

INDEX FOR *CURRENT: THE JOURNAL OF MARINE EDUCATION*: 1976 - 2012

Appearing in a variety of formats over the last thirty years, the journal of the National Marine Educators Association reflects the coming of age of the field of marine education. You'll see familiar names, recurring themes, and possibly an article you just have to have. While some back issues before 1989 are not available, copies of most articles can be made, but please send a stamped, self-addressed envelope to the national office and allow at least three weeks for copying and delivery. We'll have to charge copying costs for longer articles.

SUMMER 1976 - sold out		Walter Garstang	30
A Plan for Marine Education in Hawaii E. Barbara Klemm	3	Media Review	32
Making Known the World of Water John H. Prescott	6	Curriculum Donald A. Maclean	2-33
Photo Essay Lewis S. Trusty and Mark M. Herron	9	Basic Scientific Principles of Diving Donald A. Maclean	2-34
Brooklyn and the Sea: Explore the Beach James Elardi and Warren E. Yasso	10	A New Breed of Man: the Aquanaut Ronald M. Sweig	2-38
Can Kelp Solve Our Food and Energy Crisis? Richard C. Murphy and Howard A. Wilcox	14	Magazines Related to the Marine Environment Prentice K. Stout	2-44
Just Add Water Nancy Richardson	20	Voices Across the Deep Robert Wallar	2-45
On Poetry and Education Richard C. Murphy	28	Elective Program Projects Christelle Estrada	2-47
Media Review Richard O. Stone	30	SEA WORLD FALL 1977 - sold out	
Curriculum Donald A. Maclean	1-33	Planet Ocean F.G. Walton Smith	5
Marine Biology Christopher M. Dewees and Jon K. Hooper	1-34	A Brief History of the Shoreline of Southern California Rimmon C. Fay	7
Marine Habitats Thelma Frasier	1-40	The South Carolina Coastal Environment 1670-1977 John Mark Dean	11
Oceans: Our Continuing Frontier	1-43	Coastal Management: A Challenging Assignment Linda A. Sadler	14
FALL 1976 - sold out		Critters: The Remarkable Grunion Richard C. Murphy	17
Education: Toward the Development of an Environmental Ethic	6	Where Humanities Meet the Sea Richard Astro	18
The Role of Sea Grant in Education	10	Washington and the Sea: Marine Education for Educators Pansy Bray	21
Project Ocean Search Richard C. Murphy	13	Science and Ancient Sea Stories Willard Bascom	25
Oceans: Our Continuing Frontier H. William Menard	17	American Imagery and Visions of the Sea John Wilmerding	27
S.E.A. Richard H. Hawkins	24	Poetry and Education: Oikopleura	
To a Herring Gull			

Walter Garstang	29	Ruth Symonds	38
Special Report Arie R. Korporaal	30	A Survey of Marine Laboratories with Facilities for Teaching Tropical Marine Biology Eugene H. Kaplan	42
Media Review	31	Distribution of Salt Marsh Life Robert Schroeder and Linda Haughey	45
Teaching Marine Studies When You Don't Know a Snipe from a Sea Snipe Gail Ellison	33	Education Sails with the Tide Dorothy Vessels	51
A Plan for Environmental Education Robert W. Stegner	36	Marine Studies and Art Warren E. Yasso	55
A Conceptual Scheme of Studies of the Aquatic Environment Maura Geens Tyrell and Robert W. Stegner	38	SEA WORLD SPRING 1978 - sold out	
Resource Tools in Marine Education Barbara S. Waters	40	The Saga of the California Brown Pelican Frank S. Todd	4
Gyotaku: Preserve It with a Print Rosanne W. Fortner	45	Critters: Butterflies and Angels of the Reef	8
A Maritime Child Looks Around Rosie Stricker	47	Spider Webs, Space Stations and Crystal Chandeliers Richard C. Murphy	10
SEA WORLD WINTER 1977-78 - sold out		On the Beach at Waikiki Leighton Taylor	14
The Steinhart Aquarium John E. McCosker	3	America's Maritime Heritage Wm. Ray Heitzmann	17
The Imaginary Sea Pamela Stacy	6	From the Shell Michael W. O'Shea	22
I Shall Paint You a Picture of the Miracle of Nature Cathi Hill	11	Desert Sharks Jim Jeffries	24
Critters: Killer Whales Joan T. Phipps	15	Currents	27
Life Between the Tides William Hyland	17	Media Review	29
The Legend of Siba Francois R. Brenot	20	View from the Crow's Nest Thayer Shafer	32
John Steinbeck: Some Reflections Dr. Fred Tarp	23	What Is a Fish? Steven McDonough and Arie R. Korporaal	33
Currents	27	Plankton -- the Delightful Drifters Jack Mertz	36
Media Review	29	Today's Youth in Tomorrow's Sea Harold L. Goodwin	40
Oceanography: A Smorgasbord in Marine Studies for High School Students John D. Ross and Jane Bergeron	33	The Interdisciplinary Nature of Marine Science Michael W. O'Shea	49
Plate Tectonics Research and Secondary School Earth Science Edward C. Stoeber Jr. and Warren E. Yasso	36	America's Forgotten Marine Heritage Wm. Ray Heitzmann	53
Marine Awareness: Education for the Future		Summer Programs	59
Index for <i>Current</i>			2

SUMMER 1978 - sold out

Fishing New England Waters Brian E. Gorman	3
Octopus Joyce Bell Edelbrock	6
Critters: Batfish Whales and Dolphins Lanny H. Cornell	12
Mulleria and the Ctenophore Walter Garstang	15
Selchies -- People of the Sea Charleen Anderson	16
Marine Education in the Midwest Beverly Serrell	20
1978 -- A New Age of Riverboats and Ironships Hazel Brown	22
Currents	27
Media	29
To Inform Americans About the World of Water Harold L. Goodwin and James Schaadt	33
Signal Flag Fun Karen E. Reynolds	38
Secrets of a Sea Necklace Roseanne W. Fortner	40
Tools and Techniques of Oceanography Lucille Holden	42
Marine Science Education Materials and Their Usefulness Richard M. Schlenker	47
The Marine Education Materials System (MEMS) Susan Gammisch	53
The Development and Implementation of an Institutional Undergraduate Marine Science Program Arthur James West II and Taylor Henry Loop	54

VOLUME 1 NUMBER 1 FALL 1979 - sold out

Association News	4
Marine Literature Prentice K. Stout	9
Aquariums and Marine Educators: Where Do We Go From Here? Karen A. Hensel	10
Three Years Later: The Marine Social Studies Project Gregory L. Rhodes	14

Stateroom	18
For the Classroom: Scrimshaw	23
MEMS: Neptune's Library Susan Gammisch	24
Washington Report Linda Sadler	25
Sensory Receptors in Marine Animals Ron Pruitt	26

VOLUME 1 NUMBER 2 WINTER 1980 - sold out

Marine Education Through Children's Literature Norma Bagnall	5
Marine Literature Prentice K. Stout	9
A Remedial Reading Technique for Use in Marine Education Peter L. Pelosi	10
Marinating Your Classroom Les Picker and John W. Butzow	14
Stateroom	18
MEMS: Neptune's Library Susan Gammisch	24
Washington Report Linda Sadler	25
For the Classroom: Lay-Tubing Aquaria Tom Speitel, Donn Marutani and Thomas Fujita	27
Equipment Alternatives in Marine Sampling William J. Wallace	27

VOLUME 1 NUMBER 3 SPRING 1980 - sold out

The Inner City and Marine Education Marine Mobile Linda O'Dierno	4
Sailing: New York Harbor Lou Siegel	
Three Programs Eleanor Fries and Meryll Kafka	
Getting Your Feet Wet at Emerson High Loretta Pisani and Tom Tokar	
The New England Aquarium Warren M. Little and Maxine Rosenberg	
Downtown Aquaculture Dorothy M. Bjur	

Summer Opportunities '80 Barbara Klemm and Ann Coopersmith	13	Salem in August: The 1980 NMEA Conference Fleda Jackson	18
Washington Report Linda Sadler	16	U.S. Fish and Wildlife Service: A New Direction Nancy Kaufman	22
Stateroom	17	Grunion: The Snipe of the Sea John G. Vincent	23
Marine Literature	22	Fisheries Education: From the Great Lakes to the Sea Roseanne Fortner and Victor J. Mayer	24
For the Classroom: Density Currents Maurice Schwartz	23	Stateroom	26
Building Candles in the Sand	23	Marine Literature Prentice K. Stout	32
VOLUME 1 NUMBER 4 SUMMER 1980 - sold out			
Richard Ethridge: An American Coastal Hero Gwen A. White	5	MEMS: Neptune's Library Sue Gammisch	33
Opportunities for Teachers in the "Year of the Coast" Linda Sadler	7	Plants of the Sea: A Reed for All Seasons Norman H. Dill	34
The Obvious Question Ed Sobey	11	For the Classroom: Something Fishy Bambi Pepper	35
Edible Wild Plants of the Coastal Zone Norman Dill	14	Fisheries Biology Lab Michael J. Brody	
Organic Act for NOAA: Vehicle for Discussion Paula M. Haley	20	VOLUME 2 NUMBER 2 WINTER 1981 - sold out	
Stateroom	21	Seafaring: The Greatest Ship That Ever Sailed Hal Goodwin	4
MEMS: Neptune's Library Sue Gammisch	27	Cold Water Fatalities: An Overview of Physiological Responses J.C. Bernhartsen with Richard Schlenker	6
Washington Report Katherine Jameson	28	Freshwater Winter Ecology John E. Gannon and Arlan L. Edgar	10
Marine Literature	30	Gamming with Senator Claiborne Pell Les Picker	14
For the Classroom: Do Plants Make Oxygen? Emily Walls	31	Icebergs Edwin J. Sobey	16
Papier Mache Fish Catherine Bettis	31	Dive Rescue in Cold Water Steven J. Linton	20
VOLUME 2 NUMBER 1 FALL 1980 - sold out			
Seafaring: Mayda, Isle of Refuge Hal Goodwin	4	Washington Report Katherine Jameson	22
Marine Fisheries: A Biological Insight Paul A. Haefner Jr.	7	Stateroom	23
Gamming with Bob Shephard Fleda Jackson	10	MEMS: Neptune's Library Sue Gammisch	30
An Expanded Perspective of Fisheries Education Leslie A. Yin, Augusto Q. Medina, Wilfrid J. Rollman	12	Marine Literature Prentice K. Stout	31
		Animals of the Sea: Dorado or Dolphinfish	

Hermann J. Janssen	33
Plants of the Sea: And Visions of Beach Plums Norman H. Dill	34
For the Classroom: The Five Signs of Death Leslie Lin	35

VOLUME 2 NUMBER 3 SPRING 1981 - sold out

Seafaring: of Science, Soy Sauce and Symbols Hal Goodwin	3
NMEA Committee Reports Ed Keller	4
Second Generation Environmental Education for the 1980s Clay Schoenfield	5
Teachers, Not Materials, Determine Ultimate Use of Innovations in Marine Education Violetta Lien	8
A Leadership Training Program in Marine Education Carolyn H. Hampton and Carol D. Hampton	10

Gamming with Jim Hannaham Fleda Jackson	12
Summer Opportunities '81	16
Stateroom	20
MEMS: Neptune's Library Sue Gammisch	23
Marine Literature Prentice K. Stout	24
Animals of the Sea: Atlantic Croaker Hermann J. Janssen	25
Plants of the Sea: Pickled Pink -- the Glassworts Norman H. Dill	26
For the Classroom: Marine Crossword Puzzle Ed Sobey	27

VOLUME 2 NUMBER 4 SUMMER 1981 - sold out

Seafaring: Signposts for Sailors Hal Goodwin	3
At Work in the World of Water Harold L. Goodwin	5
Shell Collecting Donald J. Zinn	9
Educators, Field Trips and Liabilities Lundi Mauldin and Ray E. Ashton Jr.	13

Gamming with Dorothy Bjur Stephanie E. Yoder	16
MEMS: Neptune's Library Anne Frazier	18
Association News	20
Stateroom	21
Marine Literature Prentice K. Stout	24
Animals of the Sea: American Eel Hermann J. Janssen	25
Plants of the Sea: Our Marine Origin Norman H. Dill	26
For the Classroom: Stained Glass Art Norma Bagnall	
Crossword Puzzle Answers Ed Sobey	27

