

# CURRICULUM VITAE

## CAROLINE C. ARANTES

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### EDUCATION

**PhD 2017** *Wildlife and Fisheries Sciences*, Texas A&M University, Department of Wildlife and Fisheries Sciences and Applied Biodiversity Sciences (multi-disciplinary doctoral program), College Station, TX, USA. Period: 2012-2017. **Dissertation title:** "Fish diversity, biomass and trophic dynamics in relation to landscape gradients in the floodplains of the Amazon River." 185 p. Advisor: Kirk O. Winemiller.

**Masters 2009** in *Applied Zoology*, Universidade Estadual de Santa Cruz, Department of Exact Sciences and Technology, Ilhéus, Bahia, Brazil. Period: 2007-2009. **Thesis title:** "Arapaima *Arapaima gigas* (Schinz, 1822) ecology in the floodplain of the Mamirauá Sustainable Development Reserve, Amazonas, Brazil." 85 p. Advisor: Mauricio Cetra.

**Bachelors 2003** in *Oceanography*, Universidade Estadual do Rio de Janeiro, Department of Oceanography, Rio de Janeiro, Brazil. Period: 1999-2003. **Thesis title:** "Opening of the São Bento Channel, Maricá Lagoon complex, RJ: Evaluation of the impact on the ichthyofauna." 45 p. Advisor: Sandra Sergipense.

**Languages:** Portuguese; English

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### EMPLOYEMENT

2020 - present	West Virginia University. Division Forestry and Natural and Resources. Wildlife and Fisheries Resources Program. <b>Assistant Professor</b>
2018 - 2020	Michigan State University. Center for Global Change and Earth Observations. <b>Research Associate/Postdoctoral Researcher</b>
2012 - 2017	Texas A&M University, Department of Wildlife and Fisheries Science and Applied Biodiversity Sciences multi-disciplinary doctoral program. <b>Research Assistant</b>
2009 - 2012	Amazon Environmental Research Institute (IPAM/Projeto Várzea), Santarém, Pará, Brazil. <b>Fisheries Scientist</b>
2004 - 2009	Fisheries Management Program. Mamirauá Institute for Sustainable Development (IDSM), Tefé, Amazonas, Brazil. <b>Fisheries Scientist</b>
2003 - 2004	Laboratory of Fisheries Resources. Department of Marine Biology. Universidade Federal do Rio de Janeiro (UFRJ), RJ, Brazil. <b>Research Assistant</b>
2002 - 2003	Fish Ecology Laboratory. Department of Animal and Plant Biology. Universidade do Estado do Rio de Janeiro (UERJ), RJ, Brazil. <b>Research Assistant</b>
2000 - 2001	Center for Research on Mangroves. Center for Technology and Science, Department of Oceanography and Hydrology. Universidade do Estado do Rio de Janeiro (UERJ), RJ, Brazil. <b>Research Assistant</b>

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## RESEARCH PROJECTS (most relevant only)

2021 - present	Developing an assessment of climate change vulnerability for aquatic fauna in West Virginia watersheds. Funded by WVU WRI and Research and Scholarship Advancement (RSA). PIs: C. Arantes, B. Murry, J. Anderson, W. Veselka. MS student: Joseph Molina.
2021 - present	Developing an assessment of factors driving and limiting invasive carp distributions. Project: Evaluation of potential factors limiting the expansion of Invasive Carp in the Ohio and Tennessee-Cumberland River basins: lessons to apply to the upper Mississippi. Funded by USGS. PIs: B. Murry, C. Arantes. PhD student: Erin Shepta; MS student: Luka Marques.
2021 - present	Working in collaboration with WVU DNR to understand aquatic ecology responses to dam removal in WV. Project: Impacts of dam removal at the West Fork River, WV. Funded by USDA National Institute of Food and Agriculture, McIntire Stennis project [1026124]. PI: Drs. C. Arantes, MS Student: Katherine Adase.
2018 - present	Working in collaboration with an interdisciplinary team dedicated to investigating hydropower impacts on fisheries and freshwater ecosystems within the context of the water-energy-food nexus in the Amazon. Projects: Rethinking dams: Innovative hydropower solutions to achieve sustainable food and energy production and sustainable communities. Social and Environmental Processes that occur after the Construction of Belo Monte, Jirau and Santo Antonio in Brazilian Amazonia. Funded by NSF INFEWS Program and FAPESP/Brazil. PI: Dr. Emilio F Moran (Arantes CC, Laufer J, et al. 2022, Arantes et al. 2023).
2012 - present	Developing a research program that aims to understand and model how land cover changes impact Amazon floodplain fish biodiversity and fisheries (Arantes et al. 2018, 2019). Funded by Instituto Mamirauá (PI: C. Arantes) and Conselho Nacional de Pesquisas (CNPq) (PI: Miguel Petrere). MS Students: Poliane Batista, Sam Grinstead.
2014 - 2017	Investigated fish assemblages and food web dynamics in the floodplains of the Guadalupe River, TX, USA (Bower et al. 2019, Winemiller et al. 2022). Funded by Texas Park and Wildlife. PI. Dr. Kirk Winemiller.
2016 - 2017	Collaborated with Aby Sène-Harper and David Matarrita-Cascante to investigate relationships between inland fisheries and livelihood diversification and institutions and resource exploitation in the Senegal River Delta (Sène-Harper A, Matarrita-Cascante D, Arantes CC. In review).
2009 - 2021	Developed a multidisciplinary assessment of the arapaima populations, their fishery, and governance institutions in the lower Amazon, Brazil (Arantes et al 2021.; Castello, Arantes et al. 2014; Cavole, Arantes and Castello 2015).
2008 - 2010	Investigated the environmental factors affecting the spatial distribution and abundance of arapaima in floodplains of the Amazon (Arantes et al. 2013). Funded by IEEB - Instituto Educacional Edward Bertholini and Instituto Mamirauá (PI: C. Arantes).
2005 - 2009	Developed studies assessing possible density-compensatory effects on body growth and size at first reproduction of arapaima at markedly different population densities (Arantes et al. 2010).
2005 - 2009	Developed an empirical population dynamics model of arapaima populations (Castello, Stewart and Arantes 2011).
2006 - 2007	Evaluated the accuracy and precision of population censuses of arapaima done by fishers based on their own traditional knowledge (Arantes et al. 2007).
2006	Evaluated region-wide historical trends in arapaima populations (Arantes et al. 2006).
2003 - 2004	Evaluated the impacts of the shrimp fishing fleet on fish communities in the Guanabara Bay, Rio de Janeiro, Brazil.

2001 - 2003	Biology and ecology of estuarine fish communities. Developed studies on feeding, reproduction, and influences of water physical-chemical variables on fishes and their assemblages structure.
2000 - 2001	Evaluated the use of mangroves as indicators of variations in mean sea level, and analyzed the zonation and succession of plant species in coastal areas.

