

## CURRICULUM VITAE

**CHARLES YARISH**

March, 2008

### PERSONAL

Place and date of birth:

Brooklyn, New York  
June 21, 1948

Marital status:

Married, two children

Present address:

153 Hanover Road  
Newtown, Connecticut 06470

University address:

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### EDUCATION

B.S.	1970	Brooklyn College (City University of New York)
M.A.	1972	University of Texas (Austin)
Ph.D.	1976	Rutgers - The State University (New Brunswick)

### EXPERIENCE

<u>FROM/TO</u>	<u>Position/Institution</u>
1971-1972	Teaching Assistant/University of Texas
1973-1976	Teaching Assistant/Rutgers University
1973-1974	Head Teaching Assistant/Rutgers University
1974	Course Coordinator/Rutgers University
1975	Summer session lecture and laboratory
1976	Assistant Professor of Biology, University of Connecticut at Stamford
1982	Associate Professor of Biology, University of Connecticut at Stamford

## **C. Yarish**

### **EXPERIENCE (continued)**

1983-1984	Visiting Professor of Marine Biology, University of Groningen, The Netherlands
1984	Associate Professor of Biology, University of Connecticut at Stamford
1985	Visiting Scientist Biologische Anstalt Helogland, Federal Republic of Germany
1988-present	Professor of Biology, University of Connecticut
1990-1994	Associate Director of Stamford Campus, University of Connecticut
1990-1994	Adjunct Professor, Marine Sciences Research Center, SUNY at Stony Brook
2002-2007	Guest Professor, Shanghai Fisheries University, Shanghai, PR China
2004-2007	E-academe Professor, Shanghai Fisheries University, Shanghai, China

### **PROFESSIONAL SOCIETIES**

British Phycological Society  
International Phycological Society  
American Society of Limnology and Oceanography  
Phycological Society of America  
American Institute of Biological Sciences  
Sigma Xi, The Scientific Research Society of North America  
Northeast Algal Society  
World Aquaculture Society  
Canadian Aquaculture Society

### **HONORS AND DISTINCTIONS**

New Jersey State Scholarship, 1975  
Sigma Xi, 1976  
University of Connecticut Research Foundation Grant, 1976  
University of Connecticut Faculty Summer Fellowship, 1977  
University of Connecticut Research Foundation Grant, 1980  
University of Connecticut Research Foundation Grant, 1982  
University of Connecticut Research Foundation Grant, 1988  
University of Connecticut Research Foundation Grant, 1989  
University of Connecticut Research Foundation Grant, 1990  
University of Connecticut Research Foundation Grant, 1992  
Who's Who in the East, 1982 Office of Water Research and Technology Award, 1982-1983  
The Netherlands National Science Foundation Award (Z.W.O.), 1983-1984  
Connecticut Sea Grant Program, 1984-1985  
Biologische Anstalt Helogland (Zentrale) Visiting Prof. Award, 1985

## **C. Yarish**

### **HONORS AND DISTINCTIONS (continued)**

Biologische Anstalt Helgoland Visiting Scientist Award, 1986 to attend the Third International Seaweed Biogeography Workshop

Invited Associate to the Columbia University Seminar on Pollution and Water Resources, 1988-present

Appointed to the Graduate Faculty of the University of Maine, 1987- 1992; 2004-present

Appointed to the Graduate Faculty of the University of Porto, Portugal; 2002-present

International Executive Service Corps Aquaculture Project in Kenya, 1988

Irish/American Aquaculture Program, 1989, 2004

Connecticut Sea Grant Program, 1985-1986

Connecticut Sea Grant Program, 1986-1987

Connecticut Sea Grant Program, 1987-1988

Connecticut Sea Grant Program, 1988-1990

Connecticut Sea Grant Program, 1990-1991

Connecticut Sea Grant Program, 1995-1998

Connecticut Sea Grant Program, 1998-1999

Connecticut Sea Grant Program, 2000-2003

Connecticut Sea Grant Program, 2006-2008

National Sea Grant College Program, 1995-1998

National Sea Grant College Program, 2001-2004

NOAA's National Undersea Research Program, 1989-1990

Delegation Leader to China for the Citizen Ambassador Program, 1990

Organizing Committee for the V<sup>th</sup> International Phycological Congress, Qingdao, China, 1994

National Research Council of Canada Advisory Board, 1990-1996

Osborne Marine Laboratory of the N.Y. Aquarium Advisory Board, 1990-1995

Delegate & Panalist for the joint coordination panels for International Division of the Office of Oceanic & Atmospheric Research, NOAA for Aquaculture & Living Resources, for People's Republic of China, 1991-present; for South Korea (2001-present); and Japan (2002; 2004)

Delegate to the 10th and subsequent Joint Working Group Meetings of the US/PRC Protocol on Marine & Fishery Science & Technology, 1991 & 1997

Organizing Committee and Secretariat for the V<sup>th</sup> International Phycological Congress, Qingdao, PRC, June 26-July 2, 1994

Science Technical Advisory Committee, elected Co-chairman, for the Long Island Sound EPA Study,

April 28, 1992-present

1st Prize, MARINALG Award, XIV<sup>th</sup> International Seaweed Symposium, Brittany, France, August, 1992

Secretary of the Phycological Society of America (term from 1994-1996)

Executive Committee for the Phycological Society of America (1994-1996; 2000-2002)

National Lecturer for the Phycological Society of America (1993-1995)

## **C. Yarish**

### **HONORS AND DISTINCTIONS (continued)**

Member of Model Evaluation Group for the Peconic Estuary Program, Riverhead, NY, January, 1996-2000

Senior Organizer and Session Chair of an invited symposium on "Macroalgal Cultivation" for the Triennial Meeting of the World Aquaculture Society's Aquaculture '98 meetings, Las Vegas, Nevada. Feb. 16-19, 1998.

