

CURRICULUM VITAE

LES KAUFMAN

Office

Boston University Marine Program
Department of Biology
Boston University
5 Cummington Street
Boston, MA 02215

Home

90 Addington Road
Brookline, MA 02146
Phone: (617) 232-9363

Phone: (617) 353-5560

Fax: (617) 353-6340

E-Mail: lesk@bu.edu

EDUCATION

Undergraduate: The Johns Hopkins University
 Bachelor of Arts, 1974
 Earth and Planetary Sciences
Graduate: The Johns Hopkins University
 Doctor of Philosophy, 1980
 Theoretical Ecology and Evolutionary Biology

PROFESSIONAL POSITIONS

2003-Current Professor of Biology, Boston University, BU Marine Program (Associate Director 2007-2010); Center for Ecology and Conservation Biology; Faculty Fellow, Pardee Center for the Study of the Longer-Range Future, Kilachand Honors College Academic Affairs Committee; Marine Conservation Fellow, Conservation International.
2017-Current Visiting Scientist, Mote Marine Laboratory
2012-Current Conservation Fellow, Conservation International
2005-2012 Senior Marine Scientist, Conservation International
1994-Current Research Scholar, New England Aquarium
1994-2003 Associate Professor of Biology, Boston University
1990-1994 Chief Scientist, New England Aquarium, Boston
1989-1990 Senior Scientist for Ecology and Conservation, New England Aquarium
1987-1989 Curator of Exhibit Research and Development, New England Aquarium
1983-1987 Curator of Education/Research Scientist, New England Aquarium
1980-Current Associate in Ichthyology, Harvard Museum of Comparative Zoology
1978-1980 Associate Research Scientist, Chesapeake Bay Institute, Baltimore, MD.

CURRENT PROFESSIONAL MEMBERSHIPS

Sigma Xi
International Coral Reef Society
International Association of Nitrox and Technical Divers

EXAMPLES OF PROFESSIONAL SERVICES

For the World Conservation Union (IUCN):

Scientific Advisor, Freshwater Fish Specialist Group and Lake Victoria SSP (current)
Member, Species Survival Commission (current)
Chairman, Captive Breeding Specialists Groups for Aquatic Species

International Service

Steering Committee, Coral Restoration Consortium, NOAA
Advisor, Turneffe Atoll Trust, Belize (current)
Board of Directors, Healthy Reefs for Healthy People (Mesoamerican Reef)
Core Science Team, Phoenix Islands Protected Area, Government of Kiribati (current)
Advisor on sustainable aquaculture, The World Bank
Charles Darwin Foundation Program Committee, Galapagos, Ecuador
Working Group on Corals and Climate Change, Center for Ocean Solutions
Rede Abrolhos Field Research Team, University of Rio de Janeiro, Brazil
Advisor on marine impacts of climate change, The World Bank
Chairman, Committee for Ecosystem Function of Open Ocean Biodiversity (SCOPE)
Working Group Leader, Global Biodiversity Assessment (SCOPE)
Principal Investigator, University Consortium for Lake Victoria
Team Leader, Lake Victoria Research Team (Kenya, Uganda, Tanzania)
Scientific Liaison in East Africa for Fisheries, Biodiversity, and Invasive Species, World Bank
Advisory Board, Clean Water Alliance (Kenya)
Advisor to the Director, Kenya Wildlife Service
Consultant, Winrock International

For the New England Region:

Sanctuary Advisory Committee, Stellwagen Bank National Marine Sanctuary (current)
Ecosystem-based Management Working Group, Stellwagen Bank NMS
Science and Statistics Committee, New England Fisheries Management Council
Research Steering Committee, New England Fisheries Management Council
Downeast Initiative, Gulf of Maine
Habitat Advisor, New England Fisheries Management Council
Right Whale Advisory Committee, Commonwealth of Massachusetts
Right Whale Advisory Board, New England Environmental Trust

For the National Science Foundation:

Grant review panel member
Ad-hoc reviewer: Ocean Sciences, Ecology, Biotic Resources, Science Education

For the National Oceanic and Atmospheric Administration:

Grant review panel member
Ad-hoc reviewer

For the National Research Council:

Committee on Biodiversity Conservation

For Non-Government Organizations

Marine Conservation Fellow, Conservation International (current)
Research Scholar, New England Aquarium (current)
Visiting Researcher, Mote Marine Laboratory (current)
North Atlantic Marine Alliance Fish Locally Collaborative (current)
Ocean Policy Project, Commonweal
Advisor to Northeast Marine Ecoregional Assessment, The Nature Conservancy
Conservation Law Foundation
Environmental Defense Fund

Advisory Boards

Healthy Reefs for Healthy People
Stellwagen Alive!
Natural Capital Project Marine Initiative
Pew Scholars Program in Marine Conservation
Tufts Center for Animals
Massachusetts Board on Rare and Endangered Species
Earthwatch
New England Aquarium

EDITORIAL SERVICES

Associate Editor: Conservation Biology (1990-1997)
Reviewer: MIT Press, PNAS, Ecology, Journal of the Linnaean Society of London, Journal of African Hydrobiology, Ecological Monographs, Science, Copeia, Canadian Journal of Zoology, Estuarine and Coastal Marine Science, Environmental Biology of Fishes, Marine Biology, Evolution, Coral Reefs, American Journal of Botany, Oceanography, Ecological Economics, Behavioral Endocrinology, and others.

RECENT INVITED PRESENTATIONS

The World Bank
National Geographic
Regional Association for Research on the Gulf of Maine
IFReDI/Cambodian Fisheries
Stanford University
University of Massachusetts
Pardee Center for the Study of the Longer-Range Future (BU)
Switzer Center for Environmental Leadership

Salon on the Modeling of Complexity in Biological Systems (BU)
Pew Fellows for Marine Conservation, STRI, Panama

Selected Past:

Princeton University
Geological Society of America
Gordon Medical Research Conferences
Agency for International Development (Washington and Kampala, Uganda)
Center for Coastal Resources
National Research Council
3rd European Congress on Ichthyology
Ohio State University
American Association of Zoological Parks and Aquariums
Australian Institute of Marine Science
Kenya Marine and Fisheries Research Institute
Freshwater Fisheries Research Institute (Uganda)
Michigan State University
Wesleyan University
University of Maine
University of Maryland
Tufts University Veterinary School
Harvard University
Brandeis University
UMass Boston
UMass Amherst
Northeastern University
American Society of Zoologists Public Forum on Biodiversity
Association of Systematic Collections
University of Rhode Island
International Congress on Breeding Endangered Species
New England Environmental Congress
National Science Foundation Division of Biotic Resources
University of California at Davis, Bodega Bay Marine Laboratory
University of New Hampshire
Columbus Zoo and Aquarium

HONORS AND AWARDS

2012 Stone Memorial Lecturer, Mass Audubon Society
2011 Parker-Gentry Award in Conservation Biology, Chicago Field Museum
2011 "Head in the Sky" Award, Conservation International
2004 CAS Award for Distinguished Service in Academic Advising, Boston University
1991 Do Fish Get Thirsty? (New York: Franklin Watts Publishers), voted "Outstanding Science Trade Book for Children in 1991" by the joint committee of the Children's Book Council and the National Science Teachers Association.
1991 Plenary speaker, Gordon Medical Research Conference (Bone)

1991 Comparative Medicine Scholar of the Year, Tufts University
 1990-1995 Pew Scholar for Conservation and the Environment
 1986 The Last Extinction (Cambridge, MIT Press) selected by Library Journal
 as one of the "best 100 scientific technical books of 1986"

GRANTS AND CONTRACTS

\$1.2M 2018-2020 Bureau of Ocean Energy Management, Effect of sand mining on forage species and fisheries (Co-PI through Stellwagen Bank National Marine Sanctuary).

\$140,000 2018 Herbert W. Hoover Foundation, Science and decision support for Biscayne National Park (Co-PI).

\$220,000 2016-2018 NH Sea Grant (Sensitivity of larval and juvenile sand lance *Ammodytes dubius* on Stellwagen Bank to predicted ocean warming, acidification and deoxygenation (Co-PI with Hannes Baumann, Dave Wiley, Page Valentine, and Scott Gallager).

\$3000 2016-2017 Herbert W. Hoover Foundation, A decision-making platform for Biscayne Bay National Park: Pilot study (PI).

\$1,798,150 2016-2019 NSF CNH: The Potential for Aquaculture in Lake Victoria and Implications for Wild Fisheries and Fish Commodity Markets, (Co-PI, Sarah Glaser PI).

\$125,000 2016 David and Lucille Packard Foundation, Sustainable fisheries and marine biodiversity: Enhancing conservation by understanding links between food provisioning and biodiversity maintenance (PI, subcontract from Conservation International).

\$150,000 2016-2018 MacArthur Foundation, Modeling ecosystem service tradeoffs for Cambodia's Tonle Sap Basin (PI, subcontract from Conservation International).

\$35,000 2015-2017 Mudge Foundation, The effects of variation in prey species community on marine-dependent ecosystem services in the Gulf of Maine (PI).

\$16,000 2014-2015 National Fish and Wildlife Foundation, Predator-prey relationships and behavior in the great shearwater, *Puffinus gravis*, in the Gulf of Maine (PI).

\$500,000 2012-2015 MacArthur Foundation, A Landscape Analysis Partnership for Ecosystem Services in Lac Tonle Sap and the Lower Mekong Basin (PI).

\$230,000 2012-2015 NSF CNH-Ex: Conflict and Fisheries in the Lake Victoria Basin (one of three Co-PI's, Sarah Glaser PI; BU subcontract ca. \$40K still pending due to PI move).

\$2.9M 2010-2015 NSF STEM for GLACIER- Global Change Initiative- Education and Research (One of 6 Co-PI's, Suchi Gopal PI)

\$350,000 2010-2012 Massachusetts Ocean Partnership, to model ecosystem service production and trade-offs in Massachusetts Bay (PI).

\$480,000 2009-2011 NSF-NOAA CAMEO for Comparative Dynamics of Ecosystem

	Components from the Northeast Atlantic Shelf and Pacific Coast: New Approaches to Forecasting and Understanding Variability and Structure in Marine Ecosystems (one of 5 Co-PI's, no direct funds to BU, Andrew Rosenberg PI).
\$232,000	2006-2008 Pew Institute for Ocean Science, for studies of fish behavior, population structure, and feeding habits relevant to effectiveness of marine reserves (PI).
\$70,000	2005-2007 Earthwatch, for field work on coral reef health near Punta Gorda, Belize. Co-PI (with Burton Shank).
\$12.5m	2005-2010 Gordon and Betty Moore Foundation grant to Conservation International, for Marine Management Area Science Program. Senior PI (with DC and Regional Staff of Conservation International).
\$150,000	2005-2006 Northeast Consortium, to study the systematics and trophobiology of the sand lances (<i>Ammodytes</i> spp.) on Stellwagen Bank, MA. (With Dr. Cliff Goudey, MIT and Massachusetts Fishermens' Partnership).
\$250,000	2004-2006 National Marine Fisheries Service, for studies of the effects of the Western Gulf of Maine Closure (exclusion of bottom-tending gear) on the food web. (With Massachusetts Fishermens' Partnership).
\$ 60,000	2003-2006 National Science Foundation, to study brain and behavior in Lake Tanganyika cichlids (subcontract on grant with Dr. Caroly Shumway, NEAq and Dr. Hans Hoffman, Harvard University).
\$ 22,500	2004-2005 Conservation Food and Health Foundation, for food web studies in Lake Victoria (with grad student William Ojwang).
\$150,000	2001-2004 Packard Foundation for Science into Practice (ecology of California nearshore rock-reef fish assemblages). PI. Funds all to BU. (Burr Heneman, Co-PI).
\$ 29,474	2000-2002 Columbia University/Packard Foundation for effects of global climate change on coral reef ecology. PI. Funds all to BU.
\$ 7,000	2001-2002 MIT Seagrant, for morphological and functional derangement in aquacultured tautog. PI. Funds all to BU.
\$ 14,000	Economic Efficiency of Stellwagen Bank National Marine Sanctuary. 2001. Environmental Defense. Matthias Ruth (PI), Les Kaufman, James Lindholm, and Peter Auster. Funds to University of Maryland.
\$ 8,000	2001 National Fish and Wildlife Foundation, for Marine Life Management Project. PI. Funds to BU.
\$58,000	1999-2000 Center for Coastal Studies, to study edaphic factors affecting the reestablishment of saltmarsh on Cape Cod. PI (for research by graduate student, Gregg Moore). Funds to BU.
\$ 6,500	1998-2000 Pew Charitable Trusts for studies of anthropogenic disturbance to fish recruitment and survivorship processes at Portland Bight, Jamaica. PI. (P. Espeut, T. Goreau and T. McClanahan co-PI's). Funds to BU.
\$40,000	1998-1999 Mudge Foundation, for studies of anthropogenic disturbance to fish recruitment and survivorship processes on Stellwagen Bank. PI. (P. Auster and M. Ruth, co-PI's). Funds to Les Kaufman at BU.

