

Curriculum vitae

Corey T. Callaghan

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PROFESSIONAL POSITIONS

Marie-Curie Postdoctoral Researcher, iDiv, Leipzig, Germany November 2020-Present

Postdoctoral Researcher, UNSW Sydney, Sydney, Australia November 2019-October 2020

EDUCATION

UNSW (University of New South Wales) Sydney, Sydney, Australia 2016-2019

- **PhD, Biological Sciences**
- Dissertation: Avian species and community responses to urbanization at local and global scales

Florida Atlantic University, Boca Raton, Florida 2013-2015

- **M.S., Environmental Science**
- Thesis: Diet of the Purple Swamphen in south Florida and invasion pathways of nonnative avian species in Florida

Canisius College, Buffalo, New York 2009-2013

- **B.S., Environmental Science**
- **B.S., Mathematics & Statistics**

PUBLICATIONS

PEER REVIEWED PUBLICATIONS

66. Liu, G., R. T. Kingsford, **C. T. Callaghan**, and J. J. L. Rowley. 2022. Anthropogenic habitat modification alters calling phenology of frogs. *Global Change Biology*. *In press*.
65. Mesaglio, T., **C. T. Callaghan**, F. Samonte, S. B. Z. Gorta, and W. K. Cornwell. 2022. Recognition and completeness: two key metrics for judging the utility of citizen science data. *Frontiers in Ecology & the Environment*. *In press*.
64. Spake, R., M. P. Barajas-Barbosa, S. A. Blowes, D. E. Bowler, **C. T. Callaghan**, M. Garbowski, S. D. Jurburg, R. van Klink, L. Korrel, E. Ladouceur, R. Rozzi, D. S. Viana, W. Xu, and J. M. Chase. 2022. Detecting thresholds of ecological change in the Anthropocene. *Annual Reviews of Environment and Resources*. *In press*.
63. Bowler, D. E., N. Bhandari, L. Repke, C. Beuthner, **C. T. Callaghan**, D. Eichenberg, K. Henle, R. Klenke, A. Richter, F. Jansen, H. Bruelheide, and A. Bonn. 2022. Decision-making of citizen scientists when recording species observations. *Scientific Reports* 12:11069.
62. Bowler, D. E., **C. T. Callaghan**, N. Bhandari, K. Henle, B. Barth, C. Koppitz, R. Klenke, M. Winter, F. Jansen, H. Bruelheide, and A. Bonn. 2022. Temporal trends in the spatial bias of species occurrence records. *Ecography* Early view: <https://doi.org/10.1111/ecog.06219>