Aquaculture 2002 the international meetings of the World Aquaculture Society. Apr. 25, 2002.

Vice President/President Elect of the Phycological Society of America (2000)

President of the Phycological Society of America (2001)

Past President of the Phycological Society of America (2002)

Member at Large, Northeast Algal Society (1999-2002)

Member of the Executive Committee of the Northeast Algal Society (2002-2005) and a Co-convenor for 2004 meetings

Co-convenor of an invited symposium on "Integrated Aquaculture" for the Third Asia-Pacific Phycological Forum, Tsukuba, Japan, July 22, 2002.

Science Co-Chair for the 31<sup>st</sup> Meetings of the United States-Japan Cooperative Program in Natural Resource (UJNR) Panel, Yokohama and northeast Honshu, Japan, Oct. 16-25, 2002.

Honorary Guest Professor, Shanghai Fisheries University, Shanghai, China, Nov. 2, 2002.

Member of the International Organizing Committee for The Fifth Asia-Pacific Conference on Algal Biotechnology. Oct. 18-21, 2003; invited keynote speaker at these meetings and

Co-convenor and organizer for the mini-symposium "Use of algae in environmental management."

Invited plenary speaker to the Congress of the Chinese Phycological Society, Nov. 2-7, 2003, Suzhou, China.

Senior Organizer and Session Co-Chair of an invited symposium "Seaweed Culture and Integrated Aquaculture Developments" at "Aquaculture – An Ecologically Sustainable and Profitable Venture for The Meetings of the World Aquaculture Society's Aquaculture 2004 meetings, Honolulu, Hawaii, March 1-5, 2004.

Invited speaker to the symposium entitled "Pharmacological Aquaculture" at "Aquaculture – An Ecologically Sustainable and Profitable Venture for The Meetings of the World Aquaculture Society's Aquaculture 2004 meetings, Honolulu, Hawaii, March 1-5, 2004.

First E-academe Professor at Shanghai Fisheries University, Shanghai, PR China, April, 2004.

Invited participant to the 2004 Aquaculture Biotech workshop sponsored by the Martin Ryan Institute, National University of Ireland, Galway and the RI/CT Sea Grant College Programs where he gave a presentation entitled "Seaweed cultivation and biotechnology: Opportunities for integrating seaweeds in aquaculture systems for bioremediation and industry diversification."

Senior organizer and co-convenor a symposium on "Marine plant aquaculture in the Northeast" for the 2004 Northeast Conference and Exposition (NACE).

Member of the Advisory Committee of the International Conference on Applied Phycology, "Algae in Biotechnology and Environment" New Delhi, India, 14-15 February, 2006. of the Advisory Committee.

## **C. Yarish**

### **HONORS AND DISTINCTIONS (continued)**

Invited workshop leader for The International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) to the workshop entitled "MARINE ALGAE CULTURE: TECHNIQUES, USES AND DEVELOPMENT PERSPECTIVES," 22-26 May 2006, Zaragoza, Spain

Member (2006-present) of the Oversight Committee for the Center of Globalization and Commerce, University of Connecticut, Stamford, CT.

Member (2006-present) of a national panel called the "Sustainable Seafood Forum", Aquarium of the Pacific, Marine Conservation Research Institute, Long Beach, California.

Invited participant to the California World Oceans 2006 meetings (Sept. 17-20, 2006, Long Beach, California) where I presented a paper in the session "Got Aquaculture? Why Not? My paper was entitled "The use of economically and ecologically important seaweeds in integrated multi-trophic aquaculture: a guide for sustainable development of marine farms in the 21<sup>st</sup> century."

Invited participant in the mini-symposium, entitled "Sustainable Management of Seaweed Resources," at the International Conference in honor of the 20th Anniversary of the Korean Society of Phycology, Seoul, South Korea, October 16-19, 2006. My paper was entitled "Cultivation of Economically Important Seaweeds in Integrated Multi-Trophic Aquaculture Systems: A Global Approach for Sustainable Fish Production."

Invited participant in the mini-symposium, entitled "Integrated Aquaculture: Essential Role of Seaweed Cultivation (Global Expansion of Mariculture)," at the XIXth International Seaweed Symposium, Kobe, Japan, March 26-31, 2007. My paper was entitled "Cultivation of seaweeds in integrated multi-trophic aquaculture systems: New opportunities for the marine farmer in the global seafood industry."

Received The 2007 Faculty Recognition Award, which recognizes sustained outstanding achievements in teaching, research and services benefiting UConn Stamford (August 22, 2007).

### **PROFESSIONAL ACTIVITIES**

#### **Manuscript Reviewer:**

Phycologia; Journal of Phycology; Hydrobiologia, Arch. Environ. Contam. & Toxicol.; Marine Biology, Rhodora; Am. J. Botany; Canadian J. of Botany; Helgoländer Meeresunter.; British Phycological Journal; European Phycological Journal; Aquaculture; Bulletin of Environ. Contam. & Toxicol.; Botanica Marina; World Aquaculture Magazine; and Algae; Northeast Naturalist.

