 93-002348
 - 93-002355
 - 93-002509
 - Cytology
 - 93-002366
 - Diets
 - 93-002365
 - Digestive System
 - 93-002101
 - 93-002305
 - Early Development
 - 93-002501
 - 93-002506
 - 93-003279
 - Egg Composition
 - 93-002599
 - Egg Quality
 - 93-002599
 - Eggs
 - 93-002616
 - Embryology
 - 93-002610
 - Fatty Acids
 - 93-002573
 - Fecundity
 - 93-003140
 - Flexibacter
 - 93-003390
 - Histology
 - 93-002501
 - Invertebrate Forage
 - 93-002348
 - 93-002365
 - Larvae
 - 93-002348
 - 93-002365
 - Lipid Content
 - 93-002500
 - 93-002610
 - Liver
 - 93-002581
 - Maturat ion
 - 93-002520
 - .CONTINUED.
 - Hippoglossus hippoglossus
 - Maturat ion
 - 93-003131
 - Nutrition
 - 93-002573
 - Parasites/Diseases
 - 93-003390
 - Reconditioning
 - 93-003140
 - Reproductive Cycle
 - 93-003140
 - Reproductive System
 - 93-002520
 - Salinity
 - 93-003131
 - Spawning
 - 93-003131
 - 93-003140
 - Survival
 - 93-002365
 - Temperature
 - 93-003131
 - 93-002879
 - Variation Studies
 - 93-003131
 - Vibrin
 - 93-003390
 - Hippoglossus stenolepis
 - Egg Composition
 - 93-002948
 - Embryology
 - 93-002948
 - Mundlichthys affinis
 - Abundance/Factors of
 - 93-003056
 - Distribution/Factors of
 - 93-003056
 - Management/Research-Marine
 - 93-003056
 - Mark/Recapture
 - 93-003150
 - Movements
 - 93-003150
 - Stock Assessment
 - 93-003056
 - Molacanthus tricolor
 - Abundance/Factors of
 - 93-004164
 - Habitat Selection
 - 93-004164
 - Hoplias lacordae
 - Cardiovascular System
 - 93-002760
 - Hypoxia
 - 93-002760
 - Hoplias malabaricus
 - Cardiovascular System
 - 93-002760
 - Hypoxia
 - 93-002760
 - Hubbsina turneri
 - Eggs
 - 93-002514
 - Hucho
 - DNA
 - 93-002927
 - Evolution
 - 93-002927
 - Hucho bleekeri
 - Digestive System
 - 93-003254
 - Food Digestibility
 - 93-003254
 - Foods/Feeding
 - 93-003254
 - Hucho hucho
 - Life History/Genara]
 - 93-003883

SYSTEMATIC INDEX

- CONTINUED...
- Hucho hucho*
Stocking/Introductions
93-003803
Survival
93-003893
- Hypelagus*
Taxonomy
93-003353
- Hypophis macrochir*
Distribution/Vertical
93-004290
Management/Research--Marine
93-004290
- Hyperlophus vittatus*
Kudua thyrastilis
93-003450
Protozoan Diseases
93-003450
- Hypheobrycon bifasciatus*
Biosorption
93-003644
Detoxification
93-003644
Endosulfan
93-003643
93-003644
Gills
93-003643
Insecticides
93-003644
Swimming Performance
93-003643
- Hypomocis olidus*
Life History/General
93-003894
Management/Research--Reservoirs
93-003894
Stocking/Introductions
93-003894
Transplanted Species
93-003894
- Hypopthalmichthys molitrix*
Cage Culture
93-002275
Culture/Propagation
93-002275
Gonadotropin
93-002794
Hybridization
93-002275
Maturation
93-002794
Production
93-002275
Reproduction
93-002794
Trophic Status
93-002275
- Hypopthalmichthys nobilis*
Anesthetics
93-002437
Brood Stock
93-002437
Culture/Propagation
93-002437
Egg Collection
93-002437
Gonadotropin
93-002794
Maturation
93-002794
Reproduction
93-002794
- Hypoplectrus*
Speciation
93-002882
- CONTINUED.
- Hypoplectrus*
Variation Studies
93-002882
- Hypostomus plecostomus*
Aquarium
93-002489
Culture/Propagation
93-002489
- Hypsygops rubicundus*
Androgen
93-002798
Hematology
93-002790
Parental Behavior
93-002790
Reproduction
93-002798
Testosterone
93-002798
- Ichthyomyzon castaneus*
Distribution/Geographical
93-003049
Life History/General
93-003049
Population Studies
93-003049
Predator/Prey Relationships
93-003192
- Ichthyomyzon fossor*
Abundance/Factors of
93-003314
Bird Predation
93-003192
Distribution/Geographical
93-003314
Habitat Selection
93-003314
- Ichthyomyzon unicuspis*
Argulus appendiculatus
93-003192
Bird Predation
93-003192
Eyes
93-002465
Nervous System
93-002464
93-002751
Parasites/Diseases
93-003192
Parasitic Copepods
93-003192
Predator/Prey Relationships
93-003192
Swimming Performance
93-002464
- Ictalurus*
Culture/Propagation
93-002305
93-002314
Economics
93-002305
Marketing
93-002305
93-002314
- Ictalurus*
Culture/Propagation
93-002204
Economics
93-002204
Production
93-002284
- Ictalurus punctatus*
Culture/Propagation
93-002320
Epidemiology
93-002679

SYSTEMATIC INDEX

.. CONTINUED ..

Ictalurus forcastus
 Hybridization
 93-002320
 Mucus
 93-002670
 Production
 93-002320
Ictalurus punctatus
Aeromonas hydrophila
 93-003401
 Age/Growth
 93-003980
 Antibodies
 93-003405
 Ascorbic Acid
 93-004411
 Bacterial Diseases
 93-003306
 93-003401
 93-003405
 93-003419
 93-003428
 Bird Predation
 93-002289
 93-002290
 93-002315
 93-003387
 93-003216
 Cell Culture
 93-002596
 Chromium
 93-003624
 Culture/Propagation
 93-002273
 93-002282
 93-002289
 93-002290
 93-002303
 93-002319
 93-002320
 93-002322
 93-002376
 93-002392
 93-003419
 93-003889
 93-004411
 Diagnostic Techniques
 93-003405
 Diets
 93-002302
 Economics
 93-002282
 93-002322
Edwardsiella ictaluri
 93-003395
 93-003404
 93-003485
 93-003419
 93-003428
 Electrofishing
 93-003895
 Enzymes
 93-004359
 Epidemics
 93-002679
 Feeding Experiments
 93-002392
 Feeds
 93-002376
 Fish Spoilage
 93-004358
 93-004359
 93-004423
 Food Conversion Efficiency
 93-002322
 Food Technology
 93-004411

CONTINUED..

Ictalurus punctatus
 Formalin
 93-003593
 Gene Expression
 93-002922
 Gene Mapping
 93-002922
 93-002923
 Gosselin
 93-002273
 Gills
 93-003401
 Hematology
 93-002329
 Histology
 93-003401
 Hybridization
 93-002320
 Immune Response
 93-002731
 93-002727
 Immunoglobulins
 93-002711
 Life History/General
 93-003091
 Lipid Composition
 93-004357
 Lipid Content
 93-002383
 Lipid Metabolism
 93-004359
 Liver
 93-003401
 Management/Research--Rivers and
 Streams
 93-003801
 93-003895
 Medication In Diets
 93-003404
 Methylisoborneol
 93-002303
 Mucus
 93-002670
 Musculature
 93-002596
 93-004359
 93-004411
 Nets/Travels
 93-003895
 Nitrite
 93-002029
 Nutrition
 93-002376
 93-004357
 Nutritional Diseases
 93-002376
 Olfaction
 93-002322
 93-002923
 Ormetoprim
 93-003404
 Overwintering
 93-002392
 Pancreas
 93-003401
 Parasites/Diseases
 93-003395
 93-003401
 93-003404
 93-003485
 93-003419
 93-003428
 Pollution Tolerance
 93-002277
 Pond Culture
 93-002273

SYSTEMATIC INDEX

CONTINUED

- Ictalurus punctatus*
 - Pond Culture
 - 93-002322
 - Population Studies
 - 93-003891
 - Production
 - 93-002202
 - 93-002320
 - 93-002322
 - 93-002392
 - Rearing Density
 - 93-002282
 - 93-002322
 - Recruitment
 - 93-003891
 - RNA
 - 93-002711
 - Sampling
 - 93-003095
 - Sarafloxacin
 - 93-003484
 - Size at Release
 - 93-003891
 - Starvation
 - 93-002929
 - Stocking/Introductions
 - 93-003891
 - Sulfadimethoxine
 - 93-003404
 - Survival
 - 93-003891
 - Taste and Odor Problems
 - 93-002273
 - 93-002303
 - 93-004411
 - Treatment
 - 93-003395
 - 93-003484
 - 93-003420
 - 93-003593
 - Vaccination
 - 93-003419
 - Vitamins
 - 93-002376
- Ictalibus cyprinellus*
 - Fatty Acids
 - 93-002608
 - Lipid Composition
 - 93-002608
 - Sperm
 - 93-002608
- Illisha harroweri
 - Baitfish
 - 93-004271
 - Management/Research--Marine
 - 93-004271
- Ilyodon xantusi*
 - Eggs
 - 93-002514
- Istiophoridae
 - Fishing Tournaments
 - 93-004183
 - Management/Research--Marine
 - 93-004183
 - 93-004303
 - Musculature
 - 93-002930
 - Sampling
 - 93-004183
 - Sportfishing
 - 93-004303
 - Thermogenic Tissue
 - 93-002830
- Istiophorus platypterus*
 - Catch Per Unit Effort
 - 93-003857

CONTINUED

- Istiophorus platypterus*
 - Harvest
 - 93-004289
 - Management/Research--Marine
 - 93-003844
 - 93-004289
 - Recreational Benefits
 - 93-003844
 - Regulations/General
 - 93-003844
- Isurus
 - Fish Processing
 - 93-004407
- Isurus paucus*
 - Coronary Lesions
 - 93-003588
 - Pericardial Diseases
 - 93-003588
- Jenkinsia lampradianta*
 - Baitfish
 - 93-003839
 - Harvest
 - 93-003939
 - Management/Research--Marine
 - 93-003533
- Jenkinsia stolifera*
 - Baitfish
 - 93-004271
 - Management/Research--Marine
 - 93-004271
- Jordanella floridae*
 - Orcas
 - 93-002652
 - Chlorophenols
 - 93-003649
 - Early Development
 - 93-002652
 - Pulp Mill Effluents
 - 93-003649
 - Reproduction
 - 93-002652
 - Toxicity Testing
 - 93-002652
- Kryptopteron alfredi*
 - Bioluminescence
 - 93-002524
- Kryptopterus bicirrhis*
 - Electroreception
 - 93-002777
 - Nervous System
 - 93-002777
 - Regeneration
 - 93-002777
- Ruhlia sandvicensis*
 - Swimming Performance
 - 93-002571
- Labes cylindricus*
 - Catch Per Unit Effort
 - 93-003916
 - Management/Research--Reservoirs
 - 93-003916
 - Mesh/Gill Nets
 - 93-003916
 - Nets/Netting
 - 93-003916
 - Sampling
 - 93-003916
- Labes rohita*
 - Carbofuran
 - 93-003720
 - Carbohydrates
 - 93-003713
 - Culture/Propagation
 - 93-002302
 - Egg Survival
 - 93-003646

SYSTEMATIC INDEX

CONTINUED

- Labes rohita*
 Endosulfan
 93-003720
 Feeds
 93-002382
 Industrial Wastes
 93-003646
 Invertebrate Forage
 93-002382
 Larvae
 93-002382
 Lipid Content
 93-003713
 Melathion
 93-003720
 Pesticides
 93-003720
 Proteins
 93-003713
 Public Health Problems
 93-004408
 Survival
 93-002382
 Tannin
 93-003713
Labotropheus fuelleborni
 Evolution
 93-002910
 Foods/Feeding
 93-002910
 Hybridization
 93-002910
 Jaws
 93-002910
 Population Genetics
 93-002910
 Speciation
 93-002910
Labidesthes
 Habitat Selection
 93-004007
 Larval Behavior
 93-004007
 Management/Research--Lakes
 93-004007
Labidesthes sicculus
 Predator/Prey Relationships
 93-003240
Labrus bergylta
 Exploitation Rates
 93-004210
 Life History/General
 93-004210
 Management/Research--Marine
 93-004210
 Sportfishing
 93-004210
Labrus mixtus
 Exploitation Rates
 93-004210
 Life History/General
 93-004210
 Management/Research--Marine
 93-004210
 Sportfishing
 93-004210
Labrus viridis
 Head
 93-002530
Lactoria cornuta
 Aquariums
 93-002404
 Culture/Propagation
 93-002404
 Life History/General
 93-002404
Lagodon rhomboides
 Carbon Tetrachloride
 93-002621
 Enzymes
 93-002623
 Foods/Feeding
 93-003549
 Hematology
 93-002623
 93-003621
 Life History/General
 93-004155
 Management/Research--Estuaries
 93-004155
 Plastics
 93-003549
 Reproductive Cycle
 93-002623
 Swimming Performance
 93-002571
 Temperature
 93-003566
 Thermal Tolerance
 93-002566
Laena nasus
 Coronary Lesions
 93-002488
 Parasites/Diseases
 93-002488
Lampetra fluviatilis
 Hematology
 93-002740
Lampetra tridentata
 Habitat Improvement/General
 93-004087
 Management/Research--Rivers and
 Streams
 93-004087
Lateolabrax japonicus
 Exotic Species/Australia
 93-003885
 Parasites/Diseases
 93-003479
 Viral Diseases
 93-003479
Lates calcarifer
 Bacterial Diseases
 93-003411
 Culture/Propagation
 93-002332
 Invertebrate Forage
 93-002332
 Larvae
 93-002332
 Management/Research--Estuaries
 93-004159
 Mangroves
 93-004159
 Nursery Areas
 93-004159
 Parasites/Diseases
 93-003411
Vibrio anguillarum
 93-003411
Vibriosis
 93-003411
Latimeria chalumnae
 Evolution
 93-002358
 Hematology
 93-002358
 Taxonomy
 93-002358
Lebistes reticulatus
 Acidification
 93-004127

SYSTEMATIC INDEX

...CONTINUED

Lebistes reticulatus
 Biological Monitoring
 93-004127
 Lining
 93-004127

Leiopotherapon unicolor
 Electrophoresis
 93-002917
 Genetic Markers
 93-002917

Leiostomus xanthurus
 Age/Growth
 93-003206
 Catch Per Unit Effort
 93-004202
 Distribution/Geographical
 93-004202
 Early Development
 93-003206
 Foods/Feeding
 93-003549
 Larval Drift
 93-003095
 Management/Research--Estuaries
 93-003095
 93-004149
 Management/Research--Narayan
 93-004262
 Nursery Areas
 93-003095
 Otoliths
 93-003206
 Plastics
 93-003549
 Recruitment
 93-003095
 Stock Assessment
 93-004149
 93-004262

Lepidocephalichthys guntea
 Air Breathing
 93-002505
 Chemical Reclamation
 93-003672
 Life History/General
 93-002505
 Saponins
 93-003672

Lepidotrochus mudifrons
 Distribution/Vertical
 93-003320
 Population Studies
 93-003320

Lepidopus caudatus
 Artisanal Fisheries
 93-004273

Lepistosteus osseus
 Epidermis
 93-002479
 Scales
 93-002479
 Swimming Performance
 93-002479

Lepomis
 Bird Predation
 93-003216
 Eyes
 93-002702
 Habitat Selection
 93-004007
 Larval Behavior
 93-004007
 Management/Research--Lakes
 93-004007
 Management/Research--Rivers and
 Streams
 93-004006

.CONTINUED...

Lepomis
 Predator/Prey Relationships
 93-004086
 Trophic Relationships
 93-004086
 Ultraviolet Light
 93-002702

Lepomis auritus
 Egg Survival
 93-002961

Lepomis gibbosus
 Interspecific Relationships
 93-002961

Leeches
 93-003515
 Nests/Nesting
 93-002961
 Parasites/Diseases
 93-003515
 Piscicolaria reducta
 93-003515
 Pulp Mill Effluents
 93-003577
 Species Diversity
 93-003577

Lepomis cyanellus
 Culture/Propagation
 93-002391
 Diets
 93-002391
 Evolution
 93-002377
 Food Conversion Efficiency
 93-002391
 Hybridization
 93-002391
 Predator/Prey Relationships
 93-002377

Lepomis gibbosus
 Foods/Feeding
 93-002505
 Learning
 93-002585
 Musculature
 93-002705
 Swimming Performance
 93-002705
 Variation Studies
 93-002985

Lepomis gilvus
 Leeches
 93-003515
 Parasites/Diseases
 93-003515
 Piscicolaria reducta
 93-003515

Lepomis macrochirus
 Age/Growth
 93-003206
 Baits/Baiting
 93-003920
 Bird Predation
 93-003167
 Colonization
 93-003801
 Cooling Reservoirs
 93-003265
 Culture/Propagation
 93-002391
 Diets
 93-002391
 Digestive System
 93-002477
 Electrofishing
 93-004430
 Enzymes
 93-003662

SYSTEMATIC INDEX

. . CONTINUED . .

Lepomis macrochirus
 Files
 93-002476
 Fish Control/Removal
 93-004137
 Food Conversion Efficiency
 93-002391
 Foods/Feeding
 93-002477
 93-002085
 Fright Behavior
 93-002000
 Gills
 93-002652
 Habitat Improvement/General
 93-003801
 Heavy Metals
 93-003600
 Hematology
 93-003662
 Herbicides
 93-003506
 Hooking/Handling Mortality
 93-003920
 Hybridization
 93-002391
 Hydrogen Peroxide
 93-003586
 Learning
 93-002905
 Limnology
 93-004146
 Management/Research--Ponds
 93-004137
 93-004139
 Management/Research--Reservoirs
 93-002905
 93-004146
 93-004438
 Management/Research--Rivers and
 Streams
 93-003735
 Milt/Spawning
 93-004137
 Musculature
 93-002908
 Otoliths
 93-003265
 Oxygen
 93-003586
 Paraquat
 93-002586
 Pollution
 93-003735
 Pollution Tolerance
 93-002277
 Polycyclic Aromatic Hydrocarbons
 93-003662
 Post-Impoundment Studies
 93-004146
 Predator Introductions
 93-004137
 Predator/Prey Relationships
 93-003207
 Radiation
 93-003662
 Reproduction
 93-003699
 Sampling
 93-004438
 Selenium
 93-003809
 Stress
 93-003586
 Swimming Performance
 93-002476

CONTINUED

Lepomis macrochirus
 Swimming Performance
 93-002500
 Trace Metals
 93-003735
 Urban Fishing
 93-004137
 Variation Studies
 93-002905
 Wetland Restoration
 93-003091
Lepomis microlophus
 Electrofishing
 93-004438
 Enzymes
 93-002603
 Liver
 93-002603
 Management/Research--Reservoirs
 93-004438
 Metabolism
 93-002603
 Musculature
 93-002603
 Sampling
 93-004438
 Season
 93-002603
Lepomis punctatus
 Leeches
 93-003515
 Parasites/Diseases
 93-003515
Piscicolaia reduta
 93-003515
Leptocottus armatus
 Bacterial Diseases
 93-003406
 Mycobacterium
 93-003406
 Parasites/Diseases
 93-003406
Leuciscus cephalus
 Agricultural Drainage
 93-003730
 Cytochrome P450
 93-003730
 Management/Research--Rivers and
 Streams
 93-004123
 Pesticides
 93-003730
Leuciscus leuciscus
 Management/Research--Rivers and
 Streams
 93-004123
Leuciscus stoffia
 Agricultural Drainage
 93-003730
 Cytochrome P450
 93-003730
 Distribution/Geographical
 93-003033
 Enzymes
 93-003730
 Life History/General
 93-003833
 Pesticides
 93-003730
Lile pringi
 Saltfish
 93-004271
 Management/Research--Marine
 93-004271
Limnodon timonda
 Competition
 93-004307

SYSTEMATIC INDEX

CONTINUED

- Limanda limanda*
 Foods/Feeding
 93-004307
 Interspecific Relationships
 93-004307
 Management/Research--Marine
 93-004307
 Nursery Areas
 93-004307
- Liparis turneri*
 Latitude
 93-002600
 Temperature
 93-002600
 Thermal Tolerance
 93-002600
 Thermoregulation
 93-002600
- Liza abu*
 Mugilicola kabatali
 93-003514
 Parasites/Diseases
 93-003514
 Parasitic Copepods
 93-003514
- Liza haematocheila*
 Culture/Propagation
 93-002351
 Diets
 93-002351
 Feeding Experiments
 93-002351
- Liza macrolepis*
 Swimming Performance
 93-002571
- Liza ramada*
 Foods/Feeding
 93-003170
 Salinity
 93-003170
- Lophius americanus*
 Bycatch
 93-003049
 Management/Research--Marine
 93-003049
- Lophius piscatorius*
Contracaecum clavatum
 93-003487
 Eye Infection
 93-002939
 Karyotypes
 93-002939
 Nemertodes
 93-003487
 Parasites/Diseases
 93-003487
- Lota lota*
 Acidification
 93-004045
 Commercial Fishing
 93-004015
 Foods/Feeding
 93-003043
 93-003210
 Habitat Alterations
 93-003021
 Harvest
 93-004015
 Lagoons
 93-003210
 Larval Growth
 93-003043
 Management/Research--Lakes
 93-004045
 Management/Research--Marine
 93-003210

CONTINUED...

- Lota lota*
 Management/Research--Rivers and
 Streams
 93-003021
 Sportfishing
 93-004015
 Stock Assessment
 93-004015
 Water Quality
 93-003021
- Lota lota lota*
 Life History/General
 93-003068
 Spawning
 93-003068
 Stock Assessment
 93-003068
- Lucioperca lucioperca*
 Catch Per Unit Effort
 93-004001
 93-004002
 Exploitation Rates
 93-004002
 Management/Research--Lakes
 93-004001
 93-004002
 Sampling
 93-004001
 Stock Assessment
 93-004001
- Lutjanus*
 Commercial Fishing
 93-003923
 Males/Travis
 93-003923
- Lutjanus argentimaculatus*
 Lymphocystis
 93-003477
 Parasites/Diseases
 93-003477
 Viral Diseases
 93-003477
- Lutjanus campechanus*
 Marketing
 93-004391
- Lutjanus carponotatus*
 Benedonia lutjanii
 93-003528
 Fins
 93-003528
 Parasites/Diseases
 93-003528
 Trematodes
 93-003528
- Lutjanus griseus*
 Commercial Fishing
 93-003000
 Harvest
 93-003000
 Management/Research--Marine
 93-003800
 Sportfishing
 93-003800
 Stock Assessment
 93-003800
- Lutulus chrysocephalus*
 Management/Research--Rivers and
 Streams
 93-004060
 Recruitment
 93-004060
 Stock Assessment
 93-004060
- Lutulus cornutus*
 Acidification
 93-003634

.. CONTINUED.

