

April 18, 2011

JOHN G. LUNDBERG

PROFESSIONAL POSITIONS

1999— present, Chaplin Chair and Curator of Ichthyology, Academy of Natural Sciences, Philadelphia
2000— present, Adjunct Professor, Biology Department, University of Pennsylvania
2006— present, Research Associate in Ichthyology, Natural History Museum of Los Angeles County
1993—1999, Professor, Dept. Ecology and Evolutionary Biology, University of Arizona
1994—1999, Director, NSF Research Training Group: The Analysis of Biological Diversification, University of Arizona
1970—1993, Assistant Professor, Associate Professor, Professor, Dept. of Zoology, Duke University

RESEARCH INTERESTS

Systematics, Ichthyology, Biogeography, Paleobiology, Vertebrate morphology.

EDUCATION

Ph.D., University of Michigan, 1970
B.Sc., Fairleigh Dickinson University, 1964

PROFESSIONAL HONORS AND RECOGNITION

2010. Robert H. Gibbs Jr. Memorial Award for Excellence in Systematic Ichthyology from the American Society of Ichthyologists and Herpetologists.
2010. Special symposium dedicated to Lundberg professional accomplishments in teaching and research work organized by former students and colleagues. American Society of Ichthyologists and Herpetologists.

SELECTED PROFESSIONAL RESPONSIBILITIES

2000-2005, 2008-life. Member, Board of Governors of American Society of Ichthyologists and Herpetologists.
2005-present. Steering Committee Member, NSF Research Coordination Network, DeepFin Project.
2009. President. American Society of Ichthyologists and Herpetologists.

FIELD RESEARCH AND COLLECTING EXPERIENCE(since 2000)

Ichthyological and paleontological exploration in Venezuela (2001), Brazil (2001-2007), Argentina (2002; 2005), Zambia (2004); Mexico (2005), Suriname (2007).

RECENT GRANT SUPPORT

2011. Mr. Bud Keim, a descendant of Henry W. Fowler, the Academy's first Curator of Fishes, donated \$25,000 to the Ichthyology Department for the ongoing care and digital imaging of Fowler specimens in the fish collection. I am co-PI with Mark Sabaj-Perez.

- 2008-2010. National Science Foundation (Division of Biological Infrastructure: Biological Research Collections). Digital Imaging of the Primary Type Fish Specimens at the Academy of Natural Sciences, Philadelphia.
- 2003-2008. National Science Foundation (Biotic Surveys and Inventories Program). Planetary Biodiversity Inventories: All Catfish Species Inventory. I was co-PI with 5 others at overall 5 institutions.
- 2000-2004. National Science Foundation (Systematic Biology Program). Phylogenetics of pimelodine catfishes: exploring the temporal and geographical contexts of neotropical fish diversification

SELECTED PUBLICATIONS

18. **Lundberg, J.G., A. Machado-Allison and R.F. Kay.** 1986. Miocene characid fishes from Colombia: evidence for evolutionary stasis and extirpation in the South American ichthyofauna. *Science*. 234:208-209.
20. **Lundberg, J.G., W.M. Lewis, Jr., J.F. Saunders, III, F. Mago-Leccia.** 1987. Evidence for a major food web component in the main channel of the Orinoco River based on specialized electric fishes. *Science*. 237:81-83.
31. **Lundberg, J.G.** 1993. African-South American freshwater fish clades and continental drift: problems with a paradigm. Ch. 8, pp.156-199. *In* Goldblatt, P. (ed.) *Biological Relationships between Africa and South America*. Yale University Press.
38. **Lundberg, J. G.** 1997. Freshwater fishes and their paleobiotic implications. Ch. 5, pp. 67-91. *In* R. F. Kay et al. (eds.) *Vertebrate paleontology in the Neotropics: The Miocene fauna of La Venta Colombia*. Smithsonian Institution Press, Washington, D.C.
39. **Lundberg, J. G., L. G. Marshall, J. Guerrero, B. Horton, M. C. Malabarba and F. Wesselingh.** 1998. The Stage for Neotropical Fish Diversification: A History of Tropical South American Rivers. Chapter 1:13-48. *In* L.R. Malabarba, R.E.Reis, R.P.Vari, C.A.S.Lucena and Z.M.S.Lucena eds. *Phylogeny and Classification of Neotropical Fishes*. Museu de Ciências e Tecnologia, PUCRS. Porto Alegre, Brazil.
40. **Lundberg, J. G.** 1998. The Temporal Context for Diversification of Neotropical Fishes. Chapter 2:49-68. *In* L.R. Malabarba, R.E.Reis, R.P.Vari, C.A.S.Lucena and Z.M.S.Lucena eds. *Phylogeny and Classification of Neotropical Fishes*. Museu de Ciências e Tecnologia, PUCRS. Porto Alegre, Brazil.
41. **Lundberg, J. G., M. Kottelat, G. R. Smith, M. Stiassny and T. Gill.** 2000. So Many Fishes, So Little Time: An Overview of Recent Ichthyological Discoveries in Fresh Waters. *Ann. Missouri Bot. Gard.* 87(1) 26-62.
42. **Lundberg, J. G. (text) and R. Troll (art).** 2001. Freshwater Riches of the Amazon. *Natural History Magazine, American Museum of Natural History*. September 2001.
45. **Lundberg, J. G. & M.W. Littmann.** 2003. Siluriformes: Family Pimelodidae - Long-whiskered catfishes. Pp. 437-452, *in* R. Reis, S. Kullander, S. & C. Ferraris (eds). *Check List Of Freshwater Fishes of South and Central Americas*. Porto Alegre, Edipucrs, 2003.
48. Cox Fernandes, C., J. Podos, J. G. **Lundberg.** 2004. Tributaries Enhance the Diversity of Electric Fishes in Amazon River Channels. *Science*, 304: 1960-1962.