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## PUBLICATIONS

### Peer-Reviewed Journal articles

32. **Arantes CC**, Laufer J, Mayer A, Moran EF, Sant'Anna IR, Dutka-Gianelli J, Lopez MC, Doria CR. 2023. Large-scale hydropower impacts and adaptation strategies on rural communities in the Amazonian floodplain of the Madeira River. *Journal of Environmental Management*. 15;336:117240. doi.org/10.1016/j.jenvman.2023.117240.
- \*31. Cajado RA, Zacardi DM, **Arantes CC**, Oliveira LS, Silva FK, Andrade MC. 2023. Seasonal patterns of the fish larvae assemblage structure in the lower Amazon River. *Freshwater Biology*. 68(7), 1252-1266.
30. Winemiller KO, Andrade MC, **Arantes CC**, Bokhutlo T, Bower LM, Cunha ER., ... & Robertson CR. 2022. Can spatial food web subsidies associated with river hydrology and lateral connectivity be detected using stable isotopes? *Food Webs*, e00264.
- \*29. Pereira DV, **Arantes CC**, Nolan KS, Carlos CEC. 2022. Relationships between fishery yields and the landscape components along a longitudinal gradient in floodplains of the Amazon River. *Fisheries Research*. 106521
28. Correa SB, van der Sleen P, Siddiqui SF, Bogotá-Gregory JD, **Arantes CC**, Barnett AA, Couto TBA, Goulding M, Anderson EP (2022). Biotic Indicators for Ecological State Change in Amazonian Floodplains. *BioScience*, 72(8), 753-768. doi.org/10.1093/biosci/biac038
27. Keppeler FW, Andrade MC, Trindade PA, Sousa LM, **Arantes CC**, Winemiller KO, ... Giarrizzo T. 2022. Early impacts of the largest Amazonian hydropower project on fish communities. *Science of the Total Environment*, 155951. https://doi.org/10.1016/j.scitotenv.2022.15595126.
- \*26. Pinto DM; Pinto VA; Santa'anna IRA, **Arantes CC**, Doria CR. 2022. Changes in fishing dynamics in communities affected by large hydroelectric dams in the Amazon. *Research, Society and Development*, [S. l.], v. 11, n. 6, p. e3211628775. DOI: 10.33448/rsd-v11i6.28775.
25. **Arantes CC**, Laufer J, da Silva Pinto MD, Moran EF, Lopez MC, Dutka-Gianelli J, Pinto DM, Chaudhari S, Pokhrel Y, Doria CR. 2022. Functional responses of fisheries to hydropower dams in the Amazonian Floodplain of the Madeira River. *Journal of Applied Ecology*. https://doi.org/10.1111/1365-2664.14082
24. **Arantes CC**, Castello L, Basurto X., Angeli N, Sene-Harper A., McGrath DG. 2021. Institutional effects on ecological outcomes of community-based management of fisheries in the Amazon. *Ambio*, 1-13. https://doi.org/10.1007/s13280-021-01575-1
- \*23. Pereira SA, da Silva RA, Campos-Silva JV, **Arantes CC**. 2021. Assessing biological traits of Amazonian high-value fishes through local ecological knowledge. *Hydrobiologia*, 848(10), 2483-2504. https://doi.org/10.1007/s10750-021-04569-y
- \*22. Silva PB, **Arantes CC**, Freitas CE, Petrere Jr M, Ribeiro FR. 2020. Seasonal hydrology and fish assemblage structure in the floodplain of the lower Amazon River. *Ecology of Freshwater Fish*. https://doi.org/10.1111/eff.12572 21.
21. Schons S, Arantes CC, Cobourn K, Amacher G. 2020. Benefits of Community Fisheries Management to Individual Households in the Floodplains of the Amazon River in Brazil. *Ecological Economics*. 169, 106531.
20. **Arantes CC**, Winemiller K, Asher A, Castello L, Hess, L Petrere M, Freitas C. 2019(a). Floodplain land cover affects biomass distribution of fish functional diversity in the Amazon River. *Scientific Reports*. 9, 16684

19. **Arantes CC**, Fitzgerald D, Winemiller K. 2019(b). Impacts of hydroelectric dams on fishes and fisheries in tropical rivers through the lens of functional traits. *Current Opinion in Environmental Sustainability*. 37:28-40.
18. Oberdorff T, Dias MS, Jézéquel C, Albert JS, **Arantes CC** and 21 other authors. 2019. Unexpected fish diversity gradients in the Amazon Basin. *Science Advances*. 5: eaav8681
17. **Arantes CC**, Winemiller K, Petrere M, Freitas ECC. 2019(c). Spatial variation in aquatic food webs in the Amazon River floodplain. *Freshwater Science*. 38: 213-228.
16. Gurdak D, Stewart D, Castello L, **Arantes CC**. 2019. Diversity in reproductive traits of arapaima (*Arapaima* spp., Müller) in Amazonian várzea floodplains: conservation implications. *Aquatic Conservation*. 29 (2):245-257.
15. Bower LM, Keppeler FW, Cunha ER, Morales YQ, Saenz DE, Lopez EO, Bokhutlo T, **Arantes CC**, Andrade M, Robertson C, Winemiller K. 2019. Effects of hydrology on fish diversity and assemblage structure in a Texan coastal plains river. *Transactions of the American Fisheries Society*. 148: 207-218.
14. **Arantes CC**, Winemiller K., Petrere M, Castello L, Freitas C, Hess, L. 2018. Relationships between forest cover and fish diversity in the Amazon River. *Journal of Applied Ecology*. 55:386–395.
13. Castello, L, Isaac V, Hess Laura, Thapa Ram, **Arantes CC**, McGrath DG, Reno V. 2018. Fishery yields vary with land cover on the Amazon River floodplain. *Fish and Fisheries*. 00:1–10.
12. Carvalho Freitas CE, Laurenson L, Yamamoto KC, Forsberg BR, Petrere M Jr, **Arantes CC**, Siqueira-Souza FK. 2018. Fish species richness is associated with the availability of landscape components across seasons in the Amazonian floodplain. *PeerJ* 6:e5080
11. Winemiller K, **Arantes CC**, and 30 other authors. 2016. Balancing hydropower and biodiversity in the Amazon, Congo and Mekong. *Science* 351: 128-129.
- \*10. Cavole, L, **Arantes CC**, Castello L. 2015. How illegal are tropical small-scale fisheries? An estimate for arapaima in the Amazon. *Fisheries research*. 168: 1–5.
9. Castello L., **Arantes CC**, D.G McGrath, DJ Stewart, FS Sousa. 2014. Understanding fishing-induced extinctions in the Amazon. *Aquatic Conservation: Marine and Freshwater Ecosystems*. DOI: 10.1002/aqc.2491.
8. **Arantes CC**, Castello L, Cetra M, Shilling A. 2013. Environmental factors and distribution of arapaima in floodplains of the Amazon. *Environmental Biology of Fishes*. 96: 1257-1267
7. Castello L, McGrath DG, **Arantes CC**, Almeida O. 2013. Accounting for heterogeneity in small-scale fisheries management: The Amazon case. *Marine Policy* 38: 557–565.
6. Castello L, McGrath DG, Coe MT, Hess LL, Petry P, Reno V, **Arantes CC**. 2013. The vulnerability of Amazon wetlands. *Conservation Letters*. 0: 1–13.
5. Castello L, Stewart DJ, **Arantes CC**. 2011. Modeling population dynamics and conservation of Arapaima in the Amazon. *Reviews of Fish Biology and Fisheries* 21: 623-640.
4. **Arantes CC**, Castello L, Stewart DJ, Cetra M, Queiroz HL. 2010. Effects of population density on growth and reproduction of arapaima in an Amazonian river-floodplain. *Ecology of Freshwater Fish* 19(3): 455-465.
3. **Arantes CC**, Castello L, Serqueira DG. 2007. Variation among counts of *Arapaima gigas* (Schinz, 1822) (Osteoglossomorpha, Osteoglossidae) done by fishers individually in Mamirauá, Brazil. (in Portuguese). *Pan-American Journal of Aquatic Sciences* 2: 263-269.
- \*2. Hercos A, **Arantes CC**, Amaral MX. 2007. Fish collection of the Mamirauá Institute for Sustainable Development. (Original title in Portuguese). *Uakari* 3: 37-48.

1. **Arantes CC**, Garcez DS, Castello L. 2006. Densities of the arapaima (*Arapaima gigas*), Teleostei, Osteoglossidae) in lakes of Sustainable Development Reserves Mamirauá and Amanã, Amazonas, Brazil (in Portuguese). *Uakari* 2: 37-43.