- Luxilus cornutus*
- Axiology
- 93-003626
- Bioaccumulation
- 93-003716
- Calcium
- 93-003625
- Heavy Metals
- 93-003626
- Miros
- 93-003716
- Polychlorinated Biphenyls
- 93-003716
- Toxicity Testing
- 93-003634
- Trophic Relationships
- 93-003716
- Lycenchelys verrilli*
- Dielux Lycenchelys
- 93-003497
- Parasites/Diseases
- 93-003497
- Parasitic Copepods
- 93-003497
- Lycodes pacificus*
- Abundance/Factors of
- 93-004318
- Habitat Evaluation
- 93-004318
- Seasons
- 93-004318
- Lytthrurus roseolpinis*
- Management/Research--Rivers and Streams
- 93-004060
- Recruitment
- 93-004060
- Stock Assessment
- 93-004060
- Maccullochella macquariensis*
- Chilodoneilla hexasticha*
- 93-002247
- Culture/Propagation
- 93-002247
- Fry Stocking
- 93-002247
- Induced Maturation
- 93-002247
- Larvae
- 93-002247
- Parasites/Diseases
- 93-002247
- Protozoan Diseases
- 93-002247
- Maccullochella goeii*
- Electrophoresis
- 93-002017
- Genetic Markers
- 93-002017
- Macquaria ambigua*
- Electrophoresis
- 93-002017
- Genetic Markers
- 93-002017
- Herpetology
- 93-002553
- Nutrition
- 93-002553
- Macrhybopsis storeriass*
- Gain Efficiency
- 93-003807
- Macrozoarces americanus*
- Culture/Propagation
- 93-002331
- Foods/Feeding
- 93-003209

.. CONTINUED

- Macrozoarces americanus*
- Invertebrate Forage
- 93-002331
- Larvae
- 93-002331
- Macrurus magellanicus*
- Life History/General
- 93-003636
- Sex Ratios
- 93-003636
- Stock Assessment
- 93-003636
- Makaira sedica*
- Catch Per Unit Effort
- 93-003857
- Makaira nigricans*
- Catch Per Unit Effort
- 93-003857
- Harvest
- 93-004288
- Management/Research--Marine
- 93-002604
- 93-004209
- Recreational Benefits
- 93-003844
- Regulations/General
- 93-003844
- Malilotus villosus*
- Cage Culture
- 93-002339
- Coastal Habitat
- 93-004204
- Culture/Propagation
- 93-002339
- Distribution/Geographical
- 93-003075
- Distribution/Vertical
- 93-003164
- Early Development
- 93-003075
- 93-003258
- Egg Size
- 93-003258
- Embryology
- 93-003685
- Fish Preservation
- 93-004421
- Fish Spoilage
- 93-004421
- Food Technology
- 93-004400
- Intraspecies Relationships
- 93-003221
- Invertebrate Predation
- 93-003335
- Larval Behavior
- 93-003164
- Larval Drift
- 93-003164
- Latitude
- 93-002600
- Management/Research--Marine
- 93-003075
- 93-003164
- 93-004284
- Migration
- 93-004284
- Mortality Factors
- 93-003336
- 93-003650
- Nursery Areas
- 93-003075
- Oil Pollution
- 93-003685
- Predator/Prey Relationships
- 93-003221

- CONTINUED...
- Mallotus villosus*
 Predator/Prey Relationships
 93-08375
 Spawning Migration
 93-08364
 Stock Assessment
 93-08428
 Temperature
 93-08260
 Thermal Tolerance
 93-08260
 Thermoregulation
 93-08260
- Marcusenius isidori*
 Electrolocation
 93-08308
 Swimming Performance
 93-08308
- Neurolicus oulleri*
 Distribution/Vertical
 93-08385
- Moda fulvida*
 Habitat Selection
 93-08415
 Microhabitat
 93-08415
- Megalobrama amblycephala*
 Biochemical Composition
 93-08267
 Bioenergetics
 93-08267
 Carcass Traits
 93-08267
- Melanogrammus aeglefinus*
 Abundance/Factors of
 93-08384
 Age/Growth
 93-08384
 Distribution/Geographical
 93-08375
 93-08385
 Distribution/Vertical
 93-08383
 Early Development
 93-08375
 Habitat Selection
 93-08385
 Larval Drift
 93-08420
 Management/Research--Marine
 93-08375
 93-08420
 93-08438
 93-08432
 Migration
 93-08383
 Morphometry
 93-08486
 Nursery Areas
 93-08375
 Otoliths
 93-08486
 Photoperiodism
 93-08383
 Recruitment
 93-08432
 Stock Assessment
 93-08420
 93-08438
 Year Class Strength
 93-08438
 93-08432
- Melichthys nigra*
 Aquariums
 93-08238
 Culture/Propagation
 93-08238
- Melichthys vidua*
 Aquariums
 93-08298
 Culture/Propagation
 93-08298
- Meridia*
 Management/Research--Estuaries
 93-08449
 Stock Assessment
 93-08449
- Meridia beryllina*
 Embryology
 93-08367
 Pentachlorophenol
 93-08367
 Predator/Prey Relationships
 93-08368
- Meridia meridia*
 Age/Growth
 93-08312
 Evolution
 93-08312
 93-08312
 Predator/Prey Relationships
 93-08368
 Recruitment
 93-08312
 Reproductive Cycle
 93-08312
 Season
 93-08312
 Sex Determination
 93-08312
 Sex Ratios
 93-08312
 Temperature
 93-08312
- Merlangius merlangus*
 Distribution/Geographical
 93-08385
 Fish Processing
 93-08438
 Foods/Feeding
 93-08277
 Gall Bladder
 93-08277
 Habitat Selection
 93-08385
- Merluccius*
 Management/Research--Marine
 93-08432
 Recruitment
 93-08432
 Year Class Strength
 93-08432
- Merluccius bilinearis*
 Bycatch
 93-08384
 Distribution/Vertical
 93-08383
 Management/Research--Marine
 93-08385
 Migration
 93-08383
 Morphometry
 93-08486
 Otoliths
 93-08486
 Photoperiodism
 93-08383
- Merluccius capensis*
 Fish Processing
 93-08445
 Fish Spoilage
 93-08445
- Merluccius hubbsi*
 Management/Research--Marine
 93-08427

- .CONTINUED
- Merluccius hubbsi
 - Stock Assessment
 - 93-004217
 - Stock Identification
 - 93-004237
 - Merluccius merluccius
 - Artisanal Fisheries
 - 93-004273
 - Merluccius paradoxus
 - Fish Processing
 - 93-004415
 - Fish Spoilage
 - 93-004415
 - Merluccius productus
 - Carcass Traits
 - 93-004351
 - Distribution/Vertical
 - 93-004272
 - Early Development
 - 93-003083
 - Fish Processing
 - 93-004351
 - Food Technology
 - 93-004395
 - Habitat Selection
 - 93-004272
 - Kudua paniformis
 - 93-003457
 - 93-003458
 - 93-004351
 - Kudua thyrallia
 - 93-003457
 - 93-004351
 - Larval Drift
 - 93-003083
 - Management/Research--Marine
 - 93-004272
 - Musculature
 - 93-003458
 - Parasites/Diseases
 - 93-003457
 - 93-003458
 - 93-004351
 - Protozoan Diseases
 - 93-003457
 - 93-003458
 - 93-004351
 - Recruitment
 - 93-003083
 - Sampling
 - 93-004272
 - Survival
 - 93-003083
 - Microlepidogaster maculipinnis
 - Artystone minima
 - 93-003524
 - Nereocila armata
 - 93-003524
 - Parasites/Diseases
 - 93-003524
 - Parasitic Isopods
 - 93-003524
 - Micromesistius pouasou
 - Ichthyoplankton
 - 93-003101
 - Management/Research--Marine
 - 93-003101
 - Spawning
 - 93-003101
 - Stock Assessment
 - 93-003101
 - Temperature
 - 93-003101
 - Micropogonias furnieri
 - Enzymes
 - 93-002918
- . CONTINUED . . .
- Micropogonias furnieri
 - Iszymes
 - 93-002918
 - Micropogonias undulatus
 - Age/Growth
 - 93-003539
 - Biological Monitoring
 - 93-003539
 - Early Development
 - 93-002656
 - Fins
 - 93-003539
 - Growth Hormone
 - 93-002781
 - Life History/General
 - 93-004155
 - Management/Research--Estuaries
 - 93-003539
 - 93-004149
 - 93-004155
 - Osmoregulation
 - 93-002656
 - Otoliths
 - 93-003539
 - Pituitary Gland
 - 93-002781
 - Pollution
 - 93-003539
 - Proteins
 - 93-002781
 - Salinity
 - 93-002656
 - Stock Assessment
 - 93-004149
 - Micropterus dolomieu
 - Acidification
 - 93-003634
 - 93-003861
 - Catch Per Unit Effort
 - 93-003866
 - Evolution
 - 93-003021
 - Habitat Evaluation
 - 93-004112
 - Heavy Metals
 - 93-003691
 - Incubation
 - 93-002556
 - Management/Research--Lakes
 - 93-003861
 - Management/Research--Reservoirs
 - 93-003866
 - Management/Research--Rivers and Streams
 - 93-004112
 - 93-004132
 - Mate Selection
 - 93-003021
 - Mercury
 - 93-003691
 - Pollution
 - 93-004850
 - Polychlorinated Biphenyls
 - 93-003691
 - Population Studies
 - 93-004132
 - Predator/Prey Relationships
 - 93-003232
 - 93-003866
 - Regulation/General
 - 93-004132
 - Regulation/Size Limits
 - 93-003866
 - Reproduction
 - 93-002556
 - Sport Fishing
 - 93-003866

SYSTEMATIC INDEX

.CONTINUED.

Micropterus dolomieu
Sportfishing
93-004132
Stock Assessment
93-004112
Sulfur Dioxide
93-003661
Thermal Tolerance
93-002556
Toxicity Testing
93-003634
Trace Contaminants
93-004099
Trace Metals
93-003634
93-004050
Micropterus punctulatus
Catch Per Unit Effort
93-003866
Management/Research--Reservoirs
93-003066
Regulations/Size Limits
93-003066
Sportfishing
93-003866
Micropterus salmoides
Abundance/Factors of
93-003825
Acidification
93-002710
93-003016
93-003634
Age/Growth
93-003071
93-003642
Aluminum
93-003616
Aquatic Plants
93-003104
Bacterial Diseases
93-003394
Biomanipulations
93-002635
Bird Predation
93-003216
Carotenoids
93-002050
Catch Per Unit Effort
93-003952
Early Development
93-002710
93-003642
Electrofishing
93-003952
93-003995
93-004438
Fish Control/Removal
93-004137
Flow Regimes
93-003825
Foods/Feeding
93-002582
Gills
93-002710
Habitat Selection
93-003104
Hooking/Handling Stress
93-003913
Leeches
93-003615
Limnology
93-004146
Management/Research--Lakes
93-003616
Management/Research--Ponds
93-004137

.CONTINUED...

Micropterus salmoides
Management/Research--Ponds
93-004133
Management/Research--Reservoirs
93-003184
93-003925
93-004146
93-004438
Management/Research--Rivers and
Streams
93-003825
Metabolic Rates
93-002635
Mitigation
93-004137
Nervous System
93-002582
Mycardia asteroides
93-003394
Osmoregulation
93-002718
Parasites/Diseases
93-003394
93-003515
Pentachlorophenol
93-003642
Phenols
93-003642
Pigments
93-002058
Piscinaria reducta
93-003515
Population Studies
93-003071
Post-impoundment Studies
93-004146
Power Plants
93-003825
Predator Introductions
93-004137
Predator/Prey Relationships
93-002582
93-003184
93-003240
Pressure Effects
93-003913
Recruitment
93-003616
Regulations/Size Limits
93-003066
Sampling
93-003952
93-003995
93-004438
Season
93-002680
Sportfishing
93-003913
Swimbladder
93-003913
Swimming Performance
93-002588
Temperature
93-003825
Toxicity Testing
93-003634
Trace Metals
93-003634
Urban Fishing
93-004137
Micropterus salmoides floridanus
Age/Growth
93-004461
Exotic Species
93-003007
Genetic Strains
93-003087

SYSTEMATIC INDEX

CONTINUED

Morone saxatilis
 Early Development
 93-003285
 Economics
 93-002204
 Egg Collection
 93-002395
 Egg Quality
 93-003157
 Endocrinology
 93-002797
 Fatty Acids
 93-002704
 Fecundity
 93-003157
 Feeding Experiments
 93-002280
 Feeds
 93-002353
 93-002367
 Fish Passage
 93-003936
 93-003940
 Gonads
 93-002651
 Habitat Alterations
 93-003936
 Habitat Evaluation
 93-003157
 Hatching
 93-003157
 Handling/Handling Stress
 93-002395
 93-003940
 Hybridization
 93-002288
 93-002328
 93-003732
 93-004379
 Immune Response
 93-003475
 Impoundment
 93-003936
 Induced Maturation
 93-002853
 Insulin
 93-002797
 Interferon
 93-003475
 Invertebrate Forage
 93-002353
 Larvae
 93-002277
 93-002353
 93-003631
 Lipid Content
 93-002604
 Management/Research--Estuaries
 93-004149
 Management/Research--Rivers and
 Streams
 93-003157
 93-003631
 93-003936
 Maturation
 93-002053
 Metabolic Rates
 93-002684
 Mitigation
 93-003936
 Musculature
 93-002604
 93-002704
 93-002773
 Mycobacterium
 93-003406

CONTINUED

Morone saxatilis
 Mitrinide
 93-003732
 Nutrition
 93-002208
 Otoliths
 93-003286
 Parasites/Diseases
 93-003308
 93-003408
 93-003475
 Pollution
 93-003631
 Pollution Tolerance
 93-002277
 93-003732
 Production
 93-002204
 93-002280
 93-002328
 Reproduction
 93-002651
 Sampling
 93-003908
 Screens
 93-003940
 Sulfur Chloride
 93-002395
 Steroids
 93-002053
 Stock Assessment
 93-004149
 Storage Effects
 93-004379
 Stress
 93-002395
 93-003908
 Supplemental Stocking
 93-002280
 Survival
 93-002280
 93-003157
 93-003631
 Taste and Odor Problems
 93-004379
 Thermoregulation
 93-002773
 Transportation
 93-002395
 Viral Diseases
 93-003475
 Viral Erythrocytic Necrosis
 93-003475
 Vitellogenin
 93-002651
 Water Quality
 93-003631
Neosoma macrolepidotum
 Fish Passage
 93-003941
 Fishways
 93-003941
 Mugil
 Economic Value
 93-003645
 Food Technology
 93-004395
 Marketing
 93-003048
 Roe
 93-002848
Mugil auratus
 Biological Monitoring
 93-003684
 Cardiovascular System
 93-003650

SYSTEMATIC INDEX

- ...CONTINUED
- Mugil auratus*
 Diagnostic Techniques
 93-003694
 Enzymes
 93-003694
 Liver
 93-003694
 Nervous System
 93-003650
 Phenols
 93-003650
- Mugil cephalus*
 Abnormalities
 93-003452
 Enzymes
 93-002623
 Foods/Feeding
 93-003549
 Hematology
 93-002623
 Life History/General
 93-001155
 Management/Research--Estuaries
 93-001155
Myxobolus burl
 93-003452
Myxobolus spinocurvatus
 93-003452
 Osteology
 93-003452
 Parasites/Diseases
 93-003452
 Plastics
 93-003549
 Protozoan Diseases
 93-003452
 Reproductive Cycle
 93-002623
 Sampling
 93-003625
 Scoliosis
 93-003452
- Mugil curema*
 Foods/Feeding
 93-002899
 Trophic Relationships
 93-002935
- Mugil subviridis*
 Management/Research--Estuaries
 93-004155
 Mangroves
 93-004155
 Nursery Areas
 93-004155
- Mugilidae*
 Botulism
 93-004420
 Public Health Problems
 93-004420
- Mullus barbatus*
 Foods/Feeding
 93-003247
- Mullus barbatus ponticus*
 Fatty Acids
 93-002608
 Lipid Composition
 93-002608
 Sperm
 93-002608
- Mullus surmuletus*
 Artisanal Fisheries
 93-004273
 Proteins
 93-002784
 Spermatogenesis
 93-002784
- Mustelus canis*
 Alanine
 93-002636
 Arginine
 93-002576
 Egg Composition
 93-002471
 Eggs
 93-002471
 Embryology
 93-002471
 Glucose
 93-002575
 Heart
 93-002021
 Hematology
 93-002636
 Metabolism
 93-002636
 Reproduction
 93-002575
- Mustelus manazo*
 Dentition
 93-002516
- Nycteropera microlepis*
 Age/Growth
 93-003046
 Reproduction
 93-003046
- Nylocheilus caurinus*
 Foods/Feeding
 93-003025
 Hybridization
 93-003025
 Life History/General
 93-003025
- Nylopharodon conocephalus*
 Distribution/Geographical
 93-003204
- Nylopharygodon piceus*
 Gonadotropin
 93-002794
 Maturation
 93-002794
 Reproduction
 93-002794
- Myoxocephalus* *jeak*
 Foods/Feeding
 93-003245
- Myoxocephalus octodecempinus*
 pH Regulation
 93-002590
 Salinity
 93-002590
- Myoxocephalus polyacanthocephalus*
 Foods/Feeding
 93-003245
- Myoxocephalus quadricornis*
 Abnormalities
 93-003116
 Age/Growth
 93-003116
 Condition Factors
 93-003116
 Gonosomatic Index
 93-003116
 Length-Weight Relationships
 93-003116
 Lenses
 93-003116
 Swimming Performance
 93-003116
 Vertebral Counts
 93-003116
- Myoxocephalus scorpius*
 Latitude
 93-002600

CONTINUED.

- Myoxocephalus scorpius*
Temperature
93-002609
Thermal Tolerance
93-002608
Thermoregulation
93-002608
- Myoxocephalus thompsoni*
Distribution/Factors of
93-003165
Early Development
93-003165
Larval Drift
93-003165
Mortality Factors
93-003165
- Myxus senegalae*
Attractis emilia
93-002616
Hedruis bryttosi
93-002616
Nematodes
93-002616
Parasites/Diseases
93-002616
- Myxiniidae
Epidermis
93-002679
Heart
93-002621
Mucus
93-002679
- Nannochanna fasciata*
Aquariums
93-002406
Culture/Propagation
93-002406
- Nansenia indica*
Distribution/Geographical
93-003361
Meristic Studies
93-003361
New Species
93-003361
- Nansenia obscura*
Distribution/Geographical
93-003361
Meristic Studies
93-003361
New Species
93-003361
- Menochilus*
Predator/Prey Relationships
93-003254
- Menochilus berbesulus*
Agricultural Drainage
93-003730
Cytocrome P450
93-003730
Management/Research--Rivers and
Streams
93-004123
Pesticides
93-003730
- Neotilapia viviflora*
Kudua typhilitis
93-003450
Protozoan Diseases
93-003450
- Neotileosternis decora*
Aquariums
93-002402
Culture/Propagation
93-002402
- Neotileosternis helfrichi*
Aquariums
93-002402

CONTINUED.

- Neotileosternis helfrichi*
Culture/Propagation
93-002402
- Neotileosternis magnificus*
Aquariums
93-002402
Culture/Propagation
93-002402
- Neotileosternis splendida*
Aquariums
93-002402
Culture/Propagation
93-002402
- Nematogobius albertus*
Distribution/Vertical
93-004290
Management/Research--Marine
93-004290
- Nematonurus ornatus*
Marking/Tagging
93-004428
Movements
93-004428
Rescue Sowing
93-004428
- Neoceratodus forsteri*
Commercial Fishing
93-004319
Epidermis
93-002679
Evolution
93-002455
Habitat Selection
93-002904
Management/Research--Marine
93-004319
Mucus
93-002679
Nervous System
93-002455
Olfaction
93-002455
Spawning
93-002984
Sportfishing
93-004319
- Neogobius gorlap*
Karyotypes
93-003368
Taxonomy
93-003360
- Neogobius kessleri*
Karyotypes
93-003368
Taxonomy
93-003360
- Neogobius melanostomus*
Fatty Acids
93-002608
Lipid Composition
93-002608
Spore
93-002608
- Nephariotilla*
Taxonomy
93-003353
- Neolebias lutzii*
Distribution/Geographical
93-003370
Morphometry
93-003370
New Species
93-003370
Species Identification
93-003370
- Neophis aphidion*
Competition
93-002964

SYSTEMATIC INDEX

- ... CONTINUED ...
- Nerophis ophidion
 - Mate Selection
 - 93-00294
 - Natural Selection
 - 93-00294
 - Parental Behavior
 - 93-00294
 - Reproductive
 - 93-00294
 - Nithea albiflora
 - Age/Growth
 - 93-00329
 - Diets
 - 93-00329
 - Necaris leptocephalus
 - Nests/Nesting
 - 93-00301
 - Spawning
 - 93-00301
 - Necoris micropogon
 - Nests/Nesting
 - 93-00301
 - Spawning
 - 93-00301
 - Notemigonus crysoleucas
 - Bohricopthalmus aethiopsathi
 - 93-00349
 - Cestodes
 - 93-00349
 - Parasites/Diseases
 - 93-00349
 - Nothobranchius guentheri
 - Embryology
 - 93-00269
 - Light
 - 93-00269
 - Photoperiodism
 - 93-00269
 - Pineal Body
 - 93-00269
 - Notopterus chitola
 - Air Breathing
 - 93-00250
 - Jaws
 - 93-00249
 - Life History/General
 - 93-00250
 - Notopterus notopterus
 - Air Breathing
 - 93-00250
 - Life History/General
 - 93-00250
 - Notothenia argustata
 - Herpetology
 - 93-00287
 - Notothenia gibberifrons
 - Commercial Fishing
 - 93-00437
 - Early Development
 - 93-00279
 - Fatty Acids
 - 93-00293
 - Larval Growth
 - 93-00279
 - Liver
 - 93-00293
 - Management/Research--Marine
 - 93-00293
 - Metabolism
 - 93-00293
 - Season
 - 93-00279
 - Stock Assessment
 - 93-00437
 - Notothenia tarsent
 - Early Development
 - 93-00279
 - ... CONTINUED ...
 - Notothenia tarsent
 - Larval Growth
 - 93-00279
 - Season
 - 93-00279
 - Notothenia neglecta
 - Herpetology
 - 93-00262
 - Hooking/Handling Stress
 - 93-00262
 - Stress
 - 93-00262
 - Notothenia rossii
 - Elytrophalloides oatesi
 - 93-00353
 - Parasites/Diseases
 - 93-00353
 - Trematodes
 - 93-00353
 - Notothenia rossii maronata
 - Eubrachioella antarctica
 - 93-00322
 - Parasites/Diseases
 - 93-00322
 - Parasitic Copepods
 - 93-00322
 - Notothentidae
 - Evolution
 - 93-00347
 - Taxonomy
 - 93-00347
 - Notropis
 - Abundance/Factors of
 - 93-00325
 - Flow Regimes
 - 93-00325
 - Management/Research--Rivers and Streams
 - 93-00325
 - Poison Plants
 - 93-00325
 - Temperature
 - 93-00325
 - Notropis buccatus
 - Management/Research--Rivers and Streams
 - 93-00409
 - Recruitment
 - 93-00409
 - Stock Assessment
 - 93-00409
 - Notropis cumingsae
 - Egg Predation
 - 93-00262
 - Interspecies Relationships
 - 93-00262
 - Nests/Nesting
 - 93-00293
 - Notropis hudsonius
 - Bioaccumulation
 - 93-00376
 - Mirex
 - 93-00376
 - Polychlorinated Biphenyls
 - 93-00376
 - Trophic Relationships
 - 93-00376
 - Management/Research--Rivers and Streams
 - 93-00409
 - Recruitment
 - 93-00409
 - Stock Assessment
 - 93-00409
 - Notropis volucellus
 - Management/Research--Rivers and Streams
 - 93-00409

SYSTEMATIC INDEX

...CONTINUED

Notropis volucellus
 Predator/Prey Relationships
 93-08386
 Recruitment
 93-004060
 Stock Assessment
 93-004060
Noturus exilis
 Distribution/Geographical
 93-003382
Noturus nocturnus
 Distribution/Geographical
 93-003382
Noturus placidus
 Distribution/Geographical
 93-003382
Ocellia spil
 Distribution/Factors of
 93-003029
 Life History/General
 93-003029
 Population Studies
 93-003029
Ocyurus chrysurus
 Age/Growth
 93-003955
 Habitat Selection
 93-004150
 Harvest
 93-004298
 Length Frequencies
 93-003955
 Management/Research--Estuaries
 93-004150
 Management/Research--Marine
 93-003955
 93-004298
 Mangroves
 93-004150
 Nursery Areas
 93-004150
 Stock Assessment
 93-003955
Odentognathus compressus
 Bassfish
 93-004271
Odenus atger
 Aquariums
 93-002398
 Culture/Propagation
 93-002398
Oligocottus maculosus
 Gills
 93-003485
Oxydactylus maculost
 93-003485
 Parasites/Diseases
 93-003485
 Trematodes
 93-003485
Oncorhynchus
 Oligoaccumulation
 93-003716
 Bioenergetics
 93-002605
 Culture/Propagation
 93-002253
 93-002255
 DNA
 93-002927
 Ecological Analysis
 93-003792
 Escapement
 93-004090
 Evolution
 93-002927

...CONTINUED

Oncorhynchus
 Fish Passage
 93-003343
 93-003944
 93-003945
 Fishways
 93-003944
 93-003945
 Flow Regimes
 93-004890
 Habitat Alterations
 93-003792
 Impoundment
 93-004898
 Life History/General
 93-003793
 Management/Research--General
 93-003792
 93-003793
 Management/Research--Rivers and
 Streams
 93-003953
 93-004098
 Metabolic Rates
 93-002605
 Wires
 93-003716
 Ocean Ranching
 93-002255
 Oxygen
 93-002253
 Polychlorinated Biphenyls
 93-003716
 Production
 93-002255
 Respiration
 93-002253
 Screens
 93-003343
 Shear Stress
 93-003943
 Social Values
 93-003853
 Sportfishing
 93-003853
 Stock Assessment
 93-003792
 Stress
 93-003945
 Survival
 93-004090
 Swimming Performance
 93-002605
 Translocation
 93-003001
 93-003045
 Trophic Relationships
 93-003716
 Water Circulation
 93-002253
 Water Quality
 93-002253
 Weirs
 93-003944
Oncorhynchus clarki
 Disturbances
 93-003343
 93-003800
 Egg Survival
 93-003343
 93-003800
 Escapement
 93-004054
 Habitat Improvement/General
 93-004054
 93-004067