50. Rodiles-Hernández, R., D. A. Hendrickson, J. G. **Lundberg** & J. M. Humphries. 2005. *Lacantunia enigmatica* (Teleostei: Siluriformes) a new and phylogenetically puzzling freshwater fish from Mesoamerica. *Zootaxa* 1000: 1–24.
52. **Lundberg**, J. G. and A. Akama. 2005. *Brachyplatystoma capapretum*, a new goliath catfish (Pimelodidae, Siluriformes) from the Amazon River, with a reclassification of allied species. *Copeia* 2005(3): 492-516.
59. Sullivan, J. P., J. G. **Lundberg** & M. Hardman. 2006. A Phylogenetic Analysis of the Major Groups of Catfishes (Teleostei: Siluriformes) Using Nuclear *rag1* and *rag2* Gene Sequences. *Molecular Phylogenetics and Evolution*. 41 (2006) 636–662.
61. Mabee, P. M., G. Arratia, M. Coburn, M. Haendel, E. J. Hilton, J. G. **Lundberg**, R. L. Mayden, N. Rios and M. Westerfield. 2007. Connecting evolutionary morphology to genomics using ontologies: A case study from Cypriniformes including zebrafish. *J. Exp. Zool. (Mol. Dev. Evol.)* 308B:1—13.
64. **Lundberg**, J. G., J. P., Sullivan, R., Rodiles-Hernández & D. A. Hendrickson. 2007. Discovery of African roots for the Mesoamerican Chiapas catfish, *Lacantunia enigmatica*, requires an ancient intercontinental passage. *Proceedings Academy of Natural Sciences, Philadelphia*. 156: 39--53.
68. Abell, R. M. L. Thieme, C. Revenga, M. Bryer, M. Kottelat, N. Bogutskaya, B. rian Coad, N. Mandrak, S. Contreras Balderas, W. Bussing, M. L. J. Stiassny, P. Skelton, G. R. Allen, P. Unmack, A. Naseka, R. Ng, N. Sindorf, J. Robertson, E. Armijo, J. V. Higgins, T. J. Heibel, E. Wikramanayake, D. Olson, H. L. López, R. E. Reis, J. G. **Lundberg**, M. H. Sabaj Pérez, and P. Petry. 2008. Freshwater Ecoregions of the World: A New Map of Biogeographic Units for Freshwater Biodiversity Conservation. *BioScience* 58(5): 403-414.
77. Cione, A. L., W. M. Dahdul, J. G. **Lundberg** & A. Machado-Allison 2009. An unusually large, fossil piranha-like fish (Characidae: Serrasalminae) from the late Miocene of Argentina. *J. Vertebrate Paleontology*. 29(2): 350-358.
78. **Lundberg**, 2009. Pimelodidae. p. 43-44. In: *Checklist of the Freshwater Fishes of the Guiana Shield*, R.P. Vari, C.J. Ferraris, Jr., A. Radosavljevic, V.A. Funk (eds.), *Bulletin of the Biological Society of Washington*, no. 17.
79. Parisi, B.M. and J.G. **Lundberg**. 2009. *Pimelabditus moli*, a new genus and new species of pimelodid catfish (Teleostei: Siluriformes) from the Maroni River basin of northeastern South America. *Notulae Naturae, Academy of Natural Sciences, Philadelphia*, 480:1-11.
80. **Lundberg**, J. G., M. H., Sabaj-Peréz, W. M. Dahdul & O. Aguilera. 2010. The Amazonian Neogene Fish Fauna. *in* C. Hoorn, F. Wesselingh, & H. Vonnhoff (eds). *Amazonia, Landscape and Species Evolution: A Look into the Past*. Wiley-Blackwell, Oxford.
81. Wesselingh, F.P., C.M. Hoorn, S.B. Kroonenberg, A. Antonelli, J.G. **Lundberg**, H. Vonnhoff & H. Hooghiemstra. 2010. On the origin of Amazonian landscapes and biodiversity: a synthesis. *in* C. Hoorn, F. Wesselingh, & H. Vonnhoff (eds). *Amazonia, Landscape and Species Evolution: A Look into the Past*. Wiley-Blackwell, Oxford.
82. Wilkinson, M.J., L.G. Marshall, J.G. **Lundberg**, & M.H. Kreslavsky. 2010. Megafan environments in northern South America and their impact on Amazon Neogene aquatic ecosystems. *in* C. Hoorn, F. Wesselingh, & H. Vonnhoff (eds). *Amazonia, Landscape and Species Evolution: A Look into the Past*. Wiley-Blackwell, Oxford.