#### **Grant Reviewer:**

Sea Grant Programs of Alaska, Florida, Massachusetts, New Hampshire/Maine, New York, and Oregon; Reviewer for Marine and Estuarine Management Div. of NOAA/NOS/ORM; National Sea Grant Program; New Hampshire Agricultural Expt. Station; Maine Agricultural Expt. Station; Gulf of Maine Regional Marine Research Program; National Science Foundation; National Oceanic and Atmospheric Administration; Saltonstall-Kennedy Grants Program; and National Science Foundation; Dept. of Agriculture's Small Business Innovation Research (SBIR) Program of the National Research Initiative Competitive Grants Office.

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### **Other Professional Activities:**

Member of the State Extension Council, 1982-1983; Connecticut Science Fair Association, 1979-1983; Education advisor for the Oceanic Society, 1976-1980; Fairfield County Agricultural Extension Council, Inc., Bethel, CT, 1981-1983; Member of the Board of Directors of the Friends of the White Memorial Conservation Foundation, Litchfield, CT, 1980-1982; Member of the State of Connecticut Soil and Water Conservation Council (Vice-chairman, 1985-1986; Treasurer 1983-1984); Member of the Environmental Advisory Panel to 5<sup>th</sup> District Congressman William Ratchford, 1982-1984; Assisted with the organization and final communication of a King's Mark Environmental Review Team Report on Holly Pond to the Town of Darien and the City of Stamford, 1984-1985; Co-convenor of the 21st Northeast Algal Symposium, May, 1982 at Woods Hole, Massachusetts; Co-convenor of Lake Restoration Workshop, April, 1983 at Cooperative Extension Center, Bethel, Connecticut; Co-convenor of the Connecticut Sea Grant Symposium on "Economically Important Marine Plants of the Atlantic: Their Biology and Cultivation, October, 1988 at Groton, Connecticut; Editorial Board: *Phycologia* (1986-1989); *Journal of Phycology* (1989-1991); *Bull. Environ. Contam. & Toxicol.*, (1991-1995); Chair, Nominating Committee of the Northeast Algal Society 1988-89); Co-convenor of the sessions on "Seaweed Cultivation and Economically Important Seaweeds", August, 1989, at the 13th Int. Seaweed Symposium, Vancouver, British Columbia; Invited Participant to the Irish/American Aquaculture Workshop, September, 1989 Galway, Ireland; Election Committee of the Phycological Society of America (1990-1993), Chairperson 1991-1992; Ad hoc Committee to explore the Advisability of Creating an Executive Secretariat for the Phycological Society of America, 1988-1989; Invited Symposium Speaker to Symposium on "Seaweed Aquaculture in North America", at the World Aquaculture Society Annual Meetings, June 1990, Halifax, Nova Scotia; Convenor of a contributed papers symposium at the Vth International Phycological Congress, Qingdao, PRC, June 6- July 2, 1994; Co-Convenor, moderator and member of the Organizing Committee for a US EPA Long Island Sound Study-New England Interstate Environmental Training Center Workshop entitled: "Hypoxia in Long Island Sound: Integrating Modeling, Monitoring, and Research," May 1-2, 1997, at the Marine Sciences Research Center, State University of New York at Stony Brook, Stony Brook, NY; Organizer of an invited symposium on Seaweed Aquaculture for The Triennial Meeting of the World Aquaculture Society's Aquaculture '98 meetings held Feb.16-19, 1998, Las Vegas, Nevada; Invited Associate Advisor to Ph.D. students at the State University of New York at Stony Brook; University of Massachusetts at Amherst; University of Maine at Orono; Dalhousie University, Halifax, NS, Canada; University of Cape Town, South Africa; Lehman College of the City University of New York, Bronx, New York; Institute of Oceanology, Chinese Academy of Sciences, Qingdao, PRC; The Autonomous Universidad de Baja California, Ensenada, Mexico; and external reviewer for the South African FRD Core Programs, SNO Kernprogram. He was a member of the Organizing Committee for the Workshop entitled: "Marine Aquaculture: Emerging Technologies and Global Opportunities, June 26-27, 1998, at the University of Connecticut at Stamford; a member of the organizing committee for a symposium on "Integrated Aquaculture" held during the Annual Meetings of the Phycological Society of America, June 24-28, 2001. Co-convenor of an invited symposium on "Integrated Aquaculture" for the Third Asia-Pacific Phycological Forum, Tsukuba, Japan, July 22, 2002; Science Co-Chair for the 31<sup>st</sup> Meetings of the United States-Japan Cooperative Program in Natural Resource (UJNR) Panel,

Yokohama and northeast Honshu, Japan, Oct. 16-25, 2002; Member of the International Organizing Committee for The Fifth Asia-C. Yarish