SYSTEMATIC INDEX

- .CONTINUED
- Oncorhynchus clarki*
 - Large Organic Debris
 - 93-004054
 - Management/Research--General
 - 93-003775
 - Management/Research--Rivers and Streams
 - 93-003869
 - 93-004054
 - 93-004007
 - Microhabitat
 - 93-004054
 - Mortality Factors
 - 93-003343
 - 93-003830
 - Mortality Rates
 - 93-003343
 - Planning
 - 93-003869
 - Recreational Activities
 - 93-003343
 - 93-003830
 - Regulations/Catch and Release
 - 93-003775
 - 93-003869
 - Regulations/Size Limits
 - 93-003775
 - 93-003869
 - Sportfishing
 - 93-003775
 - Oncorhynchus clarki bowleri*
 - Foods/Feeding
 - 93-004135
 - Genetic Diversity
 - 93-002905
 - Habitat Evaluation
 - 93-004135
 - Habitat Improvement/General
 - 93-004135
 - Large Organic Debris
 - 93-004135
 - Management/Research--Rivers and Streams
 - 93-004135
 - Microhabitat
 - 93-004135
 - Oncorhynchus clarki hanshawi*
 - Alkalinity
 - 93-002856
 - 93-002854
 - Ammonia
 - 93-002854
 - Excretory System
 - 93-002854
 - Mortality Factors
 - 93-002850
 - pH Regulation
 - 93-002850
 - Urea
 - 93-002854
 - Oncorhynchus clarki lewisi*
 - Foods/Feeding
 - 93-004135
 - Genetic Diversity
 - 93-002905
 - Habitat Evaluation
 - 93-004135
 - Habitat Improvement/General
 - 93-004135
 - Large Organic Debris
 - 93-004135
 - Management/Research--Rivers and Streams
 - 93-004135
 - Microhabitat
 - 93-004135
 - Oncorhynchus clarki stewarti*
 - Habitat Protection
 - 93-004124
 - Management/Research--Rivers and Streams
 - 93-004124
 - Stock Assessment
 - 93-004124
 - Stocking/Introductions
 - 93-004124
 - Transplanted Species
 - 93-004124
 - Oncorhynchus gairdneri*
 - Aeromonas salmonicida*
 - 93-003416
 - Bacterial Diseases
 - 93-003416
 - Commercial Fishing
 - 93-004266
 - Culture/Propagation
 - 93-002438
 - 93-002564
 - 93-003416
 - 93-004069
 - Economic Value
 - 93-004353
 - Escapement
 - 93-003105
 - 93-004100
 - 93-004266
 - Fly
 - 93-002600
 - Fish Processing
 - 93-004353
 - 93-004355
 - Fish Sillago
 - 93-004355
 - Habitat Alterations
 - 93-003807
 - Harvest
 - 93-003105
 - 93-004100
 - 93-004266
 - Hatchery Releases
 - 93-004069
 - Hybridization
 - 93-002803
 - Induced Maturation
 - 93-002564
 - Karyocytes
 - 93-002801
 - Lepidophtheirus salmonis*
 - 93-003509
 - Management/Research--Marine
 - 93-004266
 - Management/Research--Rivers and Streams
 - 93-003807
 - 93-004069
 - 93-004100
 - Marketing
 - 93-004353
 - Movements
 - 93-002905
 - Oil Pollution
 - 93-002995
 - Parasites/Diseases
 - 93-003416
 - 93-003509
 - Parasitic Copepods
 - 93-003509
 - Photoperiodism
 - 93-002564
 - Pollution Avoidance
 - 93-002595
 - Population Genetics
 - 93-002500

- .CONTINUED
- Oncorhynchus gorbusha*
 Population Studies
 93-03105
 93-034100
 Restoration of Anadromous Runs
 93-004069
 Stock Assessment
 93-03105
 93-034100
 Supplemental Stocking
 93-004069
 Variation Studies
 93-002500
 Water Quality
 93-002438
- Oncorhynchus keta*
Aeromonas hydrophila
 93-002420
 93-002416
Aeromonas salmonicida
 93-002401
 Amino Acids
 93-002401
 Bacterial Diseases
 93-002416
 93-002426
 Carcass Traits
 93-004401
 Commercial Fishing
 93-004266
 Condition Factors
 93-002461
 Culture/Propagation
 93-002438
 93-002378
 93-002416
 93-002426
 93-002401
 93-002376
 93-004069
 Distribution/Vertical
 93-002172
 Embryology
 93-002941
 Escapement
 93-002105
 93-004266
 Feeds
 93-002481
 Foods/Feeding
 93-002162
 Fry Production
 93-002426
 Groundwater
 93-004065
 Habitat Alterations
 93-002807
 Habitat Improvement/General
 93-004058
 93-004065
 Harvest
 93-002105
 93-004266
 93-004343
 Hatchery Releases
 93-002376
 93-004069
 Hatching
 93-004065
Ichthyobodo necator
 93-002461
 Immunization
 93-002370
 Management/Research--Marine
 93-004266
 93-004343
 Management/Research--Rivers and
 Streams
 93-002807
- .CONTINUED
- Oncorhynchus keta*
 Management/Research--Rivers and
 Streams
 93-004058
 93-004065
 93-004069
 Maturation
 93-004401
 Migration
 93-002172
 Movements
 93-002595
 Nutrition
 93-002481
 Nutritional Diseases
 93-002481
 Ocean Ranching
 93-002376
 Oil Pollutants
 93-002595
 Demoregulation
 93-002461
 Osteology
 93-002481
 Parasites/Diseases
 93-002376
 93-002416
 93-002426
 93-002461
 93-002401
 Photoperiodism
 93-002302
 Pollution Avoidance
 93-002595
 Population Studies
 93-002105
 Protozoan Diseases
 93-002401
 Restoration of Anadromous Runs
 93-004069
 Scoliosis
 93-002401
 Season
 93-002162
 Spawning Channels
 93-004058
 93-004065
 Spawning Substrates
 93-004065
 Stock Assessment
 93-002105
 93-004343
 Stocking/Introductions
 93-002376
 Supplemental Stocking
 93-004069
 Survival
 93-002461
 93-004065
 Taste and Odor Problems
 93-004401
 Tetraploidy
 93-002941
 Transplanted Species
 93-002376
 Treatment
 93-002426
 Water Quality
 93-002438
 White Spot Disease
 93-002426
- Oncorhynchus kisutch*
 Acidification
 93-002602
Aeromonas salmonicida
 93-002438
 Age/Growth
 93-002369

SYSTEMATIC INDEX

- CONTINUED
- Oncorhynchus kisutch*
- Age/Growth
93-00320
- Bacterial Diseases
93-00380
93-00382
93-00342
93-00347
93-00349
- Bacterial Kidney Disease
93-00342
93-00347
- Benzo(a)pyrene
93-00388
- Bleedout
93-00335
- Bird Predation
93-00254
- Brackishwater Culture
93-00260
- Catch Per Unit Effort
93-00410
- Commercial Fishing
93-00462
93-00466
- Cortisol
93-00380
- Culture/Propagation
93-00220
93-00229
93-00260
93-00224
93-00254
93-00261
93-00269
93-00260
93-00268
93-00269
93-00270
93-00271
93-00272
93-00273
93-00274
93-00275
93-00276
93-00277
93-00278
93-00279
93-00280
93-00281
93-00282
93-00283
93-00284
93-00285
93-00286
93-00287
93-00288
93-00289
93-00290
93-00291
93-00292
93-00293
93-00294
93-00295
93-00296
93-00297
93-00298
93-00299
93-00300
93-00301
93-00302
93-00303
93-00304
93-00305
93-00306
93-00307
93-00308
93-00309
93-00310
93-00311
93-00312
93-00313
93-00314
93-00315
93-00316
93-00317
93-00318
93-00319
93-00320
93-00321
93-00322
93-00323
93-00324
93-00325
93-00326
93-00327
93-00328
93-00329
93-00330
93-00331
93-00332
93-00333
93-00334
93-00335
93-00336
93-00337
93-00338
93-00339
93-00340
93-00341
93-00342
93-00343
93-00344
93-00345
93-00346
93-00347
93-00348
93-00349
93-00350
93-00351
93-00352
93-00353
93-00354
93-00355
93-00356
93-00357
93-00358
93-00359
93-00360
93-00361
93-00362
93-00363
93-00364
93-00365
93-00366
93-00367
93-00368
93-00369
93-00370
93-00371
93-00372
93-00373
93-00374
93-00375
93-00376
93-00377
93-00378
93-00379
93-00380
93-00381
93-00382
93-00383
93-00384
93-00385
93-00386
93-00387
93-00388
93-00389
93-00390
93-00391
93-00392
93-00393
93-00394
93-00395
93-00396
93-00397
93-00398
93-00399
93-00400
93-00401
93-00402
93-00403
93-00404
93-00405
93-00406
93-00407
93-00408
93-00409
93-00410
93-00411
93-00412
93-00413
93-00414
93-00415
93-00416
93-00417
93-00418
93-00419
93-00420
93-00421
93-00422
93-00423
93-00424
93-00425
93-00426
93-00427
93-00428
93-00429
93-00430
93-00431
93-00432
93-00433
93-00434
93-00435
93-00436
93-00437
93-00438
93-00439
93-00440
93-00441
93-00442
93-00443
93-00444
93-00445
93-00446
93-00447
93-00448
93-00449
93-00450
93-00451
93-00452
93-00453
93-00454
93-00455
93-00456
93-00457
93-00458
93-00459
93-00460
93-00461
93-00462
93-00463
93-00464
93-00465
93-00466
93-00467
93-00468
93-00469
93-00470
93-00471
93-00472
93-00473
93-00474
93-00475
93-00476
93-00477
93-00478
93-00479
93-00480
93-00481
93-00482
93-00483
93-00484
93-00485
93-00486
93-00487
93-00488
93-00489
93-00490
93-00491
93-00492
93-00493
93-00494
93-00495
93-00496
93-00497
93-00498
93-00499
93-00500
93-00501
93-00502
93-00503
93-00504
93-00505
93-00506
93-00507
93-00508
93-00509
93-00510
93-00511
93-00512
93-00513
93-00514
93-00515
93-00516
93-00517
93-00518
93-00519
93-00520
93-00521
93-00522
93-00523
93-00524
93-00525
93-00526
93-00527
93-00528
93-00529
93-00530
93-00531
93-00532
93-00533
93-00534
93-00535
93-00536
93-00537
93-00538
93-00539
93-00540
93-00541
93-00542
93-00543
93-00544
93-00545
93-00546
93-00547
93-00548
93-00549
93-00550
93-00551
93-00552
93-00553
93-00554
93-00555
93-00556
93-00557
93-00558
93-00559
93-00560
93-00561
93-00562
93-00563
93-00564
93-00565
93-00566
93-00567
93-00568
93-00569
93-00570
93-00571
93-00572
93-00573
93-00574
93-00575
93-00576
93-00577
93-00578
93-00579
93-00580
93-00581
93-00582
93-00583
93-00584
93-00585
93-00586
93-00587
93-00588
93-00589
93-00590
93-00591
93-00592
93-00593
93-00594
93-00595
93-00596
93-00597
93-00598
93-00599
93-00600
93-00601
93-00602
93-00603
93-00604
93-00605
93-00606
93-00607
93-00608
93-00609
93-00610
93-00611
93-00612
93-00613
93-00614
93-00615
93-00616
93-00617
93-00618
93-00619
93-00620
93-00621
93-00622
93-00623
93-00624
93-00625
93-00626
93-00627
93-00628
93-00629
93-00630
93-00631
93-00632
93-00633
93-00634
93-00635
93-00636
93-00637
93-00638
93-00639
93-00640
93-00641
93-00642
93-00643
93-00644
93-00645
93-00646
93-00647
93-00648
93-00649
93-00650
93-00651
93-00652
93-00653
93-00654
93-00655
93-00656
93-00657
93-00658
93-00659
93-00660
93-00661
93-00662
93-00663
93-00664
93-00665
93-00666
93-00667
93-00668
93-00669
93-00670
93-00671
93-00672
93-00673
93-00674
93-00675
93-00676
93-00677
93-00678
93-00679
93-00680
93-00681
93-00682
93-00683
93-00684
93-00685
93-00686
93-00687
93-00688
93-00689
93-00690
93-00691
93-00692
93-00693
93-00694
93-00695
93-00696
93-00697
93-00698
93-00699
93-00700
93-00701
93-00702
93-00703
93-00704
93-00705
93-00706
93-00707
93-00708
93-00709
93-00710
93-00711
93-00712
93-00713
93-00714
93-00715
93-00716
93-00717
93-00718
93-00719
93-00720
93-00721
93-00722
93-00723
93-00724
93-00725
93-00726
93-00727
93-00728
93-00729
93-00730
93-00731
93-00732
93-00733
93-00734
93-00735
93-00736
93-00737
93-00738
93-00739
93-00740
93-00741
93-00742
93-00743
93-00744
93-00745
93-00746
93-00747
93-00748
93-00749
93-00750
93-00751
93-00752
93-00753
93-00754
93-00755
93-00756
93-00757
93-00758
93-00759
93-00760
93-00761
93-00762
93-00763
93-00764
93-00765
93-00766
93-00767
93-00768
93-00769
93-00770
93-00771
93-00772
93-00773
93-00774
93-00775
93-00776
93-00777
93-00778
93-00779
93-00780
93-00781
93-00782
93-00783
93-00784
93-00785
93-00786
93-00787
93-00788
93-00789
93-00790
93-00791
93-00792
93-00793
93-00794
93-00795
93-00796
93-00797
93-00798
93-00799
93-00800
93-00801
93-00802
93-00803
93-00804
93-00805
93-00806
93-00807
93-00808
93-00809
93-00810
93-00811
93-00812
93-00813
93-00814
93-00815
93-00816
93-00817
93-00818
93-00819
93-00820
93-00821
93-00822
93-00823
93-00824
93-00825
93-00826
93-00827
93-00828
93-00829
93-00830
93-00831
93-00832
93-00833
93-00834
93-00835
93-00836
93-00837
93-00838
93-00839
93-00840
93-00841
93-00842
93-00843
93-00844
93-00845
93-00846
93-00847
93-00848
93-00849
93-00850
93-00851
93-00852
93-00853
93-00854
93-00855
93-00856
93-00857
93-00858
93-00859
93-00860
93-00861
93-00862
93-00863
93-00864
93-00865
93-00866
93-00867
93-00868
93-00869
93-00870
93-00871
93-00872
93-00873
93-00874
93-00875
93-00876
93-00877
93-00878
93-00879
93-00880
93-00881
93-00882
93-00883
93-00884
93-00885
93-00886
93-00887
93-00888
93-00889
93-00890
93-00891
93-00892
93-00893
93-00894
93-00895
93-00896
93-00897
93-00898
93-00899
93-00900
93-00901
93-00902
93-00903
93-00904
93-00905
93-00906
93-00907
93-00908
93-00909
93-00910
93-00911
93-00912
93-00913
93-00914
93-00915
93-00916
93-00917
93-00918
93-00919
93-00920
93-00921
93-00922
93-00923
93-00924
93-00925
93-00926
93-00927
93-00928
93-00929
93-00930
93-00931
93-00932
93-00933
93-00934
93-00935
93-00936
93-00937
93-00938
93-00939
93-00940
93-00941
93-00942
93-00943
93-00944
93-00945
93-00946
93-00947
93-00948
93-00949
93-00950
93-00951
93-00952
93-00953
93-00954
93-00955
93-00956
93-00957
93-00958
93-00959
93-00960
93-00961
93-00962
93-00963
93-00964
93-00965
93-00966
93-00967
93-00968
93-00969
93-00970
93-00971
93-00972
93-00973
93-00974
93-00975
93-00976
93-00977
93-00978
93-00979
93-00980
93-00981
93-00982
93-00983
93-00984
93-00985
93-00986
93-00987
93-00988
93-00989
93-00990
93-00991
93-00992
93-00993
93-00994
93-00995
93-00996
93-00997
93-00998
93-00999
93-01000
- CONTINUED
- Oncorhynchus kisutch*
- Feeds
93-002361
- Fertilization
93-002873
- Fins
93-003501
- Fish Hatchery Effluents
93-002359
- Fish Kills
93-003435
93-003682
- Fish Passage
93-003035
- Fishways
93-003935
- Food Digestibility
93-002561
- Food/Fooding
93-003239
- Fungal Diseases
93-003435
93-003436
- Genetic Fitness
93-002989
- Genetic Strains
93-002020
- Gills
93-003500
93-003501
- Gonadotropin
93-002626
93-002623
93-002604
93-002762
93-002015
- Gonads
93-002579
93-002953
- Growth Hormone
93-002689
- Habitat Alterations
93-003807
93-003829
- Habitat Improvement/General
93-004054
93-004058
93-004062
93-004067
93-004090
- Habitat Selection
93-004075
- Harvest
93-003105
93-003793
93-004170
93-004286
93-004339
- Hatchery Releases
93-002254
- Hatchery/Wild Populations
93-002880
- Hematology
93-002577
- Hormones
93-002666
93-002689
93-002690
93-002733
93-002762
93-002763
93-002764
93-002015
- Immune Response
93-003387
93-003474

SYSTEMATIC INDEX

CONTINUED

Oncorhynchus kisutch
 Impairment/Entrapment
 93-003935
 Induced Maturation
 93-002686
 Insulin
 93-002699
 93-002764
 Large Organic Debris
 93-004054
 93-004099
 Lepeophtheirus salmonis
 93-003500
 93-003501
 Life History/General
 93-003829
 Liver
 93-002764
 Longlines
 93-004163
 Management/Research--Marine
 93-004266
 93-004339
 Management/Research--Rivers and Streams
 93-003230
 93-003007
 93-003029
 93-004054
 93-004058
 93-004062
 93-004066
 93-004007
 93-004099
 93-004100
 Male Selection
 93-002809
 Maturation
 93-002579
 93-002694
 93-002762
 93-002763
 93-002815
 Melano-macrophages
 93-003387
 Microhabitat
 93-003230
 93-004054
 93-004099
 Migration
 93-004086
 Minox
 93-003726
 Mitigation
 93-003029
 Mortality Factors
 93-003435
 Movements
 93-002995
 Natural Selection
 93-002889
 Net-Pan Culture
 93-002254
 Nursery Areas
 93-004075
 Oil Pollution
 93-002995
 Overwintering
 93-004062
 Parasites/Diseases
 93-003387
 93-003402
 93-003412
 93-003427
 93-003430
 93-003436

CONTINUED...

Oncorhynchus kisutch
 Parasites/Diseases
 93-003436
 93-003473
 93-003474
 93-003500
 93-003501
 Parasitic Copepods
 93-003500
 93-003501
 Phagocytosis
 93-003387
 Phosphorus
 93-003369
 Pituitary Gland
 93-002693
 93-002762
 93-002815
 Planting
 93-002829
 Pollution
 93-003535
 Pollution Avoidance
 93-002995
 Polychlorinated Biphenyls
 93-002535
 93-003679
 93-003726
 Population Studies
 93-003105
 93-004100
 Production
 93-002230
 93-002430
 93-002793
 Proteins
 93-002579
 Public Health Problems
 93-003635
 Radiation
 93-002073
 Renibacterium salmoninarum
 93-003387
 Reproduction
 93-002695
 RNA
 93-002764
 Salinity
 93-002577
 Sampling
 93-004066
 Saprolegnia parasitica
 93-003435
 93-003436
 Screens
 93-003035
 Spawning
 93-002880
 93-004075
 Spawning Channels
 93-004068
 Sperm
 93-002579
 Sportfishing
 93-003535
 Sterilization
 93-002603
 93-002604
 Steroids
 93-002762
 Stock Assessment
 93-003105
 93-004066
 93-004100
 93-004339
 Stocking/Introductions
 93-002254

...CONTINUED...

Oncorhynchus kisutch
 Stress 93-062928
 Strayness 93-063726
 Sulfides 93-003602
 Supplemental Stocking 93-002230
 Survival 93-062254
 93-062350
 93-062430
 93-003793
 Swimming Performance 93-002577
 Temperature 93-003482
 Thyroid Gland 93-002733
 Treatment 93-003690
 Viral Diseases 93-003473
 93-003474
 Visual Estimation Methods 93-004441
 Water Quality 93-002438

Oncorhynchus nasou
 Activity Patterns 93-003602
Aeromonas salmonicida 93-003416
 Bacterial Diseases 93-003416
 93-003429
 Culture/Propagation 93-003416
 93-003376
 93-004369
 Early Development 93-003002
 Embryology 93-002941
 Exotic Species 93-004043
 Fry Stocking 93-004043
 Halibut alevin 93-003429
 Hatchery Releases 93-003876
 93-004859
 Hatchery/Wild Populations 93-003092
 Hybridizations 93-002891
 Karyotypes 93-002891
 Kidneys 93-003429
Lepeophtheirus salmonis 93-003500
 Management/Research--Lakes 93-004043
 Management/Research--Rivers and Streams 93-004069
 Movements 93-003802
 Ocean Ranching 93-003876
 Parasites/Diseases 93-003416
 93-003429

...CONTINUED...

Oncorhynchus nasou
 Parasites/Diseases 93-003500
 Parasitic Copepods 93-003509
 Restoration of Anadromous Runs 93-004843
 93-004863
 Stocking/Introductions 93-002676
 Supplemental Stocking 93-004069
 Tetraploidy 93-002941
 Translocated Species 93-003076
 Variation Studies 93-003092

Oncorhynchus nasou ishikawa
 Ploidy Levels 93-002913
 Triploid Fish 93-002913

Oncorhynchus mykiss
 Acidification 93-003502
 93-004127
 Aeration 93-002228
Aeromonas hydrophila 93-003384
 93-003422
Aeromonas salmonicida 93-003384
 93-003398
 93-003403
 93-003413
 93-003425
 Age/Growth 93-002228
 93-003980
 Age/Sex Relationships 93-002843
 Allotyzines 93-002931
 Aluminum 93-003626
 Amino Acids 93-002803
 Antibodies 93-003437
 93-003468
 Antigens 93-002028
 93-003413
 Antimony 93-002613
 Arginine 93-002782
 Arsenic 93-003605
 93-003663
 Arsenic 93-003663
 93-003664
 93-003698
 Ascorbic Acid 93-002728
 Bacteria 93-003041
 Bacterial Diseases 93-003384
 93-003386
 93-003392
 93-003393
 93-003398

SYSTEMATIC INDEX

CONTINUED.

Oncorhynchus mykiss
 Bacterial Diseases
 93-003399
 93-003402
 93-003403
 93-003408
 93-003412
 93-003413
 93-003422
 93-003425
 93-003427
 93-003434
 Bacterial Kidney Disease
 93-003393
 93-003412
 93-003427
 Benz(a)pyrene
 93-003601
 Bioaccumulation
 93-003534
 93-003673
 Biotechnical Composition
 93-003715
 Biological Monitoring
 93-003715
 93-004127
 Biosorption
 93-003663
 Bird Predation
 93-002729
 93-002759
 93-003216
 Brain
 93-002644
 Bromophenol
 93-002755
 Bycatch
 93-004006
 Cadmium
 93-003598
 93-003715
 Cage Culture
 93-002229
 93-002243
 93-002251
 93-002266
 Calcium
 93-003626
 Carbohydrate Metabolism
 93-002746
 93-002986
 Cardiovascular System
 93-002687
 93-002627
 93-002671
 93-002919
 Catch Per Unit Effort
 93-003914
 Catecholamines
 93-002674
 Cell Culture
 93-002754
 Chaetoceros concavicornis
 93-003530
 Chaetoceros convolutus
 93-003530
 Chlorinated Dibenzo-p-Dioxins
 93-003673
 Chlorophenols
 93-003649
 Chromium
 93-003583
 Chromosomes
 93-002885
 Competition
 93-004095

CONTINUED.

Oncorhynchus mykiss
 Computer Applications
 93-002424
 Culture/Propagation
 93-002227
 93-002228
 93-002229
 93-002230
 93-002233
 93-002235
 93-002238
 93-002239
 93-002240
 93-002241
 93-002242
 93-002243
 93-002246
 93-002251
 93-002252
 93-002259
 93-002266
 93-002269
 93-002352
 93-002361
 93-002383
 93-002385
 93-002386
 93-002393
 93-002424
 93-002425
 93-002427
 93-002430
 93-002443
 93-002444
 93-002837
 93-003434
 93-003465
 93-003492
 93-003541
 93-003632
 93-003939
 Cytology
 93-002458
 93-002468
 93-002752
 93-003451
 Cytophaga psychrophila
 93-003482
 Dams
 93-003938
 Decomposition
 93-004117
 Detoxification
 93-003608
 Diagnostic Techniques
 93-003412
 Dioxins
 93-003530
 Dibenzofuran
 93-003694
 Dirts
 93-002383
 93-002386
 Digestive System
 93-002458
 93-002542
 93-002687
 93-002752
 Dioxin
 93-003604
 93-003673
 Diplostomum shanxiensis
 93-003512
 Disease Control
 93-003947
 Disease Importation
 93-003467

SYSTEMATIC INDEX

... CONTINUED

Oncochynchus mykiss
 Disease Susceptibility
 93-00398
 Disease-Free Culture
 93-002443
 Disturbances
 93-003343
 93-003800
 Early Development
 93-002585
 93-002589
 93-002957
 93-003683
 Egg Collection
 93-002229
 93-002240
 93-002241
 93-002242
 Egg Survival
 93-003343
 93-003646
 93-003800
 Eggs
 93-002533
 Embryology
 93-002533
 93-003663
 Endocrinology
 93-002458
 93-002551
 93-003682
 Enzymes
 93-002644
 93-002645
 93-002726
 93-002792
 93-003630
 93-003708
 Epithelium
 93-002468
 93-002754
 Escapement
 93-002241
 93-003829
 93-004054
 93-004075
 93-004098
 Estradiol
 93-002682
 93-002688
 93-002709
 Evolution
 93-002669
 Excretory System
 93-002506
 93-002782
 Exercise
 93-002819
 Exotic Species
 93-004101
 Eyes
 93-002541
 93-002565
 93-003670
 Fecundity
 93-002876
 Feeding Experiments
 93-002352
 93-002385
 Feeds
 93-002227
 93-002361
 93-002383
 93-002386
 93-002393
 Fertilization
 93-002444

... CONTINUED ...

Oncochynchus mykiss
 Fertilization
 93-002828
 93-002676
 Fingerling Production
 93-002425
 Fish Hatchery Effluents
 93-002243
 93-002251
 93-002352
 93-003541
 Fish Kills
 93-003682
 Fish Passage
 93-003035
 93-003938
 93-003542
 93-003943
 93-003944
 Fishways
 93-003035
 93-003939
 93-003964
 Flow Regimes
 93-004058
 Fluoride
 93-003392
 Food Conversion Efficiency
 93-002363
 Food Digestibility
 93-002361
 Foods/Feeding
 93-003969
 93-004135
 Fry Production
 93-003482
 Furunculosis
 93-003398
 Gall Bladder
 93-003685
 Gear Selectivity
 93-003915
 Gene Expression
 93-002709
 93-002783
 Genetic Strains
 93-002230
 93-003804
 93-003809
 Genetics
 93-002444
 Gills
 93-002469
 93-002754
 93-002755
 Glucose
 93-002663
 Gonadotropin
 93-002666
 Gonads
 93-002651
 Growth Hormone
 93-002746
 93-002783
 Growth Stimulants
 93-002425
 Habitat Alterations
 93-003807
 93-003812
 93-003829
 Habitat Evaluation
 93-003812
 93-004135
 Habitat Improvement/Gonorrhea
 93-004054
 93-004067

SYSTEMATIC INDEX

...CONTINUED.