83. Dahdul, W.M., Mabee, P.M., **Lundberg**, J.G., Midford, P.E., Balhoff, J.P., Lapp, H., Vision, T., Haendel, M.A., and Westerfield, M. 2010. The Teleost Anatomy Ontology: Anatomical representation for the genomics age. *Systematic Biology*, 50(4):369-683.
84. Dahdul, W.M., J.P., Balhoff, J. Engeman¹, T. Grande, E. J. Hilton, C. Kothari, J.G. **Lundberg**, P.E., Midford, H., Lapp, T., Vision, Westerfield, M. and P.M. Mabee. 2010. Evolutionary characters, phenotypes and ontologies: curating data from the systematic biology literature. *PloS One*, 5(5): e10708.
87. Rodiles-Hernández' R., J. G., **Lundberg** and J.P. Sullivan 2010. Taxonomic discrimination and identification of extant blue catfishes (Siluriformes:Ictaluridae: *Ictalurus furcatus* Group). *Proceedings of the Academy of Natural Sciences*. 159:67-82.
88. Hoorn. C., F.P. Wesselingh, H. ter Steege, M.A. Bermudez, Mora, J. Sevink, I. Sanmartín, Sanchez-Meseguer, C. L. Anderson, J.P. Figueiredo, C. Jaramillo, D. Riff, F.R. Negri, H. Hooghiemstra, J. **Lundberg**, T. Stadler, T. Sarkinen, A. Antonelli. 2010. In Press. Amazonia through time: Andean uplift, climate change, landscape evolution and biodiversity. *Science*. 330:927-931.

INVITED PRESENTATIONS (since 2008)

2008. New perspectives on global freshwater biogeography from atop the growing tree of catfish life. Keynote Address at South African Society of Systematic Biology, Drakensville South Africa.
2008. Plenary lecturer at biannual meeting of the Brazilian Society of Vertebrate Paleontology, Riberão Preto.
2008. Symposium speaker at Society of Vertebrate Paleontology, Cleveland.
2008. New views of global freshwater biogeography as seen from the top of the growing tree of catfish life. Rancho Santa Ana Botanical Garden, Claremont, CA.
2009. New views of global freshwater biogeography as seen from the top (and side branches) of the growing tree of catfish life. Univ. of Turku, Finland.
2009. Hotter than expected: the impacts of big inventories on understanding tropical fish diversity. Univ. of Turku, Finland.
2010. ASIH Past President's Plenary lecture. "Authentic American Cryptoichthyology", Joint Meeting of Ichthyologists and Herpetologists, Providence, Rhode Island, 7-12 July.
2010. Calvert Marine Museum, Solomons, MD. Fossil catfishes of North America and their evolutionary significance.
2010. Delaware Valley Paleontological Club, at ANSP, Calvert Marine Museum, Solomons, MD. Fossil catfishes of North America and their evolutionary significance.
2010. Harvey Mudd College, Claremont, CA., New perspectives on global freshwater biogeography from atop the growing tree of catfish life.
2011. Brazilian Society of Ichthyology, Manaus, AM, Current status and perspectives of biogeographic patterns of Neotropical fishes.

ELECTRONIC PUBLICATIONS AND PROJECTS

- 2002-present. Lundberg, J.G., K. Luckenbill, C. DoNascimento and M.W. Littmann. Catfish Bones: An On-Line Atlas of the Skeletal Anatomy of Catfishes

POSTDOCTORAL FELLOWS AND GRADUATE STUDENTS

Principal Advisor to Former Ph.D. Degree Students

- Gatz, A. John Jr. 1975. The ecology of fishes in three streams in North Carolina. 345 pp. Present position: Professor, Ohio Wesleyan University.
- Corcoran, Michael F. 1981. Geographic variation and evolutionary relationships of two species of bullhead catfishes (Siluriformes: Ictaluridae) in the southeastern United States. 178 pp. Present position: President, Gull Rock Services, environmental consulting firm.
- Lopéz-Rojas, Hector R. 1982. An analysis of the external form of the catfishes (Siluriformes: Teleostei). 256 pp. Present position: Professor, Universidad Central de Venezuela.
- Mabee, Paula. 1987. Evolutionary patterns and ontogenetic sequences in the centrarchid fishes 427 pp. Present position: Professor, University of South Dakota.
- Reinthal, Peter, N. 1987. Morphology, Ecology and behavior of a group of rock-dwelling cichlid fishes (Perciformes:Teleostei) from Lake Malawi, Africa, 304pp. Present position: Curator and Adjunct Professor, University of Arizona.
- Bornbusch, Alan H. 1988. Phylogeny of the catfish family Siluridae and its implications for the biogeography of Eurasia. Present position: International Grants Programs, American Association for the Advancement of Science.
- Westneat, Mark W. 1990. Systematics and jaw mechanism in cheline wrasses (Labridae). (Co-major Advisor with S.A. Wainwright). Present position: Associate Curator of Fishes, Department of Vertebrate Zoology, Field Museum of Natural History.
- Chen, Xiaoping. 1994. Systematics of the catfish family Amblycipitidae. Present position: Computer programmer, Ann Arbor, MI.
- Friel, John, P. 1994. Duke University. Systematics of the catfish family Aspredinidae. Assistant Curator of Ichthyology and Herpetology, Cornell University.
- Cox Fernandes, Cristina. 1995. Duke University. Community structure and diversity of the Gymnotiformes in the Amazon River. Adjunct Assistant Professor, University of Massachusetts, and Research Scientist, INPA, Manaus Brazil.
- Sullivan, John, P. 1997. Duke University. Phylogeny and electrobiological evolution in the South American knifefish genus *Hypopomus* (Hypopomidae). Postdoctoral Fellow, Academy of Natural Sciences, Philadelphia.
- Rapp Py-Daniel, Lúcia. 1997. University of Arizona. Systematics of the catfish family Loricariidae. Curator and Research Scientist, INPA, Manaus Brazil.
- Dahdul, Wasila, M. 2008. University of Pennsylvania. Morphology of modern and fossil serrasalmine fishes. Data Curator, NSF Bioinformatics Project, "Phenoscape", P. Mabee, PI, University of South Dakota.

Former and Current Postdoctoral Fellows

- Marsh-Matthews, Edith C. 1980-1981. Orinoco Fish Survey. Present Position: Associate Professor, University of Oklahoma.
- Rodiles-Hernandez, Rocio J. 2003-2004. All Catfish Species Inventory. Present Position: El Colegio de la Frontera Sur, MX.
- Sullivan, John P. 2005-2009. All Catfish Species Inventory. Present Position: Fullbright Scholar assigned in Kisingani, Democratic Republic of Congo.

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Dahdul, Wasila, M. 2008. All Catfish Species Inventory. Present Position: Data Curator, NSF Bioinformatics Project, “Phenoscape”, P. Mabee, PI, University of South Dakota.

Katriina Ilves. 2009-Present. Chaplin Postdoctoral Scientist, Academy of Natural Sciences.