61. Segar, J., **C. T. Callaghan**, E. Ladouceur, J. N. Meya, H. M. Pereira, A. Perino, and I. R. Staude. 2022. Urban conservation gardening in the decade of restoration. *Nature Sustainability* Early view: <https://doi.org/10.1038/s41893-022-00882-z>
60. Roberts, C. J., A. Vergés, **C. T. Callaghan**, and A. G. B. Poore. 2022. Many cameras make light work: opportunistic photographs of rare species in iNaturalist complement structured surveys of reef fish to better understand species richness. *Biodiversity and Conservation* 31:1407-1425.
59. Bolt, M. H., **C. T. Callaghan**, A. G. B. Poore, A. Vergés, and C. J. Roberts. 2022. Using the background of fish photographs to quantify habitat composition in marine ecosystems. *Marine Ecology Progress Series* 688: 167-172.
58. **Callaghan, C. T.**, D. E. Bowler, S. A. Blowes, J. M. Chase, M. B. Lyons, H. M. Pereira. 2022. Quantifying effort needed to estimate species diversity from citizen science data. *Ecosphere* 13:e3966.
57. Schilling, H. T., A. Riley, A. C. Puckeridge, A. Milne-Muller, and **C. T. Callaghan**. 2022. Economic value of regional spearfishing competitions. *Fisheries Research* 250:106289.
56. Mansur, A. V., R. I. McDonald, B. Güneralp, H. Kim, J. A. Puppim de Oliveira, **C. T. Callaghan**, P. Hamel, J. J. Kuiper, M. Wolff, V. Liebelt, I. S. Martins, T. Elmqvist, and H. M. Pereira. 2022. Nature futures for the urban century: Integrating multiple values into urban management. *Environmental Science and Policy* 131:46-56.
55. Benedetti, Y., R. A. Fuller, **C. T. Callaghan**, and F. Morelli. 2022. Distribution and protection of avian specialization in Europe. *Global Ecology and Biogeography* 31:10-24.
54. **Callaghan, C. T.**, A. G. B. Poore, M. Hofmann, C. J. Roberts, and H. M. Pereira. 2021. Large-bodied birds are over-represented in unstructured citizen science data. *Scientific Reports* 11: 19073.
53. Ferreto, G., T. M. Glasby, A. G. B. Poore, **C. T. Callaghan**, G. P. Housefield, M. Langley, E. A. Sinclair, J. Statton, G. A. Kendrick, and A. Vergés. 2021. Naturally-detached fragments of the endangered seagrass *Posidonia australis* collected by citizen scientists can be used to successfully restore fragmented meadows. *Biological Conservation*: 109308.
52. Lee, J. S., **C. T. Callaghan**, and W. K. Cornwell. 2021. Using citizen science to measure recolonisation of birds after the Australian 2019-20 mega-fires. *Austral Ecology*. Early view: <https://doi.org/10.1111/aec.13105>
51. Gorta, S. B. Z., R. D. Pedler, R. T. Kingsford, and **C. T. Callaghan**. 2021. Avifaunal use of an artificial waterpoint in the Strzelecki Desert during an extended dry period. *Emu: Austral Ornithology* 121:354-359.
50. **Callaghan, C. T.**, D. E. Bowler, and H. M. Pereira. 2021. Thermal flexibility and a generalist life history promote urban affinity in butterflies. *Global Change Biology* 27:3532-3546.
49. **Callaghan, C. T.**, S. Nakagawa, and W. K. Cornwell. 2021. Global abundance estimates for 9,700 bird species. *Proceedings of the National Academy of Sciences* 118:e2023170118.
48. Liu, G., J. J. L. Rowley, A. G. B. Poore, and **C. T. Callaghan**. 2021. Species' traits drive amphibian tolerance to anthropogenic habitat modification. *Global Change Biology* 27:3120-3132.
47. **Callaghan, C. T.**, G. Liu, B. A. Mitchell, A. G. B. Poore, and J. J. L. Rowley. 2021. Urbanization negatively impacts frog diversity at continental, regional, and local scales. *Basic and Applied Ecology* 54:64-74.
46. **Callaghan, C. T.**, W. K. Cornwell, A. G. B. Poore, Y. Benedetti, and F. Morelli. 2021. Urban tolerance of birds changes throughout the full annual cycle. *Journal of Biogeography* 48:1503-1517.
45. Laitly, A., **C. T. Callaghan**, K. Delhey, and W. K. Cornwell. 2021. Is color data from citizen science photographs reliable for biodiversity research? *Ecology and Evolution* 11:4071-4083.