Oncorhynchus mykiss
 Habitat Improvement/General
 93-004097
 93-004135
 Habitat Selection
 93-004075
 93-004195
 Hatchery Releases
 93-002233
 93-002235
 Hatchery/Wild Populations
 93-003959
 93-004181
 Heart
 93-002646
 93-002726
 93-002823
 Heavy Metals
 93-003690
 93-003626
 93-003663
 93-003664
 93-003698
 Hematology
 93-002614
 93-002628
 93-002692
 93-002712
 93-002713
 93-002732
 93-002738
 93-002832
 93-002867
 93-002914
 93-002930
 93-003605
 Hepatic Neoplasms
 93-003513
 Histology
 93-002460
 93-002941
 93-002942
 93-003913
 Hooking/Handling Stress
 93-002837
 Hormones
 93-002666
 93-002627
 93-002645
 93-002751
 93-002799
 93-002843
 Horseshoe Peroxidase
 93-002607
 Hypercapnia
 93-002674
 Hyperoxia
 93-002692
 Hypoxia
 93-002692
 Immune Response
 93-002614
 93-002650
 93-002696
 93-002662
 93-002930
 93-003398
 93-003399
 93-003403
 93-003425
 93-003464
 93-003466
 93-003718
 Immunization
 93-003403
 Impoundment/Entrapment
 93-003695

...CONTINUED...

Oncorhynchus mykiss
 Impoundment
 93-004098
 Induced Maturation
 93-002606
 Industrial Wastes
 93-003646
 Infectious Hematopoietic
 Necrosis
 93-003464
 93-003465
 Infectious Pancreatic Necrosis
 93-003467
 Insulin
 93-002645
 Intestinal Lesions
 93-003492
 Kidneys
 93-002596
 93-002614
 93-002696
 93-002782
 93-002849
 93-003425
 93-003451
 Land Use
 93-003812
 Large Organic Debris
 93-004054
 93-004090
 93-004135
 Lateral Line System
 93-002805
 Lead
 93-003590
 Lesions
 93-003385
 Leucocyte Migration
 93-002614
 93-003884
 Life History/General
 93-003032
 93-003829
 Lining
 93-004127
 Lipid Content
 93-003531
 Lipid Metabolism
 93-002752
 Liver
 93-002645
 93-002682
 93-002688
 93-002746
 93-002792
 93-003513
 93-003531
 93-003604
 93-003630
 93-003718
 Management/Research-Lakes
 93-003032
 93-003884
 93-003999
 93-004117
 Management/Research-Rivers and
 Streams
 93-002241
 93-003032
 93-003007
 93-003012
 93-003829
 93-003860
 93-003889
 93-004054
 93-004066

SYSTEMATIC INDEX

...CONTINUED...

Dicorhynchus mykiss
 Streams
 93-004037
 93-004095
 93-004098
 93-004099
 93-004125
 93-004135
 Maturat ion
 93-002533
 93-002544
 Melano-macrophages
 93-002650
 93-002696
 93-003425
 Melatonin
 93-002551
 Metabolic Rates
 93-002646
 93-002682
 93-002803
 Metabolism
 93-002645
 93-002837
 93-002843
 93-003715
 Metallothionein
 93-002644
 Microhabitat
 93-004054
 93-004095
 93-004099
 93-004135
 Migration
 93-004066
 Mine Effluents
 93-003613
 Mitigation
 93-003820
 Mortality Factors
 93-002250
 93-003343
 93-003830
 Mortality Rates
 93-003343
 Movements
 93-002424
 93-003089
 Musculature
 93-002806
 Naphthoflavone
 93-003630
 Nervous System
 93-002469
 93-002685
 93-002751
 Nests/Gill Nets
 93-003914
 Nets/Trammel Nets
 93-003515
 Nursery Areas
 93-004075
 Nutrition
 93-002752
 93-003399
 93-003531
 Nutritional Diseases
 93-003531
 Oil Pollution
 93-003715
 Osmoregulation
 93-002595
 93-002783
 Oxygen
 93-002580
 93-003425

...CONTINUED...

Dicorhynchus mykiss
 Ozone
 93-002443
 Parasites/Diseases
 93-002443
 93-003304
 93-003305
 93-003302
 93-003393
 93-003398
 93-003399
 93-003402
 93-003403
 93-003400
 93-003412
 93-003413
 93-003422
 93-003425
 93-003427
 93-003434
 93-003437
 93-003447
 93-003451
 93-003464
 93-003465
 93-003467
 93-003468
 93-003492
 93-003512
 93-003513
 93-003530
 93-003531
 93-003718
 Peptides
 93-002832
 93-002862
 Phagocytosis
 93-002862
 Phenols
 93-002755
 93-003634
 Pheromones
 93-002750
 Phosphate
 93-002646
 93-002720
 Phosphorus
 93-002306
 Photo-periodism
 93-002551
 Pigmenters
 93-002227
 Pituitary Gland
 93-002751
 93-002790
 Planning
 93-003529
 93-003860
 Plankton Levels
 93-002877
 93-002880
 Pollution
 93-003718
 Pollution Tolerance
 93-002277
 Polychlorinated Biphenyls
 93-003604
 93-003608
 93-003679
 93-003718
 Population Studies
 93-004125
 Predator/Prey Relationships
 93-002586
 93-003942
 93-003509

SYSTEMATIC INDEX

- CONTINUED
- Oocercyathus mykiss
 - Product ion
 - 93-082238
 - 93-082239
 - 93-082240
 - 93-082241
 - 93-082242
 - 93-082243
 - Proliferative Kidney Disease
 - 93-083437
 - 93-083447
 - 93-083451
 - Protein Metabolism
 - 93-082687
 - Proteins
 - 93-082712
 - 93-082713
 - 93-082867
 - Protozoan Diseases
 - 93-083437
 - 93-083447
 - 93-083451
 - Pseudomonas pseudosalicigenes
 - 93-083385
 - Pulp Mill Effluents
 - 93-083649
 - Radiation
 - 93-083670
 - Recreational Activities
 - 93-083343
 - 93-083830
 - Regulations/Catch and Release
 - 93-083869
 - Regulations/Size Limits
 - 93-083869
 - Renibacterium salmoninarum
 - 93-083392
 - Reproduction
 - 93-082688
 - 93-082786
 - Reproductive Cycle
 - 93-082551
 - Reproductive System
 - 93-082494
 - 93-082544
 - Respiration
 - 93-082588
 - 93-082628
 - 93-082634
 - 93-082819
 - 93-083830
 - Respiratory System
 - 93-082627
 - Salinity
 - 93-082806
 - Sampling
 - 93-084066
 - Sanitation
 - 93-082443
 - Screens
 - 93-083935
 - 93-083942
 - 93-083943
 - Serotonin
 - 93-082627
 - Serratia plymuthica
 - 93-083385
 - Sex Determination
 - 93-082544
 - Shear Stress
 - 93-083943
 - Social Behavior
 - 93-082750
 - Spawning
 - 93-082750
 - 93-084875
 - Spawning Techniques
 - 93-082444
- CONTINUED
- Oocercyathus mykiss
 - Sperm
 - 93-082494
 - 93-082589
 - 93-082828
 - Sperm Preservation
 - 93-082427
 - 93-082444
 - Stock Assessment
 - 93-084066
 - Stock Identification
 - 93-082803
 - Stocking/Introductions
 - 93-083884
 - 93-083889
 - Storage Effects
 - 93-084377
 - Stress
 - 93-082732
 - 93-082837
 - Sulfides
 - 93-083882
 - Supplemental Stocking
 - 93-082230
 - 93-082241
 - 93-082246
 - Surfactants
 - 93-083534
 - Survival
 - 93-083884
 - 93-084890
 - Swimming Performance
 - 93-082571
 - Temperature
 - 93-082646
 - 93-082671
 - 93-082709
 - 93-082726
 - 93-082819
 - 93-083462
 - 93-083864
 - Tetraploidy
 - 93-082876
 - 93-082914
 - Thermoregulation
 - 93-082671
 - Toxicity Testing
 - 93-083731
 - Transportation
 - 93-083931
 - Treatment
 - 93-083392
 - 93-083434
 - Trematodes
 - 93-083512
 - Trichloroglycol
 - 93-082755
 - Triploid Fish
 - 93-082877
 - 93-082888
 - Froptic Relationships
 - 93-083939
 - Tumors
 - 93-083513
 - Ultraviolet Light
 - 93-082565
 - 93-082592
 - Urinary Bladder
 - 93-082595
 - Vaccination
 - 93-083480
 - Variation Studies
 - 93-082930
 - Vibrio
 - 93-083488
 - Vibrio anguillarum
 - 93-083413

- CONTINUED
- Oncorhynchus mykiss
 - Vibrio anguillarum 93-003434
 - Viral Diseases
 - 93-003464
 - 93-003465
 - 93-003467
 - 93-003468
 - Viral Hemorrhagic Septicemia 93-003468
 - Vision 93-002592
 - Visual Estimation Methods 93-004441
 - Vitamins
 - 93-002395
 - 93-002867
 - 93-003399
 - Vitalogenin
 - 93-002851
 - 93-002862
 - 93-002988
 - 93-002799
 - Water Quality
 - 93-002243
 - 93-002251
 - 93-002430
 - Weirs 93-003044
 - Wetlands 93-004117
 - Antibiotics
 - 93-002755
 - 93-003715
 - Yersinia ruckeri
 - 93-003385
 - 93-003399
 - Zinc 93-003599
- Oncorhynchus mykiss irideus
- Histology 93-002869
 - Induced Maturation 93-002869
 - Neuration 93-002869
 - Sex Determination 93-002869
 - Steroids 93-002869
- Oncorhynchus nerka
- Aerial Surveys 93-004440
 - Age/Sex Relationships 93-002511
 - Bioassays 93-004140
 - Commercial Fishing 93-004256
 - Culture/Propagation 93-002435
 - 93-003470
 - Economics 93-004440
 - Environmental Impacts 93-003880
 - Escapement 93-003105
 - 93-004100
 - 93-004126
 - 93-004256
 - 93-004320
 - Fish Processing 93-004355
 - Fish Stilage 93-004355
- CONTINUED
- Oncorhynchus nerka
 - Food Supply 93-003880
 - Foods/Feeding 93-003102
 - Forecasting 93-004126
 - Harvest 93-003105
 - 93-004100
 - 93-004256
 - 93-004320
 - 93-004343
 - Hatchery Releases 93-004457
 - Infectious Hematopoietic Necrosis 93-003470
 - Management/Research--Lakes 93-003800
 - Management/Research--Marine 93-004256
 - 93-004320
 - 93-004343
 - Management/Research--Reservoirs 93-004140
 - Management/Research--Rivers and Streams 93-003077
 - 93-004180
 - 93-004440
 - Marking/Tagging 93-004457
 - Naturalization 93-002511
 - Migration 93-003077
 - Mortality Factors 93-002511
 - Movements 93-002995
 - Oil Pollution 93-002995
 - Otoliths 93-004457
 - Parasites/Diseases 93-003470
 - Parr-Smolt Transformation 93-003077
 - Photoperiodism 93-003102
 - Pollution Avoidance 93-002995
 - Population Genetics 93-002929
 - Population Studies 93-003077
 - 93-003305
 - 93-004100
 - Predatory/Prey Relationships 93-004140
 - Recruitment 93-004440
 - Season 93-003102
 - Spawning Migration 93-003126
 - Stock Assessment 93-003105
 - 93-004100
 - 93-004320
 - 93-004343
 - 93-004440
 - Stocking/Introductions 93-003800
 - 93-004457

SYSTEMATIC INDEX

...CONTINUED...

Oncorhynchus nerka
 Stress
 93-004457
 Survival
 93-003880
 Swimming Performance
 93-002571
 Trophic Relationships
 93-003030
 93-004148
 Variation Studies
 93-002929
 Viral Diseases
 93-003478
 Water Quality
 93-002430
Oncorhynchus tshawytscha
 Abundance/Factors of
 93-004114
Acanthocephala
 93-003508
Acanthocephalus dirus
 93-003508
 Age/Growth
 93-003202
 Artificial Reefs
 93-004154
 Bacterial Diseases
 93-003306
 93-003402
 93-003406
 93-003412
 93-003410
 93-003427
 Bacterial Kidney Disease
 93-003306
 93-003412
 93-003427
 Biosorption
 93-003535
 Bird Predation
 93-002254
 Catch Per Unit Effort
 93-004163
 Commercial Fishing
 93-004163
 93-004266
 Culture/Propagation
 93-002230
 93-002231
 93-002233
 93-002235
 93-002241
 93-002254
 93-002256
 93-002428
 93-002438
 93-003386
 93-003440
Cytophaga psychrophila
 93-003402
 Dams
 93-003936
 DDT
 93-003726
 Diagnostic Techniques
 93-003412
 93-003466
 Digestive System
 93-002822
 Dioxin
 93-003726
 Disease Susceptibility
 93-003501
Echinorhynchus salmoxis
 93-003508

...CONTINUED

Oncorhynchus tshawytscha
 Egg Collection
 93-002241
 Egg Production
 93-002428
 Egg Survival
 93-002428
 Endangered Populations
 93-003936
 93-003937
 93-004114
 93-004473
 Escapement
 93-002241
 93-003105
 93-003629
 93-004075
 93-004100
 93-004266
 Exercise
 93-002022
 Exploitation Rates
 93-004114
 Fingering Production
 93-002266
 Fins
 93-003501
 Fish Passage
 93-003936
 93-003937
 93-003942
 Feeds/Fooding
 93-002280
 General
 93-003038
 Gills
 93-003501
 Gonadotropin
 93-002588
 Habitat Alterations
 93-003629
 93-003936
 93-004114
 Habitat Improvement/General
 93-004097
 93-004099
 93-004154
 Habitat Selection
 93-003280
 93-004075
 Harvest
 93-003105
 93-004100
 93-004266
 Hatchery Releases
 93-002233
 93-002235
 93-002254
 93-002256
 93-003410
 Hearts
 93-002622
 Hematology
 93-002822
 Hexamite salmonids
 93-003449
 Hormones
 93-002802
 Immune Response
 93-002802
 Impoundment
 93-003936
 Incubation
 93-002428
 Infectious Pancreatic Necrosis
 93-003466

SYSTEMATIC INDEX

.. CONTINUED ..

Oncorhynchus tshawytscha
 Islands
 93-004154
 Large Organic Debris
 93-004099
 Laws/Law Enforcement
 93-004473
 Lepeophtheirus salmonis
 93-003501
 Life History/General
 93-003038
 93-003829
 Light
 93-003190
 Lurelines
 93-004163
 Management/Research--Estuaries
 93-004154
 Management/Research--Lakes
 93-004041
 Management/Research--Marine
 93-004266
 Management/Research--Rivers and
 Streams
 93-002241
 93-003829
 93-003936
 93-004666
 93-004827
 93-004091
 93-004099
 93-004190
 93-004114
 Maturation
 93-002802
 Microhabitat
 93-004099
 Migration
 93-004066
 Mixes
 93-003726
 Mitigation
 93-003829
 93-003936
 Movements
 93-002995
 Mycobacterium
 93-003496
 Net-Pen Culture
 93-002254
 93-002256
 93-003449
 Nursery Areas
 93-004075
 93-004114
 Oil Pollution
 93-002995
 Parasites/Diseases
 93-003386
 93-003402
 93-003406
 93-003412
 93-003418
 93-003427
 93-003449
 93-003466
 93-003501
 93-003508
 Parasitic Copepods
 93-003501
 PARR-SMILT Transformation
 93-002680
 Photoperiodism
 93-002680
 93-003938
 Pituitary Gland
 93-002588

.CONTINUED .

Oncorhynchus tshawytscha
 Planning
 93-003829
 Pollution
 93-003535
 Pollution Avoidance
 93-002995
 Polychlorinated Biphenyls
 93-003535
 93-003726
 Population Studies
 93-003105
 93-004108
 Predator/Prey Relationships
 93-003198
 93-003042
 93-004041
 Production
 93-002230
 93-002231
 93-002233
 93-002235
 Protozoan Diseases
 93-003449
 Public Health Problems
 93-003535
 Recruitment
 93-004114
 Rombacterium salmoninarum
 93-003386
 93-003418
 Sampling
 93-004066
 93-004091
 Screens
 93-003937
 93-003942
 Season
 93-003200
 Spawning
 93-004075
 93-004114
 Spurt/Fishing
 93-003535
 Steroids
 93-002988
 Stock Assessment
 93-003105
 93-004066
 93-004091
 93-004108
 Stocking/Introductions
 93-002254
 93-003418
 Styrenes
 93-003726
 Supplemental Stocking
 93-002230
 93-002231
 93-002241
 Survival
 93-002254
 93-003418
 Temperature
 93-002428
 93-003402
 Testosterone
 93-002802
 Trophic Relationships
 93-004041
 Viral Diseases
 93-003406
 Visual Estimation Methods
 93-004041
 Water Quality
 93-002638

SYSTEMATIC INDEX

- Ophicephalus
 Air Breathing 93-002505
 Life History/General 93-002505
- Ophicephalus argus
 Aeromonas veroeff 93-003407
 Bacterial Diseases 93-003407
 Hemorrhages 93-003407
 Parasites/Diseases 93-003407
 Ulcers 93-003407
- Ophicephalus gachua
 Endosulfan 93-003706
 Kidneys 93-003706
 Liver 93-003706
 Musculature 93-003706
- Ophicephalus punctatus
 Cholesterol 93-003703
 Cytochrome P450 93-003678
 Digestive System 93-003641
 Egg Survival 93-003646
 Gonads 93-003641
 Heavy Metals 93-003641
 Hematology 93-003579
 93-003600
 Industrial Wastes 93-003646
 Insecticides 93-003620
 93-003670
 Lead 93-003641
 Lindane 93-003620
 Lipid Content 93-003641
 93-003704
 Liver 93-003641
 93-003670
 Malathion 93-003670
 Mercuric Chloride 93-003578
 93-003579
 93-003668
 Monocrotaphos 93-003704
 Mortality Rates 93-003570
 Nutrition 93-003704
- Organophosphates 93-003703
 Osmoregulation 93-003628
 Pesticides 93-003703
 Phosphatidol 93-003703
- CONTINUED
- Ophicephalus punctatus
 Proteoles 93-003641
- Ophicephalus striatus
 Air Breathing 93-003502
 Carbonates 93-003582
 Condition Factors 93-003529
 Food Supply 93-003525
 Foods/Feeding 93-003525
 Heavy Metals 93-003629
 Nutrition 93-003629
 Pesticides 93-003582
 93-003629
 Pollution Tolerance 93-003629
 Respiratory System 93-003582
- Ophisternon baagense
 Air Breathing 93-002585
 Life History/General 93-002585
- Ophisternon bulleri
 Abundance/Factors of 93-003856
 Catch Per Unit Effort 93-003856
 El Niño 93-003856
 Harvest 93-003856
 Management/Research--Marine 93-003856
- Ophisternon libertate
 Abundance/Factors of 93-003856
 Catch Per Unit Effort 93-003856
 El Niño 93-003856
 Harvest 93-003856
 Management/Research--Marine 93-003856
- Ophisternon medinae
 Abundance/Factors of 93-003856
 Catch Per Unit Effort 93-003856
 El Niño 93-003856
 Harvest 93-003856
 Management/Research--Marine 93-003856
- Ophisternon oglinum
 Saltfish 93-004271
 Management/Research--Marine 93-004271
- Oplegnathus fasciatus
 Ascorbic Acid 93-002663
 Hypoxia 93-002663
 Stress 93-002663
 Vitamins 93-002663

- Opiurus*
 Musculature
 93-002745
 Swimbladder
 93-002745
Opiurus tau
 Immune Response
 93-002791
 Melano-macrophages
 93-002791
 Parasites/Diseases
 93-002791
 Tumors
 93-002791
Orthopneustes triacis
 Early Development
 93-002470
 Larval Identification
 93-002470
Oryzias celebesensis
 Hybridization
 93-002911
Oryzias curvirostris
 Hybridization
 93-002511
Oryzias javanicus
 Hybridization
 93-002911
Oryzias latipes
 Age/Sex Relationships
 93-002554
 93-003590
 Anilines
 93-003590
 Carcinogens
 93-002554
 93-003590
 Diagnostic Techniques
 93-003717
 Drugs
 93-003590
 Enzymes
 93-002554
 Hepatic Lesions
 93-003717
 Liver
 93-003590
 Parasites/Diseases
 93-003717
 Pollution
 93-003717
 Treatment
 93-002554
Oryzias latipes sinensis
 Hybridization
 93-002911
Oryzias melastigma
 Egg Composition
 93-002916
 Hybridization
 93-002911
Oseriscia
 Commercial Fishing
 93-003004
 Production
 93-003004
Osmorus operlanus
 Foods/Feeding
 93-003065
 Length-Weight Relationships
 93-003065
 Life History/General
 93-003065
 Management/Research--Lakes
 93-003065
 Parasites/Diseases
 93-003065
- CONTINUED...
- Osmorus operlanus*
 Stock Assessment
 93-003065
Osmorus mordax
 Growth
 93-004240
 Oid Predation
 93-002225
 93-002251
 Foods/Feeding
 93-003215
 Gear Efficiency
 93-003957
 Management/Research--Lakes
 93-003061
 93-004240
 Population Studies
 93-003061
 93-004240
 Stock Assessment
 93-003061
 Trophic Relationships
 93-003215
 93-004240
Osmorus mordax dentex
 Osmoregulation
 93-002769
 Overwintering
 93-002769
 Thermoregulation
 93-002769
Osteobrama bhimensis
 Distribution/Geographical
 93-003366
 Morphometry
 93-003366
 New Species
 93-003366
Oxygaster bacilla
 Length-Weight Relationships
 93-003982
Pogonius erythrinus
 Artisanal Fisheries
 93-004273
Pogontheia bernacchi
 Host
 93-002034
 Histology
 93-002034
 Poptider
 93-002034
Pogontheia bronchrovinki
 Exercise
 93-002625
 Spleen
 93-002625
Pogonius auratus
 Food Technology
 93-004410
 Gonapodasmius williamsont
 93-003529
 Hermes
 93-002583
 Maturation
 93-002583
 Parasites/Diseases
 93-003629
 Steroids
 93-002583
 Trematodes
 93-003529
Pogonius major
 Age/Growth
 93-002664
 93-003206
 Bacterial Diseases
 93-003376

SYSTEMATIC INDEX

.CONTINUED

- Pagrus major*
 Culture/Propagation
 93-002345
 93-002364
 93-003374
 93-003376
 Diets
 93-002364
 Early Development
 93-002386
 Flexibacter
 93-003376
 Growth Hormone
 93-002564
 Invertebrate Forage
 93-002345
 93-002364
 Larvae
 93-002345
 93-002364
 93-003376
 Otoliths
 93-003086
 Parasites/Diseases
 93-003374
 93-003376
 93-003479
 Season
 93-003374
 Temperature
 93-003374
 Vitrfo
 93-003376
 Viral Diseases
 93-003376
 93-003479
Pagrus pagrus
 Culture/Propagation
 93-002345
 Invertebrate Forage
 93-002345
 Larvae
 93-002345
Parasitusutchi
 Air Breathing
 93-002499
 Early Development
 93-002499
 Swimbladder
 93-002499
Parablennius pilicornis
 Distribution/Vertical
 93-004290
 Management/Research--Marine
 93-004290
Parablennius pokinensis
 Biochemical Composition
 93-002567
 Bioenergetics
 93-002567
 Carcass Traits
 93-002567
Parachaenichthys chierotti
 Foods/Feeding
 93-003214
Parachaenichthys georgianus
 Distribution/Vertical
 93-003320
 Foods/Feeding
 93-003214
 Population Studies
 93-003320
Paralichthys
 Foods/Feeding
 93-003549
 Plastics
 93-003549
Paralichthys adsparsus
 Early Development
 93-002545
 Larval Identification
 93-002545
 Metamorphosis
 93-002545
 Morphometry
 93-002545
Paralichthys dentatus
 Age/Growth
 93-003060
 Foods/Feeding
 93-003060
 Habitat Selection
 93-003060
 Incidental Entrapment
 93-003921
 Interspecies Relationships
 93-003921
 Length Frequencies
 93-003994
 Management/Research--Estuaries
 93-003060
 93-004149
 Nets/Trawls
 93-003921
 Nursery Areas
 93-003060
 Stock Assessment
 93-004149
Paralichthys lethostigma
 Biological Monitoring
 93-003538
 Economic Value
 93-004336
 Exploitation Rates
 93-004336
 Groundfish
 93-004336
 Life History/General
 93-004155
 Management/Research--Estuaries
 93-003538
 93-004155
 Management/Research--Marine
 93-004136
 Pollution
 93-003538
 Population Studies
 93-004336
Paralichthys microps
 Early Development
 93-002545
 Larval Identification
 93-002545
 Metamorphosis
 93-002545
 Morphometry
 93-002545
Paralichthys olivaceus
 Albinism
 93-002517
 Anemia
 93-002672
 Bacterial Diseases
 93-003306
 Culture/Propagation
 93-003304
 93-003376
 Early Development
 93-002517
 93-003471
 Epidermal Lesions
 93-003471
 Epidermis
 93-002517