**Other Professional Activities (continued):**

Pacific Conference on Algal Biotechnology. Oct. 18-21, 2003; invited keynote speaker at these meetings and co-convenor and organizer for the mini-symposium “Use of algae in environmental management;” Senior Organizer and Session Co-Chair of an invited symposium “Seaweed Culture and integrated Aquaculture Developments” at “Aquaculture – An Ecologically Sustainable and Profitable Venture for The Meetings of the World Aquaculture Society's Aquaculture 2004 meetings, Honolulu, Hawaii, March 1-5, 2004; Co-convenor of the 43<sup>rd</sup> Northeast Algal Symposium, April, 2004, Groton, Connecticut; Invited participant to the 2004 Aquaculture Biotech workshop sponsored by the Martin Ryan Institute, National University of Ireland, Galway and the RI/CT Sea Grant College Programs where he gave a presentation entitled “Seaweed cultivation and biotechnology: Opportunities for integrating seaweeds in aquaculture systems for bioremediation and industry diversification; ” Senior organizer and co-convenor a symposium on “Marine plant aquaculture in the Northeast” for the 2004 Northeast Conference and Exposition (NACE). Invited workshop leader for The International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) to the workshop entitled “MARINE ALGAE CULTURE: TECHNIQUES, USES AND DEVELOPMENT PERSPECTIVES,” 22-26 May 2006, Zaragoza, Spain. Invited member of the New Haven Harbor Watershed environmental Monitoring Program Science Advisory Committee (SAC) (Sept. 2006-2007). Invited member (2006-present) of the State of Connecticut DEP Ad Hoc Steering Committee for the creation of a National Estuarine Research Reserve for Connecticut and also an invited member (2006-present) of the State of Connecticut DEP Seagrass Steering Committee of the Office of Long Island Sound Programs. He is a member of the Advisory Board for the City of Bridgeport's Regional Vocational Aquaculture High School (1993-present) and has also been on the Advisory Board for the City of New Haven's Sound School.

**FIELD OF SPECIALIZATION**

Marine Phycology/Ecology/Aquaculture/Systematics

**RESEARCH INTERESTS**

I am interested in the ecology, systematics and phytogeography of economically important marine macroalgae and marine angiosperms, including studies on eutrophication, primary productivity, nutrient relationships, autecology, physiology and invasive species. I am particularly interested in the aquaculture of marine plants and the development of new technologies for the nutrient removal from aquaculture systems. I am a certified SCUBA diver (NAUI and PADI) with over 39 years of experience.



## **C. Yarish**

### **PUBLICATIONS** (continued)

#### **Books and Monograph**

Yarish, C. 1976. A Field and cultural Investigation of the Seasonal and Horizontal Distribution of Estuarine Red Algae of New Jersey. Doctoral Dissertation. Rutgers University. 124 pp.

Schneider, C. W., M. M. Suyemoto and C. Yarish. 1980. An annotated checklist of Connecticut Seaweeds. Connecticut Geological and Natural History Survey. Bulletin 108. 20 pp.

Yarish, C., C.A. Penniman, and M. van Patten (Editors). 1990. Economically Important Marine Plants of the Atlantic: Their Biology and Cultivation. The Connecticut Sea Grant College Program, Groton, CT, 158 pp.

Lüning, K. 1990. Seaweeds - Their Environment, Biogeography, and Ecophysiology, IN: Yarish, C. and H. Kirkman (Editors) Edited Translation of the German language edition Meeresbotanik: Verbreitung, Okophysologie und Nutzung der marinen Makroalgen by Klaus Lüning. John Wiley & Sons, Inc. New York, 527 pp.

Yarish, C. 1991. Journal of the Citizen Ambassador Program Seaweed Aquaculture Delegation To The People's Republic of China. May 24-June 6, 1990. People to People International, Inc. Spokane, Washington, 66 pp.

#### **Technical Reports**

Yarish, C. 1984. Dissolved organics released by estuarine benthic algae as carriers of metal to filter feeding zooplankton. Research Proj. tech. Completion Report, U.S. Department of Interior.

Yarish, C. 1984. A lab manual for general botany (Bio 110) and principles of biology (Bio 108). UConn COOP., Storrs, CT. 179 pp.

Baillie, P.W. and C. Yarish. 1987. The intertidal algal flora of sand and mud flats, Stamford Harbor, West Branch, Stamford, CT. A management plan submitted to The Stamford Environmental Protection Board, Stamford, CT and Coastal Area Management Program, Hartford, CT.

Yarish, C. 1988. Seaweed Farming in Kenya. A feasibility study submitted to the International Executive Service Corps, Nairobi, Kenya and Stamford, Connecticut. Project No. 16234.

Yarish, C. and P.W. Baillie. 1989. Ecological Study of an Impounded Estuary, Holly Pond, Stamford, CT. Submitted to the Stamford Environmental Protection Board, Stamford, CT and the Coastal Area Management Program, Hartford, CT, 117p. and Appendices.

## C. Yarish

### Technical Reports (continued)

Yarish, C., J.A. Kilar, and J.E. Merrill. 1991. The Management of Eutrophication Through Aquaculture and Natural Beds of Marine Algae. In: Hinga, K.R., D.W. Stanley, C.J. Klein, D.T. Lucid, and M.J. Katz (Editors). 1991. The National Estuarine Eutrophication Project: Workshop Proceedings, Rockville, MD: National Oceanic and Atmospheric Administration and the University of Rhode Island Graduate School of Oceanography, pp. 40-41.

Merrill, J., J.A. Kilar, X. Huang, C. Yarish. 1992. Aquaculture methods for use in managing eutrophicated waters. In: Schubel, J.R. The Second Phase of an Assessment of Alternatives to Biological Nutrient Removal at Sewage Treatment Plants for Alleviating Hypoxia in Western Long Island Sound. Report of the Long Island Sound Study Alternative Technologies Workshop for the U.S. Environmental Protection Agency on 21-22 November 1991 Working Paper 56, Reference No. 91-19. 19p.