44. Mesaglio, T., and **C. T. Callaghan**. 2021. An overview of the history, current contributions, and future outlook of iNaturalist in Australia. *Wildlife Research* 48:289-303.
43. **Callaghan, C. T.**, J. E. Watson, W. K. Cornwell, M. B. Lyons, and R. A. Fuller. 2021. Conservation birding: a quantitative conceptual framework for prioritizing citizen science observations. *Biological Conservation* 253:108912.
42. **Callaghan, C. T.**, A. G. B. Poore, R. E. Major, W. K. Cornwell, J. H. Wilshire, and M. B. Lyons. 2021. How to build a biodiverse city: environmental determinants of bird diversity within and among 1581 cities. *Biodiversity and Conservation* 30:217-234.
41. **Callaghan, C. T.**, F. Sayol, Y. Benedetti, F. Morelli, and D. Sol. 2021. Validation of a globally-applicable method to measure urban tolerance of birds using citizen science data. *Ecological Indicators* 120:106905.
40. Kirchhoff, C., **C. T. Callaghan**, D. A. Keith, D. Indarto, G. Taseski, M. K. J. Ooi, T. D. Le Breton, T. Mesaglio, R. T. Kingsford, and W. K. Cornwell. 2021. Rapidly mapping fire effects on biodiversity at a large-scale using citizen science. *Science of the Total Environment* 755:142348.
39. **Callaghan, C. T.**, A. G. B. Poore, T. Mesaglio, A. T. Moles, S. Nakagawa, C. Roberts, J. J. L. Rowley, A. Vergés, J. H. Wilshire, and W. K. Cornwell. 2021. Three frontiers for the future of biodiversity research using citizen science data. *BioScience* 71:55-63.
38. **Callaghan, C. T.**, and J. J. L. Rowley. 2021. A continental assessment of diurnality in frog calling behaviour. *Austral Ecology*. 46:65-71.
37. Weaver, S., **C. T. Callaghan**, and J. J. L. Rowley. 2020. Anuran accents: continental-scale citizen science data reveal spatial and temporal patterns of call variability. *Ecology and Evolution* 10:12115-12128.
36. **Callaghan, C. T.**, I. Ozeroff, C. Hitchcock, and M. Chandler. 2020. Capitalizing on opportunistic citizen science data to monitor urban biodiversity: A multi-taxa approach. *Biological Conservation* 251:109753.
35. Francis, R., K. J. Brandis, R. T. Kingsford, and **C. T. Callaghan**. 2020. Quantifying bird diversity at three sites of differing herbivore presence. *Journal of Ornithology* 161:1117-1127.
34. **Callaghan, C. T.**, Y. Benedetti, J. H. Wilshire, and F. Morelli. 2020. Avian trait specialization is negatively associated with urban tolerance. *Oikos* 129:1541-1551.
33. Morelli, F., Benedetti, Y., and **C. T. Callaghan**. 2020. Ecological specialization and population trends in European breeding birds. *Global Ecology and Conservation* 22:e00996.
32. Justyn, N. M., **C. T. Callaghan**, and G. E. Hill. 2020. Birds rarely hybridize: A citizen science approach to estimating rates of hybridization in the wild. *Evolution* 74:1216-1223.
31. **Callaghan, C. T.**, J. D. Roberts, A. G. B. Poore, R. Alford, H. Cogger, and J. J. L. Rowley. 2020. Citizen science data accurately predicts expert-derived species richness at a continental scale when sampling thresholds are met. *Biodiversity and Conservation* 29:1323-1337.
30. Rowley, J. J. L., and **C. T. Callaghan**. 2020. The FrogID dataset: expert-validated occurrence records of Australia's frogs collected by citizen scientists. *ZooKeys* 912:139-151.
29. Mitchell, B. A., **C. T. Callaghan**, and J. J. L. Rowley. 2020. Continental-scale citizen science data reveals no changes in acoustic responses of a widespread tree frog to an urbanisation gradient. *Journal of Urban Ecology* 6:juaa002.
28. **Callaghan, C. T.**, I. Benson, R. E. Major, J. M. Martin, T. Longden, and R. T. Kingsford. 2020. Birds are valuable: the case of vagrants. *Journal of Ecotourism* 19:82-92.
27. **Callaghan, C. T.**, R. E. Major, W. K. Cornwell, A. G. B. Poore, J. H. Wilshire, and M. B. Lyons. 2020. A continental measure of urbanness predicts avian response to local urbanization. *Ecography* 43:528-538.