\$59,500	1996-1999 Kendall Foundation, for studies of anthropogenic disturbance to fish recruitment and survivorship processes on Stellwagen Bank. PI. (P. Auster and M. Ruth, co-PI's). Funds to Les Kaufman at BU.
\$120,000	1996-1999 National Science Foundation, Faunal Attenuation: Predicting Spatial and Temporal Dynamics of Refugia in the Lake Victoria Basin. Co-PI. (L. Chapman (PI) and L. Chapman and T. Crisman, co-PI's). ca. \$30K to BU.
\$110,000	1997-1998 US Army, component of Johnston Atoll Science Study, to examine relationship of coral and fish biology to anthropogenic disturbance. Co-PI, funds indicate total to Kaufman from out of a program project grant. (P. Lobel, PI).
\$25,000	1997-1998 Conservation Food and Health Foundation, to study effects of logging on population genetics of tropical forest trees. PI (for research by grad student, Elizabeth Stacy). Funds to BU.
\$18,000	1995-1996 Kalkan Pet Care, Inc., for research toward a field guide to the fishes of Lake Victoria and the White Nile Headwaters. PI. Funds to BU.
\$22,510	1994-1996 National Geographic Society, to study swamp refugia and corridors in the Lake Victoria basin. (With Lauren Chapman (PI), Colin Chapman and Richard Ogutu-Ohwayo). Funds to team in Africa.
\$40,800	1993-1996 National Science Foundation, Refugia and Graveyards: Patterns of Species Survivorship in the Fish Fauna of Lake Victoria. (PI, with Lauren and Colin Chapman). Funds to BU.
\$180,000	1993-1996 National Science Foundation, to study the evolutionary genetics of the Lake Victoria cichlids (with P. Fuerst (PI)). Chapman, and Mark Chandler). ca. \$60K to NEAq and BU.
\$150,000	1990-1995 Pew Charitable Trusts, for research basic to the conservation of aquatic species and habitats, unrestricted award (PI). Funds to Kaufman, completed at BU.
\$6,000	1995 Pew Charitable Trusts, seed funds for studies of anthropogenic disturbance to fish recruitment and survivorship (PI, with Carl Safina). Funds to BU.
\$900,000	1991-1994 National Marine Fisheries Service, to study the biology of bluefin tuna (PI). Funds to Kaufman at New England Aquarium.
\$10,000	1993-1994 National Oceanic and Atmospheric Administration, for Technical Workshop on Methods for Remote Sensing of Coral Reef Degradation (PI, with C. Yentsch, University of Maine and C. Mazel, Massachusetts Institute of Technology). Funds to Kaufman at NEAq.
\$300,000	1991-1994 Saltonstahl-Kennedy Foundation, for studies on morbidity and mortality of groundfish bycatch in New England (PI, with Dr. A. Carr, Massachusetts Division of Marine Fisheries). Funds to Kaufman at NEAq.
\$700,000	1990-1994 National Institutes of Health, to study fish as models for skeletal regulation in humans (PI, with Dr. Julie Glowacki, Brigham and Women's Hospital). Funds to Kaufman at NEAq.
\$60,000	1992-1993 National Science Foundation, for Lake Victoria workshop (PI, with Peter Ochumba and Richard Ogutu-Ohwayo). Funds to Kaufman at NEAq.
\$40,000	1990-1991 National Science Foundation, for studies on limnology and fish extinctions in Lake Victoria (PI). Funds to Kaufman at NEAq.

\$29,500	1990-1991	US-AID, Fauna and water quality of African lakes (with L. Chapman, PI). Funds to team in Africa via U of Florida.
\$10,000	1990-1991	National Marine Fisheries Service, to initiate creation of a candidate species list for marine threatened and endangered species (PI). Funds to Kaufman at NEAq.
\$50,000	1990-1991	Institute for Museum Services, to complete draft master plan for Species Survival Program for endangered cichlid fauna of Lake Victoria, East Africa (PI). Funds to Kaufman at NEAq.
\$35,000	1990-1991	United States Virgin Islands Fisheries and Wildlife Department, to study stress physiology and conservation of blue marlin (PI). Funds to Kaufman at NEAq.
\$7,000	1990-1991	Conservation Food and Health Foundation to train a Kenyan graduate student in fish conservation work. (PI). Funds to Kaufman at NEAq.
\$25,000	1989-1990	National Oceanographic and Atmospheric Administration for studies on coral reef fish recruitment and community stability (PI, with Dr. John Ebersole). Funds to Kaufman at NEAq.
\$13,000	1990-1991	National Oceanographic and Atmospheric Administration grant for Lake Victoria Research Team (ongoing support for field logistics)(PI). Funds to Kaufman at NEAq.
\$25,000	1987-1988	Institute for Museum Services, to study changes in gut microflora of aquarium fishes exhibiting "failure to thrive syndrome" (with P. Boyle, PI). Funds to Boyle at NEAq.
\$275,000	1986-1989	National Science Foundation, Office of Informal Science Education, for creation of "The Thinking Gallery", an inquiry driven aquarium gallery to assist children in acquiring creative and rational thinking skills. (PI). Funds to Kaufman at NEAq.
\$21,000	1984-1986	National Science Foundation Australia-U.S. Cooperative Program, for "Case Study of a guild of plankton-eating reef fishes in Australia" (PI, with Dr. J.R. Strickler and Dr. David McB. Williams). Funds to Kaufman at NEAq.
\$25,000	1984-1985	Institute for museum Services, to study effects of diet on the nutrition and health of captive fishes (PI, with P. Boyle and P. Sieswerda).
\$22,000	1981-1982	National Oceanic and Atmospheric Administration for study of coral reef fish community structure (PI, with J. Ebersole).
\$15,000	1981-1982	UMass Public Service Grant to assess public health risks associated with eating bivalves and flounder from Boston Harbor (PI, with Michael Shiaris and Bob Egenhouse).

PUBLICATIONS: 149

Hanlon, R. and L. S. Kaufman. 1976. Associations of seven West Indian reef fishes with sea anemones. *Bull. Mar. Sci.* 26(2): 225-232.

Kaufman, L. S. 1976. Feeding behavior and functional coloration of the Atlantic trumpetfish, *Aulostomus maculatus*. *Copeia* 2: 377-388.

- Kaufman, L.S. 1977. Threespot damselfish: effects of benthic biota of Caribbean coral reefs. Proceedings, Third International Coral Reef Symposium, University of Miami: 559-564.
- Adey, W. H., P. J. Adey, R. Burke and L. S. Kaufman. 1977. The Holocene reefs of Eastern Martinique, French West Indies. Atoll Research Bull. 218: 1-40.
- Woodley, J., et al. 1981. Hurricane Allen: Initial impact on the coral reef communities of Discovery Bay, Jamaica. Science 214: 749-755.
- Kaufman, L.S. 1981. There was biological disturbance on Pleistocene coral reefs. Paleobiology 7(4): 527-532.
- Kaufman, L. S. and K. F. Liem. 1982. Fishes of the Suborder Labroidei (PISCES: Perciformes): Phylogeny, ecology, and evolutionary significance. Breviora 217: 1-19.
- Kaufman, L. S. 1983. Effects of Hurricane Allen on reef fish assemblages near Discovery Bay, Jamaica. Coral Reefs 2: 1-5.
- Ono, R. D. and L. S. Kaufman. 1983. Muscle fiber types and functional demands in fish feeding mechanisms. Journal of Morphology 177: 69-87.
- Liem, K. F. and L. S. Kaufman. 1984. Intraspecific macroevolution: functional biology of the polymorphic cichlid species *Cichlasoma minckleyi*. In: Evolution of Species Flocks. A. A. Echelle & I. Kornfield (eds.), pp. 203-215.
- Kaufman, L. S. and J. P. Ebersole. 1984. Microtopography and the organization of two assemblages of coral reef fishes in the West Indies. J. Exp. Mar. Biol. Ecol. 78: 253-263.
- Kaufman, L. S. 1987. Functional groups and the search for compensatory mechanisms in the population dynamics of North American freshwater fishes. pp. 4-1 to 4-15 In: R. G. Otto (ed.) Mechanisms of Compensatory Response of Fish Populations. EPRI EA-5202.
- Kaufman, L. S. 1987. Caught between a reef and a hard place: Why aquariums must invest in captive propagation. pp 365-362 In: Proceedings of the National Meeting of the American Association of Zoological Parks and Aquaria.
- Kaufman, L. S. 1988. The role of developmental crises in the formation of buttresses: A unified hypothesis. Evol. Trend. Plants 2(1): 39-51.**
- Kaufman, L. S. 1989. Challenges to fish fauna conservation programs as illustrated by the captive biology of Lake Victoria cichlids. Pages 105-120 in B. L. Dresser, R. W. Reece, and E. J. Maruska, eds. Fifth World Congress on Breeding Endangered Species in Captivity.

- Kaufman, L. S. 1991. Progress in the conservation of endemic fishes from Lake Victoria. pp 403-408 In: AAZPA 1991 Annual Conference Proceedings 15 July 1991, San Diego, CA.
- Kaufman, L. S., J. Ebersole, J. Beets and C. MacIvor. 1992. A key phase in the recruitment dynamics of coral reef fishes: postsettlement transition. *Environmental Biology of Fishes* 34:109-114.
- Kaufman, L. S. 1992. Catastrophic change in species-rich freshwater ecosystems, the lessons of Lake Victoria. *Bioscience* 42:846-858.
- Kaufman, L. S. and P. Ochumba. 1993. Evolutionary and conservation biology of cichlid fishes as revealed by faunal remnants in lake Victoria. *Conservation Biology* 7(3):719-730.
- Kaufman, L. S. 1993. The Challenge of the World's Great Lakes. *Conservation Biology* 7(3):447-449.
- Gophen M., P.B.O.Ochumba, U. Pollinger and L.S. Kaufman. 1993. Nile Perch (*Lates niloticus*) invasion in Lake Victoria (East Africa). *Verh. Internat. Limnol.* 25:856-859.
- Kaufman, L. S. 1993. Why the ark is sinking. Chapter One in: *The Last Extinction* (2nd ed.). MIT Press, Cambridge, MA.
- Kaufman, L. S. (Ed.) 1993. *People, Fisheries, Biodiversity, and the Future of Lake Victoria*. ERL Special Publication 93-3, New England Aquarium, 68 pp.
- Chapman, L. J., L. S. Kaufman and C. A. Chapman. 1994. Why swim upside down: A comparative study of two synodontid catfishes. *Copeia* 1994(1): 130- 135.
- Hecky, R., F. Bugenyi, P. Ochumba, M. Gophen, L. Kaufman. 1994. Deoxygenation of the deep water of Lake Victoria, East Africa. *Limnology and Oceanography* 39:1476-1481.
- Andrews, C. and L.S. Kaufman. 1994. Captive Breeding programmes and their role in fish conservation. *Creative Conservation*. pp. 338-351.
- Kaufman, L. S. and F. Zarembo. 1995. Conservation Research in Aquariums: The Social Contract. *American Association of Zoological Parks and Aquaria (AAZPA), Spec. Pub.* 2.
- Smith-Vaniz, W., L. S. Kaufman and J. Glowacki. 1995. Species-specific patterns of hyperostosis in marine teleost fishes. *Marine Biology* 121:573-580.
- Gophen, M., P. B. O. Ochumba, L. S. Kaufman. 1995. Some aspects of perturbation in the structure and biodiversity of the ecosystem of Lake Victoria (East Africa). *Aquat. Living Resour.* 8: 27-41.

- Van Staadan, M. Robert Huber, L. S. Kaufman, K. F. Liem. 1995. Brain evolution in cichlids of the African Great Lakes: Brain and body size, general patterns, and evolutionary trends. *Zoology* 98:165-178.
- Chapman, L.J., C.A. Chapman, L.S. Kaufman, and E. McKenzie. 1995. Hypoxia tolerance in twelve species of East African cichlids: Potential for low oxygen refugia in Lake Victoria. *Conservation Biology* 9:1-15.
- Sackley, P. and L. S. Kaufman. 1996. Effect of predation on foraging height in a planktivorous coral reef fish, *Chromis nitida*. *Copeia* 1996(3):726-729.
- Chapman, L.J., C.A. Chapman, R. Ogutu-Ohwayo, M. Chandler, L. Kaufman, and A.E. Keiter. 1996. Refugia for endangered fishes from an introduced predator in Lake Nabugabo, Uganda. *Conservation Biology* 10:554-61.
- Sanderson, L. M. C. Stebar, K. L. Ackermann, S. H. Jones, I. E. Batjakas, and L. Kaufman. 1996. Mucus entrapment of particles by a suspension-feeding tilapia (Pisces:Cichlidae). *Jour. Exp. Biol.* 199:1743-1756.
- Kaufman, L.S., L. J. Chapman and C. Chapman. 1996. The Great Lakes. pp. 178-204 In: T. R. McClanahan and T. P. Young (Eds) *East African Ecosystems and Their Conservation*. Longman Press, London.
- Duan, W., G.C. Booton, L. Kaufman, M. Chandler and P.A. Fuerst. 1996. Phylogenetic analysis of haplochromine cichlid taxa utilizing DNA heteroduplex separation techniques. In: E.M. Donaldson and D.D. MacKinlay (eds.), *Aquaculture Biotechnology, Symposium Proceedings of the International Congress on the Biology of Fishes*, American Fisheries Society, p. 95-104.
- Mwanja, W., L. Kaufman, M. Chandler and P.A. Fuerst. 1996. Population and stock characterization of Lake Victoria tilapiine fishes based on RAPD markers. In: E.M. Donaldson and D.D. MacKinlay (eds.), *Aquaculture Biotechnology, Symposium Proceedings of the International Congress on the Biology of Fishes*, American Fisheries Society, p. 115-124.
- Wu, L., G.C. Booton, L. Kaufman, M. Chandler and P.A. Fuerst. 1996. Use of DNA microsatellite loci to identify populations and species of Lake Victoria haplochromine cichlids. In: E.M. Donaldson and D.D. MacKinlay (eds.), *Aquaculture Biotechnology, Symposium Proceedings of the International Congress on the Biology of Fishes*, American Fisheries Society, p. 105-114.
- Chandler, M., L. S. Kaufman, and S. Mulsow. 1996. Open Oceans. Pp. 393-399 In: *The Global Biodiversity Assessment. Scientific Committee On Problems in the Environment (SCOPE)*.