VOLUME 3 NUMBER 1 FALL 1981 - sold out

Seafaring: The Bark <u>Franz</u> and U.S. Naval Aviation Hal Goodwin	3
Winter Streams: The Web of Life Goes On Daniel L. Pokora	5
Gamming with Audrey DeSilva Stephanie E. Yoder	9
An Incentive to Success: The U.S. Navy's Science Awards Program Les Picker	11
Science Fair Projects: Teaching Science or Something Else? Elizabeth A. Cornell	17
Stateroom	21
Marine Literature Prentice K. Stout	23
MEMS: Neptune's Library Frances Lee Lawrence	24
Animals of the Sea: the Seahorse Hermann J. Janssen	25
Plants of the Sea: Out of Life's Small Tragedies ...A Lesson in Marine Botany Norman H. Dill	26
For the Classroom: Observing the Social Behavior of Guppies Elizabeth Wier	

Make Your Own Water Sampling Bottle 27

VOLUME 3 NUMBER 2 WINTER 1982 – sold out

Forum
Will Hon 5

Seafaring
Hal Goodwin 7

Gamming with Captain Martin Moynihan
Nancy H. Richardson 9

On-the-Water Education: An Overview
Nancy H. Richardson 11

Shipboard Programs: A Coast-to-Coast Sampler
Schooner Inc: An Economical Alternative
Project Coast Watch
Robert McDonald

The Wide-Ranging World of the NOAA Corps
Nancy Bush

Seacamp/Newfound Harbor Maine Institute
Irene U. Hooper

On-the-Water Education
Robert E. Rutherford 14

Stateroom 21

Marine Literature
Prentice K. Stout 24

MEMS: Neptune's Library
Elizabeth A. Cornell 26

1981 NMEA Conference: Towards the Coastal Frontier
John Hunt 27

Animals of the Sea: Smooth Dogfish
Hermann J. Janssen 29

Plants of the Sea: Agar-Agar
Norm Dill 30

For the Classroom: The Water Decade
Nancy H. Richardson 31

VOLUME 3 NUMBER 3 SPRING 1982 – sold out

Gamming with Salah Galah
Les Picker 3

Seafaring
Hal Goodwin 5

One Approach to a Marine-Literate Society
Michael Hawkins and Everett T. Keach Jr. 7

Heat: The Other Extreme in Environmental

Conditions
Marvin N. Reichle and Michael W. Davis 10

Writing for Publication
Fleda Jackson 12

Summer Opportunities '82
Ann Coopersmith 15

Stateroom 21

MEMS: Neptune's Library
Susan C. Gammisch 24

Animals of the Sea: The Puffers or Blowfishes
Hermann J. Janssen 25

Plants of the Sea: Irish "Moss" or Carrageen
Norm Dill 26

For the Classroom:
Sink or Float
Melanie Lewis and Jennifer Swift 27

Drips and Drops
Lindy Millman and Debbie Smith

VOLUME 3 NUMBER 4 SUMMER 1982 – sold out

Gamming with Dr. James A. Gast
R. Scott Pflug 3

Seafaring
Hal Goodwin 5

It's Sea Week in Alaska
Jill S. Thayer 6

Forum
Cristina McComb 10

Water as Metaphor
Robert E. Najeem 11

Sea Language: Our Heritage
Wm. Ray Heitzmann 16
Stateroom 20

MEMS: Neptune's Library
Sue Gammisch 23

Marine Literature
Prentice K. Stout 24

Animals of the Sea: The Strange Remoras
Hermann J. Janssen 25

Plants of the Sea: Furcellaran
Norm Dill 26

For the Classroom: Fishy Crossword Puzzle
Mary E. Sparrow and Frances L. Lawrence

Make Your Own Water Sampling Bottle
Maurice L. Schwartz 27

VOLUME 4 NUMBER 1 FALL 1982 - sold out

Gamming: Dr. Ernest Everett Just
W. Montague Cobb 3

Seafaring
Hal Goodwin 5

Marine Science and the Seas: The Next Frontier for Minority
Scientists
Broadus N. Butler 7

Indian Fishing Rights: A Matter of Give-and-Take
Daniel L. Boxberger 10

Association News 12

Marine Literature
Prentice K. Stout 12

National Resources Directory For Marine Careers 13

Role Models in Aquatic Occupations
Mabel C. Brown 15

Hispanic-Americans' Involvement in Marine
Sciences: A Perspective
Manuel L. Hernandez Avila 21

Historically Black Higher Educational Institutions
and the Marine Sciences
Samuel P. Massie 23

MEMS: Neptune's Library
Susan C. Gammisch 27

Stateroom 28

For the Classroom:
You Are a Lessum
Skip McLamb 32

What Is the Salinity?
Violetta Lien

VOLUME 4 NUMBER 2 WINTER 1983 - sold out

Gamming with Dot Vessels
Donna Stachecki

Marine Curriculum for the Early Adolescent
Ralph T. Yulo Jr. 6

Unit Boxes Approach to Marine Education
Lloyd H. Barrow 10

Marine Literature
Prentice K. Stout 12

Education by Kayak
Ed Sobey, Jim Henderson and Leilani Little 13

The Stronsay Monster: A Case of Mistaken Identity
Geoff Swinney 15

Great Lakes Activities for Minnesota
Elementary Students
Steven J. Rakow, Eugene D. Gennaro, Allen D. Glenn
Roger Johnson and Linda E. Scott 19

Book Review: A Field Guide To the Coral Reefs of
the Caribbean by Eugene H. Kaplan
Stephen D. Cairns 21

MEMS: Neptune's Library
Susan C. Gammisch 22

Association News 23

Stateroom 24

For the Classroom:
Build Your Own Oceanography Tools
Florence Sands 27

Pickle Jar Ponds

VOLUME 4 NUMBER 3 SPRING 1983 - sold out

Seafaring
Hal Goodwin 4

Gamming with Ken Donovan
Les Picker 6

Artificial Reefs and Ocean Dumping
Richard D. Glueck 7

Summer Opportunities '83
Ann Coopersmith 11

Marine Literature
Prentice K. Stout 18

MEMS: Neptune's Library
Susan C. Gammisch 19

Association News 21

Particle Distribution on Sandy Beaches 22

Stateroom 23

For the Classroom: Stream Tables
Larry Webber 27

VOLUME 4 NUMBER 4 SUMMER 1983 - sold out

Seafaring
Hal Goodwin 3

Gamming with Richard Lebovitz Fleda Jackson	5
Marine Literature Prentice K. Stout	6
Monsters of Education Ed Sobey	7
Bifouling Organisms in the Field and for the Classroom Prentice K. Stout	9
Art in Aquatic Education: Materials and Methods Maryann Smeyda Whann	14
Academic Year Opportunities 1983 Ann Coopersmith	19
Association News	24
Stateroom	24
For the Classroom: Crab Boats; Filter Feeding in Barnacles Lois Joseph	27

VOLUME 5 NUMBER 1 FALL 1983 - sold out

Gamming with Kristen Druker Stephen Kral	3
Seafaring Hal Goodwin	5
Knowledge, Attitudes, Experiences: the Aquatic Connection Roseanne W. Fortner	7
Plate Tectonics and Continental Drift: Classroom Ideas Prentice K. Stout	12
Highlights: the 1983 Annual NMEA Meeting	15
Marine Literature Prentice K. Stout	20
MEMS: Neptune's Library Susan C. Gammisch	21
Studying the Coast to Death Valerie Chase	22
Association News	24
Stateroom	25
For the Classroom: The Life and Death of an Iceberg Chet Keinot	27
Marine Careers Kristen Druker	

VOLUME 5 NUMBER 2 WINTER 1984 - sold out

Gamming with Marion Bowditch Elizabeth A. Cornell	3
Seafaring Hal Goodwin	4
Creating Enabling Contexts Karen Hensel	6
Mobile Marine Museum R.D. Bauer and M.S. Schaadt	10
A Personal Ocean Sharon Proctor	13
Executive Director's Report Prentice K. Stout	16
Marine Education: Pedagogy and Andragogy Neal Conoley	17
Marine Literature Prentice K. Stout	18
Docents Present: A Window on the Marine World Sharon Meeker	19
Developing an Internship Program Valerie Chase	22
Stateroom	24
For the Classroom: Print Shop The Sea Urchin Utilization and Embryology Lab Douglas Brevoort	26

VOLUME 5 NUMBER 3 SPRING 1984 - sold out

Gamming with John Page Williams and Donald Baugh Roy McGillis	3
Seafaring Hal Goodwin	5
Collection Isolation and Culture of Marine Algae Daniel E. James	7
An Ocean in Your Classroom Bonnie Blackburn	10
Association News	12
Summer Opportunities Ann Coopersmith	13
MEMS: Neptune's Library Sue Gammisch	20
Water and the Thirsting Spirit Robert E. Najem	21

Stateroom	25	A Lesson in Complexity: Seabed Minerals and Easter Island Kristen Druker	19
For the Classroom: Fish Painting Sally Zimmerman	27	MEMS: Neptune's Library Susan C. Gammisch	22
VOLUME 5 NUMBER 4 SUMMER 1984 – sold out		Marine Literature Prentice K. Stout	23
Gamming with Dick Hanson	3	The Pacific Northwest: From Canoe to Submersible, the 8th Annual NMEA Conference Vicki Osis	24
Seafaring Hal Goodwin	5	For the Classroom: Coriolis Effect and Ocean Currents in the North Atlantic Linda L. Haughey	27
Freshwater: An Old Friend in Need of a New Look Freshwater Society	7		
The World of Rivers: Freshwater as a Source of Life Christine Olsenius	10	VOLUME 6 NUMBER 2 WINTER 1985 – sold out	
Freshwater Education: The Need, the Tools and the "Vital Link" Linda Schroeder	14	Gamming with Millie Graham Suzanne McGovern	3
Desalination: Tapping the Endless Supply? John Opie	17	Marine Literature Prentice K. Stout	4
Marine Literature	19	Seafaring Hal Goodwin	5
MEMS: Neptune's Library Susan C. Gammisch	20	A Capital Effort: Student Award Winners Visit D.C. Suzanne McGovern	6
Academic Year Opportunities '84-85 Ann Coopersmith	21	Profiles: People with the Right Stuff Fleda Jackson	10
Stateroom	25	Studies I: Characteristics of Successful Student/ Teacher Interaction in Marine Science Projects Jack Wheatly, Lundie Spence and Gail Jones	20
For the Classroom: A Lesson in Water Use Decisions Understanding the Water Cycle	27	Studies II: Some Characteristics of the Youth "World of Water" Student Winners Jack Wheatly, Lundie Spence and Gail Jones	21
VOLUME 6 NUMBER 1 FALL 1984 – sold out		Preparing Teachers to Teach Science: Learning Science as a Process Elizabeth A. Cornell	22
Gamming with Harriet Donofrio	3	The Sea in Literature: The Sea Teaches (Part 2) Dan Gresham	25
From the President Jeff Sandler	4	For the Classroom: An Ocean in a Box Eugene P. Williamson	27
Seafaring Hal Goodwin	5		
Using Picture Postcards and Other Paper Collectibles in Marine Education Norman D. Anderson	6	VOLUME 6 NUMBER 3 SPRING 1985 – sold out	
The Literature Web in Marine Education Rosemary A. Salesi and Lloyd H. Barrow	10	Gamming with Jim O'Connor Elizabeth Campodonico	3
The Sea in Literature: The Sea Teaches (Part 1) Dan Gresham	14	Seafaring Hal Goodwin	4
A Class Trip to D.C.: Where to Go, What to See Suzanne McGovern	15	Unlocking Electric Power in the Oceans	