26. **Callaghan, C. T.**, J. H. Wilshire, J. M. Martin, R. E. Major, M. B. Lyons, and R. T. Kingsford. 2020. The Greenspace Bird Calculator: a citizen-driven tool for monitoring avian biodiversity in urban greenspaces. *Australian Zoologist* 40:468-476.
25. **Callaghan, C. T.**, E. Kekeubata, J. Waneagea, M. Alabai, T. Esau, D. MacLaren, and R. E. Major. 2019. A collaborative bird survey of East Kwaio, Malaita, Solomon Islands. *Check List* 15:1119-1136.
24. Alabai, M., T. Esau, E. Kekeubata, J. Waneagea, D. MacLaren, R. E. Major, and **C. T. Callaghan**. 2019. First record of Solomons Nightjar *Eurostopodus nigripennis* for Malaita, with a description of its nest site. *Bulletin of the British Ornithologists' Club* 139:325-327.
23. **Callaghan, C. T.**, A. G. B. Poore, R. E. Major, J. J. L. Rowley, and W. K. Cornwell. 2019. Optimizing future biodiversity sampling by citizen scientists. *Proceedings of the Royal Society B* 286: 20191487.
22. **Callaghan, C. T.**, J. J. L. Rowley, W. K. Cornwell, A. G. B. Poore, and R. E. Major. 2019. Improving big citizen science data: Moving beyond haphazard sampling. *PLoS Biology* 17:e3000357.
21. **Callaghan, C. T.**, G. Bino, R. E. Major, J. M. Martin, M. B. Lyons, and R. T. Kingsford. 2019. Heterogeneous urban green areas are bird diversity hotspots: insights using continental-scale citizen science data. *Landscape Ecology* 34:1231-1246.
20. **Callaghan, C. T.**, R. E. Major, M. B. Lyons, J. M. Martin, J. H. Wilshire, R. T. Kingsford, and W. K. Cornwell. 2019. Using citizen science data to define and track restoration targets in urban areas. *Journal of Applied Ecology* 56:1998-2006.
19. Gorta, S. B. Z., J. A. Smith, J. D. Everett, R. T. Kingsford, W. K. Cornwell, I. M. Suthers, H. Epstein, R. McGovern, G. McLachlan, M. Roderick, L. Smith, D. Williams, and **C. T. Callaghan**. 2019. Pelagic citizen science data reveal declines of seabirds off south-eastern Australia. *Biological Conservation* 235:226-235.
18. Lyons, M. B., K. J. Brandis, N. J. Murray, J. H. Wilshire, J. A. McCann, R. T. Kingsford, and **C. T. Callaghan**. 2019. Monitoring large and complex wildlife aggregations with drones. *Methods in Ecology and Evolution* 10:1024-1035.
17. Rowley, J. J. L., **C. T. Callaghan**, T. Cutajar, C. Portway, K. Potter, S. Mahony, D. F. Trembath, P. Flemons, and A. Woods. 2019. FrogID: Citizen Scientists provide validated biodiversity data on frogs of Australia. *Herpetological Conservation and Biology* 14:155-170.
16. **Callaghan, C. T.**, R. E. Major, J. H. Wilshire, J. M. Martin, R. T. Kingsford, and W. K. Cornwell. 2019. Generalists are the most urban-tolerant of birds: a phylogenetically controlled analysis of ecological and life history traits using a novel continuous measure of bird responses to urbanization. *Oikos* 128:845-858.
15. **Callaghan, C. T.**, K. J. Brandis, M. B. Lyons, S. Ryall, and R. T. Kingsford. 2018. A comment on the limitations of UAVS in wildlife research – the example of colonial nesting waterbirds. *Journal of Avian Biology* 49:e01825.
14. **Callaghan, C. T.**, R. E. Major, M. B. Lyons, J. M. Martin, and R. T. Kingsford. 2018. The effects of local and landscape habitat attributes on bird diversity in urban greenspaces. *Ecosphere* 9:e02347.
13. **Callaghan, C. T.**, J. M. Martin, R. E. Major, and R. T. Kingsford. 2018. Avian monitoring – comparing structured and unstructured citizen science. *Wildlife Research* 45:176-184.
12. Lyons, M., K. Brandis, **C. Callaghan**, J. McCann, C. Mills, S. Ryall, and R. Kingsford. 2018. Bird interactions with drones, from individuals to large colonies. *Australian Field Ornithology* 35:51-56.
11. **Callaghan, C. T.**, J. M. Martin, R. T. Kingsford, and D. M. Brooks. 2018. Unnatural history: is a paradigm shift of natural history in 21st century ornithology needed? *Ibis* 160:475-480.