\*Denotes student paper

## Book review

**Arantes CC**. 2018. Book Review: Field Guide to the Fishes of the Amazon, Orinoco and Guianas. By P. van der Sleen & J. S. Albert (Eds). 464 pp. Published by Princeton University Press, Princeton, USA, 2018. ISBN: 9780691170749. *Journal of Fish Biology*. 92: 2047–2048. <https://doi.org/10.1111/jfb.13642>

## Book chapters & scientific peer-reviewed reports

Dutka-Gianelli J, Sant'Anna I, Sousa AST, Mendonca PD, Laufer J, **Arantes CC**, Doria CRC. 2022. Navigating conflicts to improve livelihoods of traditional communities impacted by hydroelectric dams. Chapter in Jentoff, S. et al. (eds) Blue justice: small-scale fisheries in a sustainable ocean economy. Ebook MARE Publication Series, Springer. <https://link.springer.com/book/9783030896232>

Barlow J Sist P, Almeida R, **Arantes CC**. et al. 2021. Restoration Options for the Amazon. Chapter 28: Science Panel for the Amazon Assessment Report 2021. <https://www.theamazonwewant.org/amazon-assessment-report-2021>.

Barlow J, Sist P, Almeida R, **Arantes CC**. et al. 2021. Conservation Measures to Counter the Main Threats to Amazonian Biodiversity. Chapter 27: Science Panel for the Amazon Assessment Report 2021. <https://www.theamazonwewant.org/amazon-assessment-report-2021>.

Barlow J, Sist P, Almeida R, **Arantes CC**. et al. 2021. Restoration Priorities and Benefits within Landscapes and Catchments and Across the Amazon Basin. Chapter 29 in: Science Panel for the Amazon Assessment Report 2021. <https://www.theamazonwewant.org/amazon-assessment-report-2021>.

Gurdak DJ, **Arantes CC**, Castello L, Stewart DJ, Watson LC. 2019. Evidence of Recoveries from Tropical Floodplain Fisheries: Three Examples of Management Gains for South American Giant Arapaima. In Charles Krueger, William Taylor, So-Jung Youn (Eds). From Catastrophe to Recovery: Stories of Fish Management Success.

Lynch AJ, Beard TD Jr., Cox A, **Arantes CC**, Brummet RE, Cramwinckel JF, Gordon L, Liu J, Nguyen PH, Safari PK, Zarnic Z. 2016. Drivers and Synergies in the Management of Inland Fisheries: Searching for Sustainable Solutions. Proceedings of the 2015 Global Inland Fisheries Conference. Rome, Italy.

**Arantes CC**, Castello L. 2014. Implicações da biologia, ecologia e contagens para o manejo do pirarucu. p. 33-42 In: Amaral E. (Org). Biologia, conservação e manejo participativo de pirarucus na Pan- Amazônia. Tefé: IDSM, 2013. 278 p.

Castello L, **Arantes CC**, Sarmento F, McGrath DG. 2014. Recuperando a pesca do pirarucu no baixo Amazonas, Brasil. p. 207-211. In: Amaral E. (Org). Biologia, conservação e manejo participativo de pirarucus na Pan- Amazônia. Tefé: IDSM, 2013. 278 p.

Castello L, Stewart D, **Arantes CC**. 2014. O que sabemos e precisamos fazer a respeito da conservação do pirarucu (*Arapaima* spp.) na Amazônia. p. 17-31. In: Amaral E. (Org). Biologia, conservação e manejo participativo de pirarucus na Pan- Amazônia. Organizado por Ellen Amaral. Tefé: IDSM, 2013. 278 p.

Peralta N, Amaral E, **Arantes CC**, Torres A, Soares I. 2013 Hacia el Manejo de las Pescarías en la Cuenca Amazonica, Chapter: Principales acciones y lecciones aprendidas con la gestion participativa del paiche de Mamirauá, Publisher: Instituto del Bien Comun, Editors: Luis Collado, Edgardo Castro, Max Hidalgo, pp.101-115

Da Silveira R, **Arantes CC**, Castello L. 2012. Conservação de pirarucus e de crocodilianos no Amazonas: avaliação crítica do histórico de exploração e diretrizes para o manejo econômico na Amazônia brasileira, p. 343-361. In: Marcon, J.L.; Menin, M.; Araújo, M.G.P.; Hrbek, T. (Orgs). Biodiversidade Amazônica: caracterização, ecologia e conservação. Edua, Manaus. ISBN: 978-85-7401-687-0.

- Amaral ESR, **Arantes CC**. 2008. Arowana fisheries (*Osteoglossum bicirrhosum*) in the region of Tefé, Middle Solimões (original title in Portuguese). In: Biology, conservation and management of Aruanãs in the Brazilian Amazon. H. Queiroz and M. Camargo (Eds), IDSME, Tefé, Brazil.
- Vianna JP, Castello L, Damasceno JMB, Amaral ESR, Estupiñán GMB, **Arantes CC**, Batista GS, Garcez D, Barbosa S. 2007. Community-Based Management of Arapaima in the Mamirauá Sustainable Development Reserve – Amazonas, Brazil. In: Aquatic Protected Areas as Fisheries Management Tools. 1 ed. Brasília: Ministério do Meio Ambiente, v.4, p. 245-267.

### Submitted Manuscripts

- Sène-Harper A, Matarrita-Cascante D, **Arantes CC**. In review. Fisheries Institutions, Livelihood Diversification and Sustainable Resource Exploitation in the Senegal River Delta. *Environmental Conservation*.
- Harrell J, Welsh S, Smith D, **Arantes CC**, Wellman D. In review. Smallmouth bass population characteristics and an evaluation of management responses in two West Virginia watersheds. *Journal of the Southeast Association of Fish and Wildlife Agencies*.
- Mandai SS, Branco EA, Moretto EM, Johansen IC, **Arantes CC**, Barros J., Alves GP, Moran E. In review. Two decades of deforestation threats surrounding large dams in Amazonian Protected Areas. *Journal of Environmental Management*.
- Johansen, Calvi, Lu, Corrêa, **Arantes CC**. In review Large hydropower dams' construction is associated with poverty and food insecurity in the Brazilian Amazon: the case of Belo Monte dam. *Food Security*.

### Manuscripts in progress

- Moran E, **Arantes CC**, and 5 other authors. In prep. Beyond the pro- and anti-dam divide: building a new governance model for hydropower. Target Journal: *PNAS*
- Reis V, **Arantes CC**, Doria C. Isaac V. In prep. Spatio-temporal responses of fishery yields to multiple stressors in the Xingu River. Target journal: *Fish and Fisheries*.
- Villamayor, **Arantes CC**, et al. A global bottom-up multi-stakeholder process to energetic development. Target journal: *PNAS*.

### Abstracts in Conference Proceedings

- Arantes CC**. Functional responses of fisheries to hydropower dams in the Amazonian Floodplain of the Madeira River. 2022. Joint Aquatic Sciences Meeting (JASM), Grand Rapids, MI, USA.
- Arantes CC**, Fitzgerald D, Hoeinghaus J. D, Winemiller K. 2019. Impacts of hydroelectric dams on fishes and fisheries in tropical rivers through the lens of functional traits. 149th Annual Meeting of the American Fisheries Society, Reno, Nevada, USA.
- Laufer J, **Arantes CC**, Pinto, MDS, Moran EF, Lopez MC, Dutka-Gianelli J, Mendonça D, Brasil S, Doria CRC. 2019. Dams and its impacts on fisheries in the Amazonian Floodplain of the Madeira River. 149th Annual Meeting of the American Fisheries Society, Reno, Nevada, USA.
- Arantes CC**. 2019. Fish diversity, biomass and trophic dynamics in relation to landscape gradients in the floodplain of the Amazon River. XXIII Brazilian Ichthyology meeting, Belem, Brazil.
- J. Dutka-Gianelli, M. Lopez, S. Brasil, I. Sant'Anna, D. Mendonça, **Arantes CC**, J. Laufer, and E. Moran. 2019. Understanding collaborative strategies to improve livelihoods of traditional communities impacted by hydroelectric dams. XVII Biennial IASC Conference 'In Defense of the Commons: Challenges, Innovation, and Action', Lima, Peru.