David L. Hurwood	5	by Lynette S. Walther Prentice K. Stout	41
The House of Umoja's Adventure at Sea Chester Teller	10	Marine Mammal Bibliography from the Sawyer Marine Resources Collection	43
The Sea in Literature: The Sea Teaches (Part 3) Dan Gresham	12	Fact Sheet: "What Is Oceanography?" Prentice K. Stout	50
Marine Literature Prentice K. Stout	13		
With the Killer Whales Dru Clarke	14		
MEMS: Neptune's Library Sue Gammisch	16		
Microcomputers in Marine and Aquatic Education Melissa M. Conrath and Victor J. Mayer	17		
Summer Opportunities Ann Coopersmith	21		
For the Classroom: How They Got There; Too Many Nutrients? L. Spence and D. Frankenberg	27		
VOLUME 6 NUMBER 4 FALL 1985 - sold out			
Remarks by Governor Charles S. Robb at the National Conference	3		
Conference Ramblings Maxwell C. Wheat Jr.	8		
A Change of the Watch Prentice K. Stout	11		
To Sail with the Wind: Notes From a Personal Log Gretchen Ziegler	12		
Mail Call	16		
Mystic Migrators Along the Gulf Coast John J. Dindo	17		
Groundwater: Chesapeake Bay's Underworld Come to Light James V. O'Connor	18		
Basic Beaches for the Classroom J. Philip McLaren	24		
Introductory Remarks on the Distribution and Abundance of the American Horeshoe Crab Carl N. Schuster Jr.	33		
Sea Level Change: A Fundamental Process When Interpreting Coastal Geology and Geography John M. Ziegler	39		
Book Reviews: <u>Exploring the Ocean</u> by Henry S. Parker; <u>The Art of Catching and Cooking Crabs</u>			
VOLUME 7 NUMBER 1 WINTER 1986 - sold out			
		The World of Water E.R. Pariser	3
		Experimenting with Water Simone P. Bourgeois, Arthur A. Dutura, Hazel D. McCrohan, Philip E. Riviere, Howard E. Smith, Ronald Souza and E. Ray Pariser	15
		World of Water Awards Carole R. Shaw	51
		Mail Call	64
		Basic Beaches for the Classroom J. Philip McClaren	65
		For the Classroom: Is It Solid? Melt Away Lindy Millman	86
		Book Review: <u>Marine Biology: Environment Diversity and Ecology</u> by Matthew Lerman Lou Siegel	88
VOLUME 7 NUMBER 2 SPRING 1986 - sold out			
		Climate and the Oceans Prentice K. Stout	3
		The Weather in Rhyme Robert Hendrickson	6
		A New Jersey Teacher's Sabbatical in Canada's "Center Marin" Loretta Pisani	7
		Mail Call	10
		Weather Bibliography from the Sawyer Marine Resources Collection	12
		Water Cycle: Indian Rain Song Jill Jarboe	16
		Basic Beaches for the Classroom: When Is Sand Really Sand? J. Philip McClaren	20
		The Sea Teaches (Part IV) Dan Gresham	23
		Fact Sheet: "Beaufort Wind Force Scale"	25
Index for <i>Current</i>			10

Naming and Worshipping the Winds Robert Hendrickson	27
Neptune's Library Sue Gammisch	28
For the Classroom: The Oceans? No Sweat! How the Oceans Affect Temperatures	32

VOLUME 7 NUMBER 3 SUMMER 1986 – sold out

The <u>Charles W. Morgan</u> : America's Last Wooden Whaleship Lisa Brownell	3
Dolphin Sounds Neal Overstrom	8
Dedicated to Bubbles Octavia Cubbins	10
Lord of the Sea Michael W. O'Shea	12
How Much Do You Know About Whales? The Mariner's Museum	14
Whales, Whales: A Crossword Puzzle The Mariner's Museum	16
Body Parts Puzzle Sea World Ohio	18
Whale Comparison Chart The American Cetacean Society	19
The Care and Handling of Marine Mammals Neal Overstrom	20
Academic Year Opportunities 86-87 Ann Coopersmith	22
For the Classroom: Searching the Sea -- Creating Lessons Carol J. Leonard	32

VOLUME 7 NUMBER 4 FALL 1986 – sold out

World of Water: High Quality Research in High Schools Lundie Spence	3
What World of Water Winners Say About Research Jean Adams	6
The Sea Teaches Dan Gresham	11
Beach Basics for the Classroom Phil McLaren	14
Research on Hands-on Field or Museum Science Programs Valerie Chase	19

A Summer Marine Science Institute on the Mid- Atlantic Coast James E. Bodolus	22
Artificial Reefs: A Coastal Classroom Project John J. Dindo	25
Marine Archaeology: Finders Keepers? Richard J. Audet	33
Book Review: <u>Crabs of Cape Cod</u> by Steven Berrich; <u>A Field Guide To Atlantic Coast Fishes</u> by C. Richard Robins and G. Carleton Ray Prentice K. Stout	37

For the Classroom: Playing Around with Plate Tectonics Dru Clarke	39
---	----

VOLUME 8 NUMBER 1 WINTER 1987 – sold out

The Sea Teaches Dan Gresham	3
Ocean Studies for Tomorrow: Project Discovery Challenges Abilities Marcia Marker Feld and Margaret Pratt	6
The Gulf of Maine in the Classroom Michael Brody	11
The Sunny Side of Sandy Hook Michael W. O'Shea	15
Book Reviews Prentice K. Stout	19
First Aid Training: Building Confidence and Competence Joseph A. Bous	20
Introduction to Tide Pools Sue Fisher Vaughn	26
For the Classroom: You Are a Lessum Skip McLamb	28

VOLUME 8 NUMBER 2 1988 – sold out

NMEA: Historical Notes James A. Lanier	5
Regional Chapters of NMEA	18
Survey Results	20
A Case for Integrating the Disciplines Neil Glickstein	21
Floundering Flatfish David G. Gordon	24

W.O.W. in Rhode Island Sharon Meeker	25	Marine Animal Communication Bibliography	18
Living in Water Valerie Chase and Karen Aspinwall	28	Deep Sea Ecology and Technology Bruce H. Robison	19
Exploration: A Teaching/Learning Unit Betty Hill and Mike Jackson	29	Deep Sea Structure and Food Webs Mary W. Silver	20
VOLUME 8 NUMBER 3 1988 - sold out		Drugs from the Deep Judith L. Connor	20
Updating the Vision for Marine Education E. Barbara Klemm	4	Deep Sea Curriculum Development	21
Marine Education Through Videos Jay R. Calkins	10	Deep Sea Bibliography	26
Poetry and the Sea Wm. Ray Heitzmann	13	Global Air and Water Circulation Patterns and Implications E.C. Haderlie	27
Port of Call: the Huntsman Marine Laboratory James Steel and Inka Milewski	17	Marine Debris: An Opportunity for Marine Education Burr Heneman	29
1988 Conference Update Bruce Stewart	22	National Marine Sanctuaries and Ocean Protection Miles M. Croom	29
Seaquiz J.V. O'Connor	24	Marine Environment Curriculum Development	30
The Crabby Sound David G. Gordon	26	Marine Environment Bibliography	34
For the Classroom: Apple Ocean Lindy Millman	29	Florida's Fragile Paradise: 1989 Conference Karen Blyler and Alison C. Rials	35
NEW WAVES IN MARINE EDUCATION VOLUME 8 NUMBER 4 1989 - sold out		PLASTICS IN THE OCEAN VOLUME 9 NUMBER 1 1989 - sold out	
Keeping Up with Ocean Discoveries: NMEA 1988 Nanette Sterman	4	The Great Balloon Controversy Valerie Chase	4
World of Water Winners	6	Marine Debris Burr Heneman	8
Gamming with Eugenie Clark Millie Graham	7	Marine Garbology: An Article of Trash Andrew R. Wood	12
Bridging the Gap Bruce Stewart	9	Don't Teach Your Trash to Swim Kathleen Heide Vicki Osis and Fran Recht	17
New Waves in Marine Science Symposia: Dolphin Foraging Group Structure and Habitat Relationships Bernd Wursig	10	Resources: More Information about Plastic Debris	20
Marine Mammal Language and Cognition Research Ronald J. Schusterman	11	For the Classroom: "Plastic" Jellyfish	24
Why Should Fish (and Dolphins Squid and Sea Urchins) Go to School? Carl L. Schilt	12	Report of the Task Force on Persistent Marine Debris Timothy R. R. Keeney and David Cottingham	26
Marine Animal Communication Curriculum Development	13	Florida's Fragile Paradise: 1989 Conference Update Karen Blyler	31
		VOLUME 9 NUMBER 2 1989 - sold out	
		A Sea Experience Neil Glickstein	4

Teaching about Diving Technology E. Barbara Klemm	9	E. Barbara Klemm	11
Our Inner Shore Gloria Snively	15	Islands in the Sea	18
Seaquiz: Hollywood and Marine Themes J.V. O'Connor	20	Getting to the Bottom of the Bay Michael Rigsby	19
Port of Call: Marine Extension Center Jay Calkins	21	Year 2000: Challenges for Marine Science Training and Education Worldwide Unesco Reports in Marine Science	21
Oysters and Oyster Reef Communities in Florida Jean Knight and Joe Bly	23	Resource Review: Exploring Tidepools Rita Bell	25
For the Classroom: Oyster Reef Field Trip Pat Purcell	27	Curricula: The Fluid Earth	26
Book Review: <u>A Field Guide To Southeastern and Caribbean Seashores</u> by Eugene H. Kaplan Joel Teret	30	Eyes in the Sky Nina Fisher	27
Florida's Fragile Paradise: 1989 Conference Update Karen Blyler	31	Computers and Technology in the Marine Science Classroom Susan Walton	29
VOLUME 9 NUMBER 3 1989 - sold out		Tunnel Vision Tracey L. Bryant	30
Islands in the Sea Ann Coopersmith	2	For the Classroom: Robots and ROVS: Roving the Ocean Floor The Jason Project	34
Book Review: Biology of Marine Life Steven K. Webster	9	ESTUARIES VOLUME 10 NUMBER 1 1990 - sold out	
Video Review: Gift of the Whales David G. Gordon	10	National Estuaries Day Melanie Mayer	2
NMEA Annual Report 1988-89 Rosanne Fortner	11	Where Rivers Meet the Sea	3
Aquarium Teacher Training Deborah L. Gage	23	Hudson River National Estuarine Research Reserve Betsy Blair and Dennis Mildner	5
Miami 1989: Paradise Found Karen M. Blyler	27	North Carolina National Estuarine Research Reserve M. Gail Jones	7
1989 NMEA Awards	29	Apalachicola National Estuarine Research Reserve Sharon Philyaw	11
A New Decade; Oceans '90 Vicki Osis	29	Elkhorn Slough National Estuarine Research Reserve Mark Silberstein	13
For the Classroom: Aquatic Wild Bob Samples and Cheryl Charles	30	Rookery Bay National Estuarine Research Reserve Gary Lytton	15
COMPUTERS & TECHNOLOGY VOLUME 9 NUMBER 4 1990 - sold out		Sapelo Island Visions Jay R. Calkins	17
The Computer as Interpreter J. David Denning	3	Bridging the Gap at the Belle W. Baruch Institute for Marine Biology and Coastal Research Wendy and Dennis Allen	19
"Designer" Fish William R. Hall Jr.	8	Seaquiz: U.S. Estuaries: Find Them to Protect Them J. V. O'Connor	23
Teleteaching			

Book Reviews	24
Impact of an Estuary Visit Rosanne Fortner	25
Top Priorities in Estuarine Education Lundie Spence, Neil Armstrong, M. Gail Jones	28
Gamming with Will Hon Millie Graham	31
For the Classroom: Webbing, Fiddling Around	33

ANNUAL REPORT VOLUME 10 NUMBER 2 1991 - sold out

Come to the Garden by the Sea Loretta Pisani, Kathy Manger, Mary Masterson	2
Reflections on New Jersey's Secrets J. V. O'Connor	4
Conservation Issues: Driftnets Vicki Osis	6
Marine Careers: NOAA Corps Officer Valerie Chase, Jean M. Davis	8
Museum Collections: Blueprints for New Frontiers in Taxonomy Eric A. Lazo-Wasem and Michael F. Gable	10
The Kids Are Saying: Save Our Endangered Oceans Gloria Snively, John Sheppy	14
NMEA Annual Report 1989-90 Valerie Chase	21
Directory of Education Programs at North American Aquariums James A. Lanier	27
For the Classroom: Net Gain Net Effect Project Wild Aquatic Education	31
Seaquiz: Sea Careers J. V. O'Connor	33

GLOBAL CHANGE VOLUME 10 NUMBER 3 1991 - sold out

The Challenge of Global Change: Developing a Global Ethic Michael Spranger	2
Global Climate Change and Sea Level Rise Douglas J. Canning	8
Our Disappearing Ozone Shield Michael Behrenfeld and John Chapman	13
Teacher Education and Curriculum Development	

for Global Change Education Rosanne Fortner	18
Spaceship Earth: Exploring Global Issues Through Metaphor Gloria Snively	22
More Resources about Global Environmental Change Vicki Osis	29
For the Classroom: Global Warming Demonstration Vicki Osis and John Chapman	32
Seaquiz: Coastal Vocabulary with a Global Twist J. V. O'Connor	33