10. **Callaghan, C. T.**, M. Slater, R. E. Major, M. Morrison, J. M. Martin, and R. T. Kingsford. 2018. Travelling birds generate eco-travellers: The economic potential of vagrant birdwatching. *Human Dimensions of Wildlife* 23:71-82.
9. **Callaghan, C. T.**, and D. M. Brooks. 2017. History, current distribution, and status of Egyptian Goose (*Alopochen aegyptiaca*) in the contiguous United States. *The Southwestern Naturalist* 64:296-300.
8. **Callaghan, C. T.**, M. B. Lyons, J. M. Martin, R. E. Major, and R. T. Kingsford. 2017. Assessing the reliability of avian biodiversity measures of urban greenspaces using eBird citizen science data. *Avian Conservation and Ecology* 12:12.
7. **Callaghan, C. T.**, S. Ryall, and R. T. Kingsford. 2017. A probable Australian White Ibis *Threskionis moluccus* x Straw-necked Ibis *T. spinicollis* hybrid. *Australian Field Ornithology* 34:47-48.
6. **Callaghan, C. T.** 2017. 'Shadow-boxing' in a Northern Mockingbird (*Mimus polyglottos*). *Florida Field Naturalist* 45:21-23.
5. **Callaghan, C. T.** 2016. Pacific Golden-Plover (*Pluvialis fulva*) in Florida: a first state record. *Florida Field Naturalist* 44:169-174.
4. **Callaghan, C. T.**, and D. E. Gawlik. 2016. Diet and selectivity of the *Porphyrio porphyrio* (Purple Swamphen) in south Florida. *Southeastern Naturalist* 15(Special Issue 8):1-14.
3. **Callaghan, C. T.**, and D. M. Brooks. 2016. Ecology, Behavior, and Reproduction of Invasive Egyptian Geese (*Alopochen aegyptiaca*) in Texas. *Bulletin of the Texas Ornithological Society* 49:37-44.
2. Chastant, J. E., **C. T. Callaghan**, and D. T. King. 2016. Morphometric variation during chick development in interior Double-crested Cormorants (*Phalacrocorax auritus*). *Waterbirds* 39:260-267.
1. **Callaghan, C. T.**, and D. E. Gawlik. 2015. Efficacy of eBird data as an aid in conservation planning and monitoring. *Journal of Field Ornithology* 86:298-304.

BOOK CHAPTERS

5. **Callaghan, C. T.**, and D. M. Brooks. 2020. Using citizen science to study exotic and invasive birds. In Downs, C. T. and Hart, L. A. (eds), Global trends and impacts of alien invasive birds. CABI, Wallingford, UK, pp. 363-368.
4. Huysentruyt, F., **C. T. Callaghan**, D. Strubbe, K. Winston, T. Adriaens, and D. M. Brooks. 2020. Egyptian Goose (*Alopochen aegyptiaca* Linnaeus, 1766). In Downs, C. T. and Hart, L. A. (eds), Global trends and impacts of alien invasive birds. CABI, Wallingford, UK, pp. 206-212.
3. Pranty, B., and **C. T. Callaghan**. 2020. Gray-headed Swamphen (*Porphyrio poliocephalus* Latham, 1801). In Downs, C. T. and Hart, L. A. (eds), Global trends and impacts of alien invasive birds. CABI, Wallingford, UK, pp. 243-247.
2. **Callaghan, C. T.**, B. Pranty, P. Pyle, and M. A. Patten. 2017. Gray-headed Swamphen (*Porphyrio poliocephalus*), The Birds of North America (P. G. Rodewald, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America: <https://birdsna.org/Species-Account/bna/species/purswa3> DOI: 10.2173/bna.purswa3.01.
1. **Callaghan, C. T.**, D. M. Brooks, and P. Pyle. 2017. Egyptian Goose (*Alopochen aegyptiaca*), The Birds of North America (P. G. Rodewald, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America: <https://birdsna.org/Species-Account/bna/species/egygoo> DOI: 10.2173/bna.egygoo.01.

TECHNICAL REPORTS

1. **Callaghan, C. T.**, and D. E. Gawlik. 2014. Diet of the Purple Swamphen in south Florida. Final Report to Florida Fish and Wildlife Conservation Commission. Contract No. 13254.