- .. CONTINUED ..
- Paralichthys olivaceus*
 Excretory System
 93-002672
 Flexibacter
 93-003376
 Larvae
 93-003376
 Larval Behavior
 93-003171
 Larval Drift
 93-003171
 Larval Growth
 93-003089
 Lunar Influences
 93-003171
 Management/Research--Marine
 93-004345
 Migration
 93-003171
 Mortality Rates
 93-004345
 Movements
 93-003171
 Nursery Areas
 93-003171
 Parasites/Diseases
 93-003374
 93-003376
 93-003471
 93-003479
 Population Studies
 93-004345
 Recruitment
 93-003809
 Season
 93-003374
 Starvation
 93-002672
 Stock Assessment
 93-004345
 Temperature
 93-003374
 Urea
 93-002672
 Variation Studies
 93-003809
 Vibrio
 93-003376
 Viral Diseases
 93-003376
 93-003471
 93-003479
Paraperca maritzi
 Dentition
 93-003345
 Distribution/Geographical
 93-003345
 Meristic Studies
 93-003345
 New Species
 93-003345
 Species Identification
 93-003345
Parapolyneus
 New Genus
 93-003355
Parapolyneus verskovi
 Distribution/Geographical
 93-003355
 Species Identification
 93-003355
 Taxonomy
 93-003355
Parawocetus brachypterus
 Abundance/Factors of
 93-004096
- .. CONTINUED ..
- Parawocetus brachypterus*
 Distribution/Factors of
 93-004096
 Management/Research--Marine
 93-004096
 Stock Assessment
 93-004096
Pelecus olintratus
 Foods/Feeding
 93-003210
 Lagoons
 93-003210
 Management/Research--Marine
 93-003210
Peprilus triacanthus
 Length Frequencies
 93-003900
Perca flavescens
 Acidification
 93-003616
 Aluminum
 93-003616
 Bird Predation
 93-002225
 93-003227
 93-003251
 Catch Per Unit Effort
 93-004017
 93-004039
 Commercial Fishing
 93-004015
 93-004018
 93-004039
 DNA
 93-002936
 Exotic Species
 93-004027
 Eysn
 93-002702
 Gear Efficiency
 93-003907
 Genomes
 93-002936
 Harvest
 93-004015
 Industrial Wastes
 93-003734
 Interspecies Relationships
 93-003227
 Limnology
 93-004146
 Lipid Content
 93-003734
 Management/Research--Lakes
 93-003616
 93-004017
 93-004018
 93-004027
 93-004039
 Management/Research--Reservoirs
 93-004146
 Post-impoundment Studies
 93-004146
 Recruitment
 93-003616
 Sperm
 93-002589
 Sport/Fishing
 93-004015
 93-004017
 Stock Assessment
 93-004015
 93-004017
 93-004018
 93-004027
 93-004039

SYSTEMATIC INDEX

- CONTINUED...
- Percia flavescens*
 Stocking/Introductions
 93-084027
 Ultraviolet Light
 93-082702
 Variation Studies
 93-082936
- Percia fluviatilis*
 Acidification
 93-082718
 93-083640
 Aluminum
 93-083640
 Beryllium
 93-083640
 Catch Per Unit Effort
 93-084141
 Culture/Propagation
 93-082354
 Distribution/Geographical
 93-083807
 Distribution/Vertical
 93-083807
 Early Development
 93-082718
 Fish Preservation
 93-084466
 Foods/Feeding
 93-083183
 93-083210
 Fright Behavior
 93-082953
 Gills
 93-082469
 93-082718
 93-083640
 Habitat Selection
 93-082953
 Histology
 93-082469
 Ice
 93-083807
 Invertebrate Forage
 93-082354
 Lagoons
 93-083210
 Larvae
 93-082354
 Management/Research--Lakes
 93-083807
 Management/Research--Marine
 93-083210
 Management/Research--Reservoirs
 93-084141
 Movements
 93-083807
 Nervous System
 93-082469
 Osmoregulation
 93-082718
 Population Studies
 93-082090
 Predator/Prey Relationships
 93-082953
 93-083183
 93-083186
 93-083208
 93-083238
- Percina phoxocephala*
 Distribution/Geographical
 93-083323
- Perlophthalma cantoniensis*
 Cardiovascular System
 93-082543
 Epidermis
 93-082543
- ...CONTINUED...
Perlophthalma cantoniensis
 Histology
 93-082543
 Terrestrial Behavior
 93-082543
- Petromyzon marinus*
 Age/Sex Relationships
 93-082759
 Barriers
 93-083871
 Brain
 93-082759
 93-082809
 Carbon Dioxide
 93-082619
 Endocrinology
 93-082574
 Estradiol
 93-082759
 Fish Control/Resoval
 93-083871
 Fishways
 93-083871
 Gonadotropins
 93-082678
 93-082759
 93-082899
 Hematology
 93-082619
 Hormones
 93-082574
 93-082678
 93-082759
 93-082809
 Interspecies Relationships
 93-084819
 Lagpry Control
 93-083871
 Lagpry Parasitism
 93-083108
 Life History/General
 93-083119
 Otoliths
 93-082496
 93-082772
 Oxygen
 93-082619
 Pineal Body
 93-082574
 Pituitary Gland
 93-082678
 Population Studies
 93-083110
 Predator/Prey Relationships
 93-082953
 Proteins
 93-082772
- Petromyzontidae*
 Commercial Fishing
 93-083894
 Clotrophysiology
 93-082840
 Nervous System
 93-082469
 93-082591
 93-082840
 Production
 93-083894
 Swimming Performance
 93-082591
 93-082840
- Pisiclopharus palpebratus*
 Bioluminescence
 93-082524
- Pisiclus phoxinus*
 Age/Sex Relationships
 93-082975

SYSTEMATIC INDEX

.. CONTINUED ..

Rhinichthys cataractae
 Agricultural Drainage
 93-08370
 Cytachrome P450
 93-08370
 Management/Research--Rivers and
 Streams
 93-084123
 Pesticides
 93-08370
 Vision
 93-082975

Rhinichthys obtusus
 Colonization
 93-08380
 Habitat Improvement/General
 93-08380
 Wetland Restoration
 93-08380

Rhinichthys promelas
 Arteries
 93-08378
 Bioaccumulation
 93-08373
 93-08370
Bothriocephalus schellognath
 93-08344
 Cadmium
 93-08384
 Calcium
 93-08385
 Cestodes
 93-08344
 Chlorinated Dibenzo-p-Dioxins
 93-08373
 Chlorophenols
 93-08349
 Chromium
 93-08324
 Colonization
 93-08380
 Copper
 93-08387
 93-08384
 Digestive System
 93-08285
 Dioxin
 93-08373
 DNA
 93-08387
 Gills
 93-08384
 Habitat Improvement/General
 93-08380
 Heavy Metals
 93-08285
 93-08387
 93-08384
 93-08385
 Lead
 93-08285
 Lipid Content
 93-08387
 Parasites/Diseases
 93-08344
 Pulp Mill Effluents
 93-08384
 93-08370
 RNA
 93-08387
 Swimming Performance
 93-08285
 Toxicity Testing
 93-08378
 93-08373
 Wetland Restoration
 93-08380

.. CONTINUED ..

Rhinichthys promelas
 Zinc
 93-08387
 93-08385

Platichthys flesus
 Arsenic
 93-08374
 Heavy Metals
 93-08374
 Management/Research--Rivers and
 Streams
 93-08374
 Mercury
 93-08374
 Pollution
 93-08374

Platichthys stellatus
 Hematology
 93-082675
 Taurine
 93-082675

Platycephalus bassensis
 Biosorption
 93-08351
 Chlorinated Hydrocarbons
 93-08351
 Heavy Metals
 93-08351
 Oil Pollution
 93-08351

Platycephalus caeruleopunctatus
 Bycatch
 93-08387
 Gear Selectivity
 93-08387
 Nets/Trawls
 93-08387

Plecoglossidae
 Commercial Fishing
 93-08384
 Production
 93-08384

Plecoglossus altivelis
 Cloning
 93-08289
 DNA
 93-08289

Plectropomus leopardus
 Commercial Fishing
 93-08286
 Management/Research--Marine
 93-08286
 Marine Reserves
 93-08286
 Pollution
 93-08286
 Reef Fish Communities
 93-08286

Pleuronectes antarcticus
 Management/Research--Marine
 93-083205
 Trophic Relationships
 93-083205

Pleuronectes azonus
 Storage Effects
 93-08377

Pleuronectes americanus
 Bycatch
 93-08384
 Cadmium Chloride
 93-08380
 Copper
 93-08384
 Distribution/Seasonal
 93-08389
 Early Development
 93-082584

SYSTEMATIC INDEX

- CONTINUED ..
- Pleuronectes americanus
 - Eggs
 - 93-002736
 - Escape Behavior
 - 93-002947
 - Exercise
 - 93-002631
 - Foods/Feeding
 - 93-003022
 - Hematology
 - 93-002631
 - Iron
 - 93-004354
 - Lactate
 - 93-002631
 - Larval Behavior
 - 93-003022
 - Latitude
 - 93-002600
 - Liver
 - 93-003680
 - Management/Research--Marine
 - 93-003840
 - Metabolism
 - 93-002631
 - Metallothionein
 - 93-003600
 - Movements
 - 93-003180
 - Musculature
 - 93-004354
 - Ovarium
 - 93-002947
 - Parental Behavior
 - 93-002584
 - Population Genetics
 - 93-002932
 - RNA
 - 93-003600
 - Spawning Migration
 - 93-003160
 - Storage Effects
 - 93-004354
 - Temperature
 - 93-002600
 - Thermal Tolerance
 - 93-002600
 - Thermoregulation
 - 93-002600
 - Variation Studies
 - 93-002584
 - Vitellogenin
 - 93-002736
 - Pleuronectes asper
 - Oil Pollution
 - 93-003647
 - Pleuronectes ferrugineus
 - Abundance/Factors of
 - 93-003284
 - Age/Growth
 - 93-003284
 - Bycatch
 - 93-003840
 - Distribution/Vertical
 - 93-003164
 - Gear Selectivity
 - 93-003529
 - Groundfish
 - 93-003529
 - Larval Behavior
 - 93-003164
 - Larval Drift
 - 93-003164
 - Management/Research--Marine
 - 93-003164
 - 93-003840
 - CONTINUED
 - Pleuronectes ferrugineus
 - Management/Research--Marine
 - 93-003920
 - Nets/Trawls
 - 93-003920
 - Sampling
 - 93-003920
 - Spawning Migration
 - 93-003164
 - Pleuronectes platessa
 - Age/Growth
 - 93-002881
 - 93-003269
 - 93-003272
 - 93-003282
 - Biological Tags
 - 93-002567
 - Competition
 - 93-004307
 - Currents
 - 93-003295
 - Distribution/Geographical
 - 93-003295
 - DNA
 - 93-002801
 - Early Development
 - 93-002943
 - 93-003202
 - 93-003272
 - Egg Composition
 - 93-002801
 - Egg Survival
 - 93-003062
 - Embryology
 - 93-002801
 - Eyes
 - 93-002943
 - Fecundity
 - 93-003002
 - Foods/Feeding
 - 93-003188
 - 93-003282
 - 93-004387
 - Forecasting
 - 93-003948
 - Interspecies Relationships
 - 93-003367
 - Larval Drift
 - 93-003295
 - Light
 - 93-003272
 - Management/Research--Marine
 - 93-003202
 - 93-003048
 - 93-004307
 - 93-004323
 - Markings/Tagging
 - 93-002567
 - 93-004425
 - 93-004450
 - Migration
 - 93-004450
 - Nursery Areas
 - 93-003295
 - 93-004387
 - Otoliths
 - 93-002567
 - 93-003269
 - 93-003272
 - 93-003282
 - Population Studies
 - 93-003062
 - Recruitment
 - 93-003948
 - 93-004323
 - RNA
 - 93-002801

SYSTEMATIC INDEX

- CONTINUED
- Pleurosetes platessa*
 Salinity 93-003272
 Season 93-003269
 Temperature 93-003272
 Tides 93-003295
 Variation Studies 93-003269
 Vision 93-002943
 93-003100
 Year Class Strength 93-003202
 93-004323
- Pleurosetes quadrifurcatus*
 Age/Sex Relationships 93-003106
 Management/Research--Marine 93-003106
 Sex Ratios 93-003106
 Stock Assessment 93-003106
- Pleurosetes vetulus*
 Management/Research--Estuaries 93-004152
 Migration 93-004152
 Nursery Areas 93-004152
- Pleurosetidae*
 Body Form 93-002913
 Egg Size 93-002913
 Vertebral Counts 93-002913
- Pleurosetiformes*
 Abnormalities 93-002737
 Age/Growth 93-003117
 Coloration 93-002737
 Copper 93-002737
 Evolution 93-003117
 Heavy Metals 93-002737
 Iron 93-002737
 Management/Research--Marine 93-004326
 Naturalization 93-003117
 Nets/Trawls 93-004326
 Stock Assessment 93-004326
 Zinc 93-002737
- Pleuroichthys conatus*
 Distribution/Factors of 93-003249
 Foods/Feeding 93-003249
 93-003250
 Variation Studies 93-003249
- Pneumatophorus japonicus*
 Foods/Feeding 93-003250
- Pocillia formosa*
 Sex Reversal 93-003013
 Unisex Populations 93-003013
- Pocillia latipinna*
 Age/Growth 93-002528
 93-002721
 Condition Factors 93-002721
 Latitude 93-002528
 Overwintering 93-002721
 Polymorphism 93-002932
 Population Genetics 93-002528
 93-002932
 Sex Reversal 93-003013
 Unisex Populations 93-003013
 Variation Studies 93-002528
- Pocillia mexicana*
 Sex Reversal 93-003013
 Unisex Populations 93-003013
- Pocillia reticulata*
 Achiya 93-003302
 Age/Growth 93-003302
 Anesthetics 93-002820
 Bioluminescence 93-003610
 Chlorinated Benzenes 93-003728
 Chromosomes 93-002921
 Courtship 93-003010
 DNA 93-002921
 Dwarfism 93-002892
 Genetic Strains 93-002892
 Immune Response 93-003302
 Light 93-002920
 93-003010
 Mate Selection 93-003010
 Metabolic Rates 93-002820
 Organophosphates 93-003610
 Parasites/Diseases 93-003302
 Pesticides 93-003610
 Radiation 93-003302
 Sepsis 93-003302
 Sex Determination 93-002921
 Spawning 93-003010
 Temperature 93-002820

SYSTEMATIC INDEX

- CONTINUED -

- Poecilia reticulata*
Toxicity Testing
93-003610
93-003720
Trichodina nobililis
93-003382
- Poecilia sphenops*
Chromosomes
93-002921
DNA
93-002921
Sex Determination
93-002921
- Poecilia volifera*
Chromosomes
93-002921
DNA
93-002921
Sex Determination
93-002921
- Poeciliopsis lucida*
Hybridization
93-002788
93-002886
Inbreeding
93-002886
Liver
93-002780
Mate Selection
93-002805
Metabolism
93-002805
Temperature
93-002805
Temperature Selection
93-002886
Thermal Tolerance
93-002780
- Poeciliopsis mosocha*
Desalting
93-002940
Hybridization
93-002780
93-002886
Inbreeding
93-002886
Liver
93-002780
Mate Selection
93-002886
Metabolism
93-002805
Population Genetics
93-002940
Stress
93-002940
Temperature
93-002886
Temperature Selection
93-002886
Thermal Tolerance
93-002780
- Poecilogsetia nemanii*
Distribution/Geographical
93-003356
Meristic Studies
93-003356
New Species
93-003356
- Pogonias cromis*
Biological Monitoring
93-003530
Life History/General
93-004155

- CONTINUED -

- Pogonias cromis*
Management/Research--Estuaries
93-003530
93-004155
Management/Research--Marine
93-004245
Pollution
93-003530
Population Studies
93-004245
Regulations/Fishing Gear
93-004245
- Pogonichthys macrolepidotus*
Distribution/Geographical
93-003384
- Pollachius pollachius*
Distribution/Geographical
93-003305
Foods/Feeding
93-003194
Habitat Selection
93-003305
- Pollachius virens*
Abundance/Factors of
93-003888
Currents
93-003888
Distribution/Geographical
93-003888
93-003305
Early Development
93-003888
Food Technology
93-004382
Habitat Selection
93-003305
Marking/Tagging
93-002965
93-004468
Morphometry
93-002486
Movements
93-002965
93-004468
Stoliths
93-002486
Temperature
93-003308
Year Class Strength
93-003008
- Polydactylus penicillatus*
Management/Research--Marine
93-004257
- Polyodon ides*
Fish Lists/Keys
93-003365
- Polyodon variegatus*
Taxonomy
93-003365
- Polyodon spathula*
Culture/Propagation
93-002312
93-002373
Feeding Experiments
93-002373
Foods
93-002373
Fingerling Production
93-002373
Pond Culture
93-002312
Production
93-002312
- Pomacanthidae*
Parasites/Diseases
93-003689

- .. CONTINUED
- Pomacanthidae*
Tumors
93-003489
- Pomacentrus imperator*
Sexual Dimorphism
93-002474
- Pomacentridae*
Colonization
93-002957
- Eyes
93-002720
- Pigments
93-002720
- Symbiosis
93-002557
- Ultraviolet Light
93-002720
- Pomacentrus fuscus*
Aggressive Behavior
93-002998
- Pomacentrus partitus*
Age/Sex Relationships
93-003076
- Aggressive Behavior
93-002998
- Coral Reefs
93-003076
- Courtship
93-003135
- Early Development
93-003076
- Egg Survival
93-003135
- Mate Selection
93-003135
- Nests/Resting
93-003135
- Recruitment
93-003076
- Spawning
93-003135
- Survival
93-003135
- Pomacentrus planifrons*
Aggressive Behavior
93-002998
- Coral Reefs
93-002991
- Habitat Selection
93-002991
- Management/Research--Barine
93-002991
- Microhabitat
93-002991
- Pomacentrus variabilis*
Aggressive Behavior
93-002998
- Pomatomus saltatrix*
Distribution/Geographical
93-003062
- Length Frequencies
93-002990
- Management/Research--Estuaries
93-004149
- Population Studies
93-003062
- Spawning
93-003062
- Stock Assessment
93-004149
- Pomatoschistus microps*
Gonosomatic Index
93-003115
- Lagoons
93-003115
- Nursery Areas
93-003115
- .. CONTINUED
- Pomatoschistus microps*
Reproduction
93-003115
- Pomatoschistus minutus*
Abundance/Seasonal
93-003177
- Foods/Feeding
93-003177
- Pomoxis*
Bird Predation
93-003216
- Limnology
93-004146
- Management/Research--Reservoirs
93-004146
- Post-Recruitment Studies
93-004146
- Pomoxis annularis*
Early Development
93-002883
- Gene Expression
93-002883
- Hybridization
93-002883
- Reproduction
93-002883
- Pomoxis nigromaculatus*
Acidification
93-002710
- 93-003616
- Albinism
93-003616
- Early Development
93-002710
- 93-002883
- Gene Expression
93-002883
- Gills
93-002710
- Hybridization
93-002883
- Leeches
93-003515
- Management/Research--Lakes
93-003616
- Osmoregulation
93-002710
- Parasites/Diseases
93-002515
- Piscicolaria reducta*
93-003515
- Recruitment
93-003616
- Reproduction
93-002883
- Porichthys notatus*
Balls
93-002563
- Sexual Dimorphism
93-002563
- Sound Production
93-002563
- Spawning
93-002563
- Variation Studies
93-002563
- Posidonichthys*
New Genus
93-003350
- Posidonichthys hutchinsti*
Distribution/Geographical
93-003350
- New Species
93-003350
- Species Identification
93-003350

SYSTEMATIC INDEX

- Prigitchthys atractus*
 Competition
 93-002950
 Interspecific Relationships
 93-002950
Prionace glauca
 Coronary Lesions
 93-003488
 Parasites/Diseases
 93-003408
Prochilodus affinis
 Foods/Feeding
 93-002503
 Mouth Parts
 93-002503
 Pharynx
 93-002503
Prochilodus nanaquavi
 Foods/Feeding
 93-002503
 Mouth Parts
 93-002503
 Pharynx
 93-002503
Prochilodus nigricans
 Oviposition
 93-003594
 Commercial Fishing
 93-003594
 Mercury
 93-003594
Prochilodus reticulatus
 Subsistence Fishing
 93-003030
Pregnathodes aculeatus
 Abundance/Factors of
 93-004104
 Habitat Selection
 93-004104
Protopium
 Management/Research--Lakes
 93-004020
 Stock Assessment
 93-004020
Protopium cylindraceum
 Acidification
 93-004045
 Management/Research--Lakes
 93-004045
 Variation Studies
 93-002086
Protopterus annectans
 Brain
 93-002035
 Hormones
 93-002035
 Nervous System
 93-002035
 Variation Studies
 93-002035
Psetta maculata
 Fatty Acids
 93-002608
 Lipid Composition
 93-002600
 Sperm
 93-002600
Pseudophritis
 Evolution
 93-003347
 Taxonomy
 93-003347
Pseudocheneis sulcatus
 Adhesive Discs
 93-002521
Pseudobalistes fuscus
 Aquariums
 93-002300

CONTINUED

- Pseudobalistes fuscus*
 Culture/Propagation
 93-002300
Pseudocaranx dentex
 Art Studies
 93-003472
Calligus longipedia
 93-003510
 Diagnostic Techniques
 93-003462
 Immune Response
 93-003472
 Nervous Necrosis Virus
 93-003462
 Parasites/Diseases
 93-003462
 93-003472
 93-003510
 Parasitic Copepods
 93-003510
 Viral Diseases
 93-003462
 93-003472
 Viral Nervous Necrosis
 93-003472
Pseudochannaichthys georgiana
 Commercial Fishing
 93-004317
 Distribution/Vertical
 93-003320
 Management/Research--Marine
 93-004317
 Population Studies
 93-003320
 Stock Assessment
 93-004317
Pseudochromis reticulatus
 Morphology
 93-002397
 New Species
 93-002397
Pseudopontacurus wheeleri
 Population Genetics
 93-002016
 Seasons
 93-002016
 Stock Assessment
 93-002016
Pseudoclinemus polyactis
 Age/Growth
 93-003111
 Biomass
 93-004344
 Foods/Feeding
 93-002350
 Harvest
 93-004344
 Management/Research--Marine
 93-003111
 93-004344
 Population Studies
 93-003111
 Recruitment
 93-004344
 Survival
 93-003111
Pseudotrichopterus xantholaema
 Distribution/Geographical
 93-003305
 New Species
 93-003305
 Osteology
 93-003305
Pseudotropheus zebra
 Evolution
 93-002019

- ..CONTINUED..
- Pseudotropheus zebra*
 Foods/Feeding
 93-002919
 Hybridization
 93-002919
 Jaws
 93-002919
 Population Genetics
 93-002919
 Speciation
 93-002919
Psilodroca breviceps
 Fecundity
 93-003047
 Foods/Feeding
 93-003047
 Length-Weight Relationships
 93-003047
 Life History/General
 93-003047
Psilotris kaufmani
 New Species
 93-003159
 Species Identification
 93-003159
Ptychocheilus oregonensis
 Light
 93-003198
 Predator/Prey Relationships
 93-003198
Pungitius pungitius
 Enzymes
 93-002870
 Gonads
 93-002699
 Histology
 93-002485
 Lactate Dehydrogenase
 93-002870
 Olfaction
 93-002485
 Sperm
 93-002699
 Variation Studies
 93-002699
Puntazzo puntazzo
 Culture/Propagation
 93-002345
 Invertebrate Forage
 93-002345
 Larvae
 93-002345
Puntius coschoniensis
 Age/Sex Relationships
 93-002653
 Aldicarb
 93-003627
 Endosulfan
 93-003627
 Pesticides
 93-003627
 Phosphoriden
 93-003627
 Pigments
 93-002653
 Temperature
 93-002653
Puntius elongatus
 Otolargenin
 93-003685
 Mortality Factors
 93-003685
Radiolinus
 Evolution
 93-003231
 Foods/Feeding
 93-003231
- Raja*
 Fish Lists/Keys
 93-003348
 Fish Processing
 93-004422
 Storage Effects
 93-004422
Raja batia
 Species Identification
 93-003348
Raja brachyura
 Fins
 93-002484
 Species Identification
 93-003348
 Swimming Performance
 93-002484
Raja clavata
 Fins
 93-002484
 Species Identification
 93-003348
 Swimming Performance
 93-002484
Raja erinacea
 Embryology
 93-002681
 Marking/Tagging
 93-002508
 Nitrogen
 93-002601
 Osteology
 93-002508
 Temperature
 93-002508
 Urea
 93-002681
Raja fullonica
 Species Identification
 93-003348
Raja microcellata
 Fins
 93-002484
 Swimming Performance
 93-002484
Raja montagu
 Fins
 93-002484
 Species Identification
 93-003348
 Swimming Performance
 93-002484
Raja roxus
 Fins
 93-002484
 Species Identification
 93-003348
 Swimming Performance
 93-002484
Raja nasus
 Coronary Lesions
 93-003488
 Parasites/Diseases
 93-003488
Raja radiata
 Gear Selectivity
 93-003929
 Management/Research-Marine
 93-003929
 Nets/Trawls
 93-003929
 Sampling
 93-003929
Rastbora derioceus
 Enzymes
 93-003088

SYSTEMATIC INDEX

...CONTINUED...