Van Patten, M.S. and C. Yarish. 1993. Effects of temperature on reproduction in an Atlantic Kelp, Laminaria longicuris, in the North Atlantic Ocean. In: Van Patten, M.S. Irish-American Technical Exchange on the Aquaculture of Abalone, Sea Urchins, Lobsters and Kelp. An International Workshop sponsored by the Sea Grant College Programs of the Northeastern United States. Connecticut Sea Grant College Program. Publ. CT-SG-93-05. Pp. 50-51.

Koch, E.W., C. Yarish, S.Beer, R. Troy, G. Capriulo, R. Linden, J. Rehnberg. 1995. Environmental monitoring, seagrass mapping and biotechnology as means of fisheries habitat enhancement along the Connecticut coast: A report for July 1993 to December 1994. December, 1994. 42 pp. + appendices. Submitted to Office of Long Island Sound Programs, CT Department of Environmental Protection.

G. Capriulo, C. Yarish, G. Wikfors, R. Troy and B. Welsh. 1997. "Alteration of the Planktonic Food Web of Long Island Sound Due to Eutrophication." Final Report to Office of Long Island Sound Programs, CT Department of Environmental Protection.

Chopin, T. and C. Yarish. 1998. Nitrogen and phosphorous concentrations in Porphyra in relation to salmonid aquaculture in Cobscook Bay, Maine. Rpt to Coastal Plantations International, Inc. 5p.

Yarish, C., A.E. Sperr, R. Wilkes, X.G. Fei, A.C. Mathieson, and I. Levine. "Developing a Commercially Viable Seaweed Industry in New England." for Nori Research Project (September, 1996 through February, 1998). Quarterly Technical Reports to researchers and directors from the Connecticut, Massachusetts, New Hampshire/Maine Sea Grant Programs for a National Sea Grant College Funded Project.

Yarish, C. TIES PROJECT UABC and UConn Trip Report DATES: December 7-12, 2004. 3p. submitted to the UConn Office of International Affairs to support the U.S.-Mexico Training,

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### Technical Reports (continued)

Internships, Exchanges & Scholarships (TIES). January 3, 2005. see [http://www.oia.uconn.edu/PDF/oia\\_newsletter.pdf](http://www.oia.uconn.edu/PDF/oia_newsletter.pdf), p. 3.

Babb, I.G., C. Yarish, J. Zertuche, and B. Bravo-Ureta. 2005. Using Underwater Technologies to Address Coastal Resource Issues: Mapping the Invasive Kelp, *Undaria* with a Remotely Operated Vehicle. 9p. Report Presented to the UConn Office of International Affairs to support the U.S.-Mexico Training, Internships, Exchanges & Scholarships (TIES). May 2, 2005. Information on the TIES program see <http://www.oia.uconn.edu/ties/index.html>.

Babb, I. And C. Yarish. 2005. Using Underwater Technologies to Address Coastal Resource Issues: Mapping the Invasive Kelp, *Undaria* with a Remotely Operated Vehicle. 3p. NAGL-04-10. Annual Report to National Undersea Research Program, NOAA. Feb. 3, 2005.

Final Report submitted to Connecticut Sea Grant College program and NOAA's National Marine Aquaculture Initiative for the project entitled "Development of an Integrated Recirculating Aquaculture System for Nutrient Bioremediation in Urban Aquaculture." C. Yarish, C.D. Neefus, G.P. Kraemer, T. Chopin, G. Nardi and J. Curtis (FRS #522900). 22p.

Yarish, C. "ENVIRONMENTAL MONITORING, SEAGRASS MAPPING AND BIOTECHNOLOGY AS MEANS OF FISHERIES HABITAT ENHANCEMENT ALONG THE CONNECTICUT COAST." Final Grant Report to CT DEP Long Island Sound Research Fund, Feb, 2006; revised April 26, 2006. CWF-314-R (UCONN FRS # 637173). Pp 108 plus IV Appendices.

Yarish, C., J. Zertuche and I.G. Babb. 2006. Using Underwater Technologies to Address Coastal Resource Issues: Mapping the Invasive Kelp, *Undaria* with a Remotely Operated Vehicle. Pp 6. Report Presented to the Connecticut Sea Grant College Program and the UConn Office of International Affairs.

Binational Scientific Team (Zertuche, J., B. Costa-Pierce, & C. Yarish, PIs). 2008. Marine Science Assessment of Capture Based Tuna (*Thunnus orientalis*) Aquaculture in the Ensenada Region of Northern Baja California, Mexico. Final Report of the Binational Scientific Team to the Packard Foundation, Feb. 19, 2008

## C. Yarish

### Refereed Journal / Book Articles

Yarish, C. 1975. A cultural assessment of the taxonomic criteria of selected marine Chaetophoraceae (Chlorophyta). *Nova Hedwigia* 25: 385-430.

Yarish, C. 1976. Polymorphism of selected marine Chaetophoraceae (Chlorophyta). *Br. Phycol. J.* 11: 29-38.

Yarish, C., P. Edwards and S. Casey. 1979. Acclimation responses to salinity of three estuarine red algae from New Jersey. *Mar. Biol.* 51: 289-294.

Yarish, C., P. Edwards and S. Casey. 1979. A culture study of salinity responses in ecotypes of two estuarine red algae. *J. Phycol.* 15: 341-346.

Yarish, C., K.W. Lee and P. Edwards. 1979. An improved apparatus for the culture of algae under varying regimes of temperature and light intensity. *Botanica Mar.* 22: 395-397.