- Arantes CC**, Winemiller K. 2018. Land cover and fish assemblages in the Amazon River floodplain. Freshwater Science Meeting. Detroit, Michigan, United States.
- Winemiller K., Andrade M, **Arantes CC**, and other 9 authors. 2018. Potential Influence of Exchanges between the Lower Guadalupe River and Oxbow Lakes on Food Web Dynamics. Texas Chapter American Fisheries Society. College Station, TX, United States.
- Arantes CC**, Winemiller K. 2017. Fish Biomass and functional diversity are positively associated with forest cover in the Amazon River Floodplains. The International Symposium on Flood Pulse Ecosystems. Seam Reap, Cambodia.
- Arantes CC**, Winemiller K. 2017 Relationship between forest cover and fish diversity in the Amazon River. Joint Meeting of Ichthyologists and Herpetologists. Austin, TX, United States.
- Arantes CC**, Winemiller K. 2017. Forest extent determines spatial patterns of fish biodiversity in floodplains of the Amazon. XXII Brazilian Ichthyology meeting, Porto Seguro, Brazil.
- Arantes CC**, Castello L, Sene-Harper A, Angeli N, McGrath D. 2015. Measuring the development of community-based management in the Amazon. Global Inland Fisheries Conference. FAO. Rome, Italy.
- Batista P, **Arantes CC**. 2015. Influence of dry season intensity on fish communities and fisheries in the Amazon (original title in Portuguese). Brazilian Ichthyology meeting. XXI EBI, Recife, Brazil.  
*\*Student abstract and oral presentation*
- Guimaraes LAK, **Arantes CC**, Oliveira JA, Rodrigues RR. 2015. Contributions to DNA bar coding: collection of Amazonian fish tissues for genetic and taxonomic studies. Brazilian Ichthyology meeting. XXI EBI, Recife, Brazil.  
*\*Student abstract and poster presentation*
- Arantes CC**, Winemiller, K.O., Petrere, M., Castello, L., Freitas, C.E. 2014. Influence of deforestation on fisheries in the Amazon floodplains. Proceedings of the Joint Meeting of Ichthyologists and Herpetologists. Chattanooga, Tennessee, United States.
- Arantes CC**, Castello L, Sene-Harper A, Angeli N, McGrath D. 2014. Measuring the development of community-based conservation in small-scale fisheries in the Amazon. Proceedings of the 2nd World Small-Scale Fisheries Congress, Merida, Mexico.
- Arantes CC**. 2013. Environmental influences on the distribution of arapaima in Amazon floodplains. 2013 Texas Chapter of the American Fisheries Society Proceedings, Houston, TX, United States.
- Sene-Harper A, **Arantes CC**, Angeli N. Measuring the collective action in managing small-scale fisheries in the Lower Amazon Basin of Brazil, Ecological Integration Symposium 2013, College Station, TX, United States.
- Arantes CC**, Amaral ESR. 2009. Aspects of fisheries, biology and population dynamics of the Arapaima (*Arapaima gigas*) before and after management of the species. (Original title in Portuguese). In: V Annual Research Seminar, Mamirauá Institute, Tefé-AM, Brazil.
- Castello L, Stewart D, **Arantes CC**, 2008. Population dynamics and conservation of *Arapaima* in floodplains of the Central Amazon. Paper presented at the annual meeting of the International Congress for Conservation Biology, Convention Center, Chattanooga, Tennessee, United States.
- Santos G, **Arantes CC**, Amaral ESR. 2007. Diagnosis of the fisheries in New Jerusalem community, Amanã Sustainable Development Reserve, and implications for management (original title in Portuguese). In: IV Symposium of Internal Monitoring, Mamirauá Institute, Tefé-AM, Brazil.
- Arantes CC**, Castello L, Stewart DJ, Cetra M. 2007. Effects of increases in population densities on growth and reproduction of arapaima *Arapaima gigas* (original title in Portuguese). In: IV Internal Symposium of Monitoring, Mamirauá Institute, Tefé-AM, Brazil.

- Amaral ESR, **Arantes CC**. 2007. Landing of arowanas (*Osteoglossum bicirrhosum*) in the ports of state of Amazonas, with emphasis on Tefé region (original title in Portuguese). In: Conference of Biology, Conservation and Management of arowana, *Osteoglossum bicirrhosum*, Belém-PA, Brazil.
- Arantes CC**, Amaral ESR, Barbosa S. 2007. Expansion of fisheries in Maraã: Implication for management of arapaima (*Arapaima gigas*) (original title in Portuguese). In: IV Annual Research Seminar, Mamirauá Institute, Tefé-AM.
- Arantes CC**, Amaral ESR. 2007. Community management of Arapaima (*Arapaima gigas*): the experience of Mamirauá (original title in Portuguese). In: XV Brazilian Congress of Fishing Engineering, Manaus-AM, Brazil.
- Arantes CC**, Amaral ESR. 2007 Arowana fisheries (*Osteoglossum bicirrhosum*) in the region of Tefé, Middle Solimões (original title in Portuguese). In: XV Brazilian Congress of Fishing Engineering, Manaus-AM, Brazil.
- Stewart DJ, Watson LC, **Arantes CC**, Castello L. 2007. Surprising Diversity in Arapaima, Endangered Giant Fishes from South America. In: Annual Meeting of the American Society of Ichthyologists and Herpetologists, St. Louis, Missouri, United States.
- Amaral ESR, **Arantes CC**. 2007. Arapaima managed fishery in 2006 (original title in Portuguese). In: Symposium of Internal Monitoring, Mamirauá Institute, Tefé-AM, Brazil.
- Arantes CC**, Castello L, Garcez D. 2006. Assessment of the arapaima counts in Mamirauá Reserve, Amazonas, Brazil (original title in Portuguese). In: VII International Congress on Management of Wildlife in the Amazon and Latin America, Ilhéus, Bahia, Brazil.
- Arantes CC**, Garcez D. 2006. Arapaima (*Arapaima gigas*) densities in areas of management in Mamirauá and Amanã Reserves, Amazonas, Brazil (original title in Portuguese). In: Symposium of Internal Monitoring, Mamirauá Institute, Tefé-AM, Brazil.
- Arantes CC**. 2006. Densities and fishing of the arapaima (*Arapaima gigas*) in environments of the Jarauá Sector, Sustainable Development Reserve Mamirauá (original title in Portuguese). In: III Annual Research Seminar, Tefé-AM, Brazil.
- Arantes CC**, Castello L, Stewart DJ. 2006. Does the arapaima's growth suffer effect of population density? A preliminary analysis (original title in Portuguese). In: III Annual Research Seminar, Mamirauá Institute, Tefé-AM, Brazil.
- Arantes CC**, Garcez D. 2006. Population trends of the arapaima (*Arapaima gigas*) in the Sustainable Development Reserves Mamirauá and Amanã, Amazonas, Brazil (original title in Portuguese). In: VII International Congress on Management of Wildlife in the Amazon and Latin America, Ilhéus-BA, Brazil.
- Vianna M, Matos F, Keunecke K, Lazarotto H, Kassuga A, **Arantes CC**. 2005. Characterization of shrimp fishing by trawl in the Bay of Guanabara, Rio de Janeiro: preliminary results and suggestions for management (original title in Portuguese). In: Brazilian Congress of Environmental Defense, Rio de Janeiro. Anais VII Brazilian Congress of Environmental Defense.
- Arantes CC**, Vianna M, Keunecke K, Matos F, Lazarotto H, Kassuga A. 2004. Quali- Quantitative analysis of Shrimp's Fleet that operates with Trawl in Guanabara Bay, Rio de Janeiro. (Original title in Portuguese). In: I Brazilian Congress of Oceanography, XIV Brazilian Week of Oceanography, Itajaí-SC, Brazil.
- Valetim, MFM, **Arantes CC**, Vianna M, Caramashi E. 2004. Characteristics of reproduction, feeding and fishery of the monkfish, *Lophius gastrophysus* (Teleostei, Lophiidae) in the State of Rio de Janeiro (original title in Portuguese). In: I Brazilian Congress of Oceanography, Itajaí-SC, Brazil.
- Vianna M, Keunecke K, Matos F, **Arantes CC**, Lazarotto H, Kassuga A. 2004. The Estuarine Shrimp Fishing: The Case of Guanabara Bay, RJ, Brazil). In: 3º Brazilian Crustacean Congress and 2004 TCS Summer Meeting, Florianópolis-SC, Brazil.
- Correia F, Chaves F, Silva JrC, Soarea M, Azevedo A, **Arantes CC**, Barbosa B, Gomes N, Mizutori I, Pellegrini J, Estrada G. 2003. Biometrics of leaf of mangrove species in Guanabara Bay. (Rio de Janeiro) (original title in



Portuguese). In: 53rd National Congress of Botany, 25th Meeting of Northeastern Botany, Brazil.

**Arantes CC**, Chaves F, Soares M, Silva JrC, Correia F, Viviane F, Pellegrini J, Gomes N, Barbosa B, Beatriz, Mizutori I. 2003. Litter production in mangrove areas in Guanabara Bay, Rio de Janeiro, Brazil (original title in Portuguese). In: Mangroove Conference, Brazil.

Serrano L, Sergipense S, **Arantes CC**, Gay D, Kemper F, Defante. 2003. Dredging of St. Benedict Channel: Assessment of the impact on Ichthyofauna (original title in Portuguese). In: XV Brazilian Meeting of Ichthyology. Sao Paulo-SP, Brazil.

**Arantes CC**. 2002. Artificial opening of St. Benedict Channel: Monitoring the ichthyofauna (original title in Portuguese). In: Week 11 of Scientific Initiation Rio de Janeiro-RJ, Brazil.

Kemper F, **Arantes CC**, Defante V. 2002. Diet and feeding rhythm of the dominant fish species in the Channel of St. Benedict (Lagoon Complex of Marica - RJ) (original title in Portuguese). In: Week 11 of Scientific Initiation Rio de Janeiro-RJ, Brazil.

**Arantes CC**. 2001. Evaluation of the use of mangroves as indicators of variations in mean sea level: analysis of zonation and succession of plant species (original title in Portuguese). In: Week 10 of Scientific Initiation Rio de Janeiro-RJ, Brazil.

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## PRESENTATIONS AT SCIENTIFIC MEETINGS & SEMINARS

**Arantes CC**. Impacts of mega dams on fish and fisheries in the Amazon. 2023. American Fisheries Society meeting. Grand Rapids, MI, USA.

**Arantes CC**. Invited Seminar Speaker: The ecology and conservation of large floodplain rivers in the Amazon. 2022. BioFrontiers - Biology Seminar. Department of Biological Sciences, University of North Texas, Denton, TX, USA.

**Arantes CC**. Functional responses of fisheries to hydropower dams in the Amazonian Floodplain of the Madeira River. 2022. Joint Aquatic Sciences Meeting (JASM), Grand Rapids, MI, USA.

Grinstead S, **Arantes CC**. 2022. The Effects of Landcover Change on Macrophyte-dwelling Fishes of the Lower Amazon River. Joint Aquatic Sciences Meeting (JASM), Grand Rapids, MI, USA.

Johansen I, Reis VC, **Arantes CC**, Doria CR, Isaac V. 2022. Mega dams in the Brazilian Amazon and the pandemic: new methodologies to assess impacts on fisheries systems. International conference of human and social sciences: Challenges and problems in the Brazilian Amazon.

**Arantes CC**, Laufer J, Mayer A, Moran E, Lopez MC, Doria CRC. 2022. Large-scale hydropower impacts and adaptation on rural communities in the Amazonian floodplain of the Madeira River. NSF INFEWS PI Workshop. Virtual.

**Arantes CC**. 2021 Invited Seminar Speaker: Fish Ecology & Conservation in Freshwater Ecosystems. Seminar for USGS Leetown Science Center. Virtual.

**Arantes CC**. 2021. Functional responses of fisheries to hydropower dams in the Amazonian Floodplain of the Madeira River. American Fisheries Society - WV Chapter. Virtual.

Laufer J, **Arantes CC**. 2021 Large-scale hydropower impacts and adaptation on rural communities in the Amazonian floodplain of the Madeira River. 1er Congreso Virtual Latinoamericano de la IASC (iasc-commons.org). Virtual.

Villamayor-Tomas S, **Arantes CC**. 2021. WCD 2.0: Towards a bottom-up approach to hydropower governance. DSA Conference 202. East Anglia/virtual.

- Arantes CC**, Fitzgerald D, Hoeinghaus J. D, Winemiller K. 2019. Impacts of hydroelectric dams on fishes and fisheries in tropical rivers through the lens of functional traits. 149th Annual Meeting of the American Fisheries Society, Reno, Nevada, USA.
- Laufer J, **Arantes CC**, Pinto, MDS, Moran EF, Lopez MC, Dutka-Gianelli J, Mendonça D, Brasil S, Doria CRC. 2019. Dams and its impacts on fisheries in the Amazonian Floodplain of the Madeira River. 149th Annual Meeting of the American Fisheries Society, Reno, Nevada, USA.
- Arantes CC**. 2019. Fish diversity, biomass and trophic dynamics in relation to landscape gradients in the floodplain of the Amazon River. XXIII Brazilian Ichthyology meeting, Belem, Brazil.
- Arantes CC**. 2019. Opening symposium - Dams: Impacts and contemporary approaches impact assessment and decision making. C. Arantes and E. Cunha (Orgs). XXIII Brazilian Ichthyology meeting, Belem, Brazil.
- Arantes CC**, Winemiller K. 2018. Land cover and fish assemblages in the Amazon River floodplain. Freshwater Science Meeting. Detroit, Michigan, United States.
- Arantes CC**, Winemiller K. 2017. Relationship between forest cover and fish diversity in the Amazon River. Joint Meeting of Ichthyologists and Herpetologists. Austin, Texas, United States.
- Arantes CC**, Winemiller K. 2017. Fish Biomass and functional diversity are positively associated with forest cover in the Amazon River Floodplains. The international symposium on flood pulse ecosystems. Seam Reap, Cambodia.
- Arantes CC**, Winemiller K. 2017. Forest extent determines spatial patterns of fish biodiversity in floodplains of the Amazon. XXII Brazilian Ichthyology meeting, Porto Seguro, Brazil.
- Arantes CC**, Winemiller K. 2015. Influence of deforestation on fish diversity and biomass in the Amazon River. 100th ESA - Ecological Society of America, Baltimore, United States.
- Arantes CC**, Castello L, Sene-Harper A Angeli N, McGrath D. 2015. Measuring the development of community-based management in in the Amazon. Global Conference on Inland Fisheries, FAO, Rome, Italy.
- Arantes CC**, Winemiller, K., Petrere, M., Castello, L., Freitas, C.E. 2014. Influence of deforestation on fisheries in the Amazon floodplains. Joint Meeting of Ichthyologists and Herpetologists. Chattanooga, Tennessee, United States.
- Arantes CC**, Castello L, Sene-Harper A, Angeli N, McGrath D. 2014. Measuring the development of community-based conservation in small-scale fisheries in the Amazon. Presentation in the 2nd World Small-Scale Fisheries Congress, Merida, Mexico.
- Arantes CC**. 2013. Environmental influences on the distribution of arapaima in Amazon floodplains. Presentation in the 2013 Texas Chapter of the American Fisheries Society, Houston, Texas, United States.
- Arantes CC**. 2012. A ecologia e o manejo adaptativo das populações de pirarucu (Arapaima ecology and management). International Seminar on Arapaima Conservation. August 2012. Manaus, Brazil.
- Arantes CC**, Leandro Castello, Fábio Sarmento, David McGrath. 2012. Implementando o manejo do pirarucu no Baixo Amazonas (Arapaima management in the Lower Amazon). International Seminar on Arapaima Conservation. August 2012. Manaus, Brazil.
- Arantes CC**, Castello L, Cetra M, Shilling A. 2011. Environmental factors and distribution of arapaima in floodplains of the Amazon. In: XIX Brazilian Ichthyology Meeting, Manaus, Brazil.
- Amaral ESR, **Arantes CC**. 2007. Arapaima managed fishery in 2006 (original title in Portuguese). In: Symposium of Internal Monitoring, Mamirauá Institute, Tefé, Amazonas, Brazil.
- Arantes CC**, Castello L, Stewart DJ, Cetra M. 2007. Effects of increases in population densities on growth and

reproduction of *arapaima gigas* (original title in Portuguese). In: IV Internal of Symposium Monitoring, Mamirauá Institute, Tefé, Amazonas, Brazil.

**Arantes CC**, Amaral ESR, Barbosa S. 2007. Expansion of fisheries in Maraã: Implication for management of arapaima (*Arapaima gigas*) (original title in Portuguese). In: IV Annual Research Seminar, Mamirauá Institute, Tefé-AM, Brazil.

**Arantes CC**, Amaral ESR. 2007. Community management of Arapaima (*Arapaima gigas*): the experience of Mamirauá (original title in Portuguese). In: XV Brazilian Congress of Fishing Engineering, Manaus-AM, Brazil.

**Arantes CC**, Amaral ESR. 2007 Arowana fisheries (*Osteoglossum bicirrhosum*) in the region of Tefé, Middle Solimões (original title in Portuguese). In: XV Brazilian Congress of Fishing Engineering, Manaus-AM, Brazil.

**Arantes CC**, Castello L, Garcez D. 2006. Assessment of the arapaima counts in Mamirauá Reserve, Amazonas, Brazil (original title in Portuguese). In: VII International Congress on Management of Wildlife in the Amazon and Latin America, Ilhéus – BA, Brazil.

**Arantes CC**, Garcez D. 2006. Arapaima (*Arapaima gigas*) densities in areas of management in Mamirauá and Amanã Reserves, Amazonas, Brazil (original title in Portuguese). In: Symposium of Internal Monitoring, Mamirauá Institute, Tefé-AM, Brazil.

**Arantes CC**, Castello L, Stewart DJ. 2006. Does the arapaima's growth suffer effect of population density? A preliminary analysis (original title in Portuguese). In: III Annual Research Seminar, Mamirauá Institute, Tefé, Amazonas, Brazil.

**Arantes CC**. 2002. Artificial opening of St. Benedict Channel: Monitoring Ichthyofauna (original title in Portuguese). In: Week 11th of Scientific Initiation Rio de Janeiro-RJ, Brazil.

**Arantes CC**. 2001. Evaluation of the use of mangroves as indicators of variations in mean sea level: analysis of zonation and succession of plant species (original title in Portuguese). In: Week 10 of Scientific Initiation Rio de Janeiro-RJ, Brazil.

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## GRANTS RECEIVED

2023	Studying the Impact of Textile Microplastic Pollution on the Aquatic Environment: The Nexus of Aquatic Ecology and Textile Sciences. Funded by WUV Research and Scholarship Advancement. Pls S. Metha, B. Murry, C. Arantes (US\$17,988.00)
2023	Project: Projecting the Distribution of Aquatic Species of Greatest Conservation Need throughout the mid-Atlantic region. Funded by USGS. Pls P Mazik, C. Arantes, C. Rota, B. Murry (US\$499,000.00)
2022	Pennsylvania Unassessed Waters Program (US\$5,000.00).
2022	Project: Implementing a stream flow monitoring program to inform management and conservation decisions in the Monongahela River watershed. Funded by WVU WRI-USGS. Pls B. Murry, C. Arantes, M. Stranger (US\$150,970).
2022	Project: Understanding climate change vulnerability for aquatic fauna in West Virginia Watersheds. Funded by WVU (Research and Scholarship Advancement). Pls: C. Arantes, B. Murry, J. Anderson, W. Veselka (US\$13,500).
2021	Project: Evaluation of potential factors limiting the expansion of Invasive Carp in the Ohio and Tennessee-Cumberland River basins: lessons to apply to the upper Mississippi. Pls: B. Murry, C. Arantes, with collaborators from USGS-Tennessee Tech Coop Unit, KY DNR, WV DNR, and IN DNR. (\$360,162).

2021	Project: Integrating data sets to understand climate change vulnerability for aquatic fauna in West Virginia Watersheds. Funded by WVU WRI-USGS. PIs: C. Arantes, Brent Murry, Jim Anderson, Walter Veselka. (US\$39,299.40).
2020	Co-Pi Research Project: After Hydropower Dams: Social and Environmental Processes that occur after the Construction of Belo Monte, Jirau and Santo Antonio in Brazilian Amazonia. Funded by FAPESP/Brazil- Projeto Temático. PI: Emilio F. Moran (US\$250,000). Host Institution: Universidade Estadual de Campinas, Campinas, SP, Brazil.
2013	Co-Pi Research Project: Arapaima management in the Lower Amazon. Funded by the Mamirauá Sustainable Development Institute. PI: Leandro Castello (US\$150,000).
2012	PI in Research Project: Influence of deforestation on fisheries in the Amazon floodplains. Funded by the Mamirauá Sustainable Development Institute (US\$30,000).
2011	Co-Pi in Research Project: Impacts of environmental changes on communities in the Amazon Basin: Complex interactions and effects in different scales. Issued by Conselho Nacional de Pesquisa e Desenvolvimento (CNPq). PI: Miguel Petrere (~ US\$ 133.000,00).
2010	Co-Pi in Research Project: Bio-Ecology, Fisheries, and Management Plans of the Arapaima ( <i>Arapaima gigas</i> ) in the Lower Amazon, Pará. Issued by Conselho Nacional de Pesquisa e Desenvolvimento (CNPq). PI: David G. McGrath (~ US\$ 90,000).
2005 - 2007	Co-PI in Research Project: Population biology, management, and conservation of the giant pirarucu ( <i>Arapaima gigas</i> ) in the Brazilian Amazon. Funded by the National Geographic Society. PI: D.J. Stewart (US\$25,000)
2005 - 2006	O manejo sustentável e a dinâmica populacional do pirarucu ( <i>Arapaima gigas</i> ) na Reserva Mamirauá, Amazonas, Brasil. Funded by the Mamirauá Sustainable Development Institute (US\$3,000).

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## AWARDS, HONORS, & SCHOLARSHIPS

2023	WVU Davis College of Agriculture, Natural Resources and Design Faculty Development Award (\$2,740.00).
2016	Texas A&M College of Life Sciences Tom Slick Fellowship (\$32,500.00).
2016	Texas A&M College of Life Sciences Development grant (\$1,000.00).
2016	Texas Chapter of the American Fisheries Society Student Scholarship Award (\$1,500.00).
2015	College of Agriculture and Life Sciences Dean's Outstanding Achievement Award for Graduate Research.
2015	Wildlife and Fisheries Sciences Department Outstanding Achievement Award for Graduate student.
2104	Food and Agriculture Organization of the United Nations FAO. Conference on Inland Fisheries in Rome from 26 January to 28 January, 2015. (US\$1,450.00).
2013	Amazon Field Course scholarship, Applied Biodiversity Sciences (NSF-IGERT) (~ US\$ 3,000).
2013 - 2014	Graduate Research Fellowship, Applied Biodiversity Sciences (NSF-IGERT) (~ US\$ 60,000).
2007	Best presentation award of the XV Brazilian Congress of Fishing Engineering, Manaus-AM, thematic: fishery resources.

2008 – 2009	Graduate Research Fellowship, Instituto Internacional de Educação do Brasil (IIEB – Brazil) (~ US\$ 22,000).
2005 – 2007	Research Scholarship, Brazilian Council of Research - Conselho Nacional de Pesquisa e Desenvolvimento (CNPq) (~ US\$ 2,500).
2002 – 2003	Undergraduate scholarship, Brazilian Council of Research - Conselho Nacional de Pesquisa e Desenvolvimento (CNPq) (~ US\$ 2,500).
2001 – 2002	Undergraduate scholarship, Brazilian Council of Research - Conselho Nacional de Pesquisa e Desenvolvimento (CNPq) (~ US\$ 2,500).
2000 – 2001	Undergraduate scholarship, Brazilian Council of Research - Conselho Nacional de Pesquisa e Desenvolvimento (CNPq) (~ US\$ 2,500).

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## TEACHING AND MENTORING EXPERIENCES

### Courses:

2023-Present	WVU WMAN 696C: Applied Community Ecology (3 credits, fall).
2020- Present	WVU Wildlife and Fisheries Resources Program: WAN445 Fishery management (3 credits, Fall), and BIOL/WMAN Freshwater Ecology (4 credits, Spring).
2023	American Fisheries Society, WV Chapter: Stable Isotope Workshop. 8 hours. Morgantown, WV.
2020	Graduate Program on Biodiversity and Biotechnology. Isotopic ecology: theory and applications. 45 hours. Universidade Federal de Rondônia, Porto Velho, Brazil.
2019	Graduate Program on Natural Resources Conservation. Isotopic ecology: theory and applications. 45 hours. Universidade Federal do Oeste do Para, Santarem, Brazil.
2012	Developed and conducted the course: “Community-Based Sustainable Management of Fisheries Resources” to 20 professionals who work in fisheries management in the Amazon. Mamirauá Institute, Tefé, Amazonas, Brazil.
2009 – 2011	Developed and conducted training courses for more than 50 fishing communities, ~ 300 people in the Lower Amazon region.
2008	Developed and conducted the course: “Community-Based Sustainable Management of Fisheries Resources” to 30 professionals who work in fisheries management in the Amazon. Mamirauá Institute, Tefé, Amazonas, Brazil.
2005 – 2007	Developed and conducted training courses for 15 fishing communities on the Mamirauá and Amanã Reserves, Middle Amazon.
2004	Teaching Assistant. Ichthyology. Undergraduate level course at Department of Marine Biology, Universidade Federal do Rio de Janeiro, RJ, Brazil.

### Students:

2022-present	Graduate committee chair: PhD. Wildlife and Fisheries Program, WVU: Erin Shepta.
2021-present	Graduate committee chair: MS. Wildlife and Fisheries Program, WVU: Katherine Adase; Joseph Molina; Samuel Grinstead, Luka Marques.

2022-present	<p>Graduate committee member: PhD. Wildlife and Fisheries Program, WVU: Emilee E. Briggs, Andrew Johnson.</p> <p>Graduate committee member: MS. Wildlife and Fisheries Program, WVU: Jacob Harrell, Andrew Scott, Jarrett Landreth, Bradley Novak, Samuel Johnston.</p> <p>Mentoring undergraduate students at WVU on independent studies: Ayla Bayne (Research Apprenticeship Program- RAP), Matthew Bane (Honors EXCEL), Alanna Lowther, Hannah Frye, Zach Kelly, Erin S.</p>
2020-present	Graduate committee member: PhD. Ecology & Evolutionary Biology. The University of Tennessee, Knoxville TN. Guido Herrera Rodriguez.
2019- present	Graduate committee: (Co-advising) da Silva, Tais Melo, PhD candidate. Universidade Federal de Rondônia, Porto Velho, Brazil. Project: "Alterations in trophic dynamics in the Amazonian Madeira river in response to dam construction".
2022	<p>Graduate committee (defense):</p> <p>-Douglas Costa Pereira, MS. Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil. Project: "The effects of siltation and flow pulse on the functional fish assemblage structure in an Amazonian Lake"</p> <p>-Ruineris Cajado, MS. Universidade Federal do Para, Belem, Brazil. Project: "Functional diversity reveals seasonal variation on fish larvae assemble structure in the Amazon"</p>
2021	Graduate committee (defense): Igor R Alves Sant'Anna, PhD. Universidade Federal de Rondônia, Porto Velho, Brazil, Brazil. Project: "evaluations of the status and sustainability of small-scale fisheries in the Amazon based on limited datasets"
2020	Graduate committee (defense): Pinto, Mac David da Silva, PhD. Universidade Federal de Rondônia, Porto Velho, Brazil. Project: "Hydroelectric dams impacts on the fish functional diversity of the Rivers Madeira and Tocantins, Amazon".
2019	<p>Graduate committee (defense):</p> <p>-Gilberto Salvador, PhD. Universidade Federal do Para, Belem, Brazil. Project: "Tailing dams and their effects on the fish assemblage" ("Barragens de rejeito e seus efeitos sobre a assembleia de peixes")</p> <p>-Graduate committee: Souza, Hingara Leao, PhD. Universidade Federal do Para, Belem, Brazil. Project: "Effects of land-use on macroinvertebrates and fishes in Amazonian streams".</p>
2018 - 2021	Mentored Samantha A. Pereira (PhD candidate, Universidade Federal do Rio Grande do Norte, Brazil) on a research project: "Assessing biological traits of Amazonian high-value fishes through local ecological knowledge".
2017 - 2019	Co-advised Poliane Batista on a Masters' thesis project – Universidade Federal do Oeste do Para, Santarem, Brazil. Project: "Fish assemblage structure in relation to spatial structure, environmental variables and hydrological variations in the Amazon River."
2014 - 2017	<p>Mentored undergraduate students in the directed studies course at the Wildlife and Fisheries Sciences department, Texas A&amp;M University):</p> <p>-Bradon Burks. "Differences in Stable Isotopic Carbon (<math>\delta^{13}\text{C}</math>) between <i>Pygocentrus nattereri</i>, <i>Colossoma macropomum</i>, <i>Schizodon fasciatus</i>, and <i>Triportheus elongatus</i>."</p> <p>-Lauren Naylor. "Addressing the question of scale: a look at the variability of <math>\delta^{13}\text{C}</math> in fish samples between lake systems and across habitats."</p> <p>Trained seven undergraduate students from Texas A&amp;M University on laboratory techniques and data processing (e.g., processing fish tissues and basal sources for stable isotope analysis, fish identification): Lauren Naylor, Gabriela Vara, Brandon Burks, Cecilia Fonseca, Loicka Baille, Richard Loveland and Haydan Garlin.</p>
2013	Mentored Poliane Batista on an undergraduate research project – Universidade Federal do Oeste do Para, Brazil. Project: "Influence of dry season intensity on fish communities and fisheries in the Amazon".

2012 - 2013	Trained six undergraduate students from Universidade Federal do Oeste do Para in field work data collection and laboratory techniques: Poliane Batista, Pauliana Vinhote, Sara Laurido, Karen Auzeir, Victor Penuel and Ellen Monique.
2010 - 2011	Mentored Leticia Cavole (undergraduate student, Universidade Federal do Rio Grande) on a research project. Cavole, Arantes & Castello 2015. How illegal are tropical small-scale fisheries? An estimate for arapaima in the Amazon. <i>Fisheries research</i> . 168: 1–5.
2006	Mentored Michele Xavier do Amaral on an undergraduate research project – Scientific Fellowship, Brazilian Council of Research - Conselho Nacional de Pesquisa e Desenvolvimento (CNPq). Project: “Fish collection of the Mamirauá Institute for Sustainable Development.”

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## COMMUNITY SERVICE AND OUTREACH EXPERIENCE

### Committees, education & community engagement

2022-present	Transform this Mural. Coordinating a group of student artists to create an art mural that will be exposed in the hallways of Percival Hall (DFNR, WVU) as an attempt to foster an inclusive community. The goal of creating the mural is to inspire students to envision a future that embodies diversity, and the mural will reflect this "bright" future using a sunrise to symbolize a new beginning (\$1.500).
2021-present	WVU committees: member of the Student Research & Creative Scholarship at the Davis College, member of the Diversity, Equity, and Inclusion committee, and chair of the Woman Initiative in Natural Resources at the DFNR.
2020-present	Member of the Science Panel for the Amazon (SPA). The SPA is convened under the auspices of the Sustainable Development Solutions Network (SDSN), with the main goal of providing scientific assessment of the state of the Amazon's diverse ecosystems, trends, and implications for the long-term well-being of the region ( <a href="https://www.unsdsn.org/post-title">https://www.unsdsn.org/post-title</a> ).
2022	Organized a symposium entitled “Balancing benefits and socioenvironmental costs of water infrastructure projects” as part of the Joint Aquatic Sciences Meeting, Grand Rapids, May 16th, 2022. USA.
2020-2021	Severed as Judge for students' presentations at the American Fisheries Society meetings.
2020-present	Collaborating in an initiative to identify Sustainable Conservation Targets for the Amazon Basin. The research team will identify ecological drivers needed to maintain landscape connectivity, ecological processes, and ecosystem services in Amazonian river-floodplains (Correa et al. 2022).
2020-2022	Attending a series of workshops to assemble data and combine them into indicators to address research questions related to the socio-environmental impacts of large hydropower dams across the Global South. Funded by: SESYNC (Dynamics of Socio-Environmental Systems). Coordinators: Emilio Moran, Maria Claudia Lopez, Sergio Villamayor Tomas.
2018-2019	Organized a symposium on global dams impacts as part of the XXIII Brazilian Ichthyology meeting, Belem Jan. 30th-Feb. 4th, 2019, Brazil.
2017	Vice Chancellor and Dean Search Advisory Committee, College of Agriculture and Life Sciences, Texas A&M University.
2016-present	Organizing a technical book (guideline) for implementing arapaima management schemes in the Amazon. Amaral E, Peralta N, Arantes CC. (Orgs). Arapaima co-management: A theoretical and practical field guide. IDSM. Tefe, Amazonas. I also have prepared three chapters for this book.

2016-2017	Organized the 18th Ecological Integration Symposium, Texas A&M University. Theme: "Micro to Macro: Ecology in the Anthropocene".
2015-present	Collaborating with the Amazon-Fish project. ( <a href="https://www.amazon-fish.com/">https://www.amazon-fish.com/</a> ). This is a transnational collaborative project aiming to build a high-quality freshwater fish biodiversity database covering the entire Amazon drainage. I attended the meetings in Bogota, Colombia (Nov-2016), and Lima, Peru (Nov-2017) for discussing the project's implementation and I gave presentations in local universities. Funded by: ERANetLac. Coordinator: Thierry Oberdorff.
2005 - 2012	Conducted many educational, communication, community engagement, capacity building, and policy activities aimed at developing and implementing sustainable Arapaima fisheries in the Amazon.
2010- 2011	Organized together with Leandro Castello and D.J. Stewart, a symposium entitled "Biology, Ecology, and Conservation of Arapaima" as part of the XIX Brazilian Ichthyology meeting, Manaus, Jan. 30th-Feb. 4th, 2011. Brazil.
2005 - 2007	Presented on environmental education themes at 5 local schools, included more than ~60 students, in the Tefé City, Middle Amazon region. Organized local events to promote the integration of urban people (Tefé City) on floodplain conservation schemes. Examples are: National Week of the Environment and Environmental Games.

### *Policy work*

1. While working at the Mamirauá Institute, Brazil, my colleagues and I played a key role in developing, implementing, and disseminating the most effective scheme for sustainable use of pirarucu (*Arapaima* spp.) in Brazil, Peru, and Guyana. This scheme has recovered populations of pirarucu several fold and yielded increasing catches for local fishers. Consequently, the number of communities managing the pirarucu through this scheme has increased from four in 1999 to 200 in 2006.
2. While working at Institute for Environmental Research of the Amazon (IPAM), in Brazil, we designed, developed, and implemented a policy and institutional framework for ecosystem management in the Lower Amazon region, near the city of Santarém. This framework is the first ever of its type in the Amazon, encompassing 99 riverine communities and various regional governmental and non-governmental organizations.
3. I also worked to implement a policy and institutional framework for the sustainable management of pirarucu populations in the Lower Amazon region. We assessed pirarucu populations in over 100 lakes, trained over 1,000 people in fisheries management and stock assessment involving, we organized a regional workshop to discuss policy directions, and submitted to the State Fisheries Agency a legislative proposal including a guideline for Arapaima management.

### *Outreach publications*

**Arantes CC**, Castello L, McGrath D. 2010. Developed website text for community-based management for arapaima: <http://www.ipam.org.br/programas/projeto/Manejo-Participativo-do-Pirarucu-no-Baixo-Amazonas/64>  
Video: <http://www.youtube.com/watch?v=4T7HBldgJM>.

Developed ecosystem management participative plans that involved 99 communities and 15 Settlement Projects, in the Lower Amazon. McGrath D, Almeida O, Menezes D, Cardoso A, Barboza R, **Arantes CC**, Pinto Sá, Castello L, Pimentel E, Pinto L, Sarmento F, Rocha Sá. 2010. Basic Plan of Development of the Agro-extractive Settlement Project Atumã. (original title in Portuguese).

Developed rules of natural resource use and access with 99 communities and 15 Settlements. McGrath D, Almeida O, Menezes D, Cardoso A, Barboza R, **Arantes CC**, Pinto Sá, Castello L, Pimentel E, Pinto L, Sarmento F, Rocha Sá. Utilization Plan of the Agro-extractive Settlement Project Atuma, 2010. (original title in Portuguese).

Note: The Basic Plan and the Utilization Plan were developed for 15 Agro-extractive Settlement Projects in the lower Amazon, these being: Atumã, Salvação, Aritapera, Tapará, Uricurituba, Ituqui, Três Ilhas, Costa Fronteira, Paraná de Baixo, Cacoal Grande, Paru, Maria Tereza, Ilhas Reunidas, Nossa Senhora do Perpetuo Socorro,



Madalena.

Hercos A, **Arantes CC**, Amaral ESR, Fresou F, Sousa I, Queiroz H, Lopes K, Castello L, Barbosa S. 2008. Course on Community-Based Sustainable Management of Fisheries Resources (original title in Portuguese). IDSM. Tefé, Amazonas, Brazil. 360p.

Garcez DS, **Arantes CC**. 2006. Certification of arapaima counters of the RDS Mamirauá and Amanã. The Macaqueiro (original title in Portuguese). Journal for local circulation, Tefé, Amazonas, Brazil.

**Arantes CC**. 2006. Monitoring course of *Arapaima* (original title in Portuguese). Mamirauá Institute. Tefé, Amazonas, Brazil.

### *Reviewer*

2021	Reviewer for a grant proposal submitted to the Graduate Women in Science (GWIS).
2021	Reviewer for a grant proposal submitted to the National Fellowship Program, UK Research and Innovation: Future Leaders Fellowships.
2020-present	Associate Editor- Journal Neotropical Ichthyology
2014-present	Reviewer for the Symposium on Conservation and Participatory Management in the Amazon, which is hold annually in Tefé, Middle Amazon region. Mamirauá Institute.
2010-present	Reviewer for Journals: Nature, Nature Communications, Global Change Biology, Biological Conservation, Journal of Applied Ecology, Ecological Economics, Hydrobiology, Oryx, Ecological Processes, Freshwater Ecology and Management, Ecology of Freshwater Fish, Freshwater Biology, Journal of Applied Ichthyology, Journal of Tropical Ecology, Aquatic Sciences, Neotropical Ichthyology, International Journal of Fisheries and Aquaculture, ZooKeys, African Journal of Biotechnology, Boletim do Instituto de Pesca.