

# Past Tibor T. Polgar Fellowships

The Hudson River estuary stretches from its tidal limit at the Federal Dam at Troy, New York, to its merger with the New York Bight, south of New York City. Within that reach, the estuary displays a broad transition from tidal freshwater to marine conditions that are reflected in its physical composition and the biota it supports. These characteristics present a major opportunity and challenge for researchers to describe the makeup and workings of a complex and dynamic ecosystem. The Tibor T. Polgar Fellowship Program provides funds for graduate and undergraduate students to study selected aspects of the physical, chemical, biological, and public policy realms of the estuary.

Since its inception in 1985, the program has provided approximately \$1 million in funding to 189 students and can boast the involvement of 116 advisors from 64 institutions.

The program is named in memory of Dr. Tibor T. Polgar, an estuarine biologist who was a key advisor to the Hudson River Foundation for Science and Environmental Research when the fellowship program was created. The program is conducted jointly by the Hudson River Foundation and the New York State Department of Environmental Conservation. The fellowships are funded by the Foundation.

Past reports of the Tibor T. Polgar Fellowship program are listed below. Download the entire report or particular sections as PDF files.

**Final Reports of the Tibor T. Polgar Fellowship Program, 2018** – Sarah Fernald, David Yozzo, and Helena Andreyko, editors

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- I. [Controls on Cyanobacteria Growth in the Hudson River Estuary](#) – Corey W. Rundquist and Stuart E. G. Findlay
  - II. [Quantification of Microplastic Content in Surface Water and Sediment within Hudson River Tributaries and Marshes](#) – Jason Randall, Zofia Gagnon, and Christopher Bowser
  - III. [Size Does Matter: Exposure and Effects of Microplastics on the Eastern Oyster \(\*Crassostrea virginica\*\)](#) – Erika Bernal, Paul A. X. Bologna, and Beth Sharack
  - IV. [The Effect of Salinity on Eastern Oyster Reproduction in the Hudson River Estuary](#) – Kaili M. Gregory and Matthew Hare
  - V. [Bugs on Drugs: The Influence of Redox Environments on the Microbial Degradation of Pharmaceuticals in the Hudson River Watershed](#) – Michelle L. Zeliph and Max M. Haggblom
  - VI. [Assessing Mode of Reproduction in \*Vallisneria americana\* of the Hudson River, NY, and the Chesapeake Bay, MD](#) – Carrie E. Perkins and Maile C. Neel
  - VII. [Painted Turtle Ecology in a Freshwater Tidal Marsh: Concluding Survey](#) – Virginia Caponera and Erik Kiviat
  - VIII. [Human Impact on Ramshorn–Livingston, A Hudson River Freshwater Tidal Marsh](#) – Elizabeth Thompson and Dorothy Peteet
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- I. Identifying Genetic Diversity and Population Structure in Brook Trout (*Salvelinus fontinalis*) Populations of the Upper Hudson River and its Tributaries – Spencer A. Bruce and Jeremy Wright
  - II. Evaluation of Water Quality and Biological Changes in Three Upper Hudson River Watershed Lakes – a Forecast of What is to Come? – Crew S. Stover and Margaret H. Murphy
  - III. Potential of Ribbed Mussels (*Geukensia demissa*) to Enhance Growth and Nitrogen-Removal Services in Restored Salt Marshes – Jennifer Zhu, Chester Zarnoch, J. Stephen Gosnell, Mary Alldred, and Timothy J. Hoellein
  - IV. Variation in Microplastic Content of Marsh Sediment Due to the Atlantic Ribbed Mussel (*Geukensia demissa*), Jamaica Bay, NY – Shannon Jenkins and Brett Branco
  - V. Factors Affecting the Growth and Establishment of *Vallisneria americana* in the Hudson River, NY – Anne Carew and Katharina Engelhardt
  - VI. Aerosolization of Bacteria and Toxins from Harmful Cyanobacteria Blooms – Christopher J. Hulbert and Robyn L. Smyth
  - VII. Bacterial and Viral Source Tracking in the Pocantico and Sparkill Creek Watersheds – Christina Joseph and Bernadette Connors
  - VIII. Street Runoff as a Source of Fecal Indicator Bacteria to Urban Embayments – Angel Montero and Gregory O’Mullan
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**Final Reports of the Tibor T. Polgar Fellowship Program, 2016** – Sarah Fernald, David Yozzo, and Helena Andreyko, editors

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- I. Utilizing DNA Sequencing and Land Use Data for an Improved Understanding of Fecal Contamination in Hudson River Tributaries – Elizabeth P. Farrell and Gregory D. O’Mullan
  - II. Modeling Potential Phytoplankton Blooms in the Hudson River Estuary: Challenges and Solutions – Samuel A. Nadell and Robert W. Howarth
  - III. Submersed Aquatic Vegetation in a Hudson River Watershed: The Great Swamp of New York – Chris Cotroneo and John Waldman
  - IV. Induction of Metallothionein in Grass Shrimp (*Palaemonetes pugio*) Exposed to Naturally Occurring Metals – Abhishek Naik and William G. Wallace
  - V. Quantifying the Effects of TCDD Exposure on Early Life-Stage Cardiac Gene Expression of Atlantic Tomcod by RT-PCR – Kristy A. Vitale and Isaac Wirgin
  - VI. Perched Culverts’ Effects on Downstream Eel Habitat in Hudson River Streams – Marissa J. Porter, Zofia Gagnon, Robert Schmidt, and Christopher Bowser
  - VII. Effects of Tributaries in the Transport of Microplastics in the Hudson Valley Watershed – Ian Krout, Zofia Gagnon, David Conover, and Christopher Bowser
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- I. **Testing Environmental DNA Techniques to Assess American Eel Populations in the Bronx River** - Jessica Miranda, Elizabeth Alter and John Waldman
  - II. **Ecology of Painted Turtles in a Freshwater Tidal Marsh, Tivoli North Bay, New York** - Reminy J. Bacon and Erik Kiviat
  - III. **Effects of Perched Culverts on Upstream and Downstream Eel Populations in Hudson River Streams** - Richard Brase, Zofia Gagnon, Robert Schmidt, Christopher Bowser, and Andrew Meyer
  - IV. **Influence of a Hudson River Tributary on the Bacterial Colonization of Riparian Vegetation** - Beckett Lansbury and M. Elias Dueker
  - V. **Reconstructing the Paleocology of Haverstraw Tidal Marshlands** - Lucy Gill and Dorothy Peteet
  - VI. **Protecting an Upper Hudson Heritage Lake: Assessing the Need for Fish Barrier Installation at Wolf Lake, Newcomb, New York** - Samuel Beguin, Karin Limburg, and Stacy McNulty
  - VII. **The Combined Effects of Hypoxia and Contaminants on the Early Life-Stages of Shortnose Sturgeon, *Acipenser brevirostrum*** - Carlye McConnell and Christopher Chambers
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- I. **Factors for Loss and Restoration of *Vallisneria americana* in the Hudson River - Herbivory and Depth in Sediment** - L. Jonas Hamberg, Karin Limburg and Stuart Findlay
  - II. **The Conservation Status of Goldenclub (*Orontium aquaticum*) in the Freshwater Tidal Wetlands of the Hudson River** - Julia C. Les and Erik Kiviat
  - III. **Subtidal Survey for the Presence of Oyster Reefs in Portions of Raritan Bay, Arthur Kill, and the Hackensack River of the Hudson River Estuary** - Erik Bugenhagen and Tiffany Medley
  - IV. **Prey density effects on predator foraging: a comparison of prey loss and implications towards a natural insect community** - Katherine Guild, Jeffrey Levinton
  - V. **Impact of aquatic toxins on heart development in Atlantic and shortnose sturgeon larvae** - Corinna Singleman and Nathalia Holtzman
  - VI. **Tidal Community Exchange Between the Hudson River and a Tributary** - Alec Schmidt, Karin Limburg and Alison Robbins
  - VII. **Interactions between the Alien Oriental Weatherfish (*Misgurnus anguillicaudatus*) and Native Fishes in the Klyne Esopus Kill, a Hudson River Tributary** - Anastasia Frank, Robert E. Schmidt, Suparna Bhalla and Chris H. Bowser
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- VIII. **The Effects of Dams on Densities and Sizes of American Eels in the Bronx River** – Richard DeMarte, John Waldman and Michael S. Bednarski
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- I. **Reconstructing Hudson River Sedimentary Signals** – Kyle M. Monahan and Dallas Abbott
  - II. **Sea Level Rise and Sediment: Recent Salt Marsh Accretion in the Hudson River Estuary** – Troy D. Hill and Shimon C. Anisfeld
  - III. **Nutrient Pollution in Hudson River Marshes: Effects on Greenhouse Gas Production** – Angel Montero, Brian Brigham and Gregory D. O’Mullan
  - IV. **Microbial Agents of Concern in Water and Air at the Hudson River Estuary Waterfront** – Sherif Kamal and M. Elias Dueker
  - V. **Occurrence and Ecological Effects of Amphetamine Type Stimulants in Wastewater Effluent** – Alexis M. Paspalof, Daniel Snow and Emma Rosi-Marshall
  - VI. **The Distribution of Invasive *Celastrus orbiculatus* in an Anthropogenically Disturbed Riparian Ecosystem** – Shabana Hoosein and George Robinson
  - VII. **Hypoxia Tolerance of the Invertebrates Associated with Water–chestnut Beds (*Trapa natans L.*) in the Hudson River** – Mariana Carolina Teixeira and David L. Strayer
  - VIII. **The Distribution and Feeding Ecology of Larval Sea Lampreys in the Hudson River Basin** – Thomas M. Evans and Karin E. Limburg
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- I. **Recruitment of Oysters within the Hudson River Estuary** – Ryan Carthan and Jeffrey S. Levinton
  - II. **The Impacts of the Zebra Mussel (*Dreissena polymorpha*) on the Feeding Ecology of Early Life Stage Striped Bass (*Morone saxatilis*)** – Grace A. Casselberry and Eric T. Schultz
  - III. **Field and Laboratory Investigations on the Effects of Salinity on Decomposition Dynamics among the Hudson River’s Freshwater Tidal Wetlands** – Craig T. Connolly, Stuart E.G. Findlay, and William V. Sobczak
  - IV. **Temperature as a Driver of a Size–Structure Shift in Zebra Mussels (*Dreissena polymorpha*) in the Hudson River** – Jessica A. Gephart, Michael Pace, and David Strayer
  - V. **Who Controls Whom? Linking Predator–Prey Dynamics Between Mud Crabs and Juvenile Oysters to Restoration Efforts in the New York Metropolitan Region** – Rebecca E. Kulp and Bradley J. Peterson
  - VI. **Fish Parasites in the Hudson River Estuary’s Littoral Habitats: A Prelude to Restoration** – Emily C. Ogburn, Karin E. Limburg, and Christopher M. Whipps
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- VII. Investigation of Estuarine Sediment as a Reservoir for Sewage Associated Bacteria - Erin Schneider and Gregory D. O'Mullan
  - VIII. Developing a Nonlethal Field Method for Determining Lipid Content of American Eels (*Anguilla rostrata*) - Sean O. I. Swift, Robert E. Schmidt, and David R. Myers
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- I. Tracing Combined Sewage Overflow Discharge with Quaternary Ammonium Compound - Patrick Fitzgerald and Bruce Brownawell
  - II. Genotyping Historic Atlantic Tomcod Samples to Determine the Timeline of Onset of PCB Resistance - Carrie Greenfield and Isaac Wirgin
  - III. Prevalence and Characterization of Cardiac Pathology Induced by the Parasitic Nematode *Philometra saltatrix* in Juvenile Bluefish of the Hudson River Estuary - Sarah Koske and Francis Juanes
  - IV. Assessment of Temporal and Geographic Population Structuring of *Phragmites australis* Along the Hudson River Using Microsatellite DNA Markers - Daniel Lipus, Joseph Stabile and Isaac Wirgin
  - V. Pilot Study for Laser Ablation and Stable Isotope Analysis of Feathers, Eggshells, and Prey of Great Blue Herons Sampled Across an Urbanization Gradient in the Mid-Hudson River Valley - Jill Mandel and Karin Limburg
  - VI. Diet of American Eel (*Anguilla rostrata*) Elvers in a Hudson River Tributary - Leah Pitman and Robert Schmidt
  - VII. The Effects of Salinity Intrusion on the Biogeochemistry of Hudson River Tidal Freshwater Wetlands - Robert Osborne, Stuart Findlay and Melody Bernot
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- I. Land Trusts and Conservation Easements along the Hudson: How Feasible Is Perpetuity? - Nikki Koenig Nielson and Keith H. Hirokawa
  - II. Stable Isotope Analysis in the Hudson River Marshes - Implications for Human Impact, Climate Change, and Trophic Activity - Thien Khoi V. Nguyen and Dorothy M. Peteet
  - III. Quantification and Identification of Antibiotic Resistant Microbes in the Hudson River and Flushing Bay - Suzanne Young and Gregory O'Mullan
  - IV. Invasive-Species Removals and Nitrogen-Removal Ecosystem Services in Freshwater Tidal Marshes - Mary Katherine Alldred and Stephen B. Baines
  - V. The Effects of an Urbanized Estuary on the Physiology and Metal Storage of the Eastern Oyster, *Crassostrea virginica* - Allison S. Mass and William Wallace
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- VI. Impact of Silver Nanoparticle Exposure on Crayfish (*Orconectes virilis*) Growth, Chemistry and Physiology in Controlled Laboratory Experiment and Hudson River Ecosystem - Allen Clayton and Zofia Gagnon
  - VII. Quantifying Larval Fish Habitat in Shoreline and Shallow Waters of the Tidal Hudson River - Claire E. Stouthamer and Mark B. Bain
  - VIII. Using Stable Isotopes to Examine Foraging Ecology of New York Harbor Colonial Waterbirds - Elizabeth C. Craig, Paul D. Curtis and Susan B. Elbin
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- I. A Feasibility Study of the Population Structure and Habitat Usage of Winter Flounder (*Pseudopleuronectes americanus*) in the Hudson River Estuary Investigated Through Otolith Microchemistry - George Jackman, John Waldman and Karin Limburg
  - II. Macrofossil Evidence for Middle to Late Holocene Vegetation Shifts at Iona Island Marsh, Hudson Valley, NY - Cleo Chou and Dorothy Peteet
  - III. Intensive Rotational Grazing of Romney Sheep as a Control for the Spread of *Persicaria perfoliata* - Caroline Girard and Gary Kleppel
  - IV. The Ecology of Wrack: Decomposition and Use by Invertebrates on Natural and Engineered Shorelines of the Hudson River - Cornelia Harris and David Strayer
  - V. Demographic Analysis of the Jamaica Bay Diamondback Terrapin (*Malaclemys terrapin*) Population: Implications for Survival in an Urban Habitat - Alexandra Kanonik and Russell Burke
  - VI. Evaluating Nest Protectors for Turtle Conservation - Shahriar Rahman and Russell Burke
  - VII. A Native Species, the American Eel (*Anguilla rostrata*), as a Biological Control for an Invasive Crayfish (*Orconectes rusticus*) in Tributaries to the Hudson River, NY - Sarah Mount, Catherine O'Reilly and David Strayer
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- I. Evidence for a Tsunami Generated by an Impact Event in the New York Metropolitan Area Approximately 2300 Years Ago - Katherine Cagen and Dallas Helen Abbott
  - II. Gastropods of the Hudson River Shoreline: Subtidal, Intertidal, and Upland Communities - Thomas W. Coote and David Strayer
  - III. Capturing the Nutrient Overenrichment-Eutrophication-Hypoxia Cycle at Newton Creek - M. Elias Dueker and Gregory O'Mullan
  - IV. Feeding Habits and the Effects of Prey Morphology on Pellet Production in Double-crested Cormorants, *Phalacrocorax auritus auritus* - Colin Grubel and John Waldman
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- V. Genetic, Morphological and Ecological Relationships Among Hudson Valley and a Massachusetts Population of the Clam Shrimp, *Caenestheriella gynecia* - Jonelle Orridge, John Waldman, and Robert Schmidt
  - VI. Did the Zebra Mussel (*Dreissena polymorpha*) Alter the Thermal Balance of the Hudson River? - David Seekell and Michael L. Pace
  - VII. Cohort Structure, Growth, and Energy Dynamics of Juvenile Bluefish in the Hudson River Estuary - David G. Stormer and Francis Juanes
  - VIII. Effects of Surface Roughness on Ecological Function: Implications for Engineered Structures in the Hudson River Shore Zone - Amy M. Villamagna, David Strayer, and Stuart Findlay
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**Final Reports of the Tibor T. Polgar Fellowship Program, 2007** - Catherine A. McGlynn and John R. Waldman, editors

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- I. Significance of Estuarine Hypoxia to Altered Nutrient Cycling and Toxic Nitrite Accumulation - Sarah L. McGrath and Gregory O'Mullan
  - II. Measurements of *Enterococci* Bacteria in the Hudson River: Environmental Health Issues and Policy Recommendations for Combined Sewer Overflow - Suzanne Young and Peter Bower
  - III. Effectiveness of Riparian Wetlands in Improving Water Quality in an Urban Stream - Christine M. Vanderlan and George R. Robinson
  - IV. New Tools for Assessing the Exposure of Phthalate Esters in the Lower Hudson Estuary - Anne C. Ellefson and Bruce J. Brownawell
  - V. Applying an Effect-Directed Strategy to Identify Previously Unrecognized Toxic Chemicals in Hudson River Sediments - Sara J. Lupton, Diana S. Aga, and Troy D. Wood
  - VI. Assimilation and Subcellular Distribution of Dietary Hg by Grass Shrimp, *Palaemonetes pugio*, Collected Along an Environmental Impact Gradient - David R. Seebaugh and William G. Wallace
  - VII. Possible Effects of Endocrine Disrupting Chemicals on Diamondback Terrapins (*Malaclemys terrapin*) from Jamaica Bay, NY - Erin E. Horn and Russell L. Burke
  - VIII. Fish Species-Habitat Associations in New York's Great Swamp - Chris Cotroneo and David J. Yozzo
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**Final Reports of the Tibor T. Polgar Fellowship Program, 2006** - John R. Waldman and William C. Nieder, editors

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- I. The Upside-Down Hudson River Estuary: Evidence of <sup>14</sup>C-depleted Seaward End-member OC Source Fueling pCO<sub>2</sub> Super-saturation in an Urbanized Estuary - David R. Griffith and Peter A. Raymond
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- II. [Ecological Stoichiometry of the Salt Marsh: Si:N Ratios and Effects on the Algal Community](#) - Cheryl Whritenour and Kimberly L. Schulz
  - III. [Effects of Road Salt Pollution on the Mayfly \*Tricorythodes\*](#) - Justin Halsey and Peter Groffman
  - IV. [Population and Migration of Banded Killifish in Tivoli South Bay, Hudson River, NY](#) - Alec Schmidt and Robert E. Schmidt
  - V. [The Effect of Polychlorinated Biphenyls \(PCBs\) on Song Production of the Black-Capped Chickadee \(\*Poecile atricapillus\*\)](#) - Sara DeLeon and Andre Dhondt
  - VI. [An Estimate of Gene Flow in Hudson River and Jamaica Bay Grass Shrimp \(\*Palaemonetes pugio\*\) and Sand Shrimp \(\*Crangon septemspinosa\*\)](#) - Manusha Phoolbosseea and Kathleen A. Nolan
  - VII. [Dietary Habits of Diamondback Terrapin \*Malaclemys terrapin\* in the Jamaica Bay Wildlife Refuge, New York](#)- Rafael Sierra and Russell Burke
  - VIII. [The Hudson River Watershed Management Regime: An Inventory and Analysis of Organizational Stakeholders](#) - William G. Dalton, Jr., Shawn Dalton, and Reid McLean
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- I. [Hydrological Exchange Processes in Hudson River Tidal Wetlands](#) - Alicia S. Arrigoni, Stuart Findlay, and Klement Tockner
  - II. [Summer Microbial Populations in the Lower Hudson River Estuary and their Relationship to Dissolved Organic Nutrients](#) - M.E. Dueker and Raymond Sambrotto
  - III. [Significance of Small Impoundments to American Eel \(\*Anguilla rostrata\*\)](#) - Jacqueline Anderson and Robert E. Schmidt
  - IV. [Development of an Upper Hudson River Estuary GIS-Based Fish Data Resource](#) - Megan P. O'Connor and Francis Juanes
  - V. [Dietary Habits of Diamondback Terrapins, Jamaica Bay Wildlife Refuge, New York](#) - Rafael Sierra and Russell Burke
  - VI. [A Study of Temperature-Dependent Sex Determination in the Diamondback Terrapins of Jamaica Bay](#) - Amanda L. Widrig and Russell L. Burke
  - VII. [Using Telemetry to Assess Foraging Ecology and Habitat Use of Black-Crowned Night Herons \(\*Nycticorax nycticorax\*\) in New York City](#) - Andrew James Bernick and Richard R. Veit
  - VIII. [Quantification and Characterization of Recreational Paddling on Tivoli Bays and Constitution Marsh](#) - Kevin A. Grieser and Shawn E. Dalton
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- I. Assessment of Genetic Variation in *Phragmites australis* Populations Along the Hudson River Using Inter Simple Sequence (ISSR) Analysis - Michele Maltz and Joseph Stabile
  - II. Effects of Light on Microcystin Synthetase Gene Expression in the Toxic Cyanobacterium *Microcystis aeruginosa* in a Controlled Field Study - Heidi Langer Atkinson and Ellen Braun-Howland
  - III. Observations on the Biology of the Spinycheek Crayfish *Orconectes limosus* Associated with Water Chestnut in the Tidal Hudson River - Michael Bednarski, Karin Limburg, and Robert E. Schmidt
  - IV. Soniferous Fishes in Tidal Freshwater Tivoli Bay of the Hudson River - Katie A. Anderson, Rodney Rountree, and Francis Juanes
  - V. Dispersal and Colonization of *Limnodrilus hoffmeisteri* in a Hudson River Tidal Marsh Cove - Maggie Fung and Jeffrey S. Levinton
  - VI. Salinity Preferences of Hudson River Adult Male Blue Crabs *Callinectes sapidus* - Angie W. Cornwell and Steven H. Jury
  - VII. Foraging Ecology of Black-Crowned Night Herons *Nycticorax nycticorax* in the New York City Area - Andrew James Bernick and Richard R. Veit
  - VIII. Absorption of Dietary Cd by Grass Shrimp, *Palaemonetes spp.*, Collected Along an Environmental Impact Gradient - David R. Seebaugh and William G. Wallace
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- I. A Comparison of Water Quality in an Urban and a Well Forested Stream: Patroon Creek and Tenmile Creek, Albany County, New York - Sean S. Madden and George R. Robinson
  - II. From West Point to the Battery: Bacterial Diversity Along the Lower Hudson Estuary - Jean Rothe and Rob DeSalle
  - III. Waterscaping Water Chestnuts: A Test of Improving Habitat for Fish - Jeremy Frenzel and Karin Limburg
  - IV. Evaluation of Fish Community Structure in *Trapa natans* Beds in the Middle Hudson River Estuary - Jacqueline R. Anderson and Wayne R. Gilchrest
  - V. Genetic Differentiation of the Alewife, *Alosa pseudoharengus*, in the Hudson River - Kristen L. Kuhn and Irv Kornfield
  - VI. The Distribution and Behavior of Soniferous Fishes in the Hudson River Focusing on Striped Cusk-Eel, *Ophiodon marginatum* - Katie A. Anderson, Rodney Rountree, and Francis Juanes
  - VII. Movements of American Eel (*Anguilla rostrata*) in the Saw Kill, a Hudson River Tributary - Rome Petersson and Robert E. Schmidt
  - VIII. A Baseline Inventory of Multibeam Acoustic Targets from the Hudson River between New York Harbor and Wappingers Falls - Matthew F. Napolitano and Roger D. Flood
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- I. Reconstruction of Paleogeographic History of the Hudson River at Newly Exposed Pleistocene Strata at Bear Mountain - Lawrence C. Cusick and Yuri Gorokhovich
  - II. Cadmium Resistance in *Limnodrilus hoffmeisteri* in Foundry Cove Following a Super Fund Cleanup - Ruth A. Junkins and Jeffrey S. Levinton
  - III. Effects of *Phragmites australis* on the Early Life History Stages of *Fundulus heteroclitus* at Iona Island Marsh, Hudson River, New York - Lisa Harms, Ellen Salak, and David Osgood
  - IV. Distribution, Abundance, and Reproductive Season of Sticklebacks (*Gasterosteidae*) in the Hudson River Marsh Preserves - Jerry J. Kelley and Eric T. Schultz
  - V. An Analysis of the Frequency and Duration of Spawning of Local Weakfish, *Cynoscion regalis*, Based on Age and Size Structure of Young-of-the-Year from the Hudson River, New York - Donald D. Shrum, Jr., and R. Christopher Chambers
  - VI. A GIS-Based Model for Predicting the Location of Submerged Prehistoric Archaeological Sites in New York Harbor - Daria E. Merwin and David J. Bernstein
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- I. The Distribution of Polychlorinated Biphenyls and Polybrominated Diphenyl Ethers in the Benthic Food Web of the Hudson River - Joseph C. Steinbacher and Joel E. Baker
  - II. Public Participation, Risk Perception, and the EPA's PCB Remediation Plan for the Upper Hudson River - Jennifer M. Coffey, Nancy Jackson, and Michele Collins
  - III. Measurements of Pharmaceuticals in a Sewage-Impacted Estuary - Mark Benotti and Bruce Brownawell
  - IV. Effects of Sewage-Impacted Sediments from Jamaica Bay, NY, on Growth and Reproduction in the Benthic Crustacean *Leptocheirus plumulosus* - Ann M. Zulkosky and Anne E. McElroy
  - V. Distribution of the Spotfin Killifish (*Fundulus luciae*) in the Lower Hudson River Estuary - Frederick Ottman and David J. Yozzo
  - VI. An Assessment of Predation Risk of Juvenile Atlantic Tomcod, *Microgadus tomcod*, to Piscivorous Fishes of the Lower Hudson River - Daniela Zima, R. Christopher Chambers, and David A. Witting
  - VII. Feeding Ecology of Larval and Juvenile Weakfish (*Cynoscion regalis*) in the Hudson River Estuary - Jennifer M. Martin and Eric T. Schultz
  - VIII. Demography and Life History of a Wood Turtle (*Clemmys insculpta*) Population in the Hudson River - Todd W. Hunsinger and Rodger D. Titman
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- I. Evaluation of Water, Sediment, and Prey as Routes of Exposure of Atlantic Tomcod to Aromatic Hydrocarbon Pollutants in the Hudson River - Allyce E. Nowak, Joseph Stabile, and Isaac Wirgin
  - II. Coliphage in the Hudson River as Agents of Coliform Mortality and Indicators of Water Quality - Kathryn M. Docherty and Raymond L. Kepner, Jr.
  - III. Macroinvertebrates Associated with *Vallisneria americana* and *Trapa natans* in Tivoli South Bay - Colleen Lutz and David Strayer
  - IV. Use of a Periodically Anoxic *Trapa natans* Bed by Fishes in the Hudson River - Thomas W. Coote, Robert E. Schmidt, and Nina Caraco
  - V. Preliminary Studies of Larval and Juvenile Gizzard Shad and Atlantic Menhaden in the Hudson River - Karen M. Stainbrook and Karin E. Limburg
  - VI. Availability, Consumption and Preference of Prey in Juvenile Striped Bass (*Marone saxatilis*) in the Hudson River - David V. Howe and Francis Juanes
  - VII. Effects of Summer Temperatures on the Growth and Condition of Juvenile Atlantic Tomcod, *Microgadus tomcod* - Anne F. Bonvegna, David A. Witting, and R. Christopher Chambers
  - VIII. Genetic Diversity of Diamondback Terrapins (*Malaclemys terrapin*) from Piermont Marsh, Hudson River, NY - Dominik M. Wiktor, Malcolm Hill, and Randolph M. Chambers
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- I. Sedimentary Environment Adjacent to Tivoli Bays - JoAnn Thissen and Henry Bokuniewicz
  - II. The Effect of Mycorrhizae on Nitrogen-Fixing Bacteria Associated with the Salt Marsh Grass *Spartina patens* - David J. Burke and Dittmar Hahn
  - III. Characteristics of Dissolved Organic Carbon from *Trapa Natans* Wetlands and the Hudson River - Justin R. George and Katherine T. Alben
  - IV. Habitat Variation and the Diet, Growth, and Condition of Juvenile Striped Bass (*Morone saxatilis*) in the Mid-Hudson River Estuary - David V. Howe and Francis Juanes
  - V. Does Otolith Composition Reflect Early Life History? A Prospective Analysis in Atlantic Tomcod *Microgadus tomcod* and Weakfish *Cynoscion regalis* from the Hudson River Estuary - Jennifer M. Martin and Eric T. Schultz
  - VI. The Importance of Sturgeon Along the Middle Hudson River During Prehistoric Times: A Faunal Analysis of the Tufano Site - Audrey Reifler and Christopher Lindner
  - VII. Impacts of Scale on Breeding Bald Eagles, (*Haliaeetus leucocephalus*), Along the Hudson River, New York - Craig Thompson and Kevin McGarigal
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- VIII. [A Study of the Effects of Invasive Plant Species on Small Mammals in Hudson River Freshwater Marshes](#) - Catherine A. McGlynn and Richard S. Ostfeld
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- I. [Estrogenic Potential of Organic Contaminants in New York Harbor](#) - Margaret E. McArdle, Anne E. McElroy and Adria A. Elskus
  - II. [The Effect of PCBs and Vascular Plants on the Microbial Assemblage of Lower Hudson River Sediment](#) - Kurt H. Jerke and Michael J. Lemke
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