Yarish, C., P. Edwards and S. Casey. 1980. The effects of salinity, calcium and potassium variations on the growth of two estuarine red algae. *J. of Exp. Mar. Biol. and Ecol.* 47: 235-249.

O'Kelly, C.J. and C. Yarish. 1980. Observations on marine Chaetophoraceae (Chlorophyta). I. Sporangia ontogeny in *Entocladia viridis* Reinke and *Phaeophila* Hauk. *J. Phycol.* 16: 549-558.

O'Kelly, C.J. and C. Yarish. 1980. Observations on marine Chaetophoraceae (Chlorophyta). II. On the circumscription of the genus *Entocladia* Reinke. *Phycologia* 20: 32-45.

Yarish, C. and P. Edwards. 1982. Field and cultural studies on the seasonal and horizontal distribution of estuarine red algae of New Jersey. *Phycologia* 21: 112-124.

Innes, D.J. and C. Yarish. 1984. Genetic evidence for the occurrence of asexual reproduction in populations of *Enteromorpha linza* from Long Island Sound. *Phycologia* 23: 311-320.

Yarish, C., A. M. Breeman and C. van den Hoek. 1984. Temperature, light and photoperiod responses of some Northeast American and west European endemic rhodophytes in relation to their geographic distribution. *Helgoländer Meeresunters.* 38: 273-304.

Yarish, C., A. M. Breeman and C. van den Hoek. 1985. Survival strategies and temperature responses of seaweeds belonging to different biogeographic distribution groups. *Botanica Mar.* 24: 215-230.

Yarish, C., H. Kirkman, and K. Lüning. 1987. Lethal exposure times and preconditioning to upper temperature limits of some temperate North Atlantic red algae. *Helgoländer Meeresunters.* 41: 323-327.

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### Refereed Journal / Book Articles (continued)

Yarish, C. and P.F Egan. 1987. Biological studies on *Laminaria longicruris* and its aquaculture potential in Long Island Sound. In: G.J. Halasi-Kun (Ed.) Columbia University Seminars on Pollution and Aquatic Resources Vol. 20, Columbia University Press. Pp. 193-220.

Egan, B. and C. Yarish. 1988. The distribution of the genus *Laminaria* (Phaeophyta) at its southern limit in the western Atlantic Ocean. *Botanica Mar.* 31: 155-161.

Yarish, C. and P.F. Egan. 1989. The Biology of *Laminaria longicruris* and its potential for mariculture in Long Island Sound. In: Kanungo, K., Brousseau, K., Singletary, R., and Liscek, L. (Editors) The Second Conference on the Aquatic Environment: Problems and Perspectives. Western Connecticut State University, Danbury, CT. Pp. 55-89.

Egan, B., A. Vlasto, and C. Yarish. 1989. Seasonal acclimation to temperature and light in *Laminaria longicruris* de la Pyl. (Phaeophyta). *J. of Exp. Mar. Biol. and Ecol.* 129: 1-16.

Yarish, C. 1990. In Memoriam: Boudewijn H. Brinkhuis. *Phycologia* 29(3): 385-387.

Yarish, C. and M.D. Hanisak. 1990. In Memoriam for B.H. Brinkhuis. *Phycol. Newsletter* 25(3): 12-13.

Yarish, C., B.H. Brinkhuis, B. Egan, and Z. Garcia-Esquivel. 1990. Morphological and physiological bases for *Laminaria* selection protocols in Long Island sound. In: Yarish, C., C.A. Penniman, and M. van Patten (Editors). Economically Important Marine Plants of the Atlantic: Their Biology and Cultivation. The Connecticut Sea Grant College, Groton, CT, Pp. 53-94.

Egan, B., Z. Garcia-Esquivel, B.H. Brinkhuis, and C. Yarish. 1990. Genetics of morphology and growth in *Laminaria* from the North and G.R. South (Editors) *Evolutionary Biogeography of the Marine Algae of the North Atlantic*. NATO ASI Vol. 22. Springer-Verlag, Berlin, Pp. 147-172.

Yarish, C., C.A. Penniman and B. Egan. 1990. Growth and reproductive responses of *Laminaria longicruris* de la Pyl. to nutrient enrichment. *Proc. of the 13th International Seaweed Symposium. Hydrobiologia* 204/205: 505-511.

Yarish, C. and G. Wamukoya. 1990. Seaweeds of potential economic importance in Kenya: Field survey and future prospects. *Proc. of the 13th International Seaweed Symposium. Hydrobiologia* 204/205: 339-346 (received the 1992 Marinalg Award at the XIV<sup>th</sup> International Seaweed Symposium in Brest/St. Malo, France. This paper was judged to be the most significant research for the economic development of the seaweed industry that had been presented at the XIII<sup>th</sup> International Seaweed Symposium, Vancouver, Canada, August 13-18, 1989).

## C. Yarish

### Refereed Journal / Book Articles (continued)

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## C. Yarish

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## C. Yarish

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## C. Yarish

### Refereed Journal / Book Articles (continued)

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**Refereed Journal / Book Articles (continued)**

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**C. Yarish**

**Refereed Journal / Book Articles (continued)**

He, P, S. Xu, H. Zhang, S. Wen, Y. Dai, S. Lin, C. Yarish. Bioremediation efficiency in removal of dissolved nutrients by the red seaweed *Porphyra yezoensis* cultivated in open sea. *J. Water Research (In Press)*.