VOLUME 10 NUMBER 4 1991 - sold out

Marine Science for Hearing Impaired Young Scholars E.C. Keller, Rebecca Keefer, Ed Keller III	3
Savannah State College: An Important Link in the Marine Science Network Bradford E. Brown	8
Presenting Historic Shipwrecks to the Public Denis Pagé	12
Marine Careers: Careers in Physical Oceanography Valerie Chase	16
Seeing Anne Rudloe	19
Andre's Spider Crab Joseph M. Varon	20
Book Reviews	23
Environmental Groups in America E. Barbara Klemm	25
For the Classroom: Web of Life Sue Truesdall and Leslie Bruce	29
Seaquiz: Sea Symbols J. V. O'Connor	31

MARINE MAMMALS VOLUME 11 NUMBER 1 1992 - sold out
--

From the Brink of Extinction: The North Atlantic Right Whale Noel Ciano	3
Great Whales of New England: A Field Course for High School Students Myra Morgan	7
The Anatomy of a Whale Watch Paul Forestall	10

Cetaceans Put a Face on Marine Conservation Education Fred Felleman and Beth Miller	16	For the Classroom: Playground Plotting Sheila Cushman	35
Sea World Killer Whales Learning New Language Mary Alice Ramirez	21	Seaquizz: Marine Sanctuaries: Know Them to Protect Them	37
Gray Whale Migrations: Then and Now James Sumich	23	VOLUME 11 NUMBER 3 1992 - sold out	
Shaping the Fate of the Manatee Albert C. Jensen	26	Dr. Robert Ballard at Harbor Branch Alese and Morton Pechter	2
Careers: I'd Do Anything to Work with Whales or Dolphins! Valerie Chase	31	Solving A South Sea Mystery Neil Glickstein	7
Book Reviews	34	The Use of Visual Metaphors to Explore Science Technology and Society Issues Gloria Snively	11
Dolphin and Whale Research Trips Nancy Black	36	NMEA Annual Report 1991	18
April the Dolphin Anne Rudloe	37	Satellite Oceanography E. Barbara Klemm	20
For the Classroom: Bring a Whale into Your Classroom Rob Moir	39	Eat Your Lab Thomas S. Howick	31
MARINE SANCTUARIES VOLUME 11 NUMBER 2 1992 - sold out		Careers: Biological Technician Valerie Chase	32
Marine Sanctuaries Ted Danson	2	Cover Up: Investigation of a Satellite Image J.V. O'Connor	33
National Marine Sanctuary Program Judith Snider	3	VOLUME 11 NUMBER 4 1993 - sold out	
Channel Islands National Marine Sanctuary Todd Jacobs	5	It's Not Just "Red Tide" Anymore Charles J. Gregory	3
Fagatele Bay National Marine Sanctuary Nancy Daschbach	9	Eccentric Avian David G. Gordon	8
Cordell Bank National Marine Sanctuary	11	Using A Newsletter in Your Marine Science Classroom Leslie Bruce	10
Florida's National Marine Sanctuaries Paige Gill and Lauri Maclaughlin	12	NMEA Annual Report 1992 J.V. O'Connor	16
Flower Garden Banks National Marine Sanctuary	17	The Poetry of Whales Michael O'Shea	19
Gray's Reef National Marine Sanctuary Craig S. Bonn	18	Amusement Parks and Our Marine Heritage Norman D. Anderson	21
Gulf of the Farallones National Marine Sanctuary Angie Coleman	21	Caring for the Coast Jonathan Shepherd	27
Monitor National Marine Sanctuary Dina Hill	24	Fishers Maxwell Corydon Wheat Jr.	28
Creating an Ocean Constituency Rachel Saunders	28	The Hofstra University Marine Laboratory Eugene Kaplan	29
Management of the Great Barrier Reef Marine Park Don Alcock	30	Essay: Dreamers	

Anne Rudloe 31

THE GULF OF MEXICO: WHERE THE RIVER MEETS
THE SEA
VOLUME 12 NUMBER 1 1993 - sold out

Hardbottom Environments on the Inner Continental
Shelf Off Alabama and Florida
John Dindo 3

Wetland Loss and Coastal Erosion in Louisiana
Sharon Alonzo and John Trowbridge 6

Gulf Literacy
John Trowbridge 10

Developmental Considerations for Producing
Environmental Science Activities for the
Gulf of Mexico Region
Lyle M. Soniat 12

The Year of the Gulf: America's Sea 15

A Sea of Grass
Anne and Jack Rudloe 24

1994 NMEA Conference: Science and Public Policy 26

For the Classroom: Wetlands Are Filters
Linda Maraniss, *The Gulf of Mexico: A Special Place* 28

For the Classroom: Life Cycle of a Sea Turtle
Linda Maraniss, *The Gulf of Mexico: A Special Place* 29

For the Classroom: Syntu
From *Welcome to Wetlands: An Activity Book
for Teachers* 31

FISHERIES: MANAGEMENT AND CONSERVATION
VOLUME 12 NUMBER 2 1993 - sold out

Introduction
Andy Dolloff 2

Issues: Making Science Real
Bill Hastie 3

The Definition of Fisheries Management
Larry A. Nielson 5

Teaching about Aquatic Resources
Steve Quinn 8

Depleted Coastal Fisheries Resources: Expanding Problems
in the Northeast
Michael R. Ross 11

A Future for Atlantic Coastal Striped Bass
David McDaniel 16

The Commercial Fishery of the St. Johns River,
Florida

Marty M. Hale 20

Desert Fishes of the Southwest: Will They Survive?
John N. and Mary C. Rinne 23

Pacific Salmon: Resource at Risk
Jim Lichatowich, Willa Nehlsen and Jack Williams 26

Fishing in the Dark: Management in the Realm of
Uncertainty
Susan Mello 29

From the Front Line of an Invasion: Zebra Mussels
in the Great Lakes
Clifford E. Kraft 34

Red Flags Wave for Red Snappers
Bob Shipp 38

Fishing Resources
Bill Hastie 40

VOLUME 12 NUMBER 3 1994 - sold out

The Surfer and the Science Teacher
Barbara Klemm 2

Bioluminescence: Living Light of the Sea
Rick Tinnin and Dr. Ed Buskey 10

Oceanographic Field Work by Mexican High School
Students as Teaching Support
Adriana Ayala-Lopez 14

Judgment of the Barnacles
Dr. Gloria Snively and Doug Wonnacott 15

In the Wake of Sailors Past
Mary Ann Johnson 20

Institute for Marine Sciences Roatan, Bay Islands
Dr. William L. Dulaney 23

NOAA Provides Experience for 1993 Teachers
at Sea 26

A Look at the Results from the 1993 NMEA
Membership Survey 32

VOLUME 12 NUMBER 4 1994 - sold out

Adrift In The Delaware Coastal Current
Elizabeth L. Rom and Elizabeth A. Chajes 2

Beauty and The Beasties
Lance C. Arnold 8

NMEA Annual Report 1993
Sharon H. Walker 12

Oceans Without Borders 15

Puffers, Periwinkles & Pies 19

Index for *Current* 16

Judi M. Hechtman, John W. MacFarland	
Operation Pathfinder Goes National Lundie Spence, Sharon Walker, Robert Kent Elizabeth Kumabe, John Tiedemann and Sue Yoder	24
Conservation Column	26
Randy Olson: From The Hallowed Halls To Hollywood Deborah A. Coulombe	27
Resources	30
Marine/Maritime Careers	31
THE MAURY PROJECT: A UNIQUE PARTNERSHIP IN OCEAN EDUCATION VOLUME 13 NUMBER 1 1995 - sold out	
Favorable Winds Come To Shore J.V. O'Connor	2
The Maury Project Davis R. Smith	3
The Life and Times of Matthew Fontaine Maury Jerome Williams	5
Bringing The Ocean and Atmosphere To Classrooms-- The AMS Thinks Big Ira W. Geer	8
Conference On Meteorological and Oceanographic Education Joseph M. Moran	9
El Nino, Perturber of Ocean and Atmosphere Joseph M. Moran and Donald McManus	10
The National Ice Center Captain Larry Warrenfeltz	12
Ocean-Atmosphere Studies at the Naval Postgraduate School Tom Murphree	15
NODDS: A System to Support Science Education Bill Schramm	17
Oceanography at the Naval Academy Douglas S. Dillner	19
Personal Computer Labs For Physical Oceanography Peter L. Guth	21
Activities: El Nino Analysis Global Winds And Ocean Currents How Level is Sea Level? Timing the Tides Ocean Wave Characteristics Seawater Mixing and Sinking	24
Review: "The Physical Geography of the Sea"	36

Jerome Williams	
Seaquizz: Searching the Ocean Currents	37
MARINE BIODIVERSITY--VOLUME 13 NUMBER 2 1995 - sold out	
The Convention On Biological Diversity And Marine Biodiversity Aleta A. Hohn, Roger L. Gentry and V. Maureen W. Wilmot	2
The Effects Of Overfishing On Biodiversity Mercédès Lee and Carl Safina	5
Threats To Coastal Diversity: Wetland Habitat Destruction Joy B. Zedler	10
Summit Of The Americas And Marine Biodiversity Aleta A. Hohn and Arthur E. Paterson	20
Conserving Marine Biodiversity: The Potential And Limitations Of Protected Areas Stephen R. Gittings, Ph.D.	22
Interactions Between Fisheries And Systematics Bruce B. Collette and Michael Vecchione	26
VOLUME 13 NUMBER 3 1995 - sold out	
Oh, Those Ciliates Tim Tindol	3
Selling Marine Education: Successful Moderator Techniques That Work Alan D. Rammer	9
Standards-Based Teacher Enhancement Through Partnerships	11
By-Laws Of Nmea	12
For The Classroom: El Niño And The Weather	13
Conference Update Making Connections Global Lessons From The Gulf Of Maine	15
The Micro-Serengheti: Wetlands Safari Through A Lens Tim Tindol	20
Nmea Annual Report 1994 John Dindo	26
1995 Nmea Award Winners	28
Nmea Computer Column	29
Review: "Collaborative And Community-Based Management Of Coral Reefs: Lessons From Experience	30

Charles Seaborn

Review: "Wetlands Riders" 31
John Trowbridge

THE MAURY PROJECT: A UNIQUE PARTNERSHIP IN
OCEAN EDUCATION
VOLUME 13 NUMBER 4, 1996 - sold out

All These Data: So What? 2
James O'connor

Update On The Maury Project 3
David R. Smith

The Maury Project's Peer Trainers 5

The Life And Work Of Matthew F. Maury 8
Peggy K. Smith And David R. Smith

Naval Meterological And Oceanography 10
Command Helps Operating Forces Execute
Their Mission
Public Affairs Office/Nmoc

Medea: Recognizing The U.S. Navy's 12
Oceanographic Data As A National
Treasure
Lcdr Michael E. Dotson, Usn

Voices From The Deep: Acoustic Tracking 15
Of Whales
Tom Murphree And Ree Brennan

Predicting Water Levels And Currents In 18
Coastal Waters
Bruce Parker

Ocean Observing From Satellites 22
By Jane D'aguanno

The Shape Of The Sea Surface 24
By Tom Murphree And Deidre Sullivan

For The Classroom:
Sea Level Slopes And Surface Currents 28
Eerie Lake Erie 30
Sound Travels So Far In The Ocean 32
Taking The Ocean's Temperature 34

Cd Rom Review: Turning The Tide 36
By Jerome Williams

Seaquiz: Physical Oddities Of The Sea 37
By J.V. O'connor

COASTAL ZONE MANAGEMENT ACT:
25TH ANNIVERSARY 1972-1997
VOLUME 14 NUMBER 1, 1996 - sold out

Coastal Zone Management in the United States 2
by Joseph Uravitch

Celebrating 25 Years of Ocean and Coastal Zone 6
Management: The Nation's Sanctuaries and Reserves
by Stephanie R. Thornton

Enhancing Public Access to the Coast through the 8
CZMA: National Opportunities and the Michigan
Experience
by Catherine Cunningham and Kenneth Walker

NMEA Conference: Land of the Inland Seas: 12
A Journey to a Great Lake

Harbor Visions Crew 13
by Rob Moir

From Sandcastles to Airbags: A coastal Hazards Solution 16
by Diane L. McClure

Coastal Zone Management in Alabama 21
by George F. Crozier

Coastal Zone Management for the 21st Century 23
by Michael Orbach

Conservation Column: Preaching to the Choir 25
by Andy Wood

For the Classroom
The Rocky Shore Field Notes 27
Charting our Course: Tracing the History of Land Use,
Building a Coastal Town 30

SeaQuiz: Coastal Classification Systems 33

CORAL REEFS
VOLUME 14 NUMBER 12, 1997 - sold out

Coral Reef Conservation and the International Year 2
of the Reef 1997
by Charles Seaborn

Integrating Traditional Ecological Knowledge with 16
Scientific Tools for Managing Hawaii's Coral Reefs
by Mark Calamia

Coral Reefs: An English/Spanish Compilation of 35
Activities for Middle School Students
by Sharon H. Walker, R. Amanda Newton and
Alida Ortiz

VOLUME 14 NUMBER 3 1997 - sold out

From Chaos to MAOS: Launching an Oceanography High 2
School
by Marlene Martin

NMEA National Conference: Puerto Rico 1998 6

Hydrothermal Vents on Hypercard: An Interdisciplinary 8
Science Research Project
by Neil Glickstein

Writing for Publication in Marine and Maritime Studies by Wm. Ray Heitzmann and Nora L. Deans	13	Informal Education for the Public by Vicki Osis	14
AQUAVAN: Aquatic Education on the Move by Raymond Nakamura	20	Outreach Education to Private and Government Sectors by Michael Spranger	17
Agassiz's Influence on Marine Science Teaching: Promoting Nature Study by Direct Observation by John Trowbridge	27	Sea Grant Education at the University Level by Shirley J. Fiske	20
A New Agenda for Science In Education by Admiral (ret.) James D. Watkins	31	Operation Pathfinder by Sharon H. Walker	25
For the Classroom: Nike Athletic Shoes, Rubber Duckies and Ocean Currents by Steve Clark	35	NMEA and Sea Grant Connections by Lundie Spence	35
OCEAN GIANTS VOLUME 14 NUMBER 4 1998 - sold out		Marine Education: A Vision for Sea Grant by Ronald C. Baird	39
Why Should We Care? Foreword by Julie Packard	3	Conservation Sea Grant "Wise Use Concept" by Dale Igmanson	41
Giant Ocean Fish: Hunting the Hunters by David Wilmot	4	Sea Quiz by J.V. O'Connor	43
Lines in the Water: The Imperative to Reduce Bykill in the Drift Longline Fisheries for Tuna and Swordfish by Ken Hinman	10	For the Classroom: Wrestling for Resources	44
Sharks on the Line by Merry Camhi and John A Musik	16	Food Pyramids and Bio-Accumulation	45
International Management of Atlantic Migratory Species by Rachel Husted and Rebecca Lent	22	Global Climate Change Interaction Web	46
Revealing the Secrets of Fishing using High Technology by Heidi Dewar	25	Jiffy Pop Volcanoes	47
NMEA Conference Information	30	National Sea Grant Directory	48
For the Classroom: Ocean Mural	33	EL NIÑO AND LA NIÑA VOLUME 15 NUMBER 2 1998 - sold out	
Around the World	35	Is El Nino to Blame? by Tom Murphree	2
Shark Tagging Activities	36	El Nino, La Nina and Global Weather by Tom Murphree	4
CELEBRATING 30 YEARS OF SEA GRANT VOLUME 15 NUMBER 1 1998 - sold out		El Ninos Devastate Kelp Forest Communities by Mia J. Tegner	8
1998 Year of the Ocean Proclamation by President Clinton	2	El Nino and Global Warming by Kevin Trenberth	12
National Sea Grant College Program by Victor Omelczenko	3	Just the Basics about El Nino and La Nina by Tom Murphree	19
Sea Grant's Education Mission by Douglas Sherman	4	More About El Nino and La Nina	20
Sea Grant: Enhancing K-12 Education by Rosanne W. Fortner	8	Sea Quiz: El Nino Facts and Fiction by Tom Murphree	22
		Introducing the El Nino Enso-lyzer	23
		For the Classroom: Global Winds and Following Seas	25

Hot Glasses, Cold Glasses	27	adapted from <i>Stream Scene</i>	
Balloons and Bottles	28		
Coastal Upwelling	29	General Stream Survey	19
Exploring our Coastal Heritage	34	Fish Survey	22
NMEA 1999 Conference		Water Quality Survey	27
		Macroinvertebrate Survey	31
		Stream Mapping Survey	35
		Other Surveys	38
Drifter Buoys VOLUME 16 NUMBER 1 2000 - sold out		Message from the BRIDGE: Gently Down the Stream by Lisa Ayers Lawrence	39
An Ocean Sciences Educational Proposal: Why are Drifter Buoys Important to You and Me? by Sharon H. Walker	2	Watershed Education Resources	40
Why Study Currents?	4	COSEE: Centers For Ocean Sciences Education Excellence: A New Initiative VOLUME 17 NUMBER 2 2001 - sold out	
Environmental Monitoring Via The Argos Data Collection and Location System by Sarah Schoedinger	5	Memorial Dedication for Dr. Dorothy L. Stout	2
The U.S. Navy Drifting Data Buoy Program by Elizabeth Horton	8	The Centers for Ocean Sciences Education Excellence (COSEE) Initiative: A History and A Vision by Susan B. Cook and Elizabeth L. Rom	3
The World Ocean Surface Circulation by Peter Niiler	11	Centers for Ocean Sciences Education Excellence (COSEE) Implementation Steering Committee Report	5
Transport Pathways through the Caribbean: The Tropical Origins of the Gulf Stream by Doug Wilson and Kevin Leaman	14	Centers for Ocean Sciences Education Excellence (COSEE): Creating Settings, Processes, Linkages, and Flows to Enhance Ocean Sciences Education by Duane D. Dale	9
Message From the BRIDGE by Vicki Clark	18	Abridged Executive Summary from the COSEE Workshop, from the September 2000 COSEE Final Report by Sharon H. Walker	11
For the Classroom By Anna C. Switzer --Where in the World Are We?	19	Ocean Sciences Education Opportunities for Teacher Preparation and Teacher Enhancement/Professional Development by Paula Keener-Chavis	18
--The Race is On!	21	The Potential Role of Ocean Sciences Research and Information Technology in the COSEE by Susan E. Humphris	22
--Build Your Own Drifter	22	Designing Diversity in to COSEE Programs: Inclusion Of Traditionally Underrepresented Groups in the Ocean Sciences by Benjamin E. Cuker	26
--Track A Drifter	25	The Roles of Informal Science Education in the Constellation of Science Education Programs In Promoting COSEE by J.R. Schubel	30
2001 NMEA Conference	28	Ocean Sciences in 9 th to 12 th Grade Education by Véronique Robigou	33
A Water Odyssey: Understanding Our Sense Of Place			
Watersheds VOLUME 17 NUMBER 1 2001 - sold out			
Building a Sense of Place through Watersheds Field Studies by Bill Hastie, Dru Clarke and Patty Bowers	2		
Watersheds adapted from <i>Stream Scene</i>	4		
Stream Walk Field Trip by Dru Clarke	11		
Student Data Collection	16		
Index for <i>Current</i>			20

K-8 Ocean Sciences Education Summary by Patricia A. Goodnight	36	Logic Problem and Estuarine Habitats	
COSEE – An Opportunity to Bridge the Undergraduate Research and Education Communities by Donald L. Reed	38	Outdoor Science Education For All Students: A Pilot Project to Bring Estuarine Education to Disabled Children by April N. Bahen and David H. Niebuhr	14
Acknowledgements and List of the COSEE May 2000 Workshop Participants	43	Living on the Edge...Mangrove Estuaries by Susan Leach Snyder	19
Fisheries Management VOLUME 18 NUMBER 1 2002 – sold out		Activity: Where does it live, and what does it eat? by Susan Leach Snyder	22
Why Manage Fish Stocks? by Robert L. Shipp	2	Leveraging Partnerships as a Resource for Environmental Education: The Southeast Regional Aquatic Nuisance Species Education Network by Howard Walters, John Dindo, Mike Spranger and Sharon Walker	25
International Management of Atlantic Tunas, Marlins, and Swordfish: Can it Work? by John E. Graves	9	Estuaries Day	31
Alaska Native’s and Fisheries Management by Dolly Garza	13	Using an Ocean Ecosystem Observatory and the Internet To Bring Meaningful Science Education and Real-time Data Into the Middle and High School Classroom By Eric Simms, Janice McDonnell and Michael De Luca	32
The Complete Picture: A Successful Fisheries Management Program? by Julie Childers	17	Message From the BRIDGE: Estuarine Exploration by Susanna Musick	38
West Coast Ground Fisheries Management – The Challenge of Connecting Nature with People through Science and Politics by Hal Weeks	21	2002 NMEA Conference	40
Ghost Town by Richard Manning	25	The Race To Hell Gate: Estuaries To The Abyss	
Message From the BRIDGE: Distant Shores and Dwindling Seas by Susanna Musick	31	Excerpts From: Discovering Earth’s Final Frontier: A U.S. Strategy for Ocean Exploration VOLUME 18 NUMBER 3 2002 – sold out	
2002 NMEA Conference	33	Introduction by Captain Craig McLean	2
The Race To Hell Gate: Estuaries To The Abyss		Overview by Dr. Marcia McNutt	3
Scientists and K-12 Education: Making the Connection NMEA Panel Discussion by Susan Haynes	Insert	Executive Summary	4
Estuarine and Coastal Education VOLUME 18 NUMBER 2 2002 – sold out		Motivation for Exploration	7
Introduction from The National Estuarine Research Reserve System	2	Ocean Exploration Objectives and Priorities	11
Memorial Dedication for Clara Mojica: Friend, Educator, Scientist	3	Technology Required for Ocean Exploration	21
Estuary Live by Susan Lovelace	4	Realizing the Potential of Our Discoveries and Protecting New Resources	24
Estuary Live Activities: Eco-logical: A Coastal	8	Activity: Journey to the Unknown Developed by Robin Rutherford and Jane Settle	28
		Activity: Come On Down! Developed by Donna Ouzts and Robin Sheek	38
		Activity: Designing Tools for Ocean Exploration Developed by Susan Morrison	44

Message From The Bridge: Eyes Wide Open: Virtual Exploration of the Ocean
By Susanna Musick 57

General Issue
VOLUME 18 NUMBER 4 2003 – sold out

Reviving the Naturalist’s Journal
By Tom Howick and Joe Dirnberger 2

Understanding Marine Bioinvasions: Classroom Experiments with Macroalgae
By Linda Walters 7

Ocean Wilderness Network
By Maureen Wilmot 11

REVELing in Seafloor Exploration
By Veronique Robigou and Kathleen Heidenreich 13

Sustainable Seas Expeditions’ Project Ocean Steward 2000 Online Workshop Evaluation
By Kristina Bishop and Howard D. Walters 18

Learning the Metric System: Calculating Fish Distributions, Densities, and Means Using Candy Fish
By Mary Carla Curran 28

Marine Education for Multicultural Audiences: Understanding the Asian-Pacific Islander Perspective Of the Marine Environment
By Alan Rammer 32

Communicating for Conservation: Inspiring Positive Change for the Aquatic and Ocean Realms
By Tanja Gronholm and Bill Mott 36

The NEPTUNE Project
By Nancy Penrose and Mark Stoermer 39

Minorities at Sea Together (MAST): A Model Interdisciplinary Program for Minority College Students
By Benjamin E. Cuker 45

Book Reviews 52

Lobsta Love
By Dru Clarke 53

Carbon Cycles On A Distant Coral Shore
By Mark De Crosta 54

NMEA 2003 Call for Papers 55

The BRIDGE Data Activity: More Than Mud
By Lisa Ayers Lawrence 56

Satellites In Education
VOLUME 19 NUMBER 1 2003 – sold out

Oceanography and Remote Sensing for Education
By Lundie Spence 2

Science Education and Outreach—Challenges and Opportunities for NOAA’s Environmental Satellite And Information Service
By H. Lee Dantzler 6

Inquiry for Curriculum Developers: How to Design Web-Based Lessons from Satellite Data Sources
By David G. Haase and Lundie Spence 8

NASA Oceanography: Exploring Our Ocean Planet From Space
By Andrea McCurdy 12

Detecting Sea Level Slopes and Surface Currents: Satellite Applications from the Maury Project
By David Smith 17

Ocean Forecasts: Satellites, Buoys, and Computers
By Robert Stewart 19

WhaleNet: Interactive Education and Research Utilizing Real-Time Satellite Data in Education
By J. Michael Williamson 24

Getting Satellites into Orbit: Investigations for Elementary Students
By Paula Arvedson 28

World Wide Web Sites
Compiled by Robert Stewart and Lundie Spence 29

The Satellite Educators Association
By Paula Arvedson 32

Satellites in Our Everyday World: East and West Coast Conferences
By Wayne Winston 34

Remote Sensing and the marine Environment
By Dru Clark 36

2003 NMEA National Conference: Taking Marine Education by Storm 39

Message from the BRIDGE: The Long Journey
By Laura Rose and Susanna Musick 40

Arctic Expedition 2002, National Oceanic and Atmospheric Administration, Office of Ocean Exploration
VOLUME 19 NUMBER 2 2003 – sold out

Forward
By Valerie Chase 2

Introduction
By Captain Craig McLean 3

Exploration of the Canada Basin 2002 By Kathleen Crane	4	Using Marine Technology to Develop Ocean Literacy And Teach Workplace Competencies By Deidre Sullivan, Jill Zande, Saundra Butcher, Tom Murphree, and Bruce Ford	20
Arctic Sea Ice: Channels of Life By Rolf Gradinger	8		
Spineless Wonders: The Pelagic Fauna By Russ Hopcroft	10	The Time-Distance-Direction Navigation Connection By Sharon L. Gilman and Richard Valliere	27
Physical Nutrients and Primary Productivity By Terry Whiteledge	13	Keeping Ocean Science Afloat in Our Schools: Reflections on Sustainability By Rick MacPherson and Craig Strang	32
Introduction to the Ocean Exploration Arctic Ocean Curriculum Unit By Valerie Chase and Mel Goodwin	15	Classification Puzzles By Stephen G. Clark	36
Activity: Current Events By Mel Goodwin	18	Coquina By Mark De Crosta	38
Activity: Life in the Crystal Palace By Mel Goodwin	21	Choices By Dru Clarke	39
Activity: Meet the Arctic Benthos By Mel Goodwin	23	Book Reviews	40
Activity: Let's Get to the Bottom of the Arctic! By Mel Goodwin	26	NMEA 200 Conference Bridge the Gulf: Marine Science in the Sunshine	41
Activity: Would You Like a Sample? By Mel Goodwin	30	NMEA 2004 Call For Papers	42
Activity: Being Productive in the Arctic Ocean By Mel Goodwin	36	Message From the BRIDGE: Hold the Anchovies! By Lisa Lawrence and Adapted for this Publication by Susanna Musick	43
Activity: Polar Bear Panic By Mel Goodwin	45	Wind By Mark De Crosta	45
Message From The BRIDGE: The Tip of the Iceberg By Laura Rose, Adapted for this publication by Susanna Musick	48		
General Issue VOLUME 19 NUMBER 3 2003 - sold out		<i>Aquarius</i> America's inner Space Station VOLUME 20 NUMBER 1 2004 - sold out	
		Introduction By Steven Miller	2
The Possibilities of Using a High School Oceanography Course to Fulfill the Requirements of Advanced Placement Environmental Science – APES Takes a Swim By Dr. Angela Morrow	2	Recognizing Complexity in Biological Systems: Making Coral Reef Ecology Simple? A Florida Case History By Steven Miller, William F. Precht, and Mark Chappone	4
A Marine Technology project for High School and College Students By Enid K. Sichel and Maurice A. Tivey	7	NOAA's Undersea Laboratory <i>Aquarius</i> : America's "Inner Space" Station By Steven Miller and Craig Cooper	12
Sea Turtle Hatchling Survival Game:L An Integrated Activity for Math, Science, and Reading Instructors By Dr. Maryellen Timmons	11	Trading Spaces By Bill Todd and Marc Reagan	18
Hawaii High School Students Participate in an Authentic Research Project By Erin Baumgartner	16	Girl Scouts Dive to the <i>Aquarius</i> with NOAA Ocean Exploration By Laura Rear	21
		Activity: Design Your Own	24
		Activity: Designing an Autonomous Underwater	28

Vehicle (AUV): Concepts in Lift, Drag, Thrust, Energy, Power, Mass, and Buoyancy	
Activity: Pipeline to the Coral Reefs	36
Activity: Petite Partners Packing Powerful Punches	41
Activity: The Good, the Bad, and the Nasty Tasting	47
Activity: Counting FishStix	52
Message From the BRIDGE: Submersed in Underwater Technology By Laura Rose and Adapted for this Publication by Susanna Musick	60

General Issue VOLUME 20 NUMBER 2 2004 - sold out

Marine Science and the Arts: A Minds on and Hands-on Approach By Ethan Rotman and Gail Broesder	2
The Classroom Exploration of Oceans Online Workshop Series By Howard D. Walters, Kristina O. Bishop and Christine Luketic	6
Effectiveness of Non-Profit Aquarium Education Programs: A Case Study of the National Aquarium In Baltimore By Caitlin Teresa Lamb	12
Living, Learning, Teaching: How to Grow An Internship By Maryellen Timmons and Anne Lindsay Frick	19
Bringing the <i>Sea of Cortez</i> Back to the Sea of Cortez By Jon Christensen and Doretta Winkelman	24
Crabby Behavior at the Beach: A Comparison of Hermit, Fiddler, and Blue Crabs By Melissa K. Demetrikopoulos and Lee G. Morris	28
Put Down That Shark!: Classroom Management Strategies for Field-Based Science Experiences By David h. Niebuhr, Tricia Hill, and Robert A. Carroll	35
Merging Marine Science and Engineering in the Classroom By Karen Neely	40
Activity: Design a Tag By Melissa Sanderson, Karen Neely, and Heather Kerkering	42
NMEA 2004 Conference Bridge the Gulf: Marine Science in the Sunshine	44
Message From the Bridge: Off the Hook By Susanna Musick	45

Marine Protected Areas VOLUME 20 NUMBER 3 2004 - sold out
--

Marine Protected Areas: Framing the Challenges, An Overview By Thomas E. Fish, Theresa G. Coble, and Phyllis G. Dermer	2
Refurbishing Old Tools: NOAA Fisheries Marine Protected Area Programs By Kathi Rodrigues	5
Networks of Marine Protected Areas: Thinking About Linking By Samantha Whitcraft	10
Designing the Channel Islands Marine Reserves: A Case Study of Science-Based Reserve Design By Lydia Bergen and Mark Carr	13
Seabirds: A Teaching Tool for Marine Conservation Adapted by Jennifer Wheeler	17
Activity: What Can I Eat With This Beak? How Shorebirds Share Habitat By Dawn Grafe, Adapted from the Shorebird Sister School Program	22
Activity: Foxes and Kittiwakes	25
The Kaho'oawe Island Reserve: A Native Hawaiian Approach to Marine Resources Management By Kaleikoa Ka'eo and Samantha Whitcraft	26
Lessons Beneath the Waves: Maritime Heritage Revealed Through Shipwrecks By Kate Thompson and Wayne Lusardi	30
Activity: The New Orleans: Cause and Effect By Paula Thompson, Jennifer Butler, and Beverly Slayden	35
Views of the Shore: Seeing Through the Eyes of Gulf Ilands Ntional Seashore Interpreters By Adam Prato and Mike Aymond	36
Whale Sharks and Marine Protected Areas in the Tropical Western Atlantic By Sarah Frias-Torres	39
Message From the Bridge: E helu Kākou I nā Koholā! (Let's Count Humpback Whales!) By Laura Rose and Adapted for this Publication by Susanna Musick	41

Our National Marine Sanctuaries America's Ocean & Great Lakes Treasures VOLUME 21 NUMBER 1 2005 - sold out

National Marine Sanctuaries: America's Ocean and Great Lakes Treasures	2
--	---

Activity: Exploring National Marine Sanctuaries	5	By William M. Graham and Toby F. Bolton	
National Marine Sanctuaries: Living Classrooms By Michiko J. Martin	8	Activity: Feasting with Natives	13
Ocean Education through Environmental Monitoring By Jennofer Saltzman, Ph.D.	12	Louisiana's Coastal Wetland Loss: A Successful Invasive Species Control Program? By Jeff marx and Edmond Mouton	14
Activity: Abundance of the Rocky Intertidal Zone With Life-sized Photos By April Devitt	17	Green Crab—A Potentially Devastating Invasion and a Teachable Moment By Andrea Copping	17
NOAA's National Marine Sanctuary Program: Bringing the Oceans to You, No Matter Where You Live! By Dawn Hayes, Cathy J. Sakas, Tom Dudchik, and Michiko J. Martin	19	Eurasian Watermilfoil Invasions and Management Across the United States By Dr. John D. Madsen	21
Voyaging Into Maritime Heritage: Preservation Through Education By Kate Thompson, Cathy Green, and Greg McCormack	23	Invasive <i>Spartina</i> in West Coast Estuaries By Kim Patten	27
Sidebar: Maritime Heritage: Putting People and Places in Marine Education By Robert Steelquist	27	The Invasive <i>Melaleuca</i> By Susan Snyder	32
Activity: Mock Shipwreck: An Exercise in Maritime Archaeology By Kate Thompson	29	Aquatic Invasive Species Online Resources	33
Dive Into Education with National Marine Sanctuaries: Designing and Implementing a Successful Ocean Education Conference for Teachers By Jean Nishida Souza, Claire Johnson, and Michiko J. Martin	33	2005 NMEA Conference	34
Geographic Information Science for Ocean Education: Mapping the Invisible World for Student Understanding By Steven Moore, Ph.D., Jenny Brandy, Laura Francis, and Julie Bursek	37	Aquatic Invasive Species Resources, Websites and CDs	35
Activity: Underwater Treasures: Exploring Our National Marine Sanctuaries through GIS	43	Deep Hydrothermal Vents VOLUME 21 NUMBER 3 2005 - sold out	
Environment-Based Education: Creating Revitalized Teachers and Interested Learners By Seaberry Nachbar	45	Limestone Monoliths on The Seafloor: The Lost City Hydrothermal Field By Deboryah S. Kelley	2
Activity: Seals, Corals, and Dollars...	48	Teachers REVEL in Education and Research in the Deep By Robert Causton Jr. and Sande Ivey	8
Aquatic Invasive Species VOLUME 21 NUMBER 2 2005 - sold out		Deep Sea Vents at The American Museum of Natural History By Dave Randle and Ro Kinzler	12
Introduction to Aquatic Invasive Species	2	Enhancing Deep-Sea Science Education: Exploring Ways to Answer the "Call to Action" By Liz Goehring, Veronique Robigou, and Paula Keener-Chavis	15
Successful Management of Invasive Water hyacinth in Florida's Public Waterways By Jeffrey D. Schardt	3	Vent Biology 101 By Cindy Lee Van Dover	20
Understanding Complexities of Marine Bioinvasions by Jellyfish	10	2005 NMEA Conference	23
		Activity: Diversity of The Deep By Breea Govenar	24
		Dive and Discovery: Bringing Deep-Sea Hydrothermal Vent Research into the Classroom By Daniel J. Fornari and Susan E. Humphris	27
		Exploring the Deep Seafloor with Autonomous	31

Robots By Dana R. Yoerger		Activity: How Am I supposed to Eat That	38
Translating the Science of Hydrothermal Vents Into the Language of Informal Science enters By Harry Helling and Eric Solomon	35	Integrated European Research into Cold-Water Coral Reefs By J. Murray Roberts and Andre Freiwald	41
SEAS: Diving into Deep-Sea Research from Your Classroom By Kathryn Kelsey, Mellie Lewis, and Carolyn Sheild	40	Threats to Deep-Sea Corals and their Conservation In U.S. Waters By Caitlin Frame and Hannah Gillelan	46
The Unseen Extreme: Microbiology at Deep-Sea Hydrothermal Vents By Melanie Holland	45	Climate Change and Deep-Sea Corals By John Guinotte	48
Unleashing the Power of the Deepest Story on Earth By Kristen M. Kusek Activity: <i>Volcanoes of the Deep Sea</i>	49 52		
<i>Aliens of the Deep: Exploring the Deep Ocean And Wondering about Life Beyond Our Planet</i> By Deborah Kovacs	53		
Deep-Sea Corals VOLUME 21 NUMBER 4 2005 - sold out			
What are Deep-Sea Corals? By Lance E. Morgan	2		
The Search for Deep-Sea Corals - Establishing a Foundation for Research and Management By John McDonough	5		
Corals that Live on Mountaintops By Fan Tsao and Lance E. Morgan	9		
The Intertwined Fates of Precious Corals and Monk Seals By Lance E. Morgan	12		
Activity: Leaving Home	13		
Exploring Deep-Sea Coral Habitat on the Edge - Alaska's Aleutian Islands By Robert P. Stone	18		
Deep-Sea Corals are Long-Lived Historians By Fan Tsao	22		
Activity: History's Thermometers	24		
Christmas Tree Corals: A New Species Discovered Off Southern California By Mary Yoklavich and Milton Love	27		
An Aquatic Phaomacy: The Biomedical Potential of The Deep Sea By Sara Maxwell	31		
Deep-Water Reefs off Southeastern U.S.: Recent Discoveries and Research	33		
		General Issue VOLUME 22 NUMBER 1 2006 - sold out	
		"Sea" the Future of Science: Combining Research, Education, and Outreach in Baja California By Shara Fisler and Drew Talley	2
		Literary Readings Supplement a High School Marine Science Curriculum By Erin Baumgartner	9
		Oceanography Camp for Girls By Teresa Greely and Kristin Thomas	14
		NMEA 2006 Conference: A City of Islands By Sarah Richards	18
		International Collaborations in Ocean Science Education By Melissa S. Ryan and Jenna S. Carlson	19
		Constructing Scientific Understanding at Aquariums, Zoos, and Nature Centers By Howard Walters, Ed.D.	23
		Education in Blue Flag Beaches in Puerto Rico By Alida Ortiz Sotomayor, Ph.D.; Lourdes Diaz Colon; and Edgardo Ortiz Corps, Ph.D.	31
		Activity: What is the Source of Sand?	34
		Biology buff to BOT Builder: Integrating Submersible Technology into Marine Science By Sue Phillips	36
		Activity: Sandy Beach and Dunes Poster	40
		Message From the Bridge: Cold One Day, Warm Another? By Kent Hathaway and Adapted by Susanna Musick	45
		NMEA 2004 Conference Proceedings VOLUME 22 NUMBER 2 2006 - sold out	
		NMEA Conference: Co-Chairs Message By Erin Baumgartner	2
Index for <i>Current</i>			26

NMEA 2006 Conference	2	COSEE: The Evolution of a National Network and its Strategic Goals	2
Conservation Corner: Inside our 'Blue' Conference: Planning and Implementing NMEA 2004 By Julie Childers	3	By William Spitzer and Susan Ganter	
Florida Red Tide and Human Health: The Top Ten Questions Presented by Barbara Kirkpatrick, Ed.D., ME.d., RRT, and Summarized by Julie Childers	5	Collaborations Between Formal and Informal Education Within the COSEE Network By Sharon Walker and Susan Cook	4
NMEA Committees	8	Can You Be Science Literate Without Being Ocean Literate By Craig Strang, Annette deCharon, and Sarah Schoedinger	7
Award Recipients	11	Strategies for Engaging Scientists in Ocean Sciences Education By Janice McDonnell, Sharon Franks, Andrea Thorrold, Cheryl Peach, and Eric Simms	10
Abstracts	14	Ocean Sciences and the Sensor Revolution: Implications for the Educational System and Workforce By: Deidre Sullivan and Liesl Hotaling	12
NOAA's Teacher to Sea Program	40	More than a Pipeline: COSEE Professional Development Efforts to Increase Diversity By Elizabeth Rogers Joyner, Lundie Spence, and Pam Di Bona	15
Message from the Bridge: In Full Boom By Lisa Ayers Lawrence and Adapted by Christopher Petrone	41	Ocean Sciences and STEM Education: Rethinking Science Teaching By Barbara Spector, Karen Blyler, and Mike Spranger	18
General Issue VOLUME 22 NUMBER 3 2006 - sold out			
Using Oceanography Examples to Teach Chemical Principles: <i>A Sea of Connections!</i> By Bruce G. Smith	4	COSEE Network Evaluation By Michael Seaman, Rena Dorph, Patricia Kwon, and Chris Parsons	21
Discover Coral Reefs – Reef Trips, Beach Walks, and Role-Playing By Joel Biddle	8	COSEE Partnerships: Building Lighthouses for Ocean Literacy By Gordon Kingsley and Veronique Robigou	24
Sandy Hook – A Model For Management and More Than A Day At The Beach! By Dave Grant	12	COSEE in a National Context: A Federal Perspective By Paula Keener-Chavis, Elizabeth Rom, and Don Elthon	29
Nanoscience in the Marine Science Classroom By Angela C. Morrow-Baker and Stephanie LaCrue	18	Leveraging COSEE: Going Above and Beyond By Judith Lemus and Laura Murray	32
Save Our Salt Marshes! Using Educational Brochures To Increase Student Awareness of Salt Marsh Ecology By Tara Fogleman and Mary Carla Curran	23	COSEE Centers: COSEE California COSEE Central Gulf of Mexico COSEE Florida COSEE Great Lakes COSEE Mid-Atlantic COSEE New England COSEE Ocean Learning Communities COSEE Ocean Systems COSEE SouthEast COSEE West COSEE Central Coordinating Office	34
Rip Current Safety and Public Awareness – The Beach Vacation as an Education Destination By Wendy Carey, Katie Mosher, and Spencer Rogers	26		
Mollusk Mania! A Comparison Game With Three Classes of Mollusks By Lee G. Morris and Melissa k. Demetrikopoulos	32		
NMEA National Conference: "Downeast 2007"	40		
Message From the Bridge: Sea State By Christopher J. Petrone	42		

Centers for Ocean Sciences Education Excellence (COSEE): Celebrating Five Years
VOLUME 23 NUMBER 1 2007 - sold out

General Issue
VOLUME 23 NUMBER 2 2007 - sold out

Teaching Ocean Literacy principles in K-12 Classrooms Using Real-Time Ocean Observing Data	2
--	---

By Ali L. Hudon			
Activity: Learning with Limulus – A Model for Teaching Marine Education	5	Northwestern Hawaiian Islands Marine Ecosystem: A Unique Global Biodiversity Hotspot	12
By Dave Grant and Nancy Church		By Alan Friedlander	
Understanding Symbols as a Component of Ocean Literacy	11	Activity: Hawaiian Hot Spots	19
By John Trowbridge		Map of Papahānaumokuākea Marine National Monument	22
Incorporating Education and Outreach of a Storm Water Outfall Impacting Recreational Water Quality At Public Beaches	13	The Role of Apex-Predators in the Coral Reef Ecosystem Of the Northwestern Hawaiian Islands	24
By Julie Kinzelman and Jaren Hiller		By Alan Friedlander	
How Undergraduate “Introduction to Marine Biology” Is Taught at Colleges in Coastal States	19	Papahānaumokuākea: Protecting the Environment, Perpetuating the Culture	28
By Matthew Landau, Richard Hager, and Marcy Howland		By Sterling Kini Wong	
Seeing Things in a Whole New Way: Working with Visually Impaired Children	23	Using Telepresence to Bring Ocean Exploration to You	32
By Melissa Carp		By Katie James and Laura Batt	
Unraveling the Mystery of the Marsh: Training Students to be Salt Marsh Scientists	25	Ocean Education and Outreach for Fame and Fortune – A Case Study	36
By Mary Carla Curran and Tara Fogleman		By Robert F. Chen	
NOAA Science Camp: Environmental Detectives In Action	31	Education Cruises to Bring the Place of the People	
By Julie Hahn and Nancy Reichley		By Andy Collins	
Quantifying the Impact Humans have on the Rocky Intertidal Ecosystem through a High School Educational Research Program	37	Education Takes a Front Seat on the NOAA Ship <i>Hi’ialakai</i>	45
By Jeffrey Rosaler		By Claire Fackler	
Oceanography for Pre-K-Third Grade	42	Ho’ohanohano I Nā Nūpuna Puwalu and International Pacific Marine Educators Conference VOLUME 24 NUMBER 2 2008 – sold out	
By Melissa k. Demetrikopoulos, Pascale Datta, John Pecore, Connie Lamas, Wesley D. Thompson, Michelle Wright, and Lee G. Morris		Ho’ohanohano I Nā Nūpuna Puwalu	2
Marine Education: Learning Evaluations	47	By Charles Ka’ai’ai and Sylvia Spalding	
By Carl M. Stepath		Oli Ka Lawai’a	7
From the Top of the World: Teaching About Ocean Currents	52	By: Leslie Aipalena Kuloloio	
By Lynne Cherry with Amy Clapp		Building Bridges Through Education	9
National Marine Sanctuaries Our Ocean & Great Lakes Treasures VOLUME 24 NUMBER 1 2008 – sold out		By Colin Kippen	
National Marine Sanctuaries: America’s Ocean and Great Lakes Treasures	2	Call for a Community and Cultural Consultation Process	13
Papahānaumokuākea Marine National Monument: Long-term Protection of Remote Ocean Wilderness	6	By Kitty M. Simonds	
By Kelley Belva and Andy Collins		Use of Traditional Practices in Present-Day Law	15
Marine Protected Areas as a Management Tool	10	By William S. Richardson	
By Robert Pavia		Taking a Seat at the Table	19
		By Walter M. Heen	
		LESSONS: Fishing in Old Hawai’i	21
		International Pacific Marine Education Conference	23
		By Sylvia Spalding	
		OceanRevolution.org: Evolving the Ocean Conservation Movement	26
Index for <i>Current</i>			28

By Wallace J. Nichols	
Climate Change Effects on our Natural Resources and Rights in the Pacific	31
By Ben Namakin	
What Marine Education Does the South Pacific Really Need?	34
By Hugh Govan, Et Al	
Removing the Barriers: The World Ocean Observatory And a Network of Ocean Education	40
By Peter Neill	
IPMEC List of Abstracts	42

General Issue VOLUME 24 NUMBER 3 2008 – sold out

Those hardy Little Crayfish: Where They Came From, How They Got Here, and Where They’re Going	2
By Jim R. Brinson and Kasie L Brinson	
Education for Ocean Literacy and Sustainability: Learning From Elders, Listening to Youth	6
By Craig Strang	
How One Person Can Change the World	11
By Judie Hansen and Bill Hastie	
Building Ocean Literacy Through Science and Art	18
By Erin Baumgartner, Lori Phillips, and Elizabeth Kumabe Maynard	
Ocean Research College Academy	24
By ardi Kveven and Josh Searle	
Grass Shrimp: Small Size But Big Role in Food Web	29
By Terry Aultman and mary Carla Curran	
American Innovation, Japanese Implementation: Using MARE to Increase Ocean Literacy in japan	34
By Noriko Imamiya and Craig Strang	
NMEA 2009 Conference: One World Conserving One Ocean	39
Hawaii Company Offers Exciting, New Fish Larvae Rearing Programs to Schools	40
By Sylvia Spalding	

Ocean Acidification From Ecological Impacts to Policy Opportunities
VOLUME 25 NUMBER 1 2009 – sold out

The Threat of Acidification to Ocean Ecosystems	2
By John Guinotte and Victoria J. Fabry	
Researcher Spotlight: Gretchen Hofmann, Ecological	8

Physiologist	
By Sandra Brooke	
Champagne Seas – Foretelling the Ocean’s Future	11
By Jason Hall-Spencer and Elizabeth Rauer	
Developing New Instrumentation for <i>in situ</i> Experimentation Related to Ocean Acidification – Scaling Up pH Effects From the Lab to the Field	13
By William Kirkwood and Larissa Sano	
Anticipating Ocean Acidification’s Economic Consequences on Commercial Fisheries	15
By Sarah R. Cooley and Scott C. Doney	
The Big Seven: Acidification Risks and Opportunities for the Seafood Industry	20
By Brad Warren	
A Global Perspective on the Economics of Ocean Acidification	25
By Hauke L. Kite-Powell	
What Can Be Done to Address Ocean Acidification Through U.S. Policy and Governance?	30
By Edward L. Miles and James Bradbury	
Resilient Coral Reef Ecosystems Provide a Glimmer Of Hope for the Future	33
By Jennifer Smith, Elizabeth Rauer, and Larissa Sand	
Activity: Deepwater Coral Expedition: Reefs, Rigs, and Wrecks	37

General Issue VOLUME 25 NUMBER 2 2009 – sold out

The Case of the Sick Coral: A model for Integrating Research Education to Translate Authentic Research into a Classroom Inquiry Investigation of Ocean Literacy Principles	2
By Kimberly A. Tice and Kanesa M. Duncan	
Activity: The Polychaete	10
By Gwynne S. Rife	
How Undergraduate “Introduction to Marine Biology” is Taught at Colleges in Non-Coastal States	15
By Matthew Landau, Richard Hager, and Ashley Brady	
See if You Believe This is Real – A Salty Adaptation of a PLT Activity for Early Learners	20
By Dr. Julie McIntosh and Dr. Gwynne Rife	
Sea Perch – Connecting Students, Scientist, and Oceans Around the World Through Underwater Robotics	25
By Brandy M.M. Wilbur, Chryssostomos Chryssostomidis, and Nancy Adams	
Taking Ocean Exploration Education to an International Audience	29
By Melissa Ryan, Kristina Bishop, and Margarida Suárez	

Some Observations on the Impacts of Marine Education By Carla Cudaback	34
Phone Calls From the Deep: Can You Hear Me Now? By Jessica Sharkey	36
Fiddlin' Around With Fiddler Crabs By Marvin M. Mace III and Mary Carla Curran	39

U.S. Regional Fishery Management Councils: Providing Sound Stewardship of Our Nation's Fishery Resources
VOLUME 25 NUMBER 3 2009 – sold out

Commonly Used Fishery Management Terms and Acronyms	2
Unique Entities – U.S. Regional Fishery Management Councils By Sylvia Spalding and Paul Dalzell	4
Fisheries of the United States By Kim Iverson and Anna Martin	8
Developing Ecosystem-Based Management of U.S. Fisheries By David Witherell	13
Ending Overfishing and Rebuilding Stocks By Kathy Collins	17
Evolution of Habitat Protection in Federal Waters By Patricia Fiorelli	20
Managing to Minimize Bycatch and Other Incidental Catch By Charlene Ponce	24
Management and Conservation of Deepwater Coral Ecosystems in the United States By Myra Brouwer	28
Protected Species Conservation and Fishery Management By Asuka Ishikaki	32
Working Cooperatively: International Fisheries Management in the 21 st Century By Sylvia Spalding	36
Marine Protected Areas for Fishery Management By David Witherell	39
Catch Share Programs in the United States: An Overview By Jennifer Gilden	42
Student Activity: Design a Fish	46
Student Activity: The Life and Times of a Fish	49
Student Activity: The Fish Trap Challenge	55

Student Activity: Paradise Island 57

NMEA Special Report #3
The Ocean Literacy Campaign
Featuring: Ocean Literacy Scope and Sequence for Grades K-12
March 2010 – sold out; available at
http://oceanliteracy.wp.coexploration.org/?page_id=679

Introduction By Craig Strang and Lynn Uyen Tran	2
From the Principles to the Scope and Sequence: A Brief History of the Ocean Literacy Campaign By Sarah Schoedinger, Lynn Uyen Tran, and Lynn Whitley	3
Ocean Literacy Scope and Sequence Honor Roll	8
Impacts of the Ocean Literacy Principles	11
Scientist and Educator Partnerships and Ocean Literacy: Creating a New Community of Practice By Catherine Halversen and Lynn Uyen Tran	17
Research on Learning and Teaching Ocean Aquatic Sciences By Lynn Uyen Tran, Diana L. Payne, and Lynn Whitley	22
Developing the Ideas of Ocean Literacy Using Conceptual Flow Diagrams By Craig Strang, Kathy DiRanna, and J Topps	27
Introduction to Conceptual Flow Diagrams: Ocean Literacy Scope and Sequence	31
Conceptual Flow Diagrams:	33
Grades K-2	33
Grades 3-5	40
Grades 6-8	47
Grades 9-12	54
Ideas from Teachers: Using the Ocean Literacy Framework	63
How to use the Ocean Literacy Alignment Matrix	65
Index of Topics	66
Alignment of Scope and Sequence with New York State Standards for Grades 3-8	74
About the Contributors and Credits	76
Ocean Literacy Website	77

NOAA Fisheries Service: Increasing Ocean Literacy and Stewardship Through Education
VOLUME 26 NUMBER 1 2010 – sold out

Introducing NOAA Fisheries Service By Rebecca Rueter	2
---	---

NOAA Fisheries in Our Schools: Connecting With NOAA Science Curriculum By Lisa Hiruki-Raring and Harriet Huber	4	Pelagic Reserves for Marine Top Predators: How Big and How Many? By David Hyrenbach	29
Activity: Saving Springer: Fid your Orca Family	9	Activity: Origami Whale and Turtle	34
Developing an Ocean Sciences Bowl Team: Lessons From the Washington, D.C. Public School System By Laura Oremland	11	New Stresses, New Strategies: Managing Marine Protected Areas in an Age of Global Environmental Change By Daniel Gleason	34
NOAA Fisheries Reaches Out to Teachers By Deborah McArthur, Lynne Barre, and Casey Ralston	15	Activity: Architects of Seamounts	43
Activity: Fish Population Survey By Deborah McArthur and Casey Ralston	18		
Voices From the Fisheries Projects Combine Oral History Interviews and Place-Based Education to Create Learning Opportunities for Students By Susan Abbott-Jamieson	19	General Issue VOLUME 26 NUMBER 3 2010 – sold out	
NOAA’s Teacher at Sea Program: Living and Learning at Sea By Elizabeth McMahon and Jennifer Hammond	24	Uncovering Student Interests in the Ocean By Meghan Marrero, Ed.D.	2
Activity: Living in Coral By Jessica Scharz and Assisted by Diane Stanitski and John Adler	27	An Interdisciplinary, Marine Robotics Research and Education Program By Christopher Kitts, William Kirkwood, and C. Geoffrey Wheat	7
NOAA Fisheries: Diversifying the Workforce Through Higher Education and Training Programs By Dionne Hoskins	33	A National Survey of Marine Educators: Goals and Indicators of Successful Field Trips By Erika K. Poarch	11
The National Marine Protected Areas Center: Networks of Marine Protected Areas VOLUME 26 NUMBER 2 2010 – sold out		It’s Easy Being Green By Krista M. Hoover and Mary Carla Curran	18
Welcome Letter From Dr. Jane Lubchenco	2	Young Children and the Ocean: An Investigation of Ocean Education in Early Childhood Programs By Elizabeth Austin	25
Networks of Marine Protected Areas: What Are They and Why Are They Needed? By Kara Schwenke, Lauren Wenzel, and Katya Wowk	3	Journeying through the Hawaiian Archipelago: Using Marine Science and Place-Based Learning at the Hawai’i Institute of Marine Biology By Charlie S. Wiener and Malia Rivera	30
Activity: Working Together With Sherman and the National System of Marine Protected Areas	8	International Ocean Institute – Kids: Targeting Awareness on the Sea with the Younger Generations By Aldo Drago, Alan Deidun, Martin Galea DeGiovanni, and Alicia Said	35
Institutional Networks of Marine Protected Areas--Connecting People to Protect Places By Georgina Bustamante, Meghan Gombos, Hans Hermann, Karen Schmidt, and Alessandra Vanzella-Khoury	12	The Concept of Sustainability as Proposed by Hardin’s <i>Tragedy of the Commons</i> By John Trowbridge, Ph.D. and James H. Wandersee	41
Why Are Ecological Networks of Marine Protected Areas Important? By Steven Gaines and Satie Airamé	20	Understanding Alaska’s Seas – North Pacific Research Board VOLUME 27 NUMBER 1 2011 – sold out	
Graphic: How Marine Reserves and Networks Protect Ocean Resources	24	Alaska’s Seas	2
Activity: Biodiversity	26	North Pacific Research Board: Furthering Knowledge About Northern Seas	5

Basis for All Life in the Sea: Oceanography and Productivity	8	By Elizabeth Turner and Cynthia Suchman	
Oases of Ocean Life: Fish Habitats	12		
Alaska's Ocean Bounty: Fish and Invertebrates	16		
Sentinels in the Sea: Marine Mammals	23		
Winged Indicators of Change: Seabirds	27		
People and the Sea: Humans	31		
Ocean Challenges: Other Prominent Issues	36		
From Physics to Fish: Integrated Ecosystem Programs	38		
Other Research: Partnerships	44		
Communicating About Research in Alaska's Seas	47		
The US Globe Program: Climate Change and Marine Ecosystems VOLUME 27 NUMBER 2 2011 - sold out			
US GLOBEC: Climate Change and Marine Ecosystems By David Mountain and Dale Haidvogel	2		
The Northwest Atlantic Program: Climate Change and New England Fisheries By Cabell Davis	5		
The California Current System Program: New Insights On the Coastal Oceanography By Harold P. Batchelder	10		
The Coastal Gulf of Alaska Program: Progress and Perplexity By: Nicholas bond	15		
The U.S. Southern Ocean GLOBEC Program By Eileen E. Hofmann, Daniel P. Costa, and Joseph J. Torres	19		
Interdisciplinary Modeling in US GLOBEC By Dale Haidvogel and Enrique Curchitser	24		
Technology Developments in US GLOBEC By Peter H. Wiebe and Daniel P. Costa	27		
Data Management in US GLOBEC By Peter H. Wiebe, Robert Groman, and Cyndy Chandler	30		
GLOBEC Personality: From Planktoneer to Professor By Jamie Pierson	34		
Activity: Dress like a Penguin By Annie Tompkins Gunter and Daniel Dickerson	35		
Epilogue	39		
		COSEE: Upcoming Summer 2011 Programs	41
General Issue VOLUME 27 NUMBER 3 2011 - sold out			
		Marine Education Above and Below Aleutian Seas By Reid and Sarah Brewer	2
		Great Lakes Literacy: Essential Principles and Fundamental Concepts for Great Lakes Learning By Rosanne Fortner and Lyndsey Manzo	5
		Connecting Ocean Science and Communities Through Public Science Events By Jim Wharton and E. Howard Rutherford	11
		Project SOAR Takes Flight By Ron Hirschi and Debbie Charna	16
		AOOS: Bringing Marine Data to Life By Darcy Dugan	21
		The Learning Cycle: Engaging Children in the Scientific Method By Amber Siler and Mary Carla Curran	24
		Understanding Audiences and Advancing Conservation: An Update from the Research Initiative of The Ocean Project By Bill Mott, Wei Ying Wong, Ph.D., and Douglas Meyer	33
		Making Waves Middle School Science Camp By Lisa Busch	38
		The 'Adopt-a-Microbe' Project: Web-based Interactive Microbiology Education Connected with Scientific Ocean Drilling By Beth N. Orcutt, Dinah Bowman, Katherine Inderbitzen, Amanda Haddad, Andrew T. Fisher, and Leslie Pert	40
		NMEA 2012 Annual Conference	45
A Closer Look at Ocean Careers Through the NOAA Ship Okeanos Explorer: A Case Study VOLUME 28 NUMBER 1 2012			
		Ocean Exploration: Interdisciplinary Expeditions to Reveal an Unknown Ocean By Dr. Stephen H. Hammond	2
		NOAA Corps Officer, NOAA Ship <i>Okeanos Explorer</i> By Nicola VerPlanck	7
		NOAA Ship <i>Okeanos Explorer</i> Chief Bosun: Worth His Salt in His Own World and the Sea By Carl VerPlanck	10
Index for <i>Current</i>			32

Tools of the Trade, Senior Survey Technician, NOAA Ship <i>Okeanos</i> By Colleen Peters	13
Introducing Educators to Ocean Mapping Tools By Mashkoor A. Malik, Coleen Peters, Lt. Megan Nadeau, and Elizabeth Lodbecker	15
The Anatomy of a Career in Submersible Vehicle Design By Dave Lovalvo	20
“Knowing Enough to be Dangerout” with Telepresence By Webb Pinner	23
Careers managing Scientific Information Collected Aboard the NOAA Ship <i>Okeanos Explorer</i> By Brendan Reser, Sharon Mesick, and Susan Gotfried	38
It Takes a Village: Bringing the NOAA Ship <i>Okeanos Explorer</i> to Life for Educators and Students By Susan E. Haynes and Melissa Ryan	32
OceanAGE (Another Generation of Explorers): Career Feature on NOAA’s Ocean Explorer Website By Laura Paris	35
An OceanAGE (Another Generation of Explorers): Interview with Richard Conway, Chief Electronics Technician (CET), NOAA Ship <i>Okeanos Explorer</i>	36
An OceanAGE (Another Generation of Explorers): Interview with Margaret Collins, Engine Utilityman, NOAA Ship <i>Okeanos Explorer</i>	38
An OceanAGE (Another Generation of Explorers): Interview with Brian Kennedy, NOAA Corps Officer, NOAA Ship <i>Okeanos Explorer</i>	41
Activity: Calling All Explorers	43
NMEA 2012 Annual Conference	45