GRANTS, FELLOWSHIPS, AND AWARDS

GRANTS

Department of Agriculture, Water & The Environment; Wildlife and Habitat Bushfire Recovery Program (~\$700,000 AUD)	2020-2021
<ul style="list-style-type: none">▪ <i>Project title:</i> Building capacity for resilience & recovery of threatened ecological communities▪ <i>Role:</i> Co-PI, along with M. Ooi (Lead), W. Cornwell (Co), A. Fisher (Co), D. Keith (Co), R. Kingsford (Co), M. Lyons (Co), M. Munoz-Rojaz (Co), and J. Rowley (Co)	
New South Wales Environmental Trust Research Grant (~\$166,000 AUD)	2020-2022
<ul style="list-style-type: none">▪ <i>Project title:</i> Optimizing biodiversity sampling by citizen scientists▪ <i>Role:</i> Lead-PI, along with R. Major, R. Kingsford, J. Rowley, and A. Woods	
Sea World Research & Rescue Foundation Research Grant (~\$22,000 AUD)	2018-2020
<ul style="list-style-type: none">▪ <i>Project title:</i> Snapping fish, catching data: exploring the potential of recreational scuba diving photographs to assess the composition of fish communities and their associated habitat.▪ <i>Role:</i> Co-PI, along with A. Verges (Lead), A. Poore (Co), and C. Roberts (Co)	
Australian Wildlife Society Postgraduate Research Grant (\$5,000 AUD)	2017
<ul style="list-style-type: none">▪ <i>Project title:</i> Bird conservation in the Blue Mountains World Heritage Area – response to urbanisation?▪ <i>Role:</i> Lead PI – solo application for postgraduate funding	

FELLOWSHIPS

Marie Skłodowska-Curie Actions Individual Fellowship (€174,806.40)	2020-2022
UNSW Sydney UIPA (postgraduate) stipend (~\$94,500 AUD)	2016-2020

OTHER AWARDS

British Ornithologists Union ECR travel grant to attend IOC2018 -- \$900	2018
Centre for Ecosystem Science Postgraduate Research Forum presentation award -- \$250	2018
Ecological Society of Australia Outstanding Speed Talk -- \$440	2017
Medibank International Conference and Fieldwork Grant -- \$2000	2017
Stuart Leslie Bird Conference Travel Award -- \$500	2017
Centre for Ecosystem Science Postgraduate Research Forum presentation award -- \$250	2017
FAU Senior Mentor award in mentoring undergraduate researchers -- \$500	2015
FAU GPSA travel award, AFO/WOS/SCO Annual Conference -- \$900	2015
GPSA Research Day First Place Award in Environmental and Geological Sciences -- \$100	2015
WOS travel award, Wilson Ornithological Society annual meeting -- \$300	2013
Canisius College Environmental Science Award for Excellence in Research -- N/A	2013
Canisius College Environmental Science Award for Academic Excellence -- N/A	2013
Canisius College Ignation Undergraduate Research Scholarship Recipient -- \$2,400	2012-2013

TEACHING EXPERIENCE

Demonstrator, BIOS3601 (Advanced Field Biology)	February 2019
UNSW Sydney, Sydney, Australia	
<ul style="list-style-type: none">▪ Assisted as staff in a field course for undergraduate students focused on field ecology and biology.	

Course Coordinator, BIO431 (Avian Systematics and Biogeography) June – October 2018
Charles Sturt University, Albury, Australia

- Coordinated a graduate-level course in avian systematics, taxonomy, biogeography, phylogeny.

Guest Lecture, BIOS6671 (Conservation Biology) October 2018, 2019, 2020
UNSW Sydney, Sydney, Australia

- Gave a lecture to this third-year course on urban bird conservation and ecology

Guest Lecture, BIOS1301 (Ecology & Sustainability) April 2018, April 2019
UNSW Sydney, Sydney, Australia

- Gave a lecture to this first-year course on land degradation, land management, and biodiversity offsets.

Demonstrator, BIOS1301 (Ecology & Sustainability) February – May 2018
UNSW Sydney, Sydney, Australia

- Assisted in monitoring and providing an introductory class to ecology, including lab-based and field based practical assignments.

Demonstrator, BIOS1101 (Evolutionary & Functional Biