

*Curriculum vitae*

**NATHAN K. LUJAN**

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**EDUCATION**

- 2002–2009**    **Ph.D. in Evolutionary Biology**    **Auburn University, Auburn, AL**  
• Dissertation: *Jaw morphofunctional diversity, trophic ecology, and historical biogeography of the Neotropical suckermouth armored catfishes (Siluriformes, Loricariidae)*  
• Advisor: Jonathan W. Armbruster
- 1995–2000**    **B.S. in Biological Sciences**    **Calvin College, Grand Rapids, MI**  
• Undergraduate theses: 1) *Fish trophic resource partitioning and ecomorphology in the Caves Branch River, Belize*; 2) *Woodland Period paleoecology of a Southwest Michigan pond based on 500-year old fish osteological remains*

**POSITIONS & POSTDOCTORAL TRAINING**

- 2019–present**    **Gerstner Scholar**    **American Museum of Natural History, New York, NY**  
• Phylogenomics and cranial diversification of the Neotropical catfish suborder Loricarioidei  
• Advisor: Scott A. Schaefer
- 2015–2018**    **Canada DFO Postdoctoral Fellow**    **University of Toronto Scarborough, Toronto, ON**  
• Riverscape genomics and metabarcoding of Great Lakes fishes  
• Advisors: Nathan R. Lovejoy & Nicholas E. Mandrak
- 2014–2015**    **NSF Postdoctoral Fellow**    **Academy of Natural Sciences, Philadelphia, PA**  
• Population genomics of an imperiled, rapids-dwelling fish community in the Amazon Basin  
• Advisors: John G. Lundberg (ANSP) & Brice P. Noonan (University of Mississippi)
- 2011–2014**    **NSF International Research Fellow**    **Royal Ontario Museum, Toronto, ON**  
• Molecular phylogenetics and biogeography of the Neotropical suckermouth armored catfishes  
• Advisors: Hernán López-Fernández (ROM) & Nathan R. Lovejoy (UofT Scarborough)
- 2009–2011**    **Postdoctoral Fellow**    **Texas A&M University, College Station, TX**  
• Taxonomic and trophic structure of river fish communities in Texas and South America  
• Advisor: Kirk O. Winemiller
- 2000–2002**    **Field Entomologist**    **Tennessee Valley Authority, Chattanooga, TN**  
• Application of macroinvertebrate- and fish-based Indices of Biotic Integrity

**TEACHING EXPERIENCE**

2006–09	Comparative Anatomy 3010	6 semesters (labs)	Auburn University, Auburn, AL
2007–08	Ecology 3060	2 semesters (labs)	Auburn University, Auburn, AL
2006	Principles of Biology 1020	1 semester (labs)	Auburn University, Auburn, AL
2004	A Survey of Life 1010	1 semester (labs)	Auburn University, Auburn, AL
2002–03	Genetics 3000	2 semesters (labs)	Auburn University, Auburn, AL
2001	Winter Stream Ecology 346	1 semester (labs)	AuSable Institute, Kalkaska, MI
2000	Aquatic Biology 322	1 semester (labs)	AuSable Institute, Kalkaska, MI