- Chandler, M., L. S. Kaufman, and S. Mulsow. 1996. Human impact, biodiversity and ecosystem processes in the open ocean. In: H. A. Mooney, J. H. Cushman, E. Medina, O. E. Sala and E. -D. Schulze (Eds.). *Functional Roles of Biodiversity: A Global Perspective*. John Wiley and Sons Ltd. Pp. 431-474.
- Cohen, A., L. S. Kaufman, and R. Ogutu-Ohwayo. 1996. Anthropogenic impacts and conservation efforts on the African Great Lakes- A review. In: *The Limnology, Climatology, and Palaeoclimatology of the East African Lakes* (Ed. T. C. Johnson and E. O. Odada), pp. 575-624. Gordon and Breech Publishers, The Netherlands.
- Kaufman, L. S., C. A. Chapman and L. J. Chapman. 1997. Evolution in fast forward: haplochromine fishes of the Lake Victoria region. *Endeavour* (London) 21(1):23-30.
- Huber, R., M. J. van Staaden, L.S. Kaufman, K.F. Liem. 1997. Microhabitat use, trophic patterns, and the evolution of brain structure in african cichlids. *Brain, Behavior and Evolution* (Austria) 50:167-182.
- Ogutu-Ohwayo, R., R.E. Hecky, A.S. Cohen, and L Kaufman. 1997. Human impacts on the African Great Lakes. *Env. Biol. Fish.* 50:117-131.
- Kaufman, L. S. 1997. Asynchronous taxon cycles in haplochromine fishes of the greater Lake Victoria region. *S. Afr. Jour. Science.* 93:601-606.
- Batjakas, I.E., R. K. Edgar and L. S. Kaufman. 1997. Comparative feeding efficiency of indigenous and introduced phytoplanktivores from Lake Victoria: Experimental studies on *Oreochromis esculentus* and *Oreochromis niloticus*. *Hydrobiologia* 347:75-82.
- Kaufman, L. S. and P. J. Dayton. 1997. Impacts of marine resource extraction on ecosystem services and sustainability. In: Daily, G. (Ed.), *Nature's Services*. Island Press. Pp. 275-293.
- Fuerst, P., W. Mwanja, L. Kaufman and G. C. Booten. 1997. Genetic phylogeography of introduced *Oreochromis niloticus* (Pisces:Cichlidae) in Uganda. Pp. 87-96 In: K. Fitzsimmons (Ed.). *Tilapia Aquaculture Volume 1*. Northeast Regional Agricultural Engineering Service, Ithaca.
- Lindholm, J., P. J. Auster, L. S. Kaufman and M. Ruth. 1998. Post-settlement Survivorship of Juvenile Atlantic Cod and the Design of Marine Protected Areas. Pp. 138-168 In: E. M. Dorsey and J. Pedersen (eds.). *Effects of Fishing Gear on the Sea Floor of New England*. Science and Management of Protected Areas Association. Wolfville, N. S.
- Lindholm, J., M. Ruth, L. Kaufman, and P. Auster. 1998. The Marine Refuge as a Fishery Management Tool: A Modeling Approach to the Design of Marine Refugia. In: Munro,

N.W.P. and Willison, J.H.M. (eds). Linking Protected Areas with Working Landscapes. SAMPAA, Wolfville, Nova Scotia.

Chapman, C. A., L. S. Kaufman and L. J. Chapman. 1998. Buttress formation and directional stress experienced during critical phases of tree development. *Tropical Ecology* 14(3):341-350.

Mwanja, W. and L. S. Kaufman, and P. A. Fuerst. 1998. A note on recent advances in the genetic characterization of tilapiine stocks in the Lake Victoria Region. *Afr.J.Trop. Hydrobiol. Fish.* 6(1&2): 51-53.

Cervino, J. M., T. J. Goreau, R. L. Hayes, L. Kaufman, I. Nagelkerken, K. Patterson, J. W. Porter, G. W. Smith, and C. Quirolo. Coral disease. 1999. *Science* 280 (5363): 499.

Booton, G.C., L. Kaufman, M. Chandler, R. Oguto-Ohwayo, W. Duan and P. Fuerst. 1999. Evolution of the ribosomal RNA internal transcribed spacer one (ITS-1) in cichlid fishes of the Lake Victoria region. *Molecular Phylogenetics and Evolution* 11: 273-282

Wu, L., L. Kaufman and P.A. Fuerst. 1999. Isolation of microsatellite markers in *Astatoreochromis alluaudi* and their cross species amplification in other African cichlids. *Molecular Ecology* 8: 895-897.

Mwanja, W.W., P.A. Fuerst and Les Kaufman. 1999. Lake Victoria Region: Large lakes and their surrounding minor water bodies as natural laboratories for speciation and evolution. *Lakeline* 19 (2): 12-25.

Lindholm, J., Auster, P.J. and L. Kaufman. 1999. Habitat-mediated survivorship of juvenile (0-year) Atlantic cod (*Gadus morhua*). *Marine Ecology Progress Series* 180: 247-255.

Chapman, C. A., L. J. Chapman, L. S. Kaufman and A. E. Zanne. 1999. Potential causes of arrested succession in Kibale National Park: growth and mortality of seedlings. *African Journal of Ecology* 37:81-92.

Goodrich, J. S., S. L. Sanderson, I. E. Batjakas and L. S. Kaufman. 2000. Branchial arches of suspension-feeding *Oreochromis esculentus*: sieve or sticky filter? *Journal of Fish Biology* 56:858-875.

Fuerst, P.A., Mwanja, W.W., and L. Kaufman. 2000. The Genetic History of the Introduced Nile Tilapia Of Lake Victoria (Uganda - E. Africa): The Population Structure of *Oreochromis niloticus* (Pisces: Cichlidae) Revealed by DNA Microsatellite Markers. *Tilapia Aquaculture in the 21st Century: Proceedings of the Fifth International Symposium on Tilapia in Aquaculture (ISTA V)*: 30-40.

Mwanja, W.W., P.A. Fuerst and L. Kaufman. 2000. Opportunities and challenges to conserve

- the genetic diversity of the fish resources of the Lake Victoria Region, East Africa. Pp. 219-230 In: *Proceedings of Lake Victoria 2000 A New Beginning Conference*. ISBN: 9970-713-11-1.
- Sayama, H., L. Kaufman and Y. Bar-Yam. 2000a. Symmetry breaking and coarsening in spatially distributed evolutionary processes including sexual reproduction and disruptive selection. *Physical Review E* 62:7065-7069.
- Sayama, H., L. Kaufman, and Y. Bar-Yam. 2000b. The role of spontaneous pattern formation in the creation and maintenance of biological diversity. *InterJournal* (<http://www.interjournal.org/>) Brief Article 417.
- Bentis, C., L. Kaufman and S. Golubic. 2001. Endolithic fungi in reef-building corals (Order: Scleractinia) are common, cosmopolitan, and potentially pathogenic. *Biol. Bul.* 198:254-260.
- Mwanja, W. W., A. S. Armoudlian, S. B. Wandera, L. Kaufman, L. Wu, G. C. Booton, and P. A. Fuerst. 2001. The Bounty of Minor Lakes: The Role of Small Satellite Water Bodies in Evolution And Conservation of Fishes. *Hydrobiologia* 458: 55-62.
- Lindholm, J. B., P. J. Auster, M. Ruth, and L. S. Kaufman. 2001. Modeling the effects of fishing, and implications for the design of marine protected areas: juvenile fish responses to variations in seafloor habitat. *Conservation Biology* 15:424-437.
- Murphy, D., D. Wilcove, R. Noss, J. Harte, C. Safina, J. Lubchenco, T. Root, V. Sher, L. Kaufman, M. Bean and S. Pimm. 2002. On reauthorization of the Endangered Species Act. *Cons. Biol.* 8(1):1-3. Article first published online: 19 JAN 2002
- Kaufman, L. and J. Schwartz. 2002. Nile perch population dynamics in Lake Victoria: implications for management and conservation. In: Ruth, M. and J. Lindholm (Eds.). *Dynamic Modeling for Marine Conservation*. Springer-Verlag, New York. p. 257-313.
- Potts, M., P. Ashton, L. S. Kaufman, and J. B. Plotkin. 2003. Habitat patterns in tropical rainforests: A comparison of 105 plots in northwest Borneo. *Ecology* 83: 2782–2797.
- Sayama, Hiroki, Kaufman, Les & Yaneer Bar-Yam. 2003. Spontaneous Pattern Formation and Genetic Diversity in Habitats with Irregular Geographical Features. *Conservation Biology*. 17 (3) 893-900.
- Auster, P.J., J. Lindholm, S. Schaub, G. Funnell, L.S. Kaufman and P.C. Valentine. 2003. Use of sand wave habitats by silver hake. *Journal of Fish Biology* 62L143-152.
- Chapman, L.J., C.A. Chapman, J.P. Olowo, P.J. Schofield, L.S. Kaufman, O. Seehausen, and R. Ogutu-Ohwayo. 2003. Fish Faunal Resurgence in Lake Nabugabo, East Africa. *Conservation Biology* 17:500-511.

- Balirwa, J.S., C.A. Chapman, L.J. Chapman, I.G. Cowx, K. Geheb, L. Kaufman, R.H. Lowe-McConnell, O. Seehausen, J.H. Wanink, R.L. Welcomme, and F. Witte. 2003. Biodiversity and Fishery Sustainability in the Lake Victoria Basin: An Unexpected Marriage? *Bioscience* 53:703-715. (Order of authorship alphabetical).
- Kaufman, L.S. 2003. Evolutionary footprints in ecological time: Water management and aquatic conservation in African lakes. In: *Conservation, Ecology, and Management of African Freshwaters*. In: T.L. Crisman, L.J. Chapman, C.A. Chapman, and L.S. Kaufman (editors). University Press of Florida, Gainesville, Florida. p. 460-490.
- Chapman, L.J., C.A. Chapman, T.L. Crisman, and L.S. Kaufman. 2003. Conservation and management of African aquatic ecosystems: An Introduction. Pp. 1-6. (In) *Conservation, Ecology, and Management of African Freshwaters*. T.L. Crisman, L.J. Chapman, C.A. Chapman, and L.S. Kaufman (editors). University Press of Florida, Gainesville, Florida.
- Chapman, L.J., C.A. Chapman, T.L. Crisman, and L. S. Kaufman. 2003. The conservation and management of African inland waters: A synthesis. Pp. 474-488. (In) *Conservation, Ecology, and Management of African Freshwaters*. T.L. Crisman, L.J. Chapman, C.A. Chapman, and L.S. Kaufman (editors). University Press of Florida, Gainesville, Florida.
- Ojwang, W.O., L. Kaufman, A. A. Asila, and S. Agembe and B. Michener. 2004. Isotopic evidence of functional overlap amongst the resilient pelagic fishes of Lake Victoria, Kenya. *Hydrobiologia* 529:27-35.
- Kaufman, L. and J. Wilson. 2004. On the appropriate scale for fishery management in New England, and its broader context. *Conservation Perspectives*, 2004(3) (online at http://www.nescb.org/epublications/fall2004/kaufman_wilson_main.html).
- Kaufman, L.S., J.B.C. Jackson, E. Sala, P. Chisolm, E.D. Gomez, C. Peterson, R.V. Salm and G. Llewellyn. 2004. Restoring and maintaining marine ecosystem function. Pp. 165-181 In: L. Glover and S. Earle (Eds.). *Defying Ocean's End*. Island Press, Washington DC. 283pp.
- Kaufman, L. S., B. Heneman, T. Barnes, and R. Fujita. 2004. Transition from low to high data richness: An experiment in ecosystem-based fishery management from California. *Bull. Mar. Sci.* 74(3):693-708.
- Bennett, W.A., K. Roinestad, L. Rogers-Bennett, L. Kaufman, D. Wilson-Vandenberg, and B. Heneman. 2004. Inverse regional responses to climate change and fishing intensity by the recreational rockfish (*Sebastes* spp.) fishery in California. *Can. J. Fish. Aquat. Sci* 61(12): 2499-2510.
- Precht, W., S.L. Miller, R.B. Aronson, J.F. Bruno, and L. Kaufman. 2005. Reassessing U.S. Coral Reefs (letter). *Science* 308(5730): 1741.

- Schwartz J., **Marshall K.**, Moran B. and Kaufman L. 2005. Culture-induced abnormalities in tautog (*Tautoga onitis*). North American Journal of Aquaculture 67: 265-274.
- Lindholm, J., S. Fangman, L. Kaufman and S. Miller. 2005. In situ tagging and tracking of coral reef fishes from the Aquarius undersea laboratory. Marine Technology Society Journal 39: 68-73.
- Lindholm, J., L. Kaufman, S. Miller, A. Wagschal & M. Newvile. 2005. Movement of *Ocyurus chysurus* Bloch 1790 and *Mycteroperca bonaci* Poey 1860 in the northern Florida Keys National Marine Sanctuary as determined by acoustic telemetry. Marine Sanctuaries Conservation Series MSD-05-4. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Marine Sanctuaries Division, Silver Spring, MD. 17 pp.
- Lindholm, J., A. Knight, L. Kaufman and S. Miller, 2006. Site fidelity and movement of the parrotfishes *Scarus coeruleus* and *Scarus taeniopterus* at Conch Reef (northern Florida Keys). Caribbean Journal of Science 42(1):138-144.
- Kaufman, L. 2006. If you build it, will they come? Toward a concrete basis for coral reef gardening. Pp. 119-142 In: Precht, W. (Ed.) Coral Reef Restoration Handbook: The Rehabilitation and Preservation of an Ecosystem Under Siege. CRC Press.
- Schwartz, J. D. M., M.J. Pallin, R.H. Michener, D. Mbabazi, & L.S. Kaufman. 2006. Effects of Nile perch, *Lates niloticus*, on functional and specific fish diversity in Uganda's Lake Kyoga system. *African Journal of Ecology* 44 (2): 145-156.
- Michener, R. H. and L. S. Kaufman. 2007. Stable isotope ratios as tracers in marine food webs: an update. Chapter 9 In: K. Lajtha and R. H. Michener (Eds.). Stable Isotopes in Ecology and Environmental Science. Blackwell Scientific, Boston. 316pp.
- Sayama, H., L. Kaufman, and Y. Bar-Yam. 2007. Spontaneous pattern formation and diversity in spatially structured evolutionary ecology. Chapter 6 In: J. Schwartz, Ed. Focus on Biodiversity Research. Nova Science Publishers.
- Drew, JA., G. R. Allen, L. Kaufman, P. Barber. 2008. Regional color and genetic differences demonstrate endemism in five putatively cosmopolitan reef fishes. Conservation Biology 22(4): 965-975.
- Francini-Filho, R. Moura, F. Thompson, R. Reis, L. Kaufman, R. Kikuchi, and Z. Leao. 2008. Diseases leading to accelerated decline of reef corals in the largest South Atlantic reef complex (Abrolhos Bank, eastern Brazil). Mar Pollut Bull. 56(5):1008-1014.
- Precht, W.F., R.B. Aronson, K.J.P. Deslarzes, L.S. Kaufman, M.L. Robbart, E.L. Hickerson, G.P. Schmahl and J. Sinclair. 2008. Long-Term Reef Monitoring at the Flower Garden Banks: Status, Stasis and Change. Pp. 41-44 In: Proc. Gulf and Mexico Science Forum, Marine Sanctuaries Conservation Series NMSP-08-04, Silver Spring, MD.

- Chapman, C. A. , K. Kitajima, A. E. Zanne, L. S. Kaufman, and M. J. Lawes. 2008. A 10-year evaluation of the functional basis for regeneration habitat preference of trees in an African evergreen forest. *Forest Ecology and Management* 255: 3790-3796.
- Allen, G.R., Drew, J.A., Kaufman, L. 2008. *Amphiprion barberi*, a new species of anemonefish (Pomacentridae) from Fiji, Tonga, and Samoa. *Aqua* 14(3) 105-114.
- Mwanja, W. W., G. C. Booton, L. Kaufman and P. A. Fuerst. 2008. A profile of the introduced *Oreochromis niloticus* (Pisces: Teleostei) populations in Lake Victoria Region in relation to its putative origin of Lakes Edward and Albert (Uganda - E. Africa) based on random amplified polymorphic DNA analysis. *African Journal of Biotechnology* 7(11):1769-1773.
- Grober-Dunsmore, R., L. Wooninck, J. Field, C. Ainsworth, J. Beets, S. Berkeley, J. Bohnsack, R. Boulon, R. Brodeur, J. Brodziak, L. Crowder, D. Gleason, M. Hixon, L. Kaufman, B. Lindberg, M. Miller, L. Morgan, and C. Wahle. 2008. Vertical zoning in marine protected areas. *Fisheries* 33(12):598-610.
- Carr, J. and L. Kaufman. 2008. Estimating the importance of maternal age, size, and spawning experience to recruitment of Atlantic cod (*Gadus morhua*). *Biological Conservation* 142(3): 477-487.
- Kaufman, L., L. B. Karrer and P. Peterson. 2009. Monitoring and Evaluation. In: Leslie, H. and K. McLeod (Eds.). *Ecosystem-Based Management for the Oceans*. Pp. 115-128 (Chapter 7). Island Press, Washington, DC, USA. 392 pp.
- M. A. M. de Aguiar, M. Baranger, E. M. Baptestini, L. Kaufman_ & Y. Bar-Yam. 2009. Global patterns of speciation and diversity. *Nature* 460:384-387.
- Mwanja, W.W., G.C. Booton, L. Kaufman and P.A. Fuerst. 2009. A profile of the introduced *Oreochromis niloticus* (Pisces: Teleostei) populations in Lake Victoria Region in relation to its putative origin of Lakes Edward and Albert (Uganda - E. Africa) based on random amplified polymorphic DNA analysis. *African Journal of Biotechnology* Vol. 7 (11), pp. 1769-1773.
- Francini-Filho, R., C.M. Ferreira, E.O. Cavalcanti Coni, R. Moura and L. Kaufman. 2009. Foraging activity of roving herbivorous reef fish (Acanthuridae and Scaridae) in eastern Brazil: influence of resource availability and interference competition. *Journal of the Marine Biological Association of the United Kingdom* 90(3), 481–492.
- Francini-Filho, R., R. Reis, P. Meirelles, R. Moura, F. Thompson, R. Kikuchi and L. Kaufman. 2010. Seasonal prevalence of white plague like disease on the endemic Brazilian reef coral *Mussismilia braziliensis*. *Lat. Am. J. Aquat. Res.*, 38(2): 292-296, 2010.

- Eakin CM, Morgan JA, Heron SF, Smith TB, Liu G, et al. 2010. Caribbean corals in crisis: Record thermal stress, bleaching, and mortality in 2005. *PLoS ONE* 5(11): e13969. doi:10.1371/journal.pone.0013969.
- Abate, M., A.G. Eng, and L. Kaufman. 2010. Alarm cue induces an antipredator morphological defense in juvenile Nicaragua cichlids *Hypsophrys nicaraguensis*. *Current Zoology* 56 (1):36-42.
- Brown, B. L. Soule and L. Kaufman. 2010. Effects of excluding bottom-disturbing mobile fishing gear on abundance and biomass of groundfishes in the Stellwagen Bank National Marine Sanctuary, USA. *Current Zoology* 56 (1):134-143.
- Yasue, M., L. Kaufman and A.C.J. Vincent. 2010. Assessing ecological changes in and around marine reserves using community perceptions and biological surveys. *Aquatic Conservation: Marine and Freshwater Ecosystems* 20(4):407-418.
- Traylor-Knowles, N., U. Hansen, T. Dubuc, M.Q. Martindale, L. Kaufman, and J.R. Finnerty. 2010. The evolutionary diversification of LSF and Grainyhead transcription factors preceded the radiation of basal animal lineages. *BMC Evolutionary Biology* 2010(10):101.
- Ojwang, W. O., J. E. Ojuok, D. Mbabazi and L. Kaufman. 2010. Ubiquitous omnivory, functional redundancy and the resiliency of Lake Victoria fish community. *Aquatic Ecosystem Health & Management* 13: 3, 269 — 276
- Precht, W.F., R.B. Aronson, R.M. Moody and L. Kaufman. 2010. Changing patterns of microhabitat utilization by the threespot damselfish, *Stegastes planifrons*, on Caribbean reefs. 2010. *PLoS ONE*, 2010: 5(5): e10835 DOI:10.1371/journal.pone.0010835.
- Mwanja, W.W., L. Kaufman and P. Fuerst. 2010. Comparison of the genetic and ecological diversity of the native to the introduced tilapiines (Pisces: Cichlidae), and their population structures in the Lake Victoria region, East Africa. *Aquatic Ecosystem Health & Management*, 13: 4, 442 — 450.
- Francini-Filho, R., R. Reis, P. Meirelles, R. Moura, f. Thompson, R. Kikuchi and L. Kaufman. 2010. Seasonal prevalence of white plague like disease on the endemic Brazilian reef coral *Mussismilia brasiliensis*. *Lat. Am. Aquat. Res.* 38(2):292-296.
- Romero, E. and L. Kaufman. 2011. Fisheries based on Belizean biodiversity: Why they're so vulnerable to offshore oil exploration. Pp. 135-141 *In: Too Precious to Drill. Sea Around Us*, University of British Columbia.
- Nikki Traylor-Knowles, B R Granger, T J Lubinski, J R Parikh, S Garamszegi, Y Xia, J A Marto, L Kaufman and J R Finnerty. 2011. Production of a reference transcriptome and transcriptomic database (PocilloporaBase) for the cauliflower coral *Pocillopora*

damicornis. *BMC Genomics* 2011, 12:58

- H. Patel, S. Gopal, L. Kaufman. 2011. MIDAS: A spatial decision support system for monitoring marine management areas. *International Regional Science Review* April 2011 vol. 34 no. 2 191-214
- Hansen, GJA, Ban NC, Jones ML, Kaufman L, Panes HM, Yasué M, Vincent ACJ. 2011. Hindsight in marine protected area selection: A comparison of ecological representation arising from opportunistic and systematic approaches. *Biological Conservation*. 144:1866–1875.
- Amado-Filho GM, Moura RL, Bastos AC, Salgado LT, Sumida PY, et al. 2012. Rhodolith Beds Are Major CaCO₃ Bio-Factories in the Tropical South West Atlantic. *PLoS ONE* 7(4): e35171. doi:10.1371/journal.pone.0035171.
- Coni E, Ferreira CM, Moura RL, Meireles PM, Kaufman L & Francini-Filho RB. 2012. An evaluation of the use of branching fire-corals (*Millepora* spp.) as refuge by reef fish in the Abrolhos Bank, eastern Brazil. *Environmental Biology of Fishes*. DOI: 10.1007/s10641-012-0021-6
- Rhyne, A., M. F. Tlusty, P. J. Schofield, L. Kaufman, J. A. Morris Jr. and A. W. Bruckner. 2012. Revealing the appetite of the marine aquarium fish trade: the volume and biodiversity of fish imported into the United States. *PLoS ONE* 7(5): e35808. doi:10.1371/journal.pone.0035808
- Rhyne, A., M. Tlusty and L. Kaufman. 2012. Long-term trends of coral imports into the United States indicate future opportunities for ecosystem and societal benefits. *Conservation Letters*. <http://onlinelibrary.wiley.com/doi/10.1111/j.1755-263X.2012.00265.x/abstract>
- Liu, H., M. J. Fogarty, S. M. Glaser, I. Altman, C. H. Hsieh, L. Kaufman, A. A. Rosenberg, G. Sugihara. 2012. Nonlinear dynamic features and co-predictability of the Georges Bank fish community. *Marine Ecology Progress Series* 464: 195-207.
- Drew, J. and L. Kaufman. 2012. Functional endemism: population connectivity, shifting baselines and the scale of human experience. *Ecology and Evolution*, doi: 10.1002/ece3.446.
- Mwanja, W. W., P. A. Fuerst and L. Kaufman. 2012 (Published in 2013). Collapse of the “ngege”, *Oreochromis esculentus* (Teleostei: Cichlidae) populations, and resultant population genetic status in the Lake Victoria Region. *Uganda Journal of Agricultural Science* 13(2): 65-82.
- Cooperman, M.S., So N., Arias, M., Cochrane, T.A., Elliott, V., Hand, T., Hannah, L., Holtgrieve, G.W., Kaufman, L., Koning, A.A., Koponen, J., Kum V., McCann, K.S.,

- McIntyre, P.B., Min B., Ou C., Rooney, N., Rose, K.A., Sabo, J.L. & Winemiller, K.O. 2012. (Published in 2013). A watershed moment for the Mekong: newly announced community use and conservation areas for the Tonle Sap Lake may boost sustainability of the world's largest inland fishery. *Cambodian Journal of Natural History*, 2012: 101–106.
- Francini-Filho RB, Coni EOC, Meirelles PM, Amado-Filho GM, Thompson FL, G. H. Pereira-Filho, A. C. Bastos, D. P. Abrantes, C. M. Ferreira, F. Z. Gibran, A. Z. Guth, P. Y. G. Sumida, N. L. Oliveira, L. Kaufman¹, C. V. Minte-Vera, R.L. Moura. 2013. Dynamics of coral reef benthic assemblages of the Abrolhos Bank, Eastern Brazil: Inferences on natural and anthropogenic drivers. *PLoS ONE* 8(1): e54260. doi:10.1371/journal.pone.0054260
- Deyle, E., M. Fogarty, C. Hsieh, L. Kaufman, A. D. McCall, S. B. Munch, C. T. Peretti, H. Ye and G. Sugihara. 2013. Predicting climate effects on Pacific sardine. *PNAS*. Early online: 10.1073/pnas.1215506110
<http://www.pnas.org/content/early/2013/03/27/1215506110.abstract>
- Glaser, S. M., M. J. Fogarty, H. Liu, I. Altman, C. Hsieh, L. Kaufman., A. D. McCall, A. A. Rosenberg, H. Ye and G. Sugihara. 2013. Complex dynamics may limit prediction in marine fisheries. *Fish and Fisheries*. Early online: DOI: 10.1111/faf.12037
<http://onlinelibrary.wiley.com/doi/10.1111/faf.12037/abstract>
- Tlusty, M. F., A. Rhyne, L. Kaufman, M. Hutchins, G. McGregor-Reid, C. Andrews, P. Boyle, J. Hemdal, F. McGilvray, and S. Dowd. 2013. Opportunities for public aquaria to increase the sustainability of the aquatic animal trade. *Zoo Biology* 32:1-12.
- Altman, I., R. Boumans, J. Roman, S. Gopal and L. Kaufman. 2014. An ecosystem accounting framework for marine ecosystem-based management. *The Sea* 16: 245-276.
- Rotjan, R., R. Jamieson, B. Carr, L. Kaufman, S. Manghubhai, D. Obura, R. Pierce, B. Rimon, B. Ris, S. Sandin, Shelley, U. R. Sumaila, S. Taei, H. Tausig, T. Teroroko, S. Thorrold, B. Wikgrin, T. Toatu, G. Stone. 2014. Establishment, management, and maintenance of the Phoenix Islands Protected Area. *Advances in Marine Biology* 69:289-324.
- Tlusty, M., A. Rhyne, S. Dowd and L. Kaufman. 2014. Controlling the destiny of the trade. *OFI Journal* 75:23-30.
- Rhyne, A., M. Tlusty and L. Kaufman. 2014. Is sustainable exploitation of coral reefs possible? A view from the standpoint of the marine aquarium trade. *Cur. Op. Envir. Sust.* 7:101-107.
- Downing, A. S., E. Van Nes, J. Balirwa, J. Beuving, P. Bwathondi, L. J. Chapman, I. J. M. Cornelissen, I. G. Cowx, K. Goudswaard, R. E. Hecky, J. H. Janse, A. Janssen, L. Kaufman, M. A. Kishe-Machumu, J. Kolding, W. Ligtvoet, D. Mbabazi, M. Medard, O. C. Mkumbo, E. Mlaponi, A. T. Munyaho, L. A. J. Nagelkerke, R. Ogutu-Ohwayo, W. O. Ojwang, H. K. Peter, D. Schindler, O. Seehausen, D. Sharpe, G. M. Silsbe, L. Sitoki, R. Tumwebaze, D. Tweddle, K. E. Van de Wolfshaar, H. Van Dijk, E. Van Donk, J. C. Van Rijssel, P. A. M. Van Zwieten, J. H. Wanink, F. Witte, and W. M. Mooij. 2014. Coupled human and natural system dynamics as key to the sustainability of Lake Victoria's ecosystem services. *Ecology and Society* 19(4): 31. <http://dx.doi.org/10.5751/ES-06965-190431>

- Holmberg, R. J., M. E. Tlusty, E. Futoma, L. Kaufman, J. A. Morris and A. L. Rhyne. 2015. The 800-pound gorilla in the room: Asymptotic body size and invasiveness of marine aquarium fishes. *Mar.Policy* 53:7-12.
- Boumans, R., J. Roman, I. Altman and L. Kaufman. 2015. The Multiscale Integrated Model of Ecosystem Services (MIMES): Simulating the interactions of coupled human and natural systems. *Ecosystem Services* 12:3
- Gownaris, N. J., E. K. Pikitch, W. O. Ojwang, R. Michener, and L. Kaufman. 2015. Predicting species vulnerability in a massively perturbed system: The fishes of Lake Turkana, Kenya. *PLoS One* 10(5): e0127027. doi:10.1371/journal.pone.0127027.
- Jesse G. Hastings, Michael K. Orbach, Leah B. Karrer & Les Kaufman
(2015) Multisite, Interdisciplinary Applications of Science to Marine Policy: The Conservation International Marine Management Area Science Program, *Coastal Management*, 43:2, 105-121, DOI:[10.1080/08920753.2015.1005528](https://doi.org/10.1080/08920753.2015.1005528)
- Jesse G. Hastings, Michael K. Orbach, Leah B. Karrer & Les Kaufman (2015) MMAS in Belize, *Coastal Management*, 43:2, 138-154, DOI: [10.1080/08920753.2015.1005531](https://doi.org/10.1080/08920753.2015.1005531)
- Jesse g. Hastings, Michael k. Orbach, Leah b. Karrer & Les Kaufman (2015) MMAS in Brazil, *Coastal Management*, 43:2, 122-137, DOI: [10.1080/08920753.2015.1005529](https://doi.org/10.1080/08920753.2015.1005529)
- Jesse g. Hastings, Michael k. Orbach, Leah b. Karrer & Les Kaufman
(2015) MMAS in Eastern Tropical Pacific Seascape, *Coastal Management*, 43:2, 172-188, DOI:[10.1080/08920753.2015.1005537](https://doi.org/10.1080/08920753.2015.1005537)
- Jesse G. Hastings, Michael K. Orbach, Leah B. Karrer & Les Kaufman (2015) MMAS in Fiji, *Coastal Management*, 43:2, 155-171, DOI: [10.1080/08920753.2015.1005534](https://doi.org/10.1080/08920753.2015.1005534)
- Jesse G. Hastings, Michael K. Orbach, Leah B. Karrer & Les Kaufman (2015) Lessons Learned from the Marine Management Area Science Program: Insights for Global Conservation Science Programs, *Coastal Management*, 43:2, 189-216, DOI: [10.1080/08920753.2015.1005538](https://doi.org/10.1080/08920753.2015.1005538)
- DeFilippo, L., E. M. Burmester, L. Kaufman, and R. Rotjan. 2016. Patterns of surface lesion recovery in the Northern Star Coral, *Astrangia poculata*. *Journal of Experimental Marine Biology and Ecology* 481:15-24.
- E. S. Klein, S. M. Glaser, A. Jordaan, L. Kaufman, A. A. Rosenberg. 2016. A complex past: historical and contemporary fisheries demonstrate nonlinear dynamics and a loss of determinism. *Mar Ecol Prog Ser* 557:237-246. <https://doi.org/10.3354/meps11886>
- Pasquarella, V. J., C. Holden, L. Kaufman, C. E. Woodcock. 2016. From imagery to ecology: Leveraging time series of all available Landsat observations to map and monitor ecosystem state and dynamics. *Remote Sensing in Ecology and Conservation* 2(3):152-170.
- Carne, L., L. Kaufman and K. Scavo. 2016. Measuring success for Caribbean acroporid restoration: key results from ten years of work in southern Belize." *ICRS Proceedings*.

Gownaris, N. J., E. K. Pikitch, J. Y. Aller, L. S. Kaufman, J. Kolding, K. M. M. Lwiza, K. O. Obiero, W. O. Ojwang, J. O. Malala and K. J. Rountos. 2017. Fisheries and water level fluctuations in the world's largest desert lake. *Ecohydrology* for print publication 10(1) January 2017.

Burmester, E. M., J. R. Finnerty and L. Kaufman. 2017. Temperature and symbiosis affect lesion recovery in experimentally wounded, facultatively symbiotic temperate corals. *Marine Ecology Progress Series* 570 (2017): 87-99.

Matheus, F. O., V. Abilhoa, H. L. Spach, C. V. Minta-Vera, R. B. Francini-Filho, L. Kaufman and R. L. Moura. 2017. Feeding ecology of two sympatric species of large-sized groupers (Perciformes: Epinephelidae) on Southwestern Atlantic coralline reefs." *Neotropical Ichthyology* 15(2) (2017).

Kaufman, L. S. In Press. Climate Change: Final arbiter of the mass extinction of freshwater fishes. Chapter 18 In: Lovejoy, T. and L. Hannah (Eds). *Climate change And Biodiversity*. Yale University Press. (Due out March, 2018).

Ph.D. Thesis

Kaufman, L.S. 1979. Damselfish gardens on Caribbean reefs: A natural disturbance and its effects on benthic biota. The Johns Hopkins University. Ph.D. Thesis.

Representative Technical Reports

Becker, D.S., J.A. Conte and L.S. Kaufman. 1979. A bathymetric survey of the proposed Church Creek power plant site. Chesapeake Bay Institute, The Johns Hopkins University, Spec. Rept. 73, Ref. 79-4.

Becker, D.S. and L.S. Kaufman. 1979. Status of commercially important bivalves near the proposed Church Creek power plant site. Chesapeake Bay Institute, The Johns Hopkins University, Spec. Rept. 75, Ref. 79-6.

Kaufman, L.S., R.G. Otto and P. Miller. 1980. On distribution and abundance of juvenile fishes in the Upper Chesapeake Bay. Chesapeake Bay Institute, The Johns Hopkins University, Spec. Rept. 78, Ref. 80-1.

Kaufman, L.S., D.S. Becker and R.G. Otto. 1980. Patterns of distribution and abundance of macrobenthos at Taylors Island, Maryland, with implications for monitoring programs. Chesapeake Bay Institute, The Johns Hopkins University, Spec. Rept. 81, Ref. 80-4.

Kaufman, L. S., and A. Strycky. 1991. Designation of marine species for protection under US Endangered Species Act. Report to the Office of Protected Resources, New England Aquarium, Boston.

Kaufman, L. S. and J. Tschirky. 2010. Living With the Sea. Conservation International.

Karrer, L. B., M. Orbach and L. S. Kaufman. 2010. Marine Management Areas: What, Why, and How. Conservation International.

Kaufman, L. S., D. Obura, S. Sandin, and E. Sala. 2011. CHI: Coral Health Index. Conservation International.

Edited Books

Kaufman, L. S. and K. E. Mallory (eds.). 1986, 1993. The Last Extinction. MIT Press, Cambridge, MA.

T.L. Crisman, L.J. Chapman, C.A. Chapman, and L.S. Kaufman (editors). 2003. Conservation, Ecology, and Management of African Freshwaters. University Press of Florida, Gainesville, Florida.

Semi-Popular Articles

Note: In addition to the articles listed below, I have also published about a dozen articles over the years in "The Marine Aquarist," "Salt Water Aquarist," "Aquarium," "Tropical Fish Hobbyist," "Buntbarsch Bulletin," and "Skin Diver Magazine."

Hatch, J. and L.S. Kaufman. 1986. In the shadow of skyscrapers - bringing back the wild life of urban estuaries. Aquasphere, Journal of the New England Aquarium p. 7-10.

Kaufman, L. S. and O. Seehausen. 1995a. Cichliden von der ugandischen und der kenianischen Viktoriaseeküste. Pp. 147-153 In: von Drachenfels (Ed.). Cichliden: Festschrift zum 25jährigen Jubiläum der DCG.

Kaufman, L. S. and O. Seehausen. 1995b. Cichliden aus anderen Seen des Viktoriasee-Beckens. Pp. 153-155 In: von Drachenfels (Ed.). Cichliden: Festschrift zum 25jährigen Jubiläum der DCG.

Kaufman, L. S. 1996. Preface to Lake Victoria Rock Cichlids: taxonomy, ecology and distribution. Seehausen, O. (The Netherlands).

Lindholm, J. L. Kaufman, P. Auster, M. Ruth, C. Safina. 1996. In search of new answers for New England's groundfishery: The role of habitat in the future of overfished species. Living Ocean News 1995-1996:4-7).

Kaufman, L. S. 1996. Lake Nawampasa, Uganda. Cichlid News 5(4):17-21.

Kaufman, L. S. 1997. A brief introduction to aquarium fishes from Lake Nawampasa. Cichlid News 6(1): 30-31.

Loiselle, P.V. and L. S. Kaufman. 1997. The status of the Lake Victoria Haplochromis species currently maintained by aquarists. *Buntbarsche Bulletin* 142: 18-28.

Kaufman, L. S. 2003. Fiji's Rainbow Reefs. *National Geographic*. Photos by Tim Laman.

Kaufman L. S. 2004. One Fish, Two Fish...(Evolution of Color on Coral Reefs). *National Geographic*. Photos by Tim Laman.

Kaufman, L. 2009. Coral Condos. *Ranger Rick Magazine* (January 2009), photos by Tim Laman.

Book Reviews and Essays

Kaufman, L. S. 1987. Dynamics of marine fish populations. *Conservation Biology* 1(3): 265-266.

Kaufman, L. S. 1988. Marine biodiversity, the sleeping dragon. *Conservation Biology* 1(4): 307-308. (Essay)

Kaufman, L.S. 1988. A fish faunal conservation program: the Lake Victoria cichlids. *Endangered Species Update* 8(1):72-75.

Kaufman, L. S. and A. Cohen. 1993. The Great Lakes of Africa. *Conservation Biology* 7(3):632-633. (Essay)

Kaufman, L. 1995. "Touch one strand, and the whole web shivers." *Conservation Biology* 9(2):470-471.

Kaufman, L. 1995. Building an agreement on marine conservation needs. *Conservation Biology* 9(3):696-698.

Kaufman, L. 1998. Knowing the ocean. *Cons. Biol.* 12(3):737-738.

Kaufman, L. S. 2001. The impact of species changes in African lakes. *Copeia*.

Kaufman, L. S. 2001. Most excellent of fishes. *Natural History* 110(4): 84-85.

Representative Published Abstracts and Presented Papers

Mwanja, W., M. Chandler, L. Kaufman and P. Fuerst. 1994. Population Structure and hybridization in fish: Lake Victoria tilapia studied with randomly amplified polymorphic DNA (RAPD) markers. *Ohio Jour. Science* 94(3).

- Black, M., G. Booton, M. Chandler, L. Kaufman, and P. Fuerst. 1994. Use of randomly amplified polymorphic DNA (RAPD) to study population differentiation in the African cichlid fish *Astatoreochromis alluaudi*. *Ohio Jour. Sci.* 94(3).
- Fuerst, P.A., W. Mwanja, G. Booton, M. Black, M. Chandler and L. Kaufman. 1994. RAPD's as genetic markers of population structure and hybridization in Lake Victoria cichlids. *Mol. Appr. Mar. Ecol. Evol.*
- Kaufman, L.S., M. Chandler, L. Chapman and C. Chapman. 1995. Landscape processes and macroevolutionary patterns in East African cichlid fishes. *Ann. Meet. Geological Society of America, Northeast Regional Symposium on Tectonics and Biodiversity.*
- Chandler, M., L. Chapman, L. Kaufman, R. Ogutu-Ohwayo, C. Chapman, A. Von Bismark. 1995. Wetlands as refugia from predation by introduced species. *Bull. Ecol. Soc. America* 76 (2):43-44.
- Chandler, M. And L. Kaufman. 1995. In situ conservation efforts of endemic fish biodiversity in the Lake Victoria Basin, East Africa. *Zoos, 1995 Nat=l. AZA, Columbus, Ohio.*
- Fuerst, P. A., W. Mwanja, G. Booton, M. Black, M. Chandler and L. Kaufman. 1995. RAPD's as nuclear gene markers of population structure and hybridization in Lake Victoria cichlids. (Proc. 1995 Keystone Symposium on Molecular Approaches to Marine Ecology and Evolution. *Journal of Cellular Biochemistry* 19B: 339.
- Wu, L., M. Chandler, L. Kaufman and P. A. Fuerst. 1995. Development of microsatellite markers in the African cichlid fish *Astatoreochromis alluaudi* and their use in population genetic studies. *Ohio Journal of Science* 95 (2): A-12.
- Mwanja, W., M. Chandler, L. Kaufman and P. A. Fuerst. 1995. Population structure and hybridization in fish: Lake Victoria tilapia studied with randomly amplified polymorphic DNA (RAPD) markers. *Ohio Journal of Science* 95(2): A-9.
- Black, M., G. Booton, M. Chandler, L. Kaufman and P. A. Fuerst. 1995. Use of randomly amplified polymorphic DNA (RAPD) to study population differentiation in the African cichlid fish *Astatoreochromis alluaudi*. *Ohio Journal of Science* 95 (2): A-11.
- Mwanja, W., L. Kaufman, M. Chandler and P.A. Fuerst. 1995. RAPD analysis of the genetic population structure and evolution of the Tilapiine species (Pisces: Cichlidae) of Lakes Victoria, Albert and Edward (Uganda). Paper presented at the 1995 joint meetings of the Society for Systematic Biologists, Society for the Study of Evolution, American Society of Naturalists and Numerical Taxonomy Group, Montreal.
- Booton, G.C., L. Kaufman, M. Chandler and P.A. Fuerst. 1995. Phylogenetic analysis of Lake Victoria cichlidae derived from the rRNA Internal Transcribed Spacer One (ITS 1). Paper presented at the 1995 joint meetings of the Society for Systematic Biologists, Society for

the Study of Evolution, American Society of Naturalists and Numerical Taxonomy Group, Montreal.

Wu, L., M. Chandler, L. Kaufman and P.A. Fuerst. 1995. Microsatellites in the African cichlid *Astatoreochromis alluaudi*: cloning characterization and potential application in population genetic studies. Paper presented at the 1995 joint meetings of the Society for Systematic Biologists, Society for the Study of Evolution, American Society of Naturalists and Numerical Taxonomy Group, Montreal.

Chandler, M., L. Chapman, L. Kaufman, R. Ogutu-Ohwayo, C. Chapman, and A. Von Bismarck. 1995. Wetlands as Refugia from Predation by Introduced Species. Ecological Society of America, Snowbird, Utah, August 1995.

Kaufman, L.S., M. Chandler, L. Chapman, and C. Chapman. 1995. Landscape processes and macroevolutionary patterns in East African cichlid fishes. Geological Society of America, Northeast Regional Symposium on Tectonics and Biodiversity, Connecticut, 1995.

Chapman, L. J., C.A. Chapman, L.S. Kaufman, and M. Chandler. 1996. Wetlands as Refugia from Introduced Nile Perch in the Lake Victoria Basin of East Africa. American Fisheries Society, Deerborn, Michigan, August 1996.

Mwanja, W., L. Kaufman, M. Chandler and P.A. Fuerst. 1996. Proposed phylogeny of Tilapiniines (Cichlidae: Labroidei) derived from RAPD markers. Paper presented at the 1996 meetings of the Society for the Study of Evolution, St. Louis.

Wu, L., L. Kaufman, M. Chandler and P.A. Fuerst. 1996. Application of microsatellite markers to the population genetic studies of Eastern African haplochromine cichlids from the Lake Victoria basin. Paper presented at the 1996 meetings of the Society for the Study of Evolution, St. Louis.

Lindholm, J., L.S. Kaufman, M. Ruth and P. Auster. 1996. A modeling approach to marine refugia. International Society for Ecological Economics, Boston, Ma.

Lindholm, L.S. Kaufman, M. Ruth and P. Auster. 1996. Biology of yearling groundfishes on Georges Bank: A spatially explicit model. Proceedings 2nd World Fisheries Congress, Brisbane, Australia.

Duan, W., G.C. Booton, L. Kaufman, M. Chandler and P.A. Fuerst. 1996. Phylogenetic analysis of haplochromine cichlid taxa utilizing DNA heteroduplex separation techniques. Paper presented in the "Aquaculture Biotechnology Symposium" of the *International Congress on the Biology of Fishes*, San Francisco.

Mwanja, W., L. Kaufman, M. Chandler and P.A. Fuerst. 1996. Population and stock characterization of Lake Victoria tilapine fishes based on RAPD markers. Paper presented in the "Aquaculture Biotechnology Symposium" of the *International Congress on the Biology of Fishes*, San Francisco.

- Wu, L., G.C. Booton, L. Kaufman, M. Chandler and P.A. Fuerst. 1996. Use of DNA microsatellite loci to identify populations and species of Lake Victoria haplochromine cichlids. Paper presented in the "Aquaculture Biotechnology Symposium" of the *International Congress on the Biology of Fishes*, San Francisco.
- Mwanja, W. , L. Kaufman and P.A. Fuerst. 1997. Randomly amplified polymorphic DNA characterization of ningu (*Labeo victorianus*, Pisces: Cyprinidae) populations of Lake Kyoga and Lake Victoria basins, East Africa. *Ohio Journal of Science* 97 (2): A-31.
- Mwanja, W.W., L. Kaufman, and P. A. Fuerst. 1997. Genetic Population Structure and Meristic Characterization of populations of *Oreochromis niloticus* (Pisces: Cichlidae) of Lake Victoria Region and Lake Edward-Albert System (Uganda - E. Africa). Proceedings of the 7th International Aquaculture Symposium, Sterling, Wales.
- Wu, L., L. Kaufman, B. Porter and P. Fuerst. 1997. Genetic variability and inter-population gene flow of *Astatoreochromis alluaudi* revealed by microsatellite data. Proceedings of the 77th Annual Meeting of the American Society of Ichthyologists and Herpetologists: 316-317.
- Fuerst, P., W. Mwanja, L. Kaufman and G. C. Booton. 1997. Genetic phylogeography of introduced *Oreochromis niloticus* (Pisces: Cichlidae) in Uganda. Proceedings of the IV International Symposium on Tilapia Aquaculture.
- Mwanja, W.W., F. Bugenyi, L. Kaufman and P. Fuerst. 1997. Genetic characterization of tilapiine stocks in the Lake Victoria Region. p. 33-34, *In*: R.S.V. Pullin, C.M.V. Casal, E.K. Abban and T.M. Falk (eds.) *Characterization of Ghanaian tilapia genetic resources for use in fisheries and aquaculture*. ICLARM Conf. Proc. 52, 58p.
- Lindholm, J., M. Ruth, L.S. Kaufman and P. Auster. 1997. Marine refugia as tools in fishery management: A modelling approach to the design of marine refugia. *Science and Management of Protected Areas*.
- M. Chandler, L. Chapman, R. Ogutu-Ohwayo, L. Kaufman, A. Armoudlian, and A. van Bismarck. 1997. Patterns of Fish Distribution in Response to Multiple Perturbations in the Lake Victoria Basin of East Africa. American Society of Limnology and Oceanography, Santa Fe, New Mexico, February 1997.
- L.S. Kaufman, L.J. Chapman, and P.F. Fuerst. 1998. Radiation and Extinction Mechanisms in Haplochromine Cichlids of the Lake Victoria Region. The Society for Integrative and Comparative Biology, Boston, Massachusetts, January 1998.
- Kaufman, L.S. And I. Batjakas. 1998. Insights from a toy ocean: Invasion dynamics in Lake Victoria and implications for shallow marine ecosystems. *Marine Bioinvasions*, MIT.
- Mwanja, W.W., Kaufman, L. and Fuerst, P.A. 1998. Genetic differentiation and characterization of populations of ningu, *Labeo victorianus*, and two other species of East African *Labeo*

- (Pisces: Cyprinidae). Fisheries Society of the British Isles Symposium on Tropical Fish Biology, p. 41.
- Fuerst, P.A., Mwanja, W.W. and Kaufman, L. 1998. Use of DNA microsatellite markers to study genetic diversity in the species of the genus *Oreochromis* from the Lake Victoria region. Fisheries Society of the British Isles Symposium on Tropical Fish Biology, p. 25.
- Mwanja, W. W., P. A. Fuerst, L. Wu, G. C. Booton, S. B. Wandera, and L. Kaufman. 1998. Ecological and Evolutionary Changes of Fish species in the Lake Victoria Region and Lake Edward - Albert System: the role of minor satellite water bodies. Proceedings of the 1998 International Association of Great Lakes Research.
- Wu, L. , Kaufman, L. and Fuerst, P.A. 1998. Genetic variation and species differences for DNA microsatellite loci in Lake Victoria Haplochromine cichlids. Fisheries Society of the British Isles Symposium on Tropical Fish Biology, p. 61.
- Kaufman, L., Chapman, L. and Fuerst, P.A. 1998. Tempo, mode, and mechanism in the evolution of Lake Victoria cichlids. Fisheries Society of the British Isles Symposium on Tropical Fish Biology, p. 31-32.
- Kaufman, L., Mwanja, W.W. and Fuerst, P.A. 1998. Conservation genetics of Tilapiine refugia in the Lake Victoria region. Fisheries Society of the British Isles Symposium on Tropical Fish Biology, p. 31.
- Mwanja, W., S.B. Wandera, L. Kaufman, P. Fuerst. 1998. Evolution of the haplochromine cichlid flock of the Lake Victoria Region: the bounty of the satellite lakes and their role in conservation of endangered taxa. Proceedings of the symposium on African Fish and Fisheries: Diversity and Utilisation, Grahamstown, South Africa.
- Fuerst, P.A., W. Mwanja, I. Batjakas, G. Booton and L. Kaufman. 1998. Of Lake Victoria Region Tilapiines: the isolated and displaced; the shrunk and native; the restricted and exotic; and the expanded and introduced. Proceedings of the symposium on African Fish and Fisheries: Diversity and Utilisation, Grahamstown, South Africa.
- Mwanja, W. W., A. S. Armodlian, S. B. Wandera, L. Kaufman, L. Wu, G. C. Booton, and P. A. Fuerst. 1999. The Bounty of Minor Lakes: The Role of Small Satellite Water Bodies in Evolution And Conservation of Fishes. Proc. International Symposium on the Management of African Waters, Naivsha, Kenya.
- Schwartz, J.D.M. and Kaufman, L.S. 2000. Mechanistic Models and Community Ecology. Presented at the General Scientific Meetings of the Marine Biological Laboratory, August 14-16. Woods Hole, MA.

- Kaufman, L.S. and Schwartz, J.D.M. 2000. The Future of Fisheries and Fisheries Research on Lake Victoria. Presented at the Lake Victoria Fisheries Organization's International Convention on Lake Victoria, May 16-19. Jinja, Uganda.
- L.J. Chapman, C.A. Chapman, J.P. Olowo, P.J. Schofield, and L.S. Kaufman. 2000. Biodiversity Lost and Found: The Resurgence of Indigenous fishes in the Lake Victoria Region. The Ecological Society of America, Snowbird, Utah, August 2000.
- Fuerst, P.A., L. Kaufman and W.W. Mwanja. 2000. Lake Victoria Region: Large Lakes and Their Surrounding Minor Water Bodies as a Natural Laboratory for Adaptive Ecology, Speciation and Evolution of Fish Species. *Ohio Journal of Science* 100 (1): A44.
- Mwanja, W.W., L. Kaufman, and Paul A. Fuerst. 2000. Randomly Amplified Polymorphic DNA Markers: Conservation And Management Implications. *Ohio Journal of Science* 100 (1): A38.
- Mwanja, W.W., L. Kaufman and P.A. Fuerst. 2000. A case for reintroduction and restoration of cichlid fishes in Lake Vitoria Region waters: A means towards management and conservation of rare and endangered cichlid species. Proc. International Conference on the Conservation of African Inland Fisheries, Jinja, Uganda.
- Fuerst, P.A., Mwanja, W.W., and L. Kaufman. 2000. The Genetic History of the Introduced Nile Tilapia Of Lake Victoria (Uganda - E. Africa): The Population Structure of *Oreochromis niloticus* (Pisces: Cichlidae) Revealed by DNA Microsatellite Markers. *ISTA V - Fifth International Symposium on Tilapia in Aquaculture*, Rio de Janiero, Brazil.
- Schwartz, J.D.M., Ojwang, W., and Kaufman, L.S. 2001. The Effects of Nile Perch, *Lates niloticus*, on functional diversity in the lake Kyoga satellite system, Uganda. Presented to the Society for Conservation Biology annual meeting in Hilo, HI, July 29-August 1.
- Kaufman, L. S. 2001. No reef is an island: effects of global climate change on nearshore marine environments of Mauritius. MERMAID 2001: Mauritius Environmental Resource Management and International Development, University of Mauritius.
- R. Ogutu-Ohwayo, L.J. Chapman, C.A. Chapman, and Les Kaufman. 2002. Biodiversity Lost and Found: A Decade of Research on the Lake Nabugabo Wetland System. Ramsar Conference for the Lake Nabugabo Region. Masaka, Uganda. January 2002.
- R. Ogutu-Ohwayo, C.A. Chapman, L.J. Chapman, and Les Kaufman. 2002. Considering Terrestrial Systems in the Management of the Nabugabo Ecosystem. Ramsar Conference for the Lake Nabugabo Region. Masaka, Uganda. January 2002.
- Lindholm, J., P. Auster , L. Kaufman , and S. Miller. 2002. Movement patterns and site

utilization of fishes as determined by acoustic telemetry: implications for the design of marine reserves. *Sustaining Seascapes: The Science and Policy of Marine Resource Management*, American Museum of Natural History, March 2002.

Independent Publications by Graduate Students and Post-Docs

- Batjakas, I. E. and A. E. Economakis. 1995. Coastal Fishes of Greece. Efstathiades Group, Athens, Greece. pp 129.
- Ruth, M. and J. Lindholm. 1997. Dynamic Modeling of Multispecies Fisheries for Consensus Building and Management. *Environmental Conservation* 23: 332-342.
- Stacy, E. A., J. L. Hamrick, J. D. Nason, S. P. Hubbell, R. B. Foster, and R. Condit. 1996. Pollen dispersal in low-density populations of three Neotropical tree species. *American Naturalist* 148:275-298.
- Primack, R. B. and E. A. Stacy. 1997. Women ecologists catching up in productivity, but only when they join the race. *Bioscience* 47:169-174.
- Parker, K. C., J. L. Hamrick, A. J. Parker, and E. A. Stacy. 1997. Allozyme diversity in *Pinus virginiana* (Pinaceae): Intraspecific and interspecific comparisons. *American Journal of Botany* 84:1372-1382.
- Primack, R. B. and E. A. Stacy. 1998. Cost of reproduction in the Pink Lady's Slipper Orchid (*Cypripedium acaule*): an eleven-year experimental study of three populations. *American Journal of Botany* 85:1672-1679.
- Heyer, C., P. Auster, and J. Lindholm. 1998. A Bibliography of Marine Protected Area Function and Design. Technical Report 98-01. Stellwagen Bank National Marine Sanctuary, Plymouth, Massachusetts.
- Batjakas, I. E. and A. E. Economakis. 1999. The Greek Seashore. A Guide to the Marine Invertebrates. In Press. Efstathiadis Group, Athens, Greece.
- Schwartz, J.D.M. 2000. Biological diversity in the Stellwagen Bank National Marine Sanctuary. Stellwagen Bank Technical Memorandum SBNMS-MPR-00-01. NOAA, Silver Springs, MD.
- Lindholm, J. and P. Auster. 2000. Effects of fishing on sand habitats in Closed Area II. NOAA Technical Report.
- Barr, B. and J. Lindholm. 2000. Conservation of the sea using lessons from the land. *The George Wright Forum* 17: 77-86.
- Stacy, E. A., S. Dayanandan, B. Dancik, and P. D. Khasa. 2001. Novel microsatellite DNA

markers for the Sri Lankan tree species, *Shorea cordifolia* (Dipterocarpaceae) and cross-species amplification in *S. megistophylla*. *Molecular Ecology Notes* 1:A20.

Stacy, E. A. 2001. Cross-fertility in two tropical tree species: evidence of inbreeding depression within populations and genetic divergence among populations. *American Journal of Botany* 88:1041-1051.

Lindholm, J. and B. Barr. 2001. Comparison of marine and terrestrial protected areas under Federal jurisdiction in the United States. *Conservation Biology* 15: 1441-1444.

Ruth, M and J. Lindholm (Eds). 2002. *Dynamic Modeling for Marine Conservation*. Springer-Verlag, New York. 449 pp.

Langton, R., J. Lindholm, J. Wilson and S. Sherman. 2002. An age-structured model of fish population enhancement: implications for conservation and economic sustainability. In: Ruth, M. and J. Lindholm. *Dynamic Modeling for Marine Conservation*. Springer-Verlag, New York.

Lindholm, J. and P.J. Auster. In Press. Marine Protected Area Design: Toward a Generalized Approach. In: *Science and Management of Protected Areas: Learning From the Past and Links to the Future*. SAMPAA, Wolfville, Nova Scotia

Stacy, E. A. and J. L. Hamrick. In press. CTFS plots facilitate studies of tree breeding systems: Examples from Barro Colorado Island. *Proceedings from conference: Forest diversity and dynamism: results from the global network of large-scale demographic plots*. Center for Tropical Forest Science, Smithsonian Institute. Washington, D.C.

Stacy, E. A., S. Harischandran, and I. A. U. N. Gunatilleke. In Press. Reproductive ecology of *Syzygium rubicundum* (Myrtaceae) at Sinharaja Forest. *Sri Lankan Forester*.

Recent Work In Media and Public Outreach

- 2009 Writer, Ranger Rick magazine article on coral reef fish communities.
- 2004 Writer, National Geographic article on color in coral reef fishes.
- 2003 Writer, National Geographic article on coral reefs of Fiji.
- 2002 Mission Scientist, National Geographic article on saturation science
- 2002 Mission Scientist, National Geographic article on marine biodiversity hotspots
- 2001 Scientific Advisor, New England Aquarium for the exhibit "Nyanza!" about my research and conservation program in the Lake Victoria region.
- 2001 Advisor, WGBH Television series on Evolution.
- 1994 - Research Scholar, New England Aquarium (consultant on conservation, research and education programs, films, and major exhibits).
- 1996 Consultant to "The Magic Schoolbus" childrens' science television show

Other Synergistic Activities

1. Higher Education: Founded the **The Sealing Eye** (1995), a partnership among Boston University, NOAA, the University of Maryland and regional fisheries that combines graduate training in marine conservation biology with practical experience at sea, in the laboratory, and in the fisheries policy and management boardroom. Current and past projects in Gulf of Maine, coastal California, the Florida Keys, Lake Victoria, and Mauritius.
2. Public Education: Advisor for refurbishment of New England Aquarium Caribbean Coral Reef exhibit. Advisor for proposed (NSF) exhibit on seamount biodiversity. Creative and scientific consultant for aquarium exhibit (NSF-funded) entitled "Nyanja: Africa's Inland Sea" that toured US public aquariums. Advisor and Video Teacher, Video Teacher Project, Smithsonian Astrophysical Observatory (teacher training tape on how children understand concepts of energy flow differently from adults and professionals). Work frequently with National Geographic (print and television), WGBH Television, BBC Television, other print media, television and radio concerns in public communication about the oceans, evolution and conservation.
3. Problem-Solving: Senior PI, Marine Management Area Science Program (MMAS, comparative study of MMAs in the Galapagos, Panama, Fiji, Brazil, and Belize), Center for Applied Biodiversity Studies, Conservation International (2005-). Chair, "Marine Dream Team" for Gund Institute/UVM "Multiscale Integrated Modeling of Ecosystem Services" project (MIMES). Lead biologist, California Marine Life Management Project, 2000-current. Led Lake Victoria Research Team 1990-1996. Lead for biodiversity and introduced species, Preparatory Phase, Lake Victoria Environmental Management Project, 1992-1994. Work with New England Complex Systems Institute on the role of complexity in the generation and maintenance of biological diversity (current). Work with Columbia University's Biosphere2 to study effects of global warming on coral reef organisms. Led work with Brigham and Women's Hospital to develop fish as experimental model for bone disease in humans. Awarded Pew Scholar for Conservation and the Environment (1990-1995) in recognition of contributions to aquatic conservation science and policy and Parker-Gentry Award in Conservation Biology (2011) for lifetime work in conservation sciences.

Graduate Students Trained

Ph.D. Degree

Ioannis Batjakas (1998) Is there a "hypergeneralist" guild that dominates successful invasions? A case study of *Oreochromis niloticus*. Dr. Batjakas currently works for the Department of Fisheries, Greece.

Alistair Economakis (2000) The Impacts of Behavior and Individual Variation on Resource Utilization Patterns in Fishes. Supported by the Palmer-Mcleod Fellowship 1998-2000. Dr. Economakis working with Dr. Batjakas on plans for a major public aquarium for Athens, Greece.

- Joe Walsh (2000) Trophic level responses to combined nutrient-insecticide contamination in aquatic microcosms. Co-advised with Robert Gensemer. Dr. Walsh now works on the Florida Everglades Restoration Project with the Army Corps of Engineers.
- Elizabeth Stacy (2001) Relatedness-dependent cross-fertility in tropical rainforest trees and the nature of species boundaries. Supported by the Conservation Food and Health Foundation. Dr. Stacy is currently a faculty member at the University of Hawaii, Hilo.
- James Lindholm (2001) Effects of benthic habitat on juvenile survivorship in Atlantic cod, *Gadus morhua*. Co-Advisor, with Matthias Ruth, under the Ocean Conservation Project (OCP) with support from the Kendall Foundation, the Mudge Foundation, and the Pew Charitable Trusts. Dr. Lindholm served for two years as Science Coordinator for the Stellwagen Bank National Marine Sanctuary. He is currently Research Scientist at the Pflager Institute for Environmental Research (PIER) in California.
- Jamie Bechtel (2002) The Role Of Sea Urchins in Coral Reef Regeneration. Supported by the Pew Charitable Trusts. Dr. Bechtel is the Director for Regional Marine Programs at Conservation International, Washington, DC.
- Jesse Schwartz (2002) The Functional Role of Fish Diversity in Lake Victoria, East Africa. Supported by the David and Lucille B. Packard Foundation). Jesse Schwartz is the Director of Salmon Restoration Research for the Umatilla Tribal Nations of Oregon.
- Gregg Moore (2002) The Biogeochemical ontogeny of restoration in a young Cape Cod marsh. Supported by the Center for Coastal Studies. Dr. Moore has continued his research in affiliation with the Center, and is now with UNH.
- William Ojwang (2006) Aquatic Food Webs in Nyanza Gulf, Lake Victoria (Kenya). Mr. Ojwang is Senior Research Scientist with Kenya Marine and Freshwater Research Institute.
- Burton Shank (2009) Effectiveness of marine managed areas of central and southern Belize: Spatial variations in major community processes and the implications for local management success.
- Briana Brown (2012) Small-scale community structure and trophic ecology of groundfishes in the stellwagen bank national marine sanctuary under two anthropogenic disturbance regimes.
- Marta Ribera (2016) with Suchi Gopal. Spatial dynamics of biomass aggregations on Stellwagen Bank, Massachusetts.

Valerie Pasquarella (2016) with Suchi Gopal. Remote sensing of landscape structure and function in the watershed of Massachusetts Bay.

Natasha Gownaris (2016) with Ellen Pikitch (Stony Brook University). Effects of climate change on fish food webs in Lake Turkana, Kenya.

Xingli Giam (2015) with David Wilcove (Princeton University). Effect of silviculture on freshwater fish communities of peat swamp forest in Sumatra and Borneo.

Kong Heng (2016) with Sovan Lek (Toulouse). Life history and fisheries science of the dominant fishes of Great Lake Tonle Sap, Cambodia.

Tim Werner (2017) Aspects of bycatch reduction and species conservation in fisheries. Tim is a conservation scientist with the New England Aquarium.

Liz Burmester (2017) with John Finnerty. Coral defense expression and lesion repair in the temperate coral *Astrangia poculata*.

Ben Carr (2017) Fishery and population biology of tunas and billfishes in the pelagic fisheries of Kiribati and the central west Pacific Ocean.

Current Doctoral Students

Katey Lesneski (expected 2019) *Acropora cervicornis* colony life history in relation to coral reef recovery in the west Atlantic.

Karina Scavo (expected 2020) Ecology, population biology, and exploitation of habitat refugia in the branching *Porites* species complex in the tropical west Atlantic.

John Okechi (expected 2021) with Richard Primack. Effects of cage aquaculture on the indigenous fish species of Lake Victoria.

M.S. Degree

Eliza Garfield (2016) Effects of the territorial damselfish *Stegastes planifrons* on benthic community dynamics during coral reef recovery in Florida.

Alissa Rickborn (2014) A contingency analysis of components driving fitness in the coral reef sponge *Aplysina fistularis*.

Stephanie Deckard (exp. 2015) Life history profiles of humpback whale as indicated by isotopic analysis.

Eli Romero (exp. 2015) Habitat connectivity through fish life history patterns as revealed

by stable isotopic signals in the MesoAmerican Barrier Reef system of Belize.

Michael O'Boyle (2012) Role of migratory fishes in nutrient dynamics of Florida coral reefs.

Lauren Rader (1995) Non-thesis masters.

Jamie Bechtel (1996) Analysis of fluorescent pigments in coral reef cnidarians.

Lisa Kerr (1996) Embryonic abnormalities and reproductive output for the damselfish *Abudefduf sordidus* (Pomacentridae), relative to environmental contamination at Johnson Atoll, Central Pacific Ocean. Supported by the Johnston Atoll Research Project.

Edward Timmer (1997) Analysis of *Notropis bifrenatus* (Bridle Shiner) distribution with relation to landuse patterns at Massachusetts lakes using geographical information systems (GIS). Supported by The New England Aquarium.

Beatrice Bocking (1999) Predator-prey dynamics among endemic and introduced fishes in Lake Victoria.

Lucy Keith (1999) Movement patterns of pups of the endangered Hawaiian monk seal, *Monachus schuaslandi*. Supported by National Fish and Wildlife Service. Ms. Keith currently leads in manatee conservation studies with the Florida Department of Natural Resources.

Annie Konkle (2000) Phylogenetic analysis of new piscivores taxa from the Lake Victoria Region based on lepidological characters. Ms. Konkle works out of Seattle with the Sea Education Association.

Chris Bentis (2000) The distribution and role of microbial endoliths in selected hermatypic corals from Johnston Atoll and Hawaii. Supported by the Johnston Atoll Research Project, the David and Lucille Packard Foundation, and Columbia University/Biosphere2. Dr. Bentis is completing doctoral studies at the University of California at Berkeley.

Edmundo Perez (2001) A mass balance model for the rocky intertidal coast of central Chile. Supported by a Chilean scholarship. Mr. Perez has returned to Chile to work in Chilean fisheries conservation.

William Ojwang (2001) Stable isotope evidence for the functional role of the pelagic fish assemblage in Winam Gulf of Lake Victoria, Kenya. Supported by Lake Victoria Environmental Management Project (LVEMP). Mr. Ojwang is completing his doctoral studies at BU.

Lisa Bonacci (expected 2005) Comparative trophodynamics of sibling rockfish species in California. Supported by the David and Lucille Packard Foundation. Ms. Bonacci now works for the Northeast Fisheries Science Center, NMFS, Woods Hole.

Elizabeth Soule (2003) Effects of marine protected areas on food webs. Ms. Soule is completing her doctoral studies at BU.

Kevin Blinkoff (2006) Effects of Western Gulf of Maine Closure on distribution, abundance, and size-frequency distributions of groundfish assemblages.

Post-Doctoral Associates

Dr. Irit Altman (2011 to 2016). Spatial and nonlinear dynamics of ecosystem service flows and tradeoffs in Massachusetts Bay, and Great Lake Tonle Sap, Cambodia.

Professor Maria Abate, College of General Studies, BU (2005-2009) Ethological and neurobiological aspects of brood capture behavior in Neotropical cichlids.

Dr. Caroly Shumway (2000) Neuroanatomical basis of behavior in African great lakes fishes. Dr. Shumway today directs Biodiversity Research at the New England Aquarium, and is a collaborator on continued studies of cichlid neurobiology with myself and Dr. Hans Hoffman of Harvard University.

Dr. Katherine Kavanaugh (1999) Ontogenetic staging for pomacentrid fishes using antibody stains for developmental morphogens. Supported by the Johnston Atoll Research Project. Dr. Kavanaugh is now at Harvard University with Dr. James Hanken.

Recent Examples of Undergraduate Research Training

Montana Airey (2017) Trophic relationships of seabirds in the Gulf of Maine.

Megan Federn (2015) Nutritional value of forage species in the Gulf of Maine.

Lindsay Smith (2015) Isotopic variation in feathers of the Great Shearwater, *Puffinus gravis*.

Lukas DeFilippo (2012) Effect of herbivory on lesion repair in the coral *Pocillopora damicornis*.

Erin Taylor (2012) Stable isotopic indicators of life history in northwest Atlantic squids.

Jennifer Kim (2011) Stable isotopic ratios as measure of benthic-pelagic coupling in the Mid-Atlantic Bight.

Rachel Golden (2009) Lesion repair and gene expression in the lace coral *Pocillopora damicornis*

Emily Munday (2009) Coral reef benthic community structure in Belize.

Daniel Primack (2008) Feeding mechanics of west Atlantic sand lance fishes.

Nalini Gupta (2007) Origins of cellularity in the zebrafish skeleton.

Beth Dubofsky (2007) Feeding behavior in the starfish *Astropecten*.

Andy Fogel (2007) Comparative feeding form and function in northwest Atlantic sibling species of sand lance, *Ammodytes*.

Lauren Taylor (2007) Management area effects on the Belizean coral reef.

Lauren Nadler (2007) Lesion repair in the Indo-Pacific coral *Pocillopora damicornis*.

Colin Riley (2007) Quantitative analysis of environmental forcing in Belizean coral communities.

Kari Bogner (2006) Genomic basis for cellularity in the zebrafish skeleton.

Shahrinaz Mahmoud (2006) A lesion repair assay for Pacific corals.

Amber York (2005-2006) Awareness of spatial novelty in two coral reef gobioid fishes.

Daniel Primack (2005-2006) Feeding biology of captive sand lance, Ammodytidae.

Carrie Soltanoff (2005-2006) Influence of the Western Gulf of Maine Closure on feeding biology of four skate species on Stellwagen Bank.

Kara Coffey (2004-2005) Differential response of Lake Tanganyika cichlids to spatial novelty and its neuroanatomical correlates.

Niora Fabian (2004-2006) Population structure of California sheephead.

Rupa Ghopal (2004-2005) Effects of a marine reserve on the trophobiology of longhorn sculpin and eelpout.

Katherine Bishop (2004) Effects of a marine reserve on the trophobiology of haddock and cod.

Ji Lee (2004) Effects of a marine reserve on the trophobiology of flatfishes.

Phoebe Jekielek (2002) *Astropecten spp.* as predators on juvenile sea scallops, *Plagopecten magellanicus*, in the northwest Atlantic. Supported by the National Marine Fisheries Service.

Kristine Faloon (2002) Effect of dietary history on effectiveness of molluscivorous haplochromines as control agents for human schistosomiasis. Supported by a UROP award. Senior Distinction.

Kristin Marshall (2001-present) Culture induced derangement in Tautog, *Tautoga onitis*. Independent research. Supported by MIT SeaGrant.

Sarah Gallo (2001-present) The functional role of fish diversity in California's Big Creek Reserve. Independent research. Supported by the David and Lucille Packard Foundation.

Pamela Woods (2001) Bioacoustics, plasticity and speciation of Lake Victoria cichlids. Senior Thesis and Senior Distinction. Supported by UROP.

Sarah Wingert (2001) The heritability and natural variance of metabolism in Lake Victoria haplochromine cichlids. Senior Thesis. Supported by UROP.

Taylor Chapple (2001) The affects of prey type and evasion tactics on the cost of prey capture; lessons from Nile perch, *Lates niloticus*. Senior Thesis.

Jade Williams (2001) Reticulate evolution and niche segregation in Lake Victoria cichlids; evidence from the ram-suction index of a hybrid and its parents. Senior Thesis.

Alpa Pattel (2000) Skeletal plasticity of teleost fish: Lessons from diet induced morphological shifts in a Lake Victoria cichlid. Senior Thesis. Supported by UROP.

Michelle Monet (2000) The effect of intergeneric hybridization on the functional morphology of haplochromine cichlids. Work for Distinction. Supported by UROP.

Kristen Agar (2000) Otolith analysis of daily growth increments in Lake Victoria Haplochromine cichlids. Undergraduate Research.

Jessie Muhlin (2000) Behavioral analysis of herbivorous fishes in a coral reef mesocosm, Biosphere 2. Supported by UROP.

International Student Training (single or multiple study visits)

John Okechi, KMFRI. Aquaculture and fish biodiversity in Lake Victoria. Supported by NSF.
George Owen, York University (UK). Ecosystem consequences of a sand lance fishery in the
North Sea and Gulf of Maine.

Eli Romero, University of Belize. Habitat connectivity in Belizean reef fishes. Supported by
MMAS.

Dismas Mbabazi, Ugandan Fisheries Resources Research Institute (FIRRI). Food web dynamics
in Lake Victoria Region satellite lakes. Supported by LVEMP.

Wilson Mwanja, Ugandan Fisheries Resources Research Institute (FIRRI). Conservation
genetics and phylogeography of Lake Victoria Region fishes. Supported by The World
Bank and the National Science Foundation.

Sylvester B. Wandera, FIRRI. Biology of Lake Victoria haplochromine cichlids. Supported by
the Lake Victoria Environmental Management Project (LVEMP).

Robert Amiina, FIRRI. Stable isotope analysis of haplochromine cichlids from the Kyoga Lakes
refugium, central Uganda. Supported by LVEMP.

Brian Ddungu, FIRRI. Internship in basic curatorial, laboratory, and computer skills.

Peter Ochumba, Kenya Marine and Fisheries Research Institute (KMFRI). Limnology and
biodiversity in Lake Victoria. Supported by the National Science Foundation and the
National Oceanic and Atmospheric Agency.

William Ojwang, KMFRI. Biology of Lake Victoria haplochromine cichlids. Supported by
LVEMP.

Joyce Kulekana, Tanzanian Fisheries Research Institute (TAFIRI). Biology of Lake Victoria
cichlids. Supported by LVEMP.

Salome Mwaiko, TAFIRI (due March 2002). Biology of Lake Victoria haplochromine cichlids.
Supported by LVEMP.

Outside Examiner, International Students

Gladys Bwanika, Makerere University, Kampala, Uganda, Ph.D.
Niels Buton, University of Leiden, Ph.D.
Gertrude Namulemo, Makerere University, Kampala, Uganda, MS
S. B. Wandera, Makerere University, Kampala, Uganda, MS
Mbabazi Dismas, Makerere University, Kampala, Uganda, MS

Research Statement

My laboratory works in the world's oceans and lakes on the scientific underpinnings for biological conservation and societal sustainability. We study the behavior of coupled human and natural systems in coastal environments, both marine and freshwater, and help to apply what we learn in the policy arena. This work is consolidated under BU's Program on Coupled Human and Natural Systems, housed in the Pardee Center for the Study of the Longer-Range Future. Our primary activity is field study of aquatic community dynamics using the most basic tools: transect tape, slate, camera, net, meter stick. These are backed up by stable isotope analysis, photogrammetry, analytical and simulation dynamic modeling, and experimental transcriptomics in the laboratory. Our specialties are the biology of fishes on coral reefs and in tropical great lakes, sustainability science, fisheries and biodiversity, ecosystem based management, and the biology of coral reef recovery.

We are currently engaged in detailed study of coastal ecosystem services and their tradeoffs, with active projects in Massachusetts Bay (Stellwagen Bank National Marine Sanctuary), Cambodia (Tonle Sap Great Lake), East Africa (Lakes Victoria and Turkana), and the greater Caribbean (South Florida and Belize), with long term interests also in Kiribati (Phoenix Islands Protected Area), Cuba, and Jamaica. Our most recent new development is the building of an ecological recovery program for Biscayne Bay, including empirical and modeling studies of the Bay, and its connections with the Miami-Dade/Broward metropolitan area, the Everglades, the Florida Reef Tract, and the regional Caribbean.

As part of our effort to improve ecosystem-based management, we explore the non-linear time evolution of fish populations, long-term dynamics of productivity and benthic-pelagic coupling on offshore banks, and coral reef resilience to local stressors and global climate change. We conducted a major study with Conservation International on the ecological and socioeconomic effects and efficacy of marine management areas (quilts of coastal ocean under different types of management), called MMAS (see special issue, *Coastal Management*, 43(2), 2015). We continue a close association with the science program at CI, working on adaptive management and climate adaptation, ecosystem and species conservation, ocean health diagnostics, and ecosystem service modeling, with a current project on the relationship between marine biodiversity conservation and artisanal fisheries in the developing world. In applications, we strive to develop practical ecosystem process diagnostics and quantitative biological reference points for ecosystem-based management of human activities in coastal and aquatic environments. Our work on coastal and freshwater EBM has been supported by the National Science Foundation, the Packard Foundation, the Pew Charitable Trusts, the Gordon and Betty Moore Foundation, the MacArthur Foundation, the Northeast Consortium, NOAA, the Herbert W. Hoover Foundation, and private donors.