- Rasbora daniconius*
 Insecticides
 93-003685
 Malathion
 93-003685
- Rhinichthys hypoglossoides*
 Acanthocephala
 93-003381
 Age/Growth
 93-002491
 93-002492
 93-002509
 Cestodes
 93-003381
 Distribution/Geographical
 93-003307
 Early Development
 93-003307
 Foods/Feeding
 93-003307
 Larval Growth
 93-003307
 Length-Weight Relationships
 93-002491
 93-002492
 Meristic Studies
 93-002492
 Morphometry
 93-002491
 93-002492
 93-002509
 Nematodes
 93-003381
 Parasites/Diseases
 93-002909
 93-003381
 Parasitic Copepods
 93-003381
 Parasitic Tagging
 93-002509
 Protozoan Diseases
 93-003381
 Stock Identification
 93-002909
 Trematodes
 93-003381
 Variation Studies
 93-002909
- Retropinna retropinna*
 Marking/Tagging
 93-004454
 Migration
 93-004454
 Movements
 93-004454
 Otoliths
 93-004454
- Rhoadia sapo*
 Chromosomes
 93-002937
 Karyotypes
 93-002937
 Polymorphism
 93-002937
 Variation Studies
 93-002937
- Rhinecentrus aculeatus*
 Aquariums
 93-002398
 Culture/Propagation
 93-002398
- Rhinecentrus rectangulus*
 Aquariums
 93-002398
 Culture/Propagation
 93-002398
- Rhinichthys atratulus*
 Nests/Nesting
 93-003011
 Spawning
 93-003011
- Rhinichthys cobitis*
 Habitat Selection
 93-004115
 Microhabitat
 93-004115
- Rhinichthys osculus*
 Habitat Selection
 93-004115
 Microhabitat
 93-004115
- Rhinichthys osculus robustus*
 Management/Research--Rivers and Streams
 93-004125
 Population Studies
 93-004125
- Rhinochanna*
 Taxonomy
 93-003353
- Rhinoptera bonasus*
 Fins
 93-002481
 Swimming Performance
 93-002481
- Rhizogobion bonario*
 Catch Per Unit Effort
 93-003057
- Rhodeus ocellatus ocellatus*
 Hematology
 93-003722
 Mutagens
 93-003722
 Techniques
 93-003722
- Rhombogobio lapirina*
 Food Supply
 93-003236
 Foods/Feeding
 93-003236
 Habitat Selection
 93-003236
 Nursery Areas
 93-003236
- Richardsonius balteatus*
 Foods/Feeding
 93-003025
 Hybridization
 93-003025
 Life History/General
 93-003025
- Richardsonius egragrus*
 Management/Research--Rivers and Streams
 93-004125
 Population Studies
 93-004125
- Ribeirocarrina noronai*
 Aquariums
 93-002100
 Culture/Propagation
 93-002100
 Reproduction
 93-002100
- Ribeirocarrina noronatus*
 Gonads -
 93-002522
 Hermaphroditism
 93-002522
 Histology
 93-002522
- Rutilus rutilus*
 Acidification
 93-003640

- ..CONTINUED..
- Rutilus rutilus*
 Age/Growth
 93-00266
 93-00271
 Agricultural Drainage
 93-00370
 Aluminum
 93-00360
 Beryllium
 93-00360
 Catch Per Unit Effort
 93-00400
 93-00414
 Cytochrome P450
 93-00370
 Distribution/Geographical
 93-00360
 Distribution/Vertical
 93-00387
 Electrophysiology
 93-00266
 Eyes
 93-00266
 Feeds/Feeding
 93-00325
 Flight Behavior
 93-00293
 Gills
 93-00360
 Habitat Selection
 93-00293
 Hybridization
 93-00293
 Ice
 93-00307
 Management/Research--Lakes
 93-00400
 93-00400
 Management/Research--Reservoirs
 93-00371
 93-00414
 Meristic Studies
 93-00293
 Metabolism
 93-00275
 Movements
 93-00360
 Myxidium
 93-00349
 Myxidium pfeifferi
 93-00340
 Myxidium rhodii
 93-00340
 Myxobolus
 93-00349
 Parasites/Diseases
 93-00349
 93-00340
 93-00340
 Pesticides
 93-00370
 Photoperiodism
 93-00266
 Post-impoundment Studies
 93-00326
 Predator/Prey Relationships
 93-00293
 93-00326
 Protozoan Diseases
 93-00349
 93-00340
 Sampling
 93-00400
 Starvation
 93-00275
 Stock Assessment
 93-00400
- CONTINUED.
- Rutilus rutilus*
 Stocking/Introductions
 93-00400
 Stress
 93-00275
 Trophic Relationships
 93-00400
- Salmo*
 DNA
 93-00292
 Evolution
 93-00292
- Salmo namaycush*
 Ecological Analysis
 93-00400
 Management/Research--Rivers and Streams
 93-00400
 Stock Assessment
 93-00400
- Salmo salar*
 Abundance/Factors of
 93-00310
 93-00400
 Acidification
 93-00272
 93-00382
 93-00400
 Activity Patterns
 93-00290
 Aeromonas salmonicida
 93-00290
 93-00397
 93-00399
 93-00340
 93-00342
 Age/Growth
 93-00304
 93-00309
 93-00385
 93-00312
 93-00322
 93-00327
 93-00309
 Age/Sex Relationships
 93-00310
 Ammonia
 93-00372
 Anemia
 93-00311
 Antibodies
 93-00319
 Bacterial Diseases
 93-00290
 93-00387
 93-00390
 93-00387
 93-00309
 93-00310
 93-00317
 93-00340
 93-00342
 93-00342
 Bacterial Kidney Disease
 93-00390
 93-00342
 Biochemical Composition
 93-00275
 Biomass
 93-00300
 Bird Predation
 93-00220
 93-00254
 93-00317
 93-00341
 Brood Stock
 93-00290

SYSTEMATIC INDEX

. CONTINUED .

Salmo salar
 Cage Culture
 93-002229
 93-003454
 93-003502
 93-004442
 Calcium
 93-003712
 Calligus elongatus
 93-003519
 Cardiovascular System
 93-004446
 93-004447
 Cloning
 93-002806
 Coexistence
 93-003132
 Collagen
 93-002804
 Competition
 93-003015
 Condition Factors
 93-002264
 Cortisol
 93-002836
 93-003511
 Crepidostomus bartonici
 93-003493
 Crepidostomus morescens
 93-003493
 Culture/Propagation
 93-002229
 93-002234
 93-002248
 93-002254
 93-002255
 93-002260
 93-002261
 93-002264
 93-002267
 93-002352
 93-002812
 93-002904
 93-003015
 93-003454
 93-003502
 93-003562
 93-003602
 93-003909
 93-004442
 Diagnostic Techniques
 93-003417
 Digestive System
 93-002836
 Disease Susceptibility
 93-002934
 93-003397
 93-003501
 Distribution/Geographical
 93-003334
 DNA
 93-002986
 Decline
 93-003054
 Early Development
 93-002812
 93-002836
 93-002949
 93-003054
 Ectoparasites
 93-002964
 Egg Composition
 93-002811
 Egg Quality
 93-002811
 Egg Survival
 93-002267

. CONTINUED .

Salmo salar
 Embryology
 93-002722
 Environmental Impacts
 93-003090
 Feeding Experiments
 93-002352
 93-003015
 Feeds
 93-002562
 Fins
 93-002264
 93-003501
 Fish Counters
 93-004433
 Fish Hatchery Effluents
 93-002352
 93-002562
 Fish Kills
 93-002602
 Fish Passage
 93-004433
 Fire Regimes
 93-004008
 Foods/Feeding
 93-003015
 93-003039
 Fry Stocking
 93-002964
 93-003802
 Genetic Strains
 93-002778
 Genetics
 93-002895
 Gills
 93-003501
 Habitat Improvement/General
 93-003132
 93-004008
 Habitat Selection
 93-002944
 Harvest
 93-003006
 93-004604
 Hatchery Releases
 93-002234
 93-002264
 Hatchery/Wild Populations
 93-003137
 Hatching
 93-003054
 Heart
 93-004446
 93-004447
 Hibernations
 93-003493
 Hematology
 93-002714
 Icosantra salmonis
 93-003454
 Inbreeding/Handling Stress
 93-003173
 Hormones
 93-002866
 Hydroelectric Developments
 93-004008
 Immune Response
 93-002895
 93-002934
 93-003307
 93-003307
 93-003410
 93-003420
 Immunization
 93-003510
 Induced Smoltification
 93-002261

SYSTEMATIC INDEX

CONTINUED...

Salmo salar
 Ion Transport
 93-002722
 Lactate
 93-003511
 Landlocked Populations
 93-002778
 Larval Behavior
 93-002564
 Leaping Behavior
 93-002564
 Leptospira salmonis
 93-003501
 93-003502
 93-003519
 Life History/General
 93-001052
 93-003006
 Mammal Predation
 93-003210
 Management/Research--Estuaries
 93-003000
 93-003006
 93-003030
 Management/Research--Lakes
 93-004045
 Management/Research--Rivers and
 Streams
 93-002944
 93-003030
 93-003091
 93-003132
 93-003090
 93-004064
 93-004038
 Marking/Tagging
 93-002501
 93-003000
 93-003006
 93-003136
 93-003173
 93-004442
 93-004446
 93-004447
 Maturation
 93-002510
 93-003015
 93-003034
 93-003142
 93-003143
 Melano-macrophages
 93-003387
 Migration
 93-003000
 93-003030
 93-003054
 Mitochondria
 93-002906
 Modeling
 93-003052
 Movements
 93-003000
 93-003006
 93-003030
 93-003173
 Nests/Nesting
 93-003132
 93-003137
 Net-Pen Culture
 93-002254
 93-002964
 93-003015
 Nursery Areas
 93-003000
 93-003030
 Ocean Ranching
 93-002234

CONTINUED

Salmo salar
 Ocean Ranching
 93-002255
 Parasites/Diseases
 93-002934
 93-003380
 93-003383
 93-003397
 93-003409
 93-003410
 93-003417
 93-003420
 93-003423
 93-003427
 93-003454
 93-003493
 93-003501
 93-003502
 93-003511
 93-003519
 Parasitic Behavior
 93-002964
 Parasitic Copepods
 93-002564
 93-003501
 93-003502
 93-003519
 Parr-Smolt Transformation
 93-002510
 93-003262
 93-003270
 Phagocytosis
 93-003387
 Phosiderus
 93-003562
 Photoperiodism
 93-002261
 93-002510
 93-003012
 93-005042
 Polymorphism
 93-002013
 Population Genetics
 93-002503
 93-002506
 Population Studies
 93-003091
 Predator/Prey Relationships
 93-002940
 Production
 93-002240
 93-002255
 93-002260
 Protein Metabolism
 93-002804
 Proteins
 93-002714
 Protozoan Diseases
 93-003454
 Rearing Density
 93-002264
 Recolonizing
 93-003034
 Regulations/Catch and Release
 93-003173
 Renibacterium salmoninarum
 93-003387
 93-003397
 93-003417
 Salinity
 93-002012
 93-003423
 Season
 93-003006
 93-003270
 Sexual Precocity
 93-003149

SYSTEMATIC INDEX

CONTINUED...

Salmo salar
Sodium
93-002722
93-003712
Spawning
93-002603
93-002601
93-003132
93-003136
93-003137
Spawning Cycle Regulation
93-002767
Spawning Migration
93-002865
93-002981
93-003066
93-003034
93-003086
93-003136
93-004647
Sportfishing
93-003086
Stock Assessment
93-003086
93-003090
Stocking Density
93-002944
Stocking/Introductions
93-002734
93-002944
93-003002
Stress
93-003307
Sulfides
93-003602
Supplemental Stocking
93-003882
93-003890
93-004964
Survival
93-002234
93-002340
93-002354
93-002012
93-002949
93-003054
93-003173
93-003002
93-003030
Swimming Performance
93-002901
Telemetry
93-004442
Temperature
93-002261
93-002264
93-002267
93-003262
93-003410
Territorial Behavior
93-002949
Testosterone
93-002011
Thyroid Gland
93-002965
Vaccination
93-002944
93-003409
93-003410
93-003420
Variation Studies
93-002248
93-002770
93-002903
93-002906
93-003052

CONTINUED ..

Salmo salar
Variation Studies
93-003086
Vibrio salmonicida
93-003397
93-003410
Weirs
93-003132
93-004433
Water
93-003149
Salmo salar gaussoni
Acidification
93-002661
Aluminum
93-002661
Early Development
93-002661
Stress
93-002661
Trace Metals
93-002661
Salmo trutta
Abundance/Factors of
93-003965
93-004071
93-004079
Age/Growth
93-003158
93-003965
Bacteria
93-003541
Osmosis
93-003091
Biosorption
93-003635
Bird Predation
93-002250
Coexistence
93-002966
93-003132
Crepidostomus farionis
93-003493
Crepidostomus molleus
93-003493
Culture/Propagation
93-002237
93-002259
93-003541
Dams
93-003032
Distribution/Geographical
93-003204
Distribution/Vertical
93-002970
Disturbances
93-003943
93-003030
Early Development
93-003291
Economic Value
93-003294
Egg Size
93-002237
93-003291
Egg Survival
93-003343
93-003030
Eggs
93-002052
Embryology
93-002052
Escapement
93-003032
Evolution
93-003026

SYSTEMATIC INDEX

. CONTINUED .

Salmo trutta
 Evolution
 93-003294
 Exotic Species
 93-003070
 Extinction
 93-003678
 Fecundity
 93-002237
 93-003051
 Fish Hatchery Effluents
 93-003541
 Fish Passage
 93-003161
 Flow Regimes
 93-003220
 93-004079
 Foods/Feeding
 93-002966
 93-002570
 93-003229
 93-004135
 Genetic Diversity
 93-002898
 Gills
 93-003597
 Habitat Evaluation
 93-003167
 93-004135
 Habitat Improvement/General
 93-004135
 Habitat Selection
 93-002970
 93-003158
 93-003167
 93-004081
 Harvest
 93-004084
 Hatchling
 93-003251
 Heated Water
 93-002237
 Helminths
 93-003493
 Herpetology
 93-002732
 Instream Flow
 93-003665
 Interspecies Relationships
 93-002966
 Kidneys
 93-003597
 Large Organic Debris
 93-004135
 Larval Behavior
 93-002962
 93-002973
 Laws/Law Enforcement
 93-003798
 Life History/General
 93-003026
 93-003032
 93-003035
 Liver
 93-003597
 Magnetic Fields
 93-002852
 93-002962
 Mammal Predation
 93-003218
 Management/Research--General
 93-003026
 93-003775
 93-003788
 93-003798
 Management/Research--Lakes
 93-003832

.CONTINUED...

Salmo trutta
 Management/Research--Marine
 93-002959
 Management/Research--Reservoirs
 93-002970
 Management/Research--Rivers and
 Streams
 93-002959
 93-002966
 93-003032
 93-003091
 93-003167
 93-003229
 93-003254
 93-003932
 93-003965
 93-004054
 93-004071
 93-004079
 93-004081
 93-004125
 93-004135
 Maturation
 93-003035
 93-003951
 Microhabitat
 93-002966
 93-004081
 93-004135
 Migration
 93-002959
 93-003158
 93-003161
 93-003932
 Mortality Factors
 93-002250
 93-003343
 93-003830
 Mortality Rates
 93-003343
 Movements
 93-003167
 Natural Selection
 93-003161
 Osmoregulation
 93-002892
 Overwintering
 93-003167
 Parasites/Diseases
 93-003493
 Parr--Smolt Transformation
 93-003835
 Pollution
 93-003535
 Polychlorinated Biphenyls
 93-003535
 93-003679
 Population Genetics
 93-002898
 93-003026
 93-003051
 93-003078
 93-003091
 93-003071
 93-004071
 93-004125
 Predator/Prey Relationships
 93-002507
 Public Health Problems
 93-003535
 Recirculating Systems
 93-002237
 Recreational Activities
 93-003343

SYSTEMATIC INDEX

CONTINUED -
Salmo trutta
 Recreational Activities
 93-003830
 Regulations/Catch and Release
 93-003775
 Regulations/General
 93-003826
 93-003790
 Regulations/Size Limits
 93-003775
 93-003790
 Reproductive Cycle
 93-002958
 Respiration
 93-002962
 Sewage Effluents
 93-003507
 Sex Ratios
 93-003005
 Social Behavior
 93-002973
 93-003005
 Spawning
 93-003051
 Spawning Migration
 93-003161
 Sportfishing
 93-003204
 93-003535
 93-003775
 Stocking/Introductions
 93-003132
 93-003150
 93-003070
 Stress
 93-002732
 Substrate Composition
 93-002970
 Supplemental Stocking
 93-004064
 Survival
 93-003150
 93-003070
 Temperature
 93-002237
 93-003070
 Territorial Behavior
 93-002973
 Trophic Relationships
 93-002956
 Variation Studies
 93-002090
 93-003163
 Weirs
 93-003132
Salmo trutta fario
 Age/Growth
 93-003259
 Exotic Species
 93-004063
 Glucose
 93-002730
 Insulin
 93-002730
 Management/Research--Rivers and
 Streams
 93-004123
 Nutrition
 93-002730
Salmonidae
Aeromonas salmonicida
 93-003380
 93-003433
 Alpine Lakes
 93-004136
 Alpine Streams
 93-004136

CONTINUED...
Salmonidae
 Aluminum
 93-003630
 Antibiotics
 93-002690
 Antibodies
 93-003476
 Artificial Spawning Beds
 93-003011
 Bacterial Diseases
 93-003380
 93-003433
 Bacterial Flora
 93-002690
 Bird Predation
 93-003228
 93-003795
 Cage Culture
 93-003795
Ceratomyxa shasta
 93-003441
 Commercial Fishing
 93-003746
 93-003804
 93-004215
 93-004246
 Culture/Propagation
 93-002204
 93-002236
 93-002245
 93-002257
 93-002262
 93-002265
 93-002268
 93-002441
 93-003220
 93-003761
 93-003765
 93-004215
 93-004380
 Dams
 93-003023
 Diadromy
 93-003960
 Diagnostic Techniques
 93-003478
 Digestive System
 93-002690
 Disease Control
 93-003372
 Disease Importation
 93-003372
 Draxdowns
 93-003823
 Early Development
 93-002753
 93-003630
 Economic Value
 93-002245
 93-002257
 93-003746
 93-004215
 Economics
 93-002204
 Environmental Impacts
 93-002236
 Escapement
 93-004464
 Eyes
 93-002640
 93-002685
 Fish Behavior
 93-004464
 Fish Hatchery Effluents
 93-002236
 Fish Passage
 93-003761

...CONTINUED.

Salmonidae
 Fish Passage
 93-003023
 93-003071
 Fish Sticks
 93-004387
 93-004390
 Fishways
 93-003761
 93-003871
 Flow Regimes
 93-003823
 Forestry Practices
 93-004130
 Genetics
 93-002236
 Gonadotropin
 93-002859
 Habitat Evaluation
 93-003811
 93-004136
 Habitat Improvement/General
 93-003761
 93-004072
 Harvest
 93-003746
 93-003795
 93-004215
 93-004296
 Hatchery Releases
 93-002262
 Heart
 93-002821
 Hormones
 93-002859
 Hydroelectric Developments
 93-003823
 93-004464
 Immune Response
 93-003476
 Incubators
 93-002441
 Infectious Hematopoietic
 Necrosis
 93-003470
 Interspecies Relationships
 93-004019
 Larvae
 93-003970
 Laws/Law Enforcement
 93-003746
 Life History/General
 93-002260
 93-003569
 Liver
 93-002851
 Management/Research--General
 93-003790
 93-003795
 93-004432
 Management/Research--Lakes
 93-004042
 93-004136
 Management/Research--Marine
 93-004215
 Management/Research--Rivers and
 Streams
 93-003811
 93-003970
 93-004072
 93-004080
 93-004136
 93-004464
 Marketing
 93-002245
 93-004215

CONTINUED

Salmonidae
 Marking/Tagging
 93-004432
 Migration
 93-004042
 Mitigation
 93-003823
 Movements
 93-004432
 Ocean Ranching
 93-002262
 Oxygen
 93-002441
 Parasites/Diseases
 93-002236
 93-002260
 93-003372
 93-003309
 93-003433
 93-003441
 93-003476
 93-003478
 93-003479
 Planning
 93-002257
 93-002265
 93-004072
 93-004246
 Predator Control
 93-003200
 Primary Production
 93-004042
 Production
 93-002204
 93-002265
 93-003094
 93-004215
 Protozoan Diseases
 93-003441
 Regulations/General
 93-004215
 Remote Sensing
 93-004464
 Restoration of Anadromous Runs
 93-003823
 Sedimentation
 93-003811
 93-003970
 Site Suitability
 93-002262
 Spawning Channels
 93-002262
 Spawning Habitat Restoration
 93-004080
 Spawning Substrates
 93-003811
 Stock Assessment
 93-003795
 93-004215
 93-004464
 Stocking/Introductions
 93-002265
 93-003441
 93-003795
 Supplemental Stocking
 93-002262
 93-003761
 93-003823
 Survival
 93-003441
 93-003970
 Temperature
 93-002441
 93-002851
 93-004387
 Trace Metals
 93-003638

...CONTINUED...

Salmonidae

- Trophic Relationships
 - 93-80462
- Ultraviolet Light
 - 93-80268
 - 93-80269
 - 93-802753
- Viral Diseases
 - 93-803476
 - 93-803478
 - 93-803479
- Viral Hemorrhagic Septicemia
 - 93-803476

Salvelinus

- DNA
 - 93-802927
- Evolution
 - 93-802927
- Salvelinus alpinus
 - Acidification
 - 93-804045
 - Activity Patterns
 - 93-802940
 - Age/Growth
 - 93-802249
 - 93-802954
 - Agonistic Behavior
 - 93-802950
 - Angling
 - 93-803080
 - Bacterial Flora
 - 93-802770
 - Dismorphologies
 - 93-802950
 - Biosorption
 - 93-803603
 - Culture/Propagation
 - 93-802232
 - 93-802244
 - 93-802249
 - 93-802372
 - 93-802946
 - Diadromy
 - 93-803159
 - Digestive System
 - 93-802776
 - 93-802839
 - DNA
 - 93-802900
 - Early Development
 - 93-802230
 - 93-802872
 - Echo Sounding
 - 93-803800
 - Egg Quality
 - 93-802244
 - Fatty Acids
 - 93-802778
 - Feeders
 - 93-802948
 - Feeding Experiments
 - 93-802249
 - 93-802372
 - Feeds
 - 93-802372
 - Fluoride
 - 93-803603
 - Foods/Feeding
 - 93-802940
 - 93-803224
 - Habitat Selection
 - 93-802907
 - Head
 - 93-802872
 - Histology
 - 93-802839

CONTINUED.

Salvelinus alpinus

- Hormones
 - 93-802244
- Induced Maturation
 - 93-802244
- Jaws
 - 93-802872
- Larvae
 - 93-802372
- Melate Dehydrogenase
 - 93-802900
- Management/Research—Lakes
 - 93-802967
 - 93-803000
 - 93-804045
- Migration
 - 93-803159
- Mitochondria
 - 93-802960
- Mouth Parts
 - 93-802872
- Nets/0.511 Nets
 - 93-803860
- Oxygen
 - 93-802249
- Polymorphism
 - 93-802483
 - 93-803224
- Population Studies
 - 93-803060
- Predator/Prey Relationships
 - 93-802967
- Production
 - 93-802232
- Rearing Density
 - 93-802249
- Reproductive System
 - 93-802494
- Social Behavior
 - 93-802950
- Sperm
 - 93-802494
- Stocking Density
 - 93-802950
- Stocking/Introductions
 - 93-802950
- Temperature
 - 93-802232
- Variation Studies
 - 93-802483
 - 93-802872
 - 93-802900
- Salvelinus fontinalis
 - Abundance/Factors of
 - 93-804101
 - Acidification
 - 93-803634
 - 93-803637
 - 93-803661
 - 93-803892
 - 93-804045
 - Aeromonas salmonicida
 - 93-803388
 - 93-803430
 - Age/Growth
 - 93-803639
 - 93-803689
 - Aluminum
 - 93-803639
 - Bacterial Diseases
 - 93-803388
 - 93-803427
 - 93-803430
 - Bacterial Kidney Disease
 - 93-803427
 - Bird Predation
 - 93-802259

.. CONTINUED ..

Salvelinus fontinalis
 Calcium
 93-003639
 Costodes
 93-003987
 Competition
 93-004095
 Culture/Propagation
 93-002237
 93-002259
 93-003989
 Disease Susceptibility
 93-003398
 Distribution/Factors of
 93-004181
 Early Development
 93-003639
 Egg Size
 93-002237
 Emotion *salvelinal*
 93-003597
 Fecundity
 93-002237
 Feeds/Feeding
 93-003189
 Furunculosis
 93-003398
 Genetic Strains
 93-003892
 Habitat Selection
 93-004095
 Hosted Water
 93-002237
 Hooking/Handling Mortality
 93-003922
 Hooks
 93-003922
 Hybridization
 93-003922
 Immune Response
 93-003988
 Management/Research--General
 93-003775
 Management/Research--Lakes
 93-003661
 93-003892
 93-004095
 Management/Research--Rivers and
 Streams
 93-003189
 93-004078
 93-004095
 Microhabitat
 93-004095
 Mortality Factors
 93-002259
 Parasites/Diseases
 93-003398
 93-003427
 93-003430
 93-003507
 pH
 93-003639
 Pollution Tolerance
 93-003892
 Polychlorinated Biphenyls
 93-003679
 Predator/Prey Relationships
 93-003189
 Recirculating Systems
 93-002237
 Regulations/Catch and Release
 93-003775
 Regulations/Size Limits
 93-003775
 Sportfishing
 93-003775

CONTINUED .

Salvelinus fontinalis
 Sportfishing
 93-003922
 Stocking/Introduction
 93-003892
 Sulfur Dioxide
 93-003661
 Survival
 93-003639
 93-003899
 Temperature
 93-002237
 Toxicity Testing
 93-003634
 93-003637
 Trace Metals
 93-003634
 Wild Trout Management
 93-004078
Salvelinus namaycush
 Abundance/Factors of
 93-003573
 93-004019
 Acidification
 93-002639
 93-003806
 93-003834
 93-003837
 93-003661
 93-003892
 93-004094
 93-004045
 Aeration
 93-002440
 Age/Growth
 93-003989
 93-004084
 Age/Sex Relationships
 93-002259
 Ammonia
 93-003712
 Artificially Roofed
 93-004023
 Bioaccumulation
 93-003658
 Bioassays
 93-002665
 93-004148
 Biomass
 93-003963
 Dispersal
 93-003535
 Bird Predation
 93-002225
 Dycatch
 93-004086
 Calcium
 93-003712
 Caspochlor
 93-003611
 Catch Per Unit Effort
 93-004017
 Chlordane
 93-003611
 Commercial Fishing
 93-004083
 Condition Factors
 93-002440
 Culture/Propagation
 93-002259
 93-002440
 93-002665
 93-003989
 Dibenzofuran
 93-003611
 Diet
 93-003658

SYSTEMATIC INDEX

..CONTINUED..
Salvelinus namaycush
 Dieldrin
 93-00369
 Diets
 93-00266
 Early Development
 93-00269
 Economic Value
 93-00403
 Egg Survival
 93-00314
 Feeding Experiments
 93-00265
 Gas Removal
 93-00240
 Gas Supersaturation
 93-00225
 Genetic Diversity
 93-00295
 Genetic Strains
 93-00382
 Habitat Alterations
 93-00407
 Habitat Evaluation
 93-00401
 Habitat Improvement/General
 93-00402
 Hatchery/Wild Populations
 93-00293
 Hematology
 93-00392
 Histology
 93-00392
 Hybrid Fish
 93-00392
 Lamprey Parasitism
 93-00393
 Lining
 93-00400
 Management/Research--Lakes
 93-00314
 93-00373
 93-00366
 93-00361
 93-00382
 93-00400
 93-00403
 93-00404
 93-00401
 93-00402
 93-00407
 93-00405
 93-00407
 Management/Research--Reservoirs
 93-00410
 Nitrogen
 93-00265
 Nursery Areas
 93-00402
 93-00403
 93-00407
 Nutrition
 93-00265
 Orientation/Flaring
 93-00293
 Oxygenation
 93-00240
 Parasites/Diseases
 93-00392
 Pollution
 93-00365
 93-00373
 93-00402

..CONTINUED..
Salvelinus namaycush
 Pollution Tolerance
 93-00382
 Polychlorinated Biphenyls
 93-00365
 93-00368
 Population Genetics
 93-00204
 Population Studies
 93-00402
 93-00409
 Predator/Prey Relationships
 93-00401
 93-00410
 93-00410
 Public Health Problems
 93-00355
 Radiation
 93-00392
 Recruitment
 93-00373
 93-00383
 93-00402
 93-00407
 Reproduction
 93-00381
 Social Values
 93-00403
 93-00402
 Sodium
 93-00372
 Spawning
 93-00263
 93-00314
 Spawning Habitat Restoration
 93-00401
 Spawning Substrates
 93-00314
 Sportfishing
 93-00355
 93-00403
 93-00407
 Stock Assessment
 93-00366
 93-00363
 93-00400
 93-00404
 93-00401
 93-00407
 Stock Identification
 93-00294
 Stocking/Introductions
 93-00382
 Sulfur Dioxide
 93-00265
 Supplemental Stocking
 93-00400
 93-00402
 Survival
 93-00269
 93-00382
 Swimming Performance
 93-00271
 Toxicity Testing
 93-00364
 93-00367
 Toxicology
 93-00365
 Trace Metals
 93-00364
 Trophic Relationships
 93-00401
 93-00410
 Uranium
 93-00352
 Year Class Strength
 93-00404

SYSTEMATIC INDEX

- Sarda chilensis*
 Abundance/Factors of
 93-003569
 Oil Pollution
 93-003569
- Sarda sarda*
 Artisanal Fisheries
 93-004273
- Sardina pilchardus*
 Distribution/Geographical
 93-003037
 Early Development
 93-003037
 Larval Drift
 93-003037
 Photoperiodism
 93-003000
 Population Studies
 93-003037
 Spawning
 93-003000
 Upwelling
 93-003037
- Sardinella*
 Egg Size
 93-003150
 Latitude
 93-003150
 Management/Research--Marine
 93-004257
 Temperature
 93-003150
 Variation Studies
 93-003150
- Sardinella aurita*
 Baitfish
 93-004271
 Distribution/Geographical
 93-003146
 Early Development
 93-003146
 Eggs
 93-003146
 Management/Research--Marine
 93-004271
 Spawning
 93-003146
- Sardinella brasiliensis*
 Baitfish
 93-004271
 Management/Research--Marine
 93-004271
- Sardinella lemuru*
Kudua thyrastilis
 93-003450
 Parasites/Diseases
 93-003450
 Protozoan Diseases
 93-003450
- Sardinella longiceps*
 Storage Effects
 93-004414
- Sardinops*
 Egg Size
 93-003100
 Latitude
 93-003150
 Temperature
 93-003150
 Variation Studies
 93-003150
- Sardinops melanosticta*
 Distribution/Factors of
 93-003319
 Feed Technology
 93-004426
- CONTINUED
Sardinops melanosticta
 Foods/Feeding
 93-003250
 Larval Drift
 93-003319
 Management/Research--Marine
 93-003141
 Maturation
 93-003141
 Nursery Areas
 93-003141
 93-003319
 Ocean Fronts
 93-003319
 Spawning
 93-003141
 Storage Effects
 93-004377
 93-004426
 Survival
 93-003319
- Sardinops neopilchardus*
Kudua thyrastilis
 93-003450
 Parasites/Diseases
 93-003450
 Protozoan Diseases
 93-003450
- Sardinops sagax*
 Abundance/Factors of
 93-003007
 93-003569
 Age/Growth
 93-003102
 Bycatch
 93-004100
 Catch Per Unit Effort
 93-004100
 Climate
 93-003007
 Commercial Fishing
 93-004338
 Exploitation Rates
 93-004338
 Fecundity
 93-003102
 Harvest
 93-004100
 Larval Drift
 93-003109
 Management/Research--Marine
 93-003007
 93-004100
 93-004338
 Maturation
 93-003102
 Oil Pollution
 93-003569
 Paleontology
 93-003072
 Planning
 93-004338
 Population Studies
 93-003072
 93-003102
 93-004100
 93-004338
 Recruitment
 93-003007
 93-003109
 Stock Assessment
 93-004100
 Survival
 93-003102
- Sardinops sagax nuxta*
 Larval Growth
 93-003256

SYSTEMATIC INDEX

..CONTINUED..

Sardinops sagax *musica*
 Mortality Rates
 93-003256

Saurida undequants
 Fish Processing
 93-004407

Scardinus erythropthalmus
 Eggs
 93-003710
 Radiation
 93-003719

Scarus rivulatus
 Colonization
 93-003275
 Larval Growth
 93-003275
 Otoliths
 93-003275

Schizothorax plagiostomus
 Endocrinology
 93-002547
 Gonads
 93-002547
 Histology
 93-002493
 93-002547
 Reproductive System
 93-002493
 Steroids
 93-002547

Sciænoops ocellatus
 Brackishwater Culture
 93-002362
 Cannibalism
 93-002956
 Commercial Fishing
 93-003800
 Culture/Propagation
 93-002343
 93-002347
 93-002362
 93-002366
 93-002375
 93-002901
 Diets
 93-002362
 Early Development
 93-002656
 Fatty Acids
 93-002375
 Feeding Experiments
 93-002347
 93-002366
 Feeds
 93-002375
 Fingerling Production
 93-002347
 93-002362
 Growth Hormone
 93-002701
 Harvest
 93-003800
 Hatching
 93-002343
 Invertebrate Forage
 93-002366
 Larvae
 93-002366
 Larval Drift
 93-003310
 Life History/General
 93-004155
 Lipid Metabolism
 93-002375
 Management/Research--Estuaries
 93-004155

..CONTINUED..

Sciænoops ocellatus
 Management/Research--Marine
 93-003800
 Migration
 93-003310
 Mortality Factors
 93-002956
 Mortality Rates
 93-004329
 Nutrition
 93-002362
 93-002375
 Osmoregulation
 93-002362
 93-002656
 Pituitary Gland
 93-002701
 Proteins
 93-002701
 Salinity
 93-002362
 93-002656
 Site Suitability
 93-002901
 Sodium Chloride
 93-002362
 Sportfishing
 93-003800
 Stock Assessment
 93-003800
 93-004329
 Survival
 93-002347
 Tank Culture
 93-002343
 Tides
 93-003310
 Water Quality
 93-002367

Scyliodon soukewah
 Fish as Food
 93-004375
 Taste and Odor Problems
 93-004375

Scomber japonicus
 Abundance/Factors of
 93-003560
 Fecundity
 93-003124
 Management/Research--Marine
 93-004172
 Oil Pollution
 93-002560
 Recruitment
 93-004172
 Reproductive Cycle
 93-003124
 Spawning
 93-003124
 Stock Assessment
 93-004172
 Storage Effects
 93-004377

Scomber scomberus
 Abundance/Factors of
 93-001298
 Age/Growth
 93-003207
 Copper
 93-004364
 Distribution/Factors of
 93-003290
 Distribution/Vertical
 93-003162
 Early Development
 93-003162

SYSTEMATIC INDEX

CONTINUED
Scorpaenopsis scorpaenoides
 Fecundity
 93-003144
 Fish Behavior
 93-003919
 Fish Processing
 93-004366
 Fish Spoilage
 93-004376
 Food Technology
 93-004365
 93-004385
 Iron
 93-004354
 Larval Growth
 93-003263
 Maturation
 93-003144
 Morphometry
 93-002405
 Musculature
 93-004354
 Nets/Purse Seines
 93-003519
 Nutrition
 93-004385
 Otoliths
 93-002486
 Photoperiodism
 93-003263
 Respiration
 93-002668
 Storage Effects
 93-004354
 93-004365
 93-004366
 93-004370
 Temperature
 93-003298
 Variation Studies
 93-003162
 93-003287
Scorpaenopsis commerson
 Ciguatera
 93-003618
Scorpaenopsis nipponicus
 Foods/Feeding
 93-003250
 Scorpaenidae
 Catch Per Unit Effort
 93-003837
 Harvest
 93-003037
 Incidental Entrapment
 93-003900
 Longlines
 93-003910
 Management/Research--Marine
 93-003805
 93-003837
 Monofilament
 93-003910
 Musculature
 93-002537
 Nets/Netting
 93-003910
 Public Health Problems
 93-004350
 Stock Assessment
 93-003805
 Storage Effects
 93-004350
 Swimming Performance
 93-002537
Scorpaenopsis boops
 Abnormalities
 93-003452

CONTINUED ..
Scorpaenopsis boops
Myxobolus *lurii*
 93-003452
Myxobolus spiraeurvatum
 93-003452
 Osteology
 93-003452
 Parasites/Diseases
 93-003452
 Protozoan Diseases
 93-003452
 Scoliosis
 93-003452
Scopthalmus maximus
 ATP
 93-002629
 Culture/Propagation
 93-002342
 93-002390
 93-002629
 93-003446
 Early Development
 93-002580
 Egg Quality
 93-002342
 Egg Size
 93-003133
 Egg Survival
 93-003133
 Fecundity
 93-003133
 93-003140
 Feeding Experiments
 93-002390
 Fertilization
 93-003133
 Hormones
 93-003133
 Invertebrate Forage
 93-002390
 Larvae
 93-002342
 93-002390
 Cystos
 93-002580
 Parasites/Diseases
 93-003446
 Protozoan Diseases
 93-003446
 Recodification
 93-003140
 Reproductive Cycle
 93-003133
 93-003140
 Respiration
 93-002580
 Spawning
 93-003140
 Sperm
 93-002629
 Sperm Preservation
 93-002629
 Swimming Performance
 93-002552
 Temperature
 93-002629
Tetraodon brevifilius
 93-003446
Scorpaena guttata
 Lactate Dehydrogenase
 93-002860
 Musculature
 93-002060
 RNA
 93-002860
 Starvation
 93-002860

- Scyllorhinus
 Nervous System
 93-002804
 Respiration
 93-002804
 Scyllorhinus canaliculus
 Aquariums
 93-002396
 Bionenergetics
 93-002594
 Culture/Propagation
 93-002396
 Cytology
 93-002461
 Genetics
 93-002090
 Histology
 93-002461
 Kidneys
 93-002461
 Musculature
 93-002594
 Spermatogenesis
 93-002090
 Steroids
 93-002090
 Swimming Performance
 93-002594
 Scyllorhinus stellaris
 Aquariums
 93-002396
 Culture/Propagation
 93-002396
 Sebastes
 Age/Growth
 93-004317
 93-003179
 93-004452
 Distribution/Vertical
 93-003070
 Early Development
 93-003070
 Electrophoresis
 93-004452
 Evolution
 93-003117
 Foods/Feeding
 93-003179
 Ichthyoplankton
 93-003070
 Management/Research--Marine
 93-003070
 93-003223
 Nataliation
 93-003117
 Population Studies
 93-003070
 Predator/Prey Relationships
 93-003223
 Sampling
 93-003070
 Seasons
 93-003179
 Survival
 93-003179
 Sebastes atrovirens
 Habitat Selection
 93-003004
 Kelp Forests
 93-003004
 Management/Research--Marine
 93-003004
 Predator/Prey Relationships
 93-003004
 Sebastes entomelas
 Foods/Feeding
 93-003234
 CONTINUED
 Sebastes entomelas
 Interspecies Relationships
 93-003234
 Niche Overlaps
 93-003234
 Sebastes flavidus
 Abundance/Factors of
 93-004310
 Foods/Feeding
 93-003234
 Habitat Evaluation
 93-004310
 Interspecies Relationships
 93-003234
 Niche Overlaps
 93-003234
 Seamounts
 93-004310
 Sebastes gonolfi
 Foods/Feeding
 93-003234
 Interspecies Relationships
 93-003234
 Niche Overlaps
 93-003234
 Sebastes holvanaculatus
 Abundance/Factors of
 93-004310
 Habitat Evaluation
 93-004310
 Seamounts
 93-004310
 Sebastes inermis
 Light
 93-002942
 Parasites/Diseases
 93-003470
 Phototropism
 93-002942
 Viral Diseases
 93-003470
 Sebastes jordani
 Foods/Feeding
 93-003234
 Interspecies Relationships
 93-003234
 Niche Overlaps
 93-003234
 Sebastes molliger
 Oil Pollution
 93-002647
 Sebastes marinus
 Morphometry
 93-002406
 Otoliths
 93-002406
 Sebastes mentella
 Currents
 93-003309
 Distribution/Geographical
 93-003075
 93-003309
 Early Development
 93-003075
 Larval Drift
 93-003309
 Management/Research--Marine
 93-003075
 Migration
 93-003309
 Nursery Areas
 93-003075
 Temperature
 93-003309
 Sebastes mystinus
 Olfaction
 93-002971

- .. CONTINUED ..
- Sebastes mystinus*
Orientation/Homing
93-002971
- Sebastes paucispinus*
Foods/Feeding
93-003234
Interspecies Relationships
93-003234
Niche Overlaps
93-003234
- Sebastes wilsoni*
Abundance/Factors of
93-004318
Habitat Evaluation
93-004318
Seasons
93-004318
- Sebastes zacentrus*
Abundance/Factors of
93-004318
Habitat Evaluation
93-004318
Seasons
93-004318
- Sebastes telescopus*
Enzymes
93-002861
Heart
93-002861
Hematology
93-002861
Hypoxia
93-002861
Respiratory System
93-002861
- Selanx cruesophthalmus*
Baitfish
93-003839
Commercial Fishing
93-003862
Economic Value
93-003862
Harvest
93-003839
93-003862
Management/Research--Marine
93-003839
93-003862
- Sebastes melanops*
Nests/Nesting
93-003011
Spawning
93-003011
- Seriola fasciata*
Distribution/Geographical
93-003317
- Seriola quinqueradiata*
Abnormalities
93-003452
Abundance/Factors of
93-003329
Bacterial Diseases
93-003424
Culture/Propagation
93-002370
93-002388
93-003374
Diets
93-002388
Distribution/Factors of
93-003319
Feeding Attractants
93-002370
Feeds
93-002388
Foods/Feeding
93-002370
- .. CONTINUED ..
- Seriola quinqueradiata*
Larval Drift
93-003319
Management/Research--Marine
93-003129
Migration
93-003129
Myxobolus bur1
93-003452
Myxobolus spinacurvature
93-003452
Nursery Areas
93-003319
Ocean Fronts
93-003319
Osteology
93-003452
Parasites/Diseases
93-003374
93-003424
93-003452
93-003475
Protozoan Diseases
93-003452
Recruitment
93-003129
Scoliosis
93-003452
Season
93-003374
Streptococcus
93-003424
Survival
93-003319
Temperature
93-003374
Viral Diseases
93-003479
- Serranus scriba*
Bioaccumulation
93-002741
Cobalt
93-002741
Heavy Metals
93-002741
Nutrition
93-002741
Trophic Relationships
93-002741
- Serranus subligarius*
Hermaphroditism
93-002749
Hormones
93-002749
Reproduction
93-002749
- Siganus sutor*
Atresia
93-002744
Fecundity
93-002744
Reproductive Cycle
93-002744
- Sillago*
Commercial Fishing
93-004206
Management/Research--Marine
93-004206
Marine Reserves
93-004206
Pollution
93-004206
Reef Fish Communities
93-004206
Scleriformes
Osteology
93-004254

SYSTEMATIC INDEX

...CONTINUED

Siluriformes
 Variation Studies
 93-002454

Silurus glanis
 Foods/Feeding
 93-003183
 Predator/Prey Relationships
 93-003183

Silurus meridionalis
 Age/Growth
 93-002855
 Otoliths
 93-002855
 Foods/Feeding
 93-002855

Silurus triostegus
 Condition Factors
 93-002548
 Hematology
 93-002548
 Maturation
 93-002548

Solea solea
 Abnormalities
 93-002493
 Abundance/Factors of
 93-003316
 Activity Patterns
 93-002088
 Age/Growth
 93-002026
 93-003273
 93-003274
 Barometric Pressure
 93-003166
 Colonization
 93-003316
 Coloration
 93-002493
 Competition
 93-004307
 Culture/Propagation
 93-002330
 93-002356
 Early Development
 93-002493
 93-002026
 93-003166
 93-003274
 Egg Production
 93-002330
 Eggs
 93-002658
 Feeds
 93-002356
 Fertilization
 93-002658
 Foods/Feeding
 93-003274
 93-003316
 93-004307
 Interspecies Relationships
 93-004307
 Jaws
 93-002493
 Larval Behavior
 93-003316
 Larval Drift
 93-003166
 Light
 93-003274
 Management/Research--Marine
 93-004387
 Marking/Tagging
 93-002988
 Migration
 93-003166

...CONTINUED.

Solea solea
 Nursery Areas
 93-004307
 Olfaction
 93-002988
 Orientation/Homing
 93-002988
 93-003166
 Otoliths
 93-003273
 93-003274
 Parasites/Diseases
 93-002356
 Photoperiodism
 93-003316
 Predator/Prey Relationships
 93-003316
 Production
 93-002356
 Selective Breeding
 93-002926
 Survival
 93-002356
 Swimming Performance
 93-003166
 Teeth
 93-002493
 Temperature
 93-003274

Solea vulgaris
 Activity Patterns
 93-002988
 Artisanal Fisheries
 93-002473
 Histology
 93-002576
 Lights
 93-002988
 Nutrition
 93-002576
 Recruitment
 93-002576
 Starvation
 93-002576
 Swimming Performance
 93-002988
 93-002988

Soleidae
 Management/Research--Marine
 93-004323
 Recruitment
 93-004323
 Year Class Strength
 93-004323

Solenostomidae
 Embryology
 93-002538
 Fish Lists/Keys
 93-003364
 Metabolism
 93-002538

Solenostomus armatus
 Distribution/Geographical
 93-003364
 Species Identification
 93-003364
 Taxonomy
 93-003364

Solenostomus cyanopterus
 Distribution/Geographical
 93-003364
 Species Identification
 93-003364
 Taxonomy
 93-003364

Solenostomus paradoxicus
 Distribution/Geographical
 93-003364

- . . . CONTINUED . . .
- Selenastomas paradoxus*
Species Identification
93-003364
Taxonomy
93-003364
- Sparisotex hasta*
Exotic Species/Australia
93-003885
- Sparisoma aurofrenatum*
Artisanal Fisheries
93-003099
Gear Efficiency
93-003099
Gear Selectivity
93-003899
Harvest
93-003099
Management/Research--Marine
93-003099
Traps/General
93-003099
- Sparisoma chrysopterus*
Artisanal Fisheries
93-003899
Gear Efficiency
93-003899
Gear Selectivity
93-003899
Harvest
93-003899
Management/Research--Marine
93-003899
Traps/General
93-003899
- Sparisoma viride*
Artisanal Fisheries
93-003099
Gear Efficiency
93-003099
Gear Selectivity
93-003099
Harvest
93-003099
Management/Research--Marine
93-003099
Traps/General
93-003099
- Sparus auratus*
Artisanal Fisheries
93-004273
Culture/Propagation
93-002345
Cytochrome P450
93-002555
Cytology
93-002765
Early Development
93-002669
93-002765
Growth Hormone
93-002765
Histology
93-002669
Immune Response
93-002669
Invertebrate Forage
93-002346
Kidneys
93-002669
Larvae
93-002345
Liver
93-002555
Pituitary Gland
93-002765
- Sparus macrocephalus*
Parasites/Diseases
93-003479
- . . . CONTINUED . . .
- Sparus macrocephalus*
Viral Diseases
93-003479
- Sphyraena argentea*
Malate Dehydrogenase
93-002700
Musculature
93-002700
Thermoregulation
93-002700
- Sphyraena barracuda*
Management/Research--Estuaries
93-004150
93-004159
Mangroves
93-004159
Nursery Areas
93-004159
- Sphyraena ocellis*
Malate Dehydrogenase
93-002700
Musculature
93-002700
Thermoregulation
93-002700
- Sphyraena idlantes*
Malate Dehydrogenase
93-002700
Musculature
93-002700
Thermoregulation
93-002700
- Sphyraena lucasana*
Malate Dehydrogenase
93-002700
Musculature
93-002700
Thermoregulation
93-002700
- Sphyraenidae*
Harvest
93-004366
Management/Research--Marine
93-004366
Sport Fishing
93-004366
- Sphyrna lewini*
Catch Per Unit Effort
93-003857
- Spirochaeta spirochaeta*
Age/Growth
93-003219
Oycatch
93-003219
Foods/Feeding
93-003219
- Sprattelloides robustus*
Rudra thymitis
93-003450
Parasites/Diseases
93-003450
Protozoan Diseases
93-003450
- Sprattus*
Fecundity
93-003113
Spawning
93-003113
Variation Studies
93-003113
- Sprattus sprattus*
Age/Growth
93-002755
93-003069
Condition Factors
93-002755

SYSTEMATIC INDEX

CONTINUED..
Sprattus sprattus
 Foods/Feeding
 93-003242
 Lipid Composition
 93-002795
 Production
 93-003069
 Recruitment
 93-003069
 Squallidae
 Trace Metals
 93-003591
Squalius cephalus
 Bioaccumulation
 93-003534
 Phenols
 93-003534
 Surfactants
 93-003534
Squalus acanthias
 Aquaculture
 93-002396
 Catch Per Unit Effort
 93-004163
 Chloride Cells
 93-002643
 93-002795
 93-003710
 Commercial Fishing
 93-004163
 Coronary Lesions
 93-003400
 Culture/Propagation
 93-002396
 Embryology
 93-002601
 Excretory System
 93-002799
 Heavy Metals
 93-003710
 Ion Transport
 93-002643
 93-002796
 Longfins
 93-004163
 Mercury
 93-003710
 Musculature
 93-002615
 Nervous System
 93-002796
 Nitrogen
 93-002601
 Parasites/Diseases
 93-003400
 Peptides
 93-002615
 Pharmacology
 93-002796
 Rectal Gland
 93-002643
 93-002799
 93-003710
 Steroids
 93-002796
 Urea
 93-002601
 Vision
 93-002796
Squalus mitsukurin
 Latitude
 93-002818
 Reproduction
 93-002818
 Sexual Dimorphism
 93-002818

CONTINUED..
Squalus mitsukurin
 Variation Studies
 93-002818
Stenodus leucichthys nelma
 Variation Studies
 93-002894
Stenotomus chrysops
 Antifouling
 93-003620
 Cytochrome P450
 93-003620
 Liver
 93-003620
 Tributyltin
 93-003620
Sternopygus daniensis
 Electric Fish
 93-003099
 Electrolocation
 93-003099
Sternopygus nacrurus
 Electric Fish
 93-003699
 Electrolocation
 93-003699
Stizostedion
 Acidification
 93-003661
 Management/Research--Lakes
 93-003661
 Sulfur Dioxide
 93-003661
Stizostedion canadense
 DNA
 93-002036
 Fish Passage
 93-003941
 Fishways
 93-003941
 Genomes
 93-002936
 Pollution
 93-004059
 Trace Contaminants
 93-004055
 Trace Metals
 93-004055
 Variation Studies
 93-002936
Stizostedion luctiperca
 Age/Growth
 93-003271
 Foods/Feeding
 93-003183
 93-003210
 93-003243
 Lagoons
 93-003210
 Management/Research--Marine
 93-003210
 Management/Research--Reservoirs
 93-003243
 93-003271
 Predator/Prey Relationships
 93-003183
 Taste and Odor Problems
 93-003537
 Trophic Relationships
 93-003243
Stizostedion vitreum
 Abnormalities
 93-003499
 Acidification
 93-003634
 93-003637
 Age/Growth
 93-002856

CONTINUED .
 Stizostedion vitreum
 Bioaccumulation
 93-003625
 Bycatch
 93-004006
 Catch Per Unit Effort
 93-004017
 93-004039
 Commercial Fishing
 93-004015
 93-004016
 93-004018
 93-004039
 Culture/Propagation
 93-002271
 93-002299
 93-002313
 93-003873
 DDE
 93-003711
 Diets
 93-002271
 DNA
 93-002036
 Electrofishing
 93-003075
 Exotic Species
 93-004027
 Exploitation Rates
 93-004022
 Eyes
 93-002703
 Fingerling Stocking
 93-004029
 Fish Control/Removal
 93-003873
 93-004040
 Fish Passage
 93-003941
 Fishways
 93-002041
 Flow Regimes
 93-003890
 Foods/Feeding
 93-002866
 Gear Efficiency
 93-003907
 Genomes
 93-002936
 Habitat Evaluation
 93-004030
 Harvest
 93-004015
 Heavy Metals
 93-003625
 93-003691
 Hexachlorobenzene
 93-003711
 Larvae
 93-002313
 Limnology
 93-004146
 Lymphocystis
 93-003711
 Management/Research--Lakes
 93-004034
 93-004036
 93-004037
 93-004038
 93-004022
 93-004027
 93-004028
 93-004029
 93-004039
 Management/Research--Reservoirs
 93-004146

CONTINUED .
 Stizostedion vitreum
 Management/Research--Rivers and
 Streams
 93-003698
 93-004030
 93-004039
 Mercury
 93-003625
 93-003691
 Metabolic Rates
 93-002056
 Musculature
 93-003499
 Myofibrillar Proteins
 93-003499
 Neoplasms
 93-003711
 Parasites/Diseases
 93-003499
 93-003711
 Photoperiodism
 93-002703
 Photosynthesis
 93-002703
 Polychlorinated Biphenyls
 93-003691
 93-003711
 Pond Culture
 93-002271
 93-002299
 Post-Impoundment Studies
 93-004146
 Precipitation
 93-003690
 Predator Control
 93-004040
 Production
 93-002271
 93-002299
 93-002313
 Recruitment
 93-003890
 Screens
 93-003873
 Spawning Habitat Restoration
 93-004030
 93-004030
 Sportfishing
 93-004015
 93-004017
 93-004022
 Stock Assessment
 93-004034
 93-004035
 93-004036
 93-004037
 93-004038
 93-004029
 93-004039
 Stocking/Introductions
 93-004027
 93-004029
 Survival
 93-002271
 Swimming Performance
 93-002571
 Tank Culture
 93-002313
 Toxicity Testing
 93-003634
 93-003637
 Trace Metals
 93-003634

SYSTEMATIC INDEX

...CONTINUED...

- Stizostedion vitreum
 - Trophic Relationships
 - 93-00484B
 - Variation Studies
 - 93-00293C
 - Year Class Strength
 - 93-00300B
- Stromateoides argenteus
 - Feeds/Feeding
 - 93-00305D
- Symbolophorus
 - Distribution/Vertical
 - 93-00425D
 - Management/Research--Marine
 - 93-00425D
- Symphodus scina
 - Head
 - 93-00253D
- Symphodus tinca
 - Spine
 - 93-00260D
- Synchiropus splendens
 - Aspartus
 - 93-00240F
 - Culture/Propagation
 - 93-00240F
 - Life History/General
 - 93-00240F
- Syngnathus typhle
 - Age/Growth
 - 93-00311E
 - Competition
 - 93-00205A
 - Early Development
 - 93-00311E
 - Fecundity
 - 93-00311E
 - Meta Selection
 - 93-00295A
 - Natural Selection
 - 93-00295A
 - Parental Behavior
 - 93-00295A
 - 93-00311E
 - Reproduction
 - 93-00295A
 - Survival
 - 93-00311E
- Tanakaia taenaga
 - Immunology
 - 93-00372E
 - Mutagens
 - 93-00372E
 - Techniques
 - 93-00372E
- Tandanus tandanus
 - Electrophoresis
 - 93-00291F
 - Genetic Markers
 - 93-00291F
- Tautoga onitis
 - Early Development
 - 93-00306A
 - Life History/General
 - 93-00306A
- Tautoglabrus adspersus
 - Colonization
 - 93-00295D
 - Habitat Selection
 - 93-00295D
- Tetraodontidae
 - Inflation
 - 93-00253E
 - Musculature
 - 93-00253E
- Tetrapturus albidus
 - Harvest
 - 93-00420B

...CONTINUED...

- Tetrapturus albidus
 - Management/Research--Marine
 - 93-00384A
 - 93-00420B
 - Recreational Benefits
 - 93-00384A
 - Regulations/General
 - 93-00384A
- Tetrapturus audeax
 - Catch Per Unit Effort
 - 93-00305F
- Tetrapturus pfluegeri
 - Harvest
 - 93-00420B
 - Management/Research--Marine
 - 93-00384A
 - 93-00420B
 - Recreational Benefits
 - 93-00384A
 - Regulations/General
 - 93-00384A
- Thalassom bifasciatum
 - Endocrinology
 - 93-00268A
 - Romones
 - 93-00268A
 - Hypothalamic-Hypophysial System
 - 93-00268A
 - Sex Reversal
 - 93-00268A
- Thiagra chalcogramma
 - Age/Growth
 - 93-00376E
 - Brain
 - 93-00250B
 - Catch Per Unit Effort
 - 93-00433F
 - Culture/Propagation
 - 93-00235B
 - Currents
 - 93-00333J
 - Digestive System
 - 93-00250D
 - Distribution/Geographical
 - 93-00333J
 - 93-00332E
 - Distribution/Seasonal
 - 93-00317D
 - Distribution/Vertical
 - 93-00332E
 - Early Development
 - 93-00326J
 - 93-00327E
 - Egg Drift
 - 93-00317E
 - Egg Size
 - 93-00326J
 - Exploitation Rates
 - 93-00433F
 - Feeding Experiments
 - 93-00235B
 - Feed Technology
 - 93-00379A
 - 93-00379A
 - 93-00436B
 - 93-00436I
 - 93-00437I
 - 93-00440E
 - 93-00441F
 - Histology
 - 93-00250D
 - Interactions/Fishes
 - 93-00433F
 - Invertebrate Forage
 - 93-00235D
 - Larvae
 - 93-00235D

.. CONTINUED ..

Theragra chalcogramma
 Larval Drift
 93-003170
 93-003313
 Larval Growth
 93-003264
 Lipid Content
 93-002358
 Management/Research--Marine
 93-004337
 Musculature
 93-002549
 Nursery Areas
 93-003313
 Nutrition
 93-002358
 Otoliths
 93-003276
 Predator/Prey Relationships
 93-003264
 Recruitment
 93-003264
 Season
 93-003264
 Starvation
 93-002589
 Stock Assessment
 93-004337
 Variation Studies
 93-003267

Theragra finmarchica
 Catch Per Unit Effort
 93-004337
 Exploitation Rates
 93-004337
 International Fisheries
 93-004337
 Management/Research--Marine
 93-004337
 Stock Assessment
 93-004337

Thunnus alalunga
 Artisanal Fisheries
 93-004178
 Management/Research--Marine
 93-004178

Thunnus albacaros
 Age/Growth
 93-002263
 Bioenergetics
 93-002295
 Cardiovascular System
 93-002683
 Catch Per Unit Effort
 93-003857
 Heart
 93-002683
 Metabolic Rates
 93-002685
 Musculature
 93-002518
 Swimming Performance
 93-002518
 93-002685

Thunnus thynnus
 Artisanal Fisheries
 93-004273
 Currents
 93-003322
 Distribution/Factors of
 93-003322
 Food Technology
 93-004346
 Harvest
 93-004289
 Management/Research--Marine
 93-004289

.. CONTINUED ..

Thunnus thynnus
 Population Studies
 93-003322
 Storage Effects
 93-004346

Thysallus arcticus
 Escapement
 93-003639
 Fish Passage
 93-003939
 Habitat Alterations
 93-003821
 Management/Research--General
 93-003775
 Management/Research--Rivers and
 Streams
 93-003821
 Migration
 93-003174
 Overwintering
 93-003174
 Regulations/Catch and Release
 93-003775
 Regulations/Size Limits
 93-003775
 Reintroductions
 93-003174
 Spawning Migration
 93-002955
 93-003039
 Sportfishing
 93-003775
 Stocking/Introductions
 93-003174
 Survival
 93-003174
 Water Quality
 93-003821
 Weirs
 93-003959

Thysallus thymalis
 Culture/Propagation
 93-002250
 93-002384
 Disease-Free Culture
 93-002250
 Feeds
 93-002384
 Fingerling Production
 93-002384
 Management/Research--Rivers and
 Streams
 93-004123
 Parasites/Diseases
 93-002258
 Reproductive System
 93-002494
 Sperm
 93-002494

Tilapia
Aeromonas hydrophila
 93-003421
 Bacterial Diseases
 93-003421
 Catch Per Unit Effort
 93-003916
 Culture/Propagation
 93-002294
 93-004373
 Economic Value
 93-004373
 Economics
 93-002204
 Immune Response
 93-003421
 Management/Research--Marine
 93-004257

SYSTEMATIC INDEX

...CONTINUED

Tilapia
 Management/Research--Reservoirs
 93-003926
 Marketing
 93-004373
 Nets/Gill Nets
 93-003016
 Nets/Netting
 93-003916
 Parasites/Diseases
 93-003421
 Production
 93-002204
 Sampling
 93-003916
 Vaccination
 93-003421

Tilapia aurea
 Age/Growth
 93-003989
 Biogenetics
 93-003023
 Chloride Cells
 93-002559
 Culture/Propagation
 93-002276
 93-002317
 93-003378
 93-003905
 Enzymes
 93-002841
 Foods/Feeding
 93-003023
 Gills
 93-002559
 Hapts
 93-002276
 Immunization
 93-003378
 Immunoglobulins
 93-002805
 Leaches
 93-003515
 Marketing
 93-002317
 Metabolic Rates
 93-003023
 Musculature
 93-002841
 Osmoregulation
 93-002559
 Parasites/Diseases
 93-003378
 93-003515
 Piscicolaria reducta
 93-003515
 Production
 93-002317
 Salinity
 93-002559

Tilapia hornorum
 Brockishwater Culture
 93-002278
 93-002293
 93-002294
 93-002295
 93-002316
 93-002318
 93-002323
 93-002324
 93-002325
 93-003521
 Brood Stock
 93-002318
 Cage Culture
 93-002274

...CONTINUED

Tilapia hornorum
 Cage Culture
 93-002278
 93-002293
 93-002295
 93-002316
 93-002323
 93-002325
 Culture/Propagation
 93-002274
 93-002278
 93-002293
 93-002294
 93-002295
 93-002316
 93-002317
 93-002318
 93-002323
 93-002324
 93-002325
 93-002901
 93-003521
 Diets
 93-002323
 DNA
 93-002089
 Economic Value
 93-002278
 Economics
 93-002274
 Egg Production
 93-002318
 Feeding Experiments
 93-002323
 Fry Production
 93-002318
 Gene Mapping
 93-002899
 Hybridization
 93-002274
 93-002278
 93-002293
 93-002294
 93-002295
 93-002316
 93-002318
 93-002323
 93-002324
 93-002325
 93-002901
 93-003521
 Marketing
 93-002317
 Neobenedenia mellott
 93-003521
 Parasites/Diseases
 93-003521
 Photoperiodism
 93-002318
 Production
 93-002317
 Rarities Density
 93-002274
 93-002323
 Salinity
 93-002204
 Site Suitability
 93-002316
 93-002901
 Social Values
 93-002278
 Swimming Performance
 93-002571
 Tank Culture
 93-002318
 Transfected
 93-003521

- Tilapia melanotheron*
 Habitat Improvement/General
 93-004161
 Management/Research--Estuaries
 93-004143
 Production
 93-004163
- Tilapia mossambica*
Aeromonas Sulfate
 93-003702
 Biological Monitoring
 93-003696
- Brackishwater Culture
 93-002278
 93-002293
 93-002294
 93-002295
 93-002316
 93-002310
 93-002323
 93-002324
 93-002325
 93-003521
- Brood Stock
 93-002318
- Cage Culture
 93-002274
 93-002278
 93-002293
 93-002296
 93-002316
 93-002323
 93-002325
- Cardiovascular System
 93-002607
- Culture/Propagation
 93-002274
 93-002278
 93-002279
 93-002293
 93-002294
 93-002295
 93-002316
 93-002317
 93-002310
 93-002323
 93-002324
 93-002326
 93-002981
 93-003521
- Cytology
 93-002810
- Detergents
 93-003589
- Diagnostic Techniques
 93-003696
- Diets
 93-002323
- Digestive System
 93-002687
 93-002622
- Early Development
 93-003045
- Economic Value
 93-002270
- Economics
 93-002274
 93-002279
- Egg Production
 93-002318
- Endocrinology
 93-002924
- Fatty Acids
 93-002608
- Feeding Experiments
 93-002323
- CONTINUED...
- Tilapia mossambica*
 Foods/Feeding
 93-003589
- Fry Production
 93-002318
- Gene Mapping
 93-002024
- Gills
 93-002622
- Gonadotropin
 93-002846
- Growth Hormone
 93-002560
 93-002030
 93-002046
 93-002924
- Hormones
 93-002560
 93-002810
 93-002846
 93-002863
- Horseradish Peroxidase
 93-002607
- Hybridization
 93-002274
 93-002278
 93-002293
 93-002294
 93-002295
 93-002316
 93-002318
 93-002323
 93-002324
 93-002325
 93-002981
 93-003521
- Ichthyophthirius multifiliis*
 93-003459
- Immune Response
 93-003459
- Industrial Wastes
 93-003696
- Ion Transport
 93-002622
- Lipid Composition
 93-002608
- Marketing
 93-002279
 93-002317
- Mucus
 93-002676
- Neobenedenia pallean*
 93-003521
- Nutrition
 93-002676
- Osmoregulation
 93-002622
 93-002046
 93-002863
- Parasites/Diseases
 93-003459
 93-003521
- Parasitic Behavior
 93-003459
- Parental Behavior
 93-003459
- Parental Transfer
 93-003459
- Peptides
 93-002810
- Photoperiodism
 93-002318
- Pituitary Gland
 93-002560
 93-002810
 93-002846

SYSTEMATIC INDEX

.CONTINUED.

Tilapia mossambica
 Pituitary Gland
 93-002924
 Production
 93-002279
 93-002317
 Protein Metabolism
 93-002607
 93-003500
 Protozoan Diseases
 93-003459
 Rearing Density
 93-002274
 93-002323
 RNA
 93-002924
 Salinity
 93-002294
 93-002560
 93-002803
 Site Suitability
 93-002316
 93-002501
 Social Values
 93-002270
 Sperm
 93-002608
 Tank Culture
 93-002310
 Trematodes
 93-003521
 Urea
 93-003702
 Vitellogenin
 93-002676
 Tilapia nilotica
 Brackishwater Culture
 93-002294
 Chloride Cells
 93-002559
 93-002761
 Cloning
 93-002875
 Confinement
 93-002315
 Culture/Propagation
 93-002279
 93-002284
 93-002286
 93-002292
 93-002294
 93-002310
 93-002315
 93-002317
 93-002321
 93-002561
 93-003191
 Cytology
 93-003617
 Diets
 93-003191
 Digestive System
 93-002857
 DNA
 93-002890
 Early Development
 93-002654
 Economics
 93-002279
 Egg Quality
 93-002310
 Egg Survival
 93-002310
 Endocrinology
 93-002924
 Enzymes
 93-002841

.CONTINUED.

Tilapia nilotica
 Enzymes
 93-002857
 93-003701
 Fertilization
 93-002286
 Foods/Feeding
 93-003192
 Fry Production
 93-002310
 Gene Mapping
 93-002890
 93-002924
 Gills
 93-002559
 93-002761
 Growth Hormone
 93-002560
 93-002675
 93-002924
 Hormones
 93-002315
 93-002560
 93-002674
 93-002761
 Incubation
 93-002310
 93-002321
 Insecticides
 93-003617
 93-003701
 Invertebrate Predation
 93-002292
 Light
 93-002321
 Liver
 93-003617
 Management/Research--Ponds
 93-004140
 Marketing
 93-002279
 93-002317
 Metabolism
 93-002654
 Molluscs
 93-004140
 Musculature
 93-002735
 93-002841
 Osmoregulation
 93-002559
 Otoliths
 93-002558
 Parathion
 93-003701
 Pituitary Gland
 93-002924
 93-002924
 Pond Culture
 93-002292
 93-002321
 Predator Control
 93-002292
 Production
 93-002279
 93-002284
 93-002317
 Proteins
 93-002558
 Pyrethroids
 93-003617
 Rearing Density
 93-002284
 Rice-Fish Culture
 93-003191
 RNA
 93-002924

- CONTINUED..
- Tilapia nilotica*
 Salinity
 93-00254
 93-00259
 93-00260
 93-00261
 Sex Reversal
 93-00235
 Site Suitability
 93-00201
 Sporn
 93-00206
 Steroids
 93-00264
 Stocking/Introductions
 93-00440
 Survival
 93-00204
 Swimming Performance
 93-00251
 93-00275
 Ultraviolet Light
 93-00285
 Vector Control
 93-00440
 Water Quality/Dissolved Gases
 93-00231
- Tilapia sparrmanii*
 Biosorption
 93-00364
 Heavy Metals
 93-00364
 Iron
 93-00364
 Zinc
 93-00364
- Tilapia spilargenteus*
 Culture/Propagation
 93-00237
 Marketing
 93-00237
 Production
 93-00237
- Tilapia zillii*
 Amino Acids
 93-00288
 Culture/Propagation
 93-00237
 Feeds
 93-00280
 Marketing
 93-00237
 Production
 93-00237
 Taste Reception
 93-00288
- Tinca tinca*
 Age/Growth
 93-00326
 93-00327
 Carotenoids
 93-00258
 Fecundity
 93-00347
 Management/Research--Reservoirs
 93-00327
 Ploidy Levels
 93-00388
 Post-impoundment Studies
 93-00326
 Triploid Fish
 93-00288
- Tor putitora*
 Attractants
 93-00356
 Hedrusid
 93-00356
- CONTINUED..
- Tor putitora*
 Nematodes
 93-00356
 Parasites/Diseases
 93-00356
- Torpedo*
 Electric Organs
 93-00261
 Ion Transport
 93-00261
 Potassium
 93-00261
- Toxotes jaculator*
 Management/Research--Estuaries
 93-00459
 Mangroves
 93-00459
 Nursery Areas
 93-00459
- Trachurus declivis*
Carotolhua godichouffi
 93-00382
Carotolhua trigonocephala
 93-00382
 Parasites/Diseases
 93-00382
 Parasitic Isopods
 93-00382
 Parasitic Tagging
 93-00382
- Trachurus symmetricus*
 Abundance/Factors of
 93-00369
 Oil Pollution
 93-00369
- Trachurus trachurus*
 Distribution/Vertical
 93-00429
 Management/Research--Marine
 93-00429
- Trjaenodes obesus*
Paralibion ulongotus
 93-00383
 Parasites/Diseases
 93-00383
 Parasitic Copepods
 93-00343
- Triakis semifasciata*
 Exercise
 93-00263
 Respiration
 93-00263
 Swimming Performance
 93-00263
- Trichurus*
 Storage Effects
 93-00414
- Trichurus haemela*
 Foods/Feeding
 93-00320
- Trichogaster fasciatus*
 Air Breathing
 93-00250
 Life History/General
 93-00250
- Tridentiger trigonocephalus*
 Exotic Species/Australia
 93-00385
- Trigloca*
 Evolution
 93-00321
 Foods/Feeding
 93-00321
- Triplophysa shillensis*
 Caves
 93-00332

SYSTEMATIC INDEX

- ...CONTINUED...
- Triplophysa shillanensis*
Meristic Studies
93-003392
New Species
93-003392
Taxonomy
93-003392
- Triporthus growthert*
Mouth Parts
93-002470
Pharynx
93-002470
- Trisopterus esmarki*
Management/Research--Marine
93-004304
Stock Assessment
93-004304
Year Class Strength
93-004304
- Tylochromis*
Management/Research--Marine
93-004257
- Umbra krameri*
Abundance/Factors of
93-004116
Habitat Protection
93-004116
Management/Research--Rivers and
Streams
93-004116
Population Studies
93-004116
- Ubridae*
Carcinogens
93-003666
Parasites/Diseases
93-003666
Tumors
93-003666
- Ubrina*
Distribution/Geographical
93-003332
Fish Lists/Keys
93-003332
- Ubrina analis*
Species Identification
93-003332
- Ubrina bussingi*
Species Identification
93-003332
- Ubrina dorsalis*
Species Identification
93-003332
- Ubrina galapagarum*
Species Identification
93-003332
- Ubrina roodi*
Species Identification
93-003332
- Ubrina roscaber*
Species Identification
93-003332
- Ubrina wintersteint*
New Species
93-003332
Species Identification
93-003332
- Ubrina wasshi*
Species Identification
93-003332
- Urophycis chuss*
Food Technology
93-004305
Nutrition
93-004305
- Urophycis tenuis*
Fish Freshness Testing
93-004424
- CONTINUED
- Urophycis tenuis*
Food Technology
93-004348
93-004382
- Valenciennesa strigatus*
Monogamy
93-003009
Parental Behavior
93-003009
- Vinba vinba*
Carotenoids
93-002598
- Wallago attu*
Behavior
93-003576
Chronium
93-003576
Culture/Propagation
93-002302
Product Use
93-002302
- Xenisthus*
Early Development
93-002490
Meristic Studies
93-002490
Morphometry
93-002490
- Xenisthus calliformis*
Early Development
93-002535
Morphometry
93-002535
Osteology
93-002535
Pigments
93-002535
Species Identification
93-002535
- Xenostyus*
Nervous System
93-002724
- Xenostyus nigri*
Escape Behavior
93-002982
Swimming Performance
93-002982
- Xenoporus captivus*
Eggs
93-002514
- Xenotoca eiseni*
Eggs
93-002514
- Xiphias gladius*
Artisanal Fisheries
93-004170
Commercial Fishing
93-003863
Exploitation Rates
93-004325
Fishing Gear
93-003863
Harvest
93-003863
93-004289
Incidental Entrapment
93-003555
International Fisheries
93-004325
Management/Research--Marine
93-003863
93-004170
93-004289
93-004325
Monofillament
93-003555

- CONTINUED
- Xiphas gladius*
Mets/Wetting
93-003555
Ocean Dumping
93-003555
- Xiphistele*
Harvest
93-004334
Management/Research-Marine
93-004303
93-004334
Sportfishing
93-004303
- Xiphophorus*
Early Development
93-002710
Gonadotropin
93-002710
Maturation
93-002710
- Xiphophorus couchianus*
Population Genetics
93-002875
Variation Studies
93-002875
- Xiphophorus gordonii*
Population Genetics
93-002875
Variation Studies
93-002875
- Xiphophorus helleri*
Aquariums
93-002408
Spawning
93-002408
Viviparity
93-002408
- Xiphophorus maculatus*
Aquariums
93-002408
93-002414
Culture/Propagation
93-002414
Spawning
93-002408
Viviparity
93-002408
- Xiphophorus mayeri*
Population Genetics
93-002875
Variation Studies
93-002875
- Xiphophorus variatus*
Aquariums
93-002414
Culture/Propagation
93-002414
Population Genetics
93-002875
Variation Studies
93-002875
- Xiphophorus xiphidium*
Population Genetics
93-002875
Variation Studies
93-002875
- Zoarces viviparus*
Activity Patterns
93-002539
Hypoxia
93-002521
Historic Studies
93-002539
Morphometry
93-002539
Respiration
93-002521

- CONTINUED
- Zoarces viviparus*
Sexual Dimorphism
93-002539
Vertebral Counts
93-002539



SUBSCRIPTION INFORMATION

For current subscription price contact:

The Government Printing Office
Superintendent of Documents
Washington, DC 20402

*Subscription to *Fisheries Review* should be clearly written on the check.

U.S. Federal Agencies in wildlife-related fields and individuals or agencies who exchange domestic or foreign publications may receive free subscriptions to *Fisheries Review* by writing to:

Office of Information Transfer
Fisheries Review - Wildlife Review
U.S. Fish and Wildlife Service
1201 Oak Ridge Drive, Suite 200
Fort Collins, CO 80525-5589

CHANGE OF ADDRESS

If SIA is the first entry on the first line of your address label, send your new address and your former address exactly as it appears on your mailing label to:

The Government Printing Office
Superintendent of Documents
Washington, DC 20402

If a 12-character code appears on the first line of the label, send your new address and your former address exactly as it appears on your mailing label to:

Office of Information Transfer
Fisheries Review - Wildlife Review
U.S. Fish and Wildlife Service
1201 Oak Ridge Drive, Suite 200
Fort Collins, CO 80525-5589