37. Roxo, F.F., L.E. Ochoa, M.H. Sabaj, **N.K. Lujan**, R. Covain, G.S.C. Silva, J. Chang, M.E. Alfaro, J.S. Albert, B.F. Melo, C. Oliveira. 2019. Phylogenomic reappraisal of the suckermouth armored catfish family Loricariidae (Teleostei: Siluriformes) using ultraconserved elements. *Molecular Phylogenetics and Evolution* *In press*.
36. Moody, E.K., **N.K. Lujan**, K.A. Roach, K.O. Winemiller. 2019. Threshold elemental ratios and the temperature dependence of herbivory in fishes. *Functional Ecology*. DOI: 10.1111/1365-2435.13301.
35. Armbruster, J.W., L. Greene, **N.K. Lujan**. 2018. Using morphology to test DNA-based phylogenetic relationships within the Guiana Shield catfish tribe Lithoxini (Siluriformes: Loricariidae). *Copeia* 106:671–681.
34. **Lujan, N.K.**, J.W. Armbruster, N.R. Lovejoy. 2018. Multilocus phylogeny, diagnosis and generic revision of the Guiana Shield endemic suckermouth armored catfish tribe Lithoxini (Loricariidae: Hypostominae). *Zoological Journal of the Linnean Society* 184:1169–1186.
33. Geda, S.R.\*, **N.K. Lujan\***, M.A. Perkins, E. Abernethy, M.H. Sabaj, and M.M. Gangloff. 2018. Multilocus phylogeny of the zebra mussel family Dreissenidae (Mollusca: Bivalva) reveals a fourth Neotropical genus sister to all other genera. *Molecular Phylogenetics and Evolution* 127:1020–1033. \*equal contributions
32. Collins, R.A., A.G. Bifi, R.R. De Oliveira, E.D. Ribeiro, **N.K. Lujan**, L.H. Rapp Py-Daniel, T. Hrbek. 2018. Biogeography and species delimitation of the rheophilic suckermouth-catfish genus *Pseudolithoxus* (Siluriformes: Loricariidae), with the description of a new species from the Brazilian Amazon. *Systematics and Biodiversity* 16:538–550.
31. Fitzgerald, D.B., M.H. Sabaj, L.M. Sousa, A.P. Gonçalves, L. Rapp Py-Daniel, **N.K. Lujan**, J. Zuanon, K.O. Winemiller, and J.G. Lundberg. 2018. Diversity and community composition of rapids-dwelling fishes of the Xingu River: Implications for conservation amid large-scale hydroelectric development. *Biological Conservation* 222:104–112.
30. Castiglione, G.M., F.E. Hauser, B.S. Liao, **N.K. Lujan**, A. Van Nynatten, J.M. Morrow, R.K. Schott, N. Bharracharyya, S.Z. Dungan, B.S.W. Chang. 2017. Evolution of nonspectral rhodopsin function at high altitudes. *Proceedings of the National Academy of Sciences* 114:7385–7390.
29. Roxo, F.F., **N.K. Lujan**, V.A. Tagliacollo, B.T. Waltz, G.S.C. Silva, C. Oliveira, J.S. Albert. 2017. Shift from slow- to fast-water habitats accelerates lineage and phenotype evolution in a clade of Neotropical suckermouth catfishes (Loricariidae: Hypoptopomatinae). *PLoS ONE* 12:1511–1529.
28. **Lujan, N.K.**, C.A. Cramer, R. Covain, S. Fisch-Muller, H. López-Fernández. 2017. Multilocus molecular phylogeny of the ornamental wood-eating catfishes (Siluriformes, Loricariidae, *Panaqolus* and *Panaque*) reveals undescribed diversity and parapatric clades. *Molecular Phylogenetics and Evolution* 109:321–336.
27. Silva, G. de Souza da Costa, F.F. Roxo, **N.K. Lujan**, V.A. Tagliacollo, C.H. Zawadski, C. Oliveira. 2016. Transcontinental dispersal, ecological opportunity and origins of an adaptive radiation in the Neotropical catfish genus *Hypostomus* (Siluriformes: Hypostominae). *Molecular Ecology* 25:1511–1529.
26. Armbruster, J.W., **N.K. Lujan**. 2016. A new species of *Peckoltia* from the Upper Orinoco (Siluriformes: Loricariidae). *ZooKeys* 569:105–121.
25. Winemiller, K.O., P. McIntyre, L. Castello, E. Fluet-Chouinard, T. Giarrizzo, S. Nam, I.G. Baird, W. Darwall, **N.K. Lujan**, I. Harrison, M.L.J. Stiassny, R.A.M. Silvano, D.B. Fitzgerald, F.M. Pelicice, A.A. Agostinho, L.C. Gomes, J.S. Albert, E. Baran, M. Petrere Jr., C. Zarfle, M. Mulligan, J.P. Sullivan, C. Arantes, L.M. Sousa, A.A. Koning, D.J. Hoeninghaus, M. Sabaj, J.G. Lundberg, J. Armbruster, M.L. Thieme, P. Petry, J. Zuanon, G. Torrente Vilara, J. Snoeks, C. Ou, W. Rainboth, C.S. Pavanelli, A. Akama, A. van Soesbergen, L. Sáenz. 2016. Balancing hydropower and biodiversity in the Amazon, Congo, and Mekong: Basin-scale planning is needed to minimize impacts in mega-diverse rivers. *Science* 351:128–129.
24. **Lujan, N.K.**, V. Meza-Vargas, V. Astudillo-Clavijo, R. Barriga-Salazar, H. López-Fernández. 2015. Multilocus molecular phylogeny for *Chaetostoma* Clade genera and species with a review of *Chaetostoma* (Siluriformes: Loricariidae) from the central Andes. *Copeia* 103:664–701. [Copeia's 2015 Best Paper by a Young Scholar in Ichthyology]
23. **Lujan, N.K.**, V. Meza-Vargas, R. Barriga-Salazar. 2015. Two new *Chaetostoma* group (Loricariidae:

- Hypostominae) sister genera from opposite sides of the Andes Mountains in Ecuador, with the description of one new species. *Copeia* 103:651–663.
22. **Lujan, N.K.**, J. Armbruster, N. Lovejoy, H. López-Fernández. 2015. Multilocus molecular phylogeny of the Loricariidae (Pisces: Siluriformes) with a focus on subfamily Hypostominae. *Molecular Phylogenetics and Evolution* 82A:269–288.
  21. Londoño-Burbano, A., S. Lefebvre, **N.K. Lujan**. 2014. A new species of *Limatulichthys* Isbrücker & Nijssen (Loricariidae: Loricariinae) from the western Guiana Shield. *Zootaxa*. 3884:360–370.
  20. **Lujan, N.K.**, S. Steele, M. Velasquez. 2013. A new distinctively banded species of *Panaqolus* (Siluriformes: Loricariidae) from the western Amazon Basin in Peru. *Zootaxa* 3691:192–198.
  19. **Lujan, N.K.**, K.A. Roach, D. Jacobsen, K.O. Winemiller, V. Meza Vargas, V. Rimarachín Chang, J. Arana Maestre 2013. Aquatic community structure across an Andes-to-Amazon fluvial gradient. *Journal of Biogeography* 40:1715–1728.
  18. **Lujan, N.K.**, H. Agudelo-Zamora, D.C. Taphorn, P.N. Booth, H. López-Fernández. 2013. Description of a new, narrowly endemic South American darter (Characiformes: Crenuchidae) from the central Guiana Shield highlands of Guyana. *Copeia* 2013:454–463.
  17. **Lujan, N.K.**, K.O. Winemiller, J.W. Armbruster. 2012. Trophic diversity in the evolution and community assembly of loricariid catfishes. *BMC Evolutionary Biology* 12:124. [Highly Accessed]
  16. Conway, K.W., **N.K. Lujan**, J.G. Lundberg, R.L. Mayden, D.S. Siegel. 2012. Microanatomy of the paired-fin pads of ostariophysan fishes (Teleostei: Ostariophysi). *Journal of Morphology* 273:1127–1149.
  15. **Lujan, N.K.**, J.W. Armbruster. 2012. Morphological and functional diversity of the mandible in suckermouth armored catfishes (Siluriformes: Loricariidae). *Journal of Morphology* 273:24–39.
  14. **Lujan, N.K.**, D.P. German, K.O. Winemiller. 2011. Do wood-grazing fishes partition their niche?: morphological and isotopic evidence for trophic segregation in Neotropical Loricariidae. *Functional Ecology* 25:1327–1338.
  13. **Lujan, N.K.**, J.W. Armbruster. 2011. A new basal Ancistrini genus and species from the Andes of Northern Peru (Siluriformes: Loricariidae). *Copeia* 2011:397–502.
  12. **Lujan, N.K.**, J. Birindelli. 2011. A new distinctively banded species of *Pseudolithoxus* (Siluriformes: Loricariidae) from the upper Orinoco River. *Zootaxa* 2941:38–46.
  11. **Lujan, N.K.**, J.W. Armbruster. 2011. Two new genera and species of Ancistrini (Siluriformes: Hypostominae) from the western Guiana Shield. *Copeia* 2011(2):216–225.
  10. **Lujan, N.K.**, M. Hidalgo, D.J. Stewart. 2010. Revision of *Panaque* (*Panaque*), with descriptions of three new species from the Amazon Basin (Siluriformes, Loricariidae). *Copeia* 2010(4):676–704. [Cover]
  9. **Lujan, N.K.**, M. Arce, J.W. Armbruster. 2009. A new black *Baryancistrus* with blue sheen from the upper Orinoco (Siluriformes: Loricariidae). *Copeia* 2009(1):50–56.
  8. **Lujan, N.K.**, C. Chamon. 2008. Two new species of Loricariidae (Teleostei: Siluriformes) from main channels of the upper and middle Amazon Basin, with discussion of deep water specialization in loricariids. *Ichthyological Exploration of Freshwaters* 19:271–282.
  7. **Lujan, N.K.** 2008. Description of a new *Lithoxus* (Siluriformes: Loricariidae) from the Guayana Highlands with a discussion of Guiana Shield biogeography. *Neotropical Ichthyology* 6:413–418.
  6. Rengifo, B., **N.K. Lujan**, D. Taphorn, P. Petry. 2008. A new species of *Gelanoglanis* (Siluriformes: Auchenipteridae) from the Marañon River (Amazon Basin), northeastern Peru. *Proceedings of the Academy of Natural Sciences of Philadelphia* 157:181–188.
  5. **Lujan, N.K.**, J.W. Armbruster, M.H. Sabaj. 2007. Two new species of *Pseudancistrus* from southern Venezuela (Siluriformes: Loricariidae). *Ichthyological Exploration of Freshwaters* 18:163–174. [Cover]
  4. Armbruster, J.W., L.A. Tansey, **N.K. Lujan**. 2007. *Hypostomus rhantos* (Siluriformes: Loricariidae), a new species from southern Venezuela. *Zootaxa* 1553:59–68.
  3. Armbruster, J.W., **N.K. Lujan**, D.C. Taphorn. 2007. Four new *Hypancistrus* (Siluriformes: Loricariidae) from Amazonas, Venezuela. *Copeia* 2007(1):62–79.

2. Werneke, D.C., M.H. Sabaj, **N.K. Lujan**, J.W. Armbruster. 2005. *Baryancistrus demantoides* and *Hemiancistrus subviridis*, two new uniquely colored species of catfishes from Venezuela (Siluriformes: Loricariidae). *Neotropical Ichthyology* 3:533–542.
1. Werneke, D.C., J.W. Armbruster, **N.K. Lujan**, D.C. Taphorn. 2005. *Hemiancistrus guahiborum*, a new suckermouth armored catfish from Southern Venezuela (Siluriformes: Loricariidae). *Neotropical Ichthyology* 3:543–548.

#### PEER-REVIEWED BOOK CHAPTERS (CLICK TO DOWNLOAD PDF)

5. Armbruster, J.W., P. van der Sleen, and **N.K. Lujan** 2017. Subfamily Rhinelepinae – pineapple plecos. pp. 259–287. *In*: P. van der Sleen and J. Albert, eds. A Field Guide to the Fishes of the Amazon – Fish Genera of the Amazon, Orinoco and Guianas. Princeton University Press, Princeton.
4. Armbruster, J.W., P. van der Sleen, and **N.K. Lujan** 2017. Subfamily Lithogeninae – climbing armored catfishes. pp. 286–287. *In*: P. van der Sleen and J. Albert, eds. A Field Guide to the Fishes of the Amazon – Fish Genera of the Amazon, Orinoco and Guianas. Princeton University Press, Princeton.
3. Armbruster, J.W., P. van der Sleen, and **N.K. Lujan** 2017. Subfamily Hypostominae – plecos and relatives. pp. 259–286. *In*: P. van der Sleen and J. Albert, eds. A Field Guide to the Fishes of the Amazon – Fish Genera of the Amazon, Orinoco and Guianas. Princeton University Press, Princeton.
2. **Lujan, N.K.** and K. Conway. 2015. Life in the fast lane: a review of rheophily in freshwater fishes. 2015 *in*: R. Riesch, M. Plath, M. Tobler, eds. Extremophile Fishes. Springer, Dordrecht.
1. **Lujan, N.K.** and J.W. Armbruster. 2011. The Guiana Shield. pp. 211-224 *In*: J. Albert, R. Reis, eds. Historical Biogeography of Neotropical Freshwater Fishes. University of California Press, Berkeley.

#### EDITORIALS (CLICK TO DOWNLOAD PDF)

7. **Lujan, N.K.** 2019. Shining light on larval fish diversity on reefs. *Journal of Fish Biology* 94: 209.
6. **Lujan, N.K.** 2019. After 175 years, a species proposed by Darwin and Jenyns is tested. *Journal of Fish Biology* 94:4.
5. Thomson, S.A., R.L. Pyle, S. Ahyong, and 181 signatories. 2018. Taxonomy based on science is necessary for global conservation. *PLoS Biology* 16: e2005075.
4. Harrison, I.J., J. Arroyave, **N.K. Lujan**, and J.F. Craig. 2017. Correct procedure for uploading information on new taxonomic names to ZooBank. *Journal of Fish Biology* 90:1167–1169.
3. Ceriaco, L.M., E.E. Gutiérrez, A. Dubois, and 490 signatories. 2016. Photography-based taxonomy is inadequate, unnecessary, and potentially harmful for biological sciences. *Zootaxa* 4196: 435–445.
2. **Lujan, N.K.**, and L. Page. 2015, February 27. Libraries of Life. *New York Times* OpEd highlighting the value of natural history museums and the need for greater public support.
1. **Lujan, N.K.**, D. Bloom, and C. Watson. 2013, January 17. Rumble in the Jungle. *New York Times* OpEd highlighting the impacts of artisanal gold mining in South America.

#### MANUSCRIPTS IN REVIEW OR PREPARATION

1. **Lujan, N.K.**, J.T. Weir, B.P. Noonan, N.R. Lovejoy, N.E. Mandrak. Is Niagara Falls a barrier to gene-flow in riverine fishes? A test using genome-wide SNP data from seven native species. *Molecular Ecology* **In review**.
2. **Lujan, N.K.**, J.W. Armbruster, D.C. Werneke, T.F. Teixeira, and N.R. Lovejoy. Phylogeny and biogeography of the Guiana Shield armored catfish *Corymbophanes* clade (Loricariidae), with descriptions of two new species and one new genus. *Zoological Journal of the Linnean Society* **In review**.
3. Foster, K., **N.K. Lujan**, R.M. Everts, B. Sidlauskas, H. López-Fernández, & D. Bloom. Molecular phylogenetics and habitat transitions of South American Darters (Characiformes: Crenuchidae). *Molecular Phylogenetics and Evolution* **In prep**.

#### AGENCY REPORTS (CLICK TO DOWNLOAD PDF)

- 2017 **Lujan, N.K.** A Metabarcoding Laboratory and Bioinformatics Protocol for the Identification of Early

- Life Stages of At-Risk and Invasive Fishes. Department of Fisheries and Oceans Canada.
- 2010 Winemiller, K.O., **N.K. Lujan**, R.N. Wilkins, R.T. Snelgrove, A.M. Dube, K.L. Skow, and A.G. Snelgrove. Status of Freshwater Mussels in Texas. Texas A&M Institute of Renewable Natural Resources. Texas A&M University.

#### INVITED SEMINARS

- 2019 **XV Congreso Colombiano de Ictiología, Medellín, Colombia**
- 2019 **Natural History Museum of Los Angeles, Los Angeles, CA**
- 2017 **II Symposium on Phylogeny and Classification of Neotropical Fishes, Londrina, Brazil**
- 2017 **XIV Congreso Colombiano de Ictiología, Cali, Colombia**
- 2016 **Aldrich Contemporary Art Museum, Ridgefield, CT**
- 2016 **University of Washington School of Aquatic and Fisheries Sciences, Seattle, WA**
- 2016 **Sacramento and San Francisco Aquarium Societies, CA**
- 2016 **Durham Region Aquarium Society, Toronto, Canada**
- 2015 **University of Mississippi Biology Department, Oxford, MS**
- 2015 **4<sup>th</sup> International L-Number Days, Hannover, Germany**
- 2015 **Catfish Cataclysm Convention, Madison, WI**
- 2015 **Catfish Study Group Convention, Wigan, United Kingdom**
- 2012 **University of Toronto Ecology and Evolutionary Biology Department, Toronto, Canada**
- 2010 **University of San Marcos Natural History Museum, Lima, Peru**
- 2010 **University of the Llanos Ezequiel Zamora, Guanare, Venezuela**
- 2010 **Texas A&M University Wildlife and Fisheries Sciences Department, College Station, TX**
- 2010 **Brazos Valley Aquarium Society, College Station, TX**
- 2007 **Midwest Cichlid Association, Des Moines, IA**
- 2005 **U.S. Embassy Lecture Series, Georgetown, Guyana**
- 2004 **Cumberland River Compact, Nashville, TN**

#### CONFERENCE PRESENTATIONS

- 2019 Gallage, K., N. Mandrak, N. Lovejoy, **N.K. Lujan**. Metagenomic approach to identify and quantify juvenile fish and eggs from the Great Lakes Basin. Canadian Conference for Fisheries Research, London, ON.
- 2018 Ortega-Lara, A., **N.K. Lujan**, A. Giraldo, F.A. Villa-Navarro. Sistemática de los bagres sapos de la familia Pseudopimelodidae (Siluriformes: Pimelodidae) en Colombia. V Congreso Colombiano de Zoología, Bogotá, Colombia.
- 2018 Meza, V.M., **N.K. Lujan**, R.E. Reis. How many genera are *Hemiancistrus*? Joint Meeting American Society of Ichthyologists and Herpetologists (JMIH), Rochester, NY.
- 2017 **Lujan, N.K.**, M.H. Sabaj, L.M. Sousa, M. Santos, L. Rapp Py-Daniel, J.G. Lundberg, B.P. Noonan. Comparative population genomics of seven fish taxa spanning rapids of the lower Xingu River, Amazonas Basin, Brazil. JMIH, Austin, TX.
- 2017 Armbruster, J.W., **N.K. Lujan**, D.C. Werneke, D.D. Bloom. The *Characidium declivirostre* group with description of two new species (Characiformes: Crenuchidae), JMIH, Austin, TX.
- 2016 Armbruster, J.W., **N.K. Lujan**, L. de Souza. The Proto-Berbice, an ancient river that influenced the modern distributions and conservation challenges of freshwater fishes throughout the western Guiana Shield. IV International Congress on Biodiversity of the Guiana Shield, Georgetown, Guyana.
- 2014 **Lujan, N.K.**, J. Armbruster, N. Lovejoy, & H. López-Fernández. Multilocus molecular phylogeny of the Loricariidae (Pisces: Siluriformes) with a focus on subfamily Hypostominae, JMIH, Chattanooga, TN.
- 2013 Lefebvre, S.L., **N.K. Lujan**, & H. López-Fernández. Morphology and diet correlations in Neotropical suckermouth armoured catfishes of the Hypostominae (Siluriformes: Loricariidae), JMIH, Albuquerque, NM.

- 2013 Castiglione, G.M., **N.K. Lujan**, & B.S.W. Chang. Complex patterns of selection in Andean mountain catfish rhodopsin, Society for Molecular Biology and Evolution, Chicago, IL.
- 2013 **Lujan, N.K.**, V. Meza, & R. Barriga. Systematic revision of *Chaetostoma* group genera and species (Loricariidae), Meeting of the Brazilian Society of Ichthyology, Maringá, Brazil.
- 2012 **Lujan, N.K.**, K.O. Winemiller, & J.W. Armbruster. Trophic diversity in the evolution and community assembly of loricariid catfishes, Joint Congress on Evolutionary Biology, Ottawa, ON.
- 2009 **Lujan, N.K.** The physics and chemistry of the loricariid trophic radiation, JMIH, Portland, OR.
- 2008 **Lujan, N.K.** Lower jaw functional and morphological diversity within Loricariidae, JMIH, Montreal, QC.
- 2007 **Lujan, N.K.** Biogeography and geology of the Venezuelan Guiana Shield, JMIH, St Louis, MO.
- 2007 Armbruster, J.W., L. de Souza, & **N.K. Lujan**. Repeated trends in the biogeography of loricariid catfishes, JMIH, St Louis, MO.
- 2007 Hidalgo, M., B. Rengifo, **N.K. Lujan**, J.W. Armbruster, & H. Ortega. Remarkable new loricariids from the Northern and Central Peruvian Amazon, JMIH, St Louis, MO.
- 2006 **Lujan, N.K.** New catfishes from the western Guiana Shield, JMIH, New Orleans, LA.
- 2006 **Lujan, N.K.** & J.W. Armbruster. Phylogenetically informative new loricariid genera from the Western Guyana Shield, JMIH, New Orleans, LA.
- 2005 **Lujan, N.K.** Catfishes of the Rio Ventuari, JMIH, Tampa, FL.
- 2005 Smith, M.E., **N.K. Lujan**, J. Humphries, & K. Luckenbill. Acoustic function of the encapsulated swimbladder of loricariid catfishes, JMIH, Tampa, FL.
- 2000 **Lujan, N.K.** Woodland Period paleoecology of a southwest Michigan pond reconstructed using 500-year-old fish osteological remains, Michigan Academy of Sciences, Lansing, MI.

#### POPULAR VIDEOS, INTERVIEWS, ARTICLES, WEBSITES AND MEDIA COVERAGE (CLICK TO ACCESS)

- 2018 **Leave taxonomy to the taxonomists and biologists: Q and A with Nathan Lujan:** Interview with the University of Toronto Scarborough regarding a PLoS Biology paper in which coauthors and I argue for the importance to biodiversity conservation of a traditional
- 2018 **Undiscovered Amazon: The Unexplored and Threatened Andean Headwater:** YouTube video produced by Krista DeMille about my research and conservation work in the Marañon River; >1,000 views in first six months.
- 2017 **Amazonas Magazine** (September/October): *Rediscovering a Lost Loricariid* article about a 2016 expedition I led to the upper Ireng River in southern Guyana, published in [English](#) and [German](#).
- 2016 **IUCN-Freshwater Fish Specialist Group Newsletter** (October): Article on field work, discoveries, and conservation threats from dams in the Marañon River of northern Peru.
- 2016 **International Rivers NGO:** River Guardian interview and profile by Margaret Zhou.
- 2015 **Amazonas Magazine** (May/June): Article entitled *New findings on the genetic relationships of the Hypostominae* by Ingo Seidel about my molecular phylogenetic research on the Loricariidae.
- 2014 **PBS Program Art21:** Online documentary on my collaboration with artist David Brooks, focusing on evolution, ecology, and conservation themed artwork displayed in New York and Switzerland.
- 2012-13 **PlanetXingu:** Public outreach and crowdfunding of field research in the Xingu River, Brazil with iXingu Project co-PIs Mark Sabaj, Leandro Sousa.
- 2007-13 **Practical Fishkeeping Magazine:** Thirteen online articles and interviews about my research with a cumulative total of over 41,000 page views.
- 2012 **ROM Magazine:** Article about a 2012 expedition I led to Ecuador.
- 2011 **Eddie Bauer First Ascent Blog:** Blog describing an Explorer's Club supported expedition that I led to Bolivia.
- 2005 **Fishes of Amazonas Website:** Online catalog of ichthyological discoveries in the upper Orinoco watershed of southern Venezuela (collaboration with M. H. Sabaj at ANSP).

#### PROFESSIONAL SERVICE

- 2018-present Taxonomy Advisor, IUCN-Species Survival Commission, Freshwater Fish Specialist Group.

- 2017-present Associate Editor of Taxonomy, Morphology and Biogeography, *Journal of Fish Biology*.  
 2015-present Member, IUCN-Species Survival Commission, Freshwater Fish Specialist Group.  
 2015-2017 Assistant Editor of Taxonomy and Morphology, *Journal of Fish Biology*.  
 2005-present Approximately one review a month for journals including: *African Journal of Ecology, Animals, Aquatic Conservation: Marine and Freshwater Ecosystems, Biological Journal of the Linnean Society, Checklist, Copeia, Environmental Biology of Fishes, Evolution, Freshwater Biology, Hydrobiologia, Journal of Fish Biology, Journal of Biogeography, Molecular Phylogenetics and Evolution, Neotropical Ichthyology, Physiology & Behavior, Scientific Reports, Systematics and Biodiversity, ZooKeys, and Zootaxa*.  
 2015 *Ad hoc* reviewer for the National Science Foundation – Division of Evolutionary Biology.  
 2013 Panelist for the National Science Foundation – Division of Evolutionary Biology.  
 2012 *Ad hoc* reviewer for the Austrian Science Foundation.

## GRANTS

- 2016 \$49,980 **Coypu Foundation:** Aquatic Biodiversity Survey of the Southern Colombian Andes.  
 2014 \$49,983 **Coypu Foundation:** Aquatic Biodiversity Survey of the Western Guiana Shield.  
 2013 \$526,000 **NSF DEB-1257813:** Baseline Survey of the Lower Xingu River Rapids, Brazil: a Highly Diverse, Globally Unique, and Immediately Imperiled Ecosystem (I was a grant postdoc and coauthor with co-PIs: J.G. Lundberg, K.O. Winemiller, and M.H. Sabaj).  
 2013 \$11,400 **Planet Xingu:** Aquarium fish hobbyist crowd-funding of research in the Xingu River, Brazil (co-PIs: M.H. Sabaj-Pérez, L.M. Sousa, J. Dignall).  
 2012 \$45,570 **Coypu Foundation:** Aquatic Biodiversity Survey of the Southern Ecuadorian Andes.  
 2011 \$158,300 **National Science Foundation (OISE-1064578):** International Research Fellowship: 2-year postdoctoral fellowship for research at the Royal Ontario Museum, Toronto, Canada.  
 2011 \$8,333 **Explorers Club–Eddie Bauer: Grant for Expeditions:** Aquatic Inventory of the Rio Mamoré.  
 2009 \$36,750 **Coypu Foundation:** Aquatic Biodiversity Survey of the Southern Peruvian Andes.  
 2009 \$18,000 **National Geographic Committee for Research and Exploration (#8721-09):** A Lost Watershed in the Lost World: Searching for Genetic Evidence of the Proto-Berbice in Fishes of the Upper Orinoco.  
 2004-7 \$18,237 **Sub-awards of NSF DEB-0315963:** All Catfish Species Inventory (ACSI): Total of four sub-awards for fieldwork in Peru, Venezuela, and Uganda.

## FIELD EXPERIENCE

- 2002–18 Collection of over 10,000 lots and 6,000 tissues of fishes and macroinvertebrates using dip-, cast-, seine-, trawl-, and gill-nets, electrofishers, rotenone, and hook and line in rivers and streams throughout Canada, the United States, Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Uganda, and Venezuela. Nineteen international expeditions conducted to date.  
 2000–02 Macroinvertebrate-based indices of biotic integrity (IBI) using Hess and Surber samplers and fish-based IBIs using seines, backpack-, and boat-electrofishers in streams and rivers throughout the Tennessee River Valley, including: Alabama, Kentucky, Georgia, North Carolina, Tennessee, and Virginia.  
 1999 Fish ecology and ethology studies using snorkel, cast-net and seine in the Caves Branch River, Sibun River Watershed, Belize.

## TECHNICAL CONSULTING

- 2014–15 **Ecuador: Dué River and Normandía Hydroelectric Projects:** I provided technical guidance to the Inter-American Development Bank and private companies regarding the diversity and distribution of fish species near two proposed hydroelectric plants.  
 2011–13 **Guyana: Amaila Falls Hydroelectric Project:** I provided technical guidance to the Inter-American Development Bank and private companies regarding the diversity and distribution of fish species near

a proposed hydroelectric plant. This included modifications to project design, supervision of mixed teams of scientists and local guides under arduous field conditions, collection and statistical analysis of specimens and ecological data, drafting of reports, and resolution of Critical Natural Habitat concerns for an endemic fish species found within the project's area of influence.

2012 **Perú: Chaglla Hydroelectric Power Plant:** I provided technical guidance to the Inter-American Development Bank and private companies regarding the design and execution of the environmental impact survey, taxonomic identification of species found within the project's area of influence, and resolution of Critical Natural Habitat concerns for fish species found within the project's area of influence.

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## **PROFESSIONAL REFERENCES**

Available upon request.