

CALIFORNIA SEA GRANT COLLEGE SYSTEM

UNIVERSITY OF CALIFORNIA 9500 GILMAN DRIVE LA JOLLA, CA 92093-0232 (619) 534-4444

PUBLICATIONS UPDATE

OCTOBER 1998

Included are journal reprints, proceedings, and conference papers resulting from California Sea Grant-sponsored research and support, as well as selected California Sea Grant Series publications. A comprehensive list of publications is available on request. Ordering information is on page 7.

AQUACULTURE

- Clegg, J.S., K.R. Uhlinger, S.A. Jackson, G.N. Cherr, E. Rifkin, and C.S. Friedman. 1998. Induced thermotolerance and the heat shock protein-70 family in the Pacific oyster *Crassostrea gigas*. *Mol. Mar. Biol. Biotechnol.* 7(1): 21-30.
- Doroshov, S.I., G.P. Moberg, and J.P. Van Eenennaam. 1997. Observations on the reproductive cycle of cultured white sturgeon, *Acipenser transmontanus*. Env. Biol Fish. 48: 265-278.
- Faulkner, I.N., and G.P. Moberg. 1997. Effects of short term management stress on the ability of GnRHa to induce gonadotropin secretion in male white sturgeon, *Acipenser transmontanus*. *Aquaculture* 159:159-168.
- Homola, E., and E.S. Chang. 1997. Assay methods for methyl farnesoate esterases in crustaceans. Arch. Insect Biochem. Physiol. 36: 115-128.
- Homola, E., and E.S. Chang. 1997. Distribution and regulation of esterases that hydrolyze methyl farnesoate in *Homarus americanus* and other crustaceans. *Gen. Comp. Endocrinol.* 106: 62-72.
- McBride, S.C., W.D. Pinnix, J.M. Lawrence, A.L. Lawrence, and T.M. Mulligan. 1997. The effect of temperature on production of gonads by the sea urchin *Strongylocentrotus franciscanus* fed natural and prepared diets. *J. World Aqua. Soc.* 28(4): 357-365.
- Moberg, G.P., and S.I. Doroshov. 1996. Probing the endocrine control of sturgeon reproduction.

 In Culture and Management of Sturgeon and Paddlefish Symposium proceedings, ed. Doroshov, Binkowski, Thuemler, and MacKinlay, 105-111. San Francisco: American Fisheries Society.
- Pavlick, R.J., Jr., and G.P. Moberg. 1997. Dopaminergic influence on gonadotropin secretion in white sturgeon (Acipenser transmontanus). Fish Physiol. Biochem. 16(1): 35-43.
- Pavlick, R.J., Jr., and G.P. Moberg. 1997. The effect of chronic testosterone administration on sturgeon gonadotropins in juvenile and pre-vitellogenic white sturgeon (*Acipenser transmontanus*). Gen. Comp. Endocrinol. 105: 218-227.

- Thomas, S.L., and R.H. Piedrahita. 1997. Oxygen consumption rates of white sturgeon under commercial culture conditions. *Aquacultural Engineering* 16: 227-237.
- Thomas, S.L., and R.H. Piedrahita. 1998. Apparent ammonia-nitrogen production rates of white sturgeon (acipenser transmontanus) in commercial aquaculture systems. Aquacultural Engineering 17: 45-55.
- Van Eenennaam, A.L., J.D. Murray, and J.F. Medrano. 1998. Mitotic analysis of the North American white sturgeon, *Acipenser transmontanus* Richardson (Pisces, Acipenseridae), a fish with a very high chromosome number. *Genome* 41: 266-271.
- Van Eenennaam, A.L., J.D. Murray, and J.F. Medrano. 1998. Synaptonemal complex analysis in spermatocytes of white sturgeon, *Acipenser transmontanus* Richardson (Pisces, Acipenseridae), a fish with a very high chromosome number. *Genome* 41: 51-61.

COASTAL OCEAN RESEARCH

- Daehler, C.C., and D.R. Strong. 1997. Hybridization between introduced smooth cordgrass (Spartina alterniflora; Poaceae) and native California cordgrass (S. Foliosa) in San Francisco Bay, California, USA. Am. J. Bot. 84(5): 607-611.
- He, L.M., and B.M. Tebo. 1998. Surface charge properties of and Cu(II) adsorption by spores of the marine Bacillus sp. Strain SG-1. Appl. Environ. Microbiol. 64(3): 1123-1129.
- Jackson, G.A. 1998. Currents in the high drag environment of a coastal kelp stand off California. Continental Shelf Research 17(15): 1913-1928.
- Lambert, C.C., and G. Lambert. 1998. Non-indigenous ascidians in southern California harbors and marinas. Mar. Biol. 130: 675-688.
- Levin, L.A., D. Talley, and G. Thayer. 1996. Succession of macrobenthos in a created salt marsh. Mar. Ecol. Prog. Ser. 141: 67-82.
- Levin, L.A., T.S. Talley, and J. Hewitt. 1998. Macrobenthos of *Spartina foliosa* (Pacific cordgrass) salt marshes in southern California: Community structure and comparison to a Pacific mudflat and a *Spartina alterniflora* (Atlantic smooth cordgrass) marsh. *Estuaries* 21(1): 129-144.
- Sobey, R.J., and C.H. Barker. 1997. Wave-driven transport of surface oil. J. Coastal Res. 13(2): 490-496.
- Switzer, T. 1997. Getting the drift: How water moves out of the surf zone. GPS World, March 1997.
- Tebo, B.M., R. Ganesh, W.K. Tolley, and A.E. Grow. 1997. Microbial metal accumulation and microsolid separation for treating and recovering metals from industrial rinsewaters. In *Biotechnology for Water Use and Conservation: The Mexico '96 Workshop*, Organisation for Economic Cooperation and Development, 493-506. (Not available for distribution)
- Tebo, B.M., W.C. Ghiorse, L.G. van Waasbergen, P.L. Siering, and R. Caspi. 1997. Bacterially-mediated mineral formation: Insights into manganese(II) oxidation from molecular genetic and biochemical studies. Reviews in Mineralogy 35:225-266.

FISHERIES

- Benoit, M.D., H.V.S. Peeke, and E.S. Chang. 1997. Use of chemical cues for shell preference by the hermit crab, *Pagurus samuelis*. Mar. Fresh. Behav. Physiol. 30: 45-54.
- Cailliet, G.M., L.W. Botsford, J.G. Brittnacher, G. Ford, M. Matsubayashi, A. King, D.L. Watters, and R.G. Kope. 1996. Development of a computer-aided age determination system: Evaluation based on otoliths of bank rockfish off California. *Trans. Am. Fish. Soc.* 125: 874-888.
- Dewees, C.M. 1996. Industry and government negotiation: Communication and change in New Zealand's individual transferable quota system. In *Fisheries resource utilization and policy*. Proceedings of the World Fisheries Congress, Theme 2, ed. R. M. Meyer *et al.*, 333-341. New Delhi: Oxford & IBH Publishing Co. Pvt. Ltd.
- Dewees, C.M. 1998. Effects of individual quota systems on New Zealand and British Columbia fisheries. Ecological Applications 8(1): S133-S138.
- El Haj, A.J., S.L. Tamone, M. Peake, P. Sreenivasula Reddy, and E. S. Chang. 1997. An ecdysteroid-responsive gene in a lobster a potential crustacean member of the steroid hormone receptor superfamily. *Gene* 201:127-135.
- Fox, D.S., and R.M. Starr. 1996. Comparison of commercial fishery and research catch data. Can. J. Fish. Aquat. Sci. 53: 2681-2694.
- Friedman, C.S., M. Thomson, C. Chun, P.L. Haaker, and R.P. Hedrick. 1997. Withering syndrome of the black abalone, *Haliotis cracherodii* (Leach): Water temperature, food availability, and parasites as possible causes. *J. Shellfish Res.* 16(2): 403-411.
- Gibb, A.C. 1996. The kinematics of prey capture in *Xystreurys liolepis*: Do all flatfish feed asymmetrically? *J. Exp. Biol.* 199: 2269-2283.
- Gibb, A.C. 1997. Do flatfish feed like other fishes? A comparative study of percomorph prey-capture kinematics. J. Exp. Biol. 200: 2841-2859.
- Griffin, F.J., M.C. Pillai, C.A. Vines, J. Kääriä, T. Hibbard-Robbins, R. Yanagimachi, and G.N. Cherr. 1998. Effects of salinity on sperm motility, fertilization, and development in the Pacific herring, Clupea pallasi. Biol. Bull. 194: 25-35.
- Hankin, D.G., T.H. Butler, P.W. Wild, and G-L.Xue. 1997. Does intense fishing on males impair mating success of female Dungeness crabs? Can. J. Fish. Aquat. Sci. 54(3): 655-669.
- Homola, E., and E.S. Chang. 1997. Methyl farnesoate: Crustacean juvenile hormone in search of functions. Comp. Biochem. Physiol. 117B(3): 347-356.
- Kalamaki, M., R.J. Price, and D.Y.C. Fung. 1997. Rapid methods for identifying seafood microbial pathogens and toxins. J. Rapid Methods Automation Microbiol. 5: 87-137.
- Kao, H.-W., and E.S. Chang. 1997. Limb regeneration in the eye sockets of crabs. Biol. Bull. 193: 393-400.
- Lafferty, K.D., and A.M. Kuris. 1996. Biological control of marine pests. Ecology 77(7): 1989-2000.
- McBride, S.C. 1997. Packaging and shipping live adult, juvenile, and larval abalone (Haliotis spp.) for commercial and research purposes. Shellfish: 51-59.

- Morgan, L.E., L.W. Botsford, and S.R. Wing. 1997. Influence of local productivity and recruitment patterns on design of reserves, the California red sea urchin population as an example. In: Proceedings, *California and the World Ocean '97*, ed. O.T. Magoon *et al*, 427-436. Virginia: ASCE.
- Reddy, P.S., G.D. Prestwich, and E.S. Chang. 1997. Crustacean hyperglycemic hormone gene expression in the lobster *Homarus americanus*. In *Advances in comparative endocrinology*, ed. S. Kawashima and S. Kikuyama. Proceedings of the XIII International Congress of Camparative Endocrinology, Yokohama, Japan, November, 1997. Bologna: Monduzzi Editore.
- Shamseldin, A.A., J.S. Clegg, C.S. Friedman, G.N. Cherr, and M.C. Pillai. 1997. Induced thermotolerance in the Pacific oyster, *Crassostrea gigas*. J. Shellfish Res. 16(2): 487-491.
- Vines, C.A., F.J. Griffin, M.C. Pillai, R. Yanagimachi, T. Hibbard-Robbins, and G.N. Cherr. 1996. A specialized role for the Pacific herring egg chorion in sperm motility initiation. In *The fish egg: Its biology and culture symposium proceedings*, ed. D. MacKinlay and M. Eldridge, 167-172. American Fisheries Society.
- Yoklavich, M.M., V.J. Loeb, M. Nishimoto, B. Daly. 1996. Nearshore assemblages of larval rockfishes and their physical environment off central California during an extended El Niño, 1991-1993. Fish. Bull. 94: 766-782.
- Young, G., S.D. McCormick, T. Björnsson, and H.A. Bern. 1995. Circulating growth hormone, cortisol and thyroxine levels after 24 h seawater challenge of yearling coho salmon at different developmental stages. Aquaculture 136: 371-384.

MARINE AFFAIRS

- Scheiber, H.N. 1998. Historical memory, cultural claims, and environmental ethics in the jurisprudence of whaling regulation. Ocean & Coastal Management 38: 5-40.
- Scheiber, H.N., and C. Carr. 1997. The limited entry concept and the pre-history of the ITQ movement in fisheries management. In *Social implications of quota systems in fisheries*, ed. G. Palsson and G. Petursdottir, 235-260. Copenhagen: Nordic Council of Ministers.

NEW MARINE PRODUCTS

- Abrell, L.M., B. Borgeson, and P. Crews. 1996. A new polyketide, secocurvularin, from the salt water culture of a sponge derived fungus. *Tetrahedron Lett.* 37(50): 8983-8984.
- Abrell, L.M., B. Borgeson, and P. Crews. 1996. Chloro polyketides from the cultured fungus (Aspergillus) separated from a marine sponge. Tetrahedron Lett. 37(14): 2331-2334.
- Compagnone, R.S., I.C. Piña, H.R. Rangel, F.Dagger, A.I. Suárez, M.V.R. Reddy, and D.J. Faulkner. 1998. Antileishmanial cyclic peroxides from the Palauan sponge *Plakortis* aff. angulospiculatus. Tetrahedron 54: 3057-3068.
- Epel, D., M. Kaufman, B. Toomey, Y. Ikeda, and C. Patton. 1997. Saving the children: The cell and molecular biology of embryo defenses. J. Reprod. Develop. 43: 45-46.

- Haygood, M.G., and S.K. Davidson. 1997. Small-subunit rRNA genes and in situ hybridization with oligonucleotides specific for the bacterial symbionts in the larvae of the bryozoan Bugula neritina and proposal of "Candidatus Endobugula sertula." Appl. Environ. Microbiol. 63(11): 4612-4616.
- Hopmann, C., and D.J. Faulkner. 1997. Lissoketal, a spiroketal from the Palauan ascidian Lissoclinum voeltzkowi. Tetrahedron Lett. 38(2): 169-170.
- Kang, H., and W. Fenical. 1997. Aplidiamine, a unique zwitterionic benzyl hydroxyadenine from the Western Australian marine ascidian Aplidiopsis sp. Tetrahedron Lett. 38(6): 941-944.
- Kang, H., and W. Fenical. 1997. Ningalins A-D: Novel aromatic alkaloids from a Western Australian ascidian of the genus *Didemnum. J. Org. Chem.* 62(10): 3254-3262.
- Kaufman, M.R., Y. Ikeda, C. Patton, G. Van Dykhuizen, and D. Epel. 1998. Bacterial symbionts colonize the accessory nidamental gland of the squid *Loligo opalescens* via horizontal transmission. *Biol. Bull.* 194: 36-43.
- Lu, Q., and D.J. Faulkner. 1997. Two 11α-acetoxysterols from the Palauan soft coral Lobophytum cf. pauciflorum. Nat. Prod. Lett. 10: 231-237.
- Lu, Q., and D.J. Faulkner. 1997. Two new sesterterpenoids and a new 9,11-secosterol from Spongia matamata. J. Nat. Prod. 60(2): 195-198.
- MacPherson, J.C., J.G. Pavlovich, and R.S. Jacobs. 1996. Biosynthesis of arachidonic acid metabolites in Limulus polyphemus amebocytes: Analysis by liquid chromatography-electrospray ionization mass spectrometry. Biochim. et Biophy. Acta 1303: 127-136.
- Mayer, A.M. S., M.A. Choudhry, M.M. Sayeed, and J. A. Spitzer. 1997. The marine toxin okadaic acid reduces O₂ generation and tyrosine phosphorylation in LPS-primed rat neutrophils. *Life Sci.* 61(15): 199-204.
- Pond, C.D., J.A. Holden, P.C. Schnabel, and L.R. Barrows. 1997. Surface plasmon resonance analysis of topoisomerase I-DNA binding: effect of Mg²⁺ and DNA sequence. *Anti-Cancer Drugs* 8: 336-344.
- Reddy, M.V.R., D.J. Faulkner, Y. Venkateswarlu, and M.R. Rao. 1997. New lamellarin alkaloids from an unidentified ascidian from the Arabian Sea. *Tetrahedron* 53(10): 3457-3466.
- Reddy, M.V.R., M.K. Harper, and D.J. Faulkner. 1997. Luffasterols A-C, 9,11-secosterols from the Palauan sponge *Luffariella* sp. *J. Nat. Prod.* 60(1): 41-43.
- Sakowicz, R., M.S. Berdelis, K. Ray, C.L. Blackburn, C. Hopmann, D.J. Faulkner, and L.S.B. Goldstein. 1998. A marine natural product inhibitor of kinesin motors. *Science* 280: 292-295.
- Schmidt, E.W., C.A. Bewley, and D.J. Faulkner. 1998. Theopalauamide, a bicyclic glycopeptide from filamentous bacterial symbionts of the lithistid sponge *Theonella swinhoei* from Palau and Mozambique. J. Org. Chem. 63: 1254-1258.
- Schmidt, E.W., and D.J. Faulkner. 1998. Microsclerodermins C E, antifungal cyclic peptides from the lithistid marine sponges *Theonella* sp. and *Microscleroderma* sp. *Tetrahedron* 54: 3043-3056.
- Schmidt, E.W., M.K. Harper, and D.J. Faulkner. 1997. Mozamides A and B, cyclic peptides from a Theonellid sponge from Mozambique. J. Nat. Prod. 60: 779-782.
- Varoglu, M., T.H. Corbett, F.A. Valeriote, and P. Crews. 1997. Asperazine, a selective cytotoxic alkaloid from a sponge-derived culture of *Aspergillus niger*. J. Org. Chem. 62(21): 7078-7079.

- Wang, G.-Y.-S., L.M. Abrell, A. Avelar, B.M. Borgeson, and P. Crews. 1998. New hirsutane based sesquiterpenes from salt water cultures of a marine sponge-derived fungus and the terrestrial fungus Coriolus consors. Tetrahedron 54: 7335-7342.
- Wang, G.-Y.-S., B.M. Borgeson, and P. Crews. 1997. Pitholides A-D, polyketides from a marine tunicate-derived culture of *Pithomyces* sp. *Tetrahedron Lett.* 38(49): 8449-8452.
- Williams, D.H., and D.J. Faulkner. 1996. Three new acetylenes from the Palauan sponge *Haliclona* sp. *J. Nat. Prod.* 59: 1099-1101.
- Wylie, B.L., N.B. Ernst, K.J.S. Grace, and R.S. Jacobs. 1997. Marine natural products as phospholipase A₂ inhibitors. In *Phospholipase A₂. Basic and clinical aspects in inflammatory diseases*, ed. W. Uhl, T. J. Nevalainen, and M. W. Büchler, 146-152. Basel: Karger.

OCEAN ENGINEERING AND INSTRUMENTATION

- Sloan, F.E., and J.B. Talbot. 1997. Evolution of perhydroxyl ions on graphite/epoxy cathodes. J. Electrochem. Soc. 144(12): 4146-4151.
- Webster, W.C., and X. Zhang. 1998. A waterfall springing from unsteady flow over an uneven bottom. Conference paper, Thirteenth International Workshop on Water Waves and Floating Bodies, the Netherlands, March 29-April 1, 1998.

SELECTED SERIES PUBLICATIONS

- Abbott, I., ed. 1997. Taxonomy of Economic Seaweeds: With Reference to Some Pacific Species, Vol. 6. Report No. T-040. (Volumes 1 5 also available; \$10 each volume \$15 International includes airmail postage)
- Bakun, A. 1996. Patterns in the Ocean: Ocean Processes and Marine Population Dynamics.

 Report No. T-037. (\$24 U.S. \$29 International includes airmail postage)
- Culver, C.S., A.M. Kuris, and B. Beede. 1997. Identification and Management of the Exotic Sabellid Pest in California Cultured Abalone. Report No. T-041. (\$6)
- McArdle, D.A. 1997. California Marine Protected Areas. Report No. T-039. (\$13)
- Olin, P.G., and J.L. Cassell, eds. 1998. Marine and Aquatic Nonindigenous Species in California: An Assessment of Current Status and Research Needs. Report No. T-043.
- Price, R.J., P. D. Tom, and K.E. Stevenson. 1993. *Ensuring Food Safety...the HACCP Way*.

 Report No. T-030. (Single copy free; \$1 each for multiple copies. Book is also available in Spanish language.)
- Sakanari, J.A., M. Moser, and T.L. Deardorff. 1995. Fish Parasites and Human Health. Report No. T-034. (\$4)
- Starr, R.M., K.A. Johnson, E.A. Laman, and G.M. Cailliet. 1998. Fishery Resources of the Monterey Bay National Marine Sanctuary. Report No. T-042. (\$10)
- Zedler, J.B. 1996. Tidal Wetland Restoration: A Scientific Perspective and Southern California Focus. Report No. T-038. (\$10)

ORDERING INFORMATION

- A complete list of available Series books can be found under Communications on the California Sea Grant website; or request a comprehensive publications list from the Communications office.
- Sea Grant Series publications are priced individually. Please prepay with cash, check or money order payable to University of California Regents. If no price is noted, the book is free. Single copies of available publications listed under Reprint Series are free.
- Tax is included in the cost of the book, and postage is included when mailing to any address
 with a United States Zip Code. There is an additional charge for Airmail postage for
 International shipments. Please contact the Communications Department to request
 international airmail rates.
- Order by first author's name and the first several words of the publication title. Include the
 publication number of books from the Series list. Send orders and inquiries to:

Communications Department
California Sea Grant
9500 Gilman Drive
University of California
La Jolla, CA 92093-0232
Phone: (619) 534-4446
Fax: (619) 453-2948
Email: gfrederick@ucsd.edu
http://www-csgc.ucsd.edu/

• Publications not available from California Sea Grant may be borrowed for one month from the National Sea Grant Depository, an archive of all Sea Grant funded documents. There is a limit of 10 publications per request. Please indicate your intent to borrow the publication(s) so that your request is not returned. If possible, send request on an interlibrary loan form or institutional letterhead. Mail to:

National Sea Grant Depository
Pell Library Building
Fax: (401) 874-6114
University of Rhode Island
Website: http://nsgd.gso.uri.edu/

 Find the complete collection of Sea Grant funded work on the National Sea Grant Depository website.

National Sea Grant Depository

Pell Library Building - GSO University of Rhode Island Narragansett, RI 02882-1197USA



UNIVERSITY OF CALIFORNIA SAN DIEGO CALIFORNIA SEA GRANT COLLEGE SYSTEM 9500 GILMAN DRIVE DEPT 0232 LA JOLLA CA 92093-0232

CALIFORNIA SEA GRANT BULK RATE U.S. POSTAGE

PAID

SAN DIEGO, CA PERMIT NO. 1909