## C. Yarish

### Patents and Licensing Agreements

Licensing Agreement for use of my *Porphyra* strains to Coastal Plantations International-PhycoGen, Inc. Portland, Maine, January, 1998–2000 between the University of Connecticut and The Company.

### GRANTS AND CONTRACTS RECEIVED AS PRINCIPAL INVESTIGATOR

1. "Salinity and Temperature Effects on Photosynthesis and Organic Carbon Release Rates by Selected Benthic Macroalgae." Awarded by U.S. Dept. of Interior, Office of Water Research and Technology for the period March, 1982 - September, 1983 (Award: \$20,260).
2. "Biogeography of Endemic North American Marine Algae." Awarded by the Netherlands National Science Foundation (Z.W.O.) for the period August, 1983- August, 1984 (Award: \$17,500).
3. "Strain selection in *Laminaria longicruris* (Brown Seaweed) for Development of Maximum Biomass: Awarded by Connecticut Sea Grant for the period July, 1984 - June 1985 (Award: \$16,880).
4. "Temperature resistance and temperature adaptation in marine algae." Awarded by the Biologische Anstalt Helgoland for the period June, 1985 - September 1985 (Award: DM 6,942).
5. "Strain selection in *Laminaria longicruris* (Brown Seaweed) for Development of Maximum Biomass." Awarded by Connecticut Sea Grant for the period July, 1985 - June, 1986 (Award: \$37,954).
6. "Strain selection in *Laminaria longicruris* (Brown Seaweed) for Development of Maximum Biomass." Awarded by Connecticut Sea Grant for the period July, 1986 - June, 1987 (Award: \$42,649).
7. "The effects of nutrient enrichment on a rocky subtidal marine macrophyte community." Awarded by Connecticut Sea Grant for the period July, 1987 - June, 1988 (Award: \$40,969). Co-principal investigator, Dr. C. Penniman, University of New Hampshire.
8. "A study of a deep-water population of the brown alga *Laminaria saccharina* recently discovered off the coast of New Jersey." Awarded by the National Undersea Research Program for the period October, 1989 - August, 1990 (Award: Submersible time and support). Co-principle investigator, Dr. D. Hanisak, Harbor Branch Oceanographic Institution.
9. "Genetics of morphology and growth in *Laminaria* from the North Atlantic Ocean." Awarded by Connecticut Sea Grant for the period July, 1988 - February, 1991 (Award:

\$69,395). Co-principal investigator, Dr. B. Brinkhuis (deceased), SUNY-at Stony Brook.

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### **GRANTS AND CONTRACTS RECEIVED AS PRINCIPAL INVESTIGATOR** (continued)

10. "Seaweed Aquaculture in People's Republic of China." Delegation Leader for scientific delegation to PRC, May 20 - June 9, 1990. (Award: \$5000).
11. Sea Grant (Connecticut) "Aquaculture Applications of Biochemical Genetics to the Economic Kelps, *Laminaria saccharina* and *Laminaria longicruris*" for July 1, 1990-June 30, 1991 funding cycle (with C. Neefus, A.C. Mathieson and R.T. Eckert of the University of New Hampshire, \$45,281).
12. Sea Grant (New Hampshire/Maine) "Biochemical Genetics Studies to Enhance Aquaculture of the Kelps, *Laminaria saccharina* and *Laminaria longicruris*" for January 1, 1991 - December 31, 1992 funding cycle (with C. Neefus, A. C. Mathieson and R.T. Eckert of \$49,067 for year one and \$54,067 for year 2). This is a parallel grant proposal to the Connecticut Sea Grant College Program in Year 2.
13. NOAA International Programs. Visiting Research Scientist to my lab at Stamford Campus (August, 1991-January, 1992).
14. Sea Grant (Connecticut) "The Use of *Ulva* as a Model System in Critical Nitrogen Determination" for July 1, 1991 - June 30, 1992 for \$6,729 (with J.A. Kilar).
15. State of Connecticut Department of Environmental Protection "Alteration of the Planktonic Food Web Structure of Long Island Sound: Possible Enhancement of the Microbial Loop Due to Eutrophication" for July 1, 1993-June 30, 1995 for \$208,480 (Co-PI with G. Capriulo [PI], R. Troy, G. Wikfors, & B. Welsh).
16. State of Connecticut Department of Environmental Protection "Environmental Monitoring, Seagrass Mapping and Biotechnology as Means of Fisheries Habitat Enhancement Along the Connecticut Coast" for July 1, 1993-June 30, 1995 for \$188,244 (with S. Beer & E.W. Koch).
17. Connecticut Sea Grant College Program travel grant to attend the V<sup>th</sup> International Phycological Congress in Qingdao, People's Republic of China and to work at the Experimental Marine Biology Laboratory for a week following. \$1,400 (funded June, 1995-July, 1995).
18. NOAA's International Programs Office. Visiting Research Scientist to my lab at the Stamford Campus (August, 1995-January, 1996), Prof. X.G. Fei, Director, Experimental Marine Biology Laboratory, Institute of Oceanology, Chinese Academy of Sciences, Qingdao, People's Republic of China.

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### **GRANTS AND CONTRACTS RECEIVED AS PRINCIPAL INVESTIGATOR** (continued)

19. National Sea Grant College Program "Developing a commercially viable seaweed aquaculture industry in New England" with D. Cheney (Northeastern University), I. Davison (University of Maine), D. Dow (University of New Hampshire), I. Levine (Plantations International, Inc.) A. Mathieson (Univ. of New Hampshire), S. Minocha (Univ. of New Hampshire), C. Neefus (Univ. of New Hampshire) and A. Klein (Univ. of New Hampshire). My subproposal for "Field and Culture Evaluations" (with co-PI's, A.C. Mathieson and I. Levine) has been funded from the National Sea Grant Program through the Connecticut Sea Grant College Program for \$225,404 beginning August 1, 1995 - July 31, 1998. I was also a co-PI on other sections of the regional proposal.
20. Connecticut and National Sea Grant College Programs "Exchange of seedstock biotechnology for the developmental control of *Porphyra* (nori) and the design of an integrated aquaculture system for stripping nutrients from seawater." \$8,000 from the Connecticut Sea Grant College Program that included travel to the People's Republic of China (Oct.-Nov. 1997) and the participation of a Visiting Scientist at my laboratory (February-June, 1998), Dr. S. Lu, Experimental Marine Biology Labs, Institute of Oceanology, Chinese Academy of Sciences, Qingdao, PRC, in a cooperative research program.
21. Grant from General Reinsurance Faculty Development Fund at the Stamford Campus "Field and Culture Studies for the Development of a Commercially Viable Nori Aquaculture Industry for New England." My proposal was awarded \$1,100 to fund undergraduate student involvement in my research program beginning June 1, 1996 - May 31, 1997.
22. Grant from General Reinsurance Faculty Development Fund at the Stamford Campus to attend Perkin-Elmer, Applied Biosystems' PCR workshop ("Methods in PCR"), January 27-29, 1997. My grant was for \$900 to cover the tuition charges.
23. Grant from General Reinsurance Programmatic Development Fund at the Stamford Campus entitled "The Stamford Campus Young Scholars-in-Residence Program for Minority Students in Science." The proposal (\$11,400) developed a model outreach program for the Stamford Campus within the context of an urban setting and developed a center of excellence for qualified minority students in the biological and marine sciences (October 1, 1997-September 30, 1998).
24. Connecticut and National Sea Grant College "Nori Aquaculture in Cobscook Bay and Selected Sites in the Gulf of Maine." Connecticut Sea Grant College Program for \$13,860 beginning May 1, 1998 – February 28, 1999.

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**GRANTS AND CONTRACTS RECEIVED AS PRINCIPAL INVESTIGATOR (continued)**

25. A Co-PI on a Critical Technologies Grant with Co-PIs R. Cooper and T. Chen entitled: "Research and Development of Marine Plant (Nori) Aquaculture in Connecticut Waters: Selective Breeding/Transgenic Development Support of Commercial Aquaculture Operation." \$296,896 with \$225,000 matching funds from the Mohegan Tribal Nation, and \$250,000 of "in-kind" support from the Mohegan Tribal Nation, Phycogen, Inc. and Spectrogram, Inc., 4/01/1999-12/31/2002.
26. Senior PI for a Regional Project funded by the Connecticut, New Hampshire-Maine and New York, Sea Grant College Programs entitled "Bioremediation of finfish aquaculture effluent via polyculture with *Porphyra* (nori): culture, mesocosm, and field studies. "My Year Two Year Grant from the Connecticut Sea Grant College Program was for \$139,510 beginning Mar. 1, 2000 – Feb. February 28, 2003.
27. Senior PI for a Regional Project funded by the NOAA OAR's National Marine Aquaculture Initiative. "Development of an Integrated Recirculating Aquaculture System for Nutrient Bioremediation in Urban Aquaculture." C. Yarish, C.D. Neefus, G.P. Kraemer, T. Chopin, G. Nardi and J. Curtis. Total funding for two years is \$451,835 (9/01/01 – 8/31/04).
28. Co-PI on a proposal to the Maine Sea Grant College Program (with Susan Brawley, University of Maine) entitled "Enhanced spore production for seeding of New England *Porphyra* for integrated finfish/seaweed aquaculture." Total funding was \$21,105 (subcontract; 2/01/2003-1/31/2006) of a three year project.
29. PI on a proposal to the Connecticut Sea Grant College Program (with R.B. Whitlatch, G.P. Kraemer and S. Lin) entitled "Impacts and Spread of the Non-indigenous Rhodophycean Alga, *Grateloupia turuturu*, on Long Island Sound with total funding for a 2 yr project (3/1/2006 – 2/28/2008) of \$153,714 with direct costs of \$103,861.
30. PI on a proposal to the US EPA Long Island Sound Research Grant Competition (with R.B. Whitlatch, G.P. Kraemer and S. Lin) entitled "Multi-component Evaluation to Minimize the Spread of Aquatic Invasive Seaweeds, Harmful Algal Bloom Microalgae, and Invertebrates via the Live Bait Vector in Long Island Sound." (6/1/2006 – 8/31/2007) of \$101,756 with direct costs of \$68,754. In addition, Connecticut Sea Grant College Program also contributed an additional \$7,898.
31. Co-PI on a proposal to the Packard Foundation (with Barry Costa-Pierce, University of Rhode Island and Jose Zertuche, Universidad Autonoma de Baja California, MX) entitled "Sustainability Assessment of Capture-Based Tuna Aquaculture in Mexico." The UConn subcontract to the Graduate School of Oceanography, University of Rhode Island was

\$18,355. Total award from Packard to the project was \$156,221 (8/26/2006-12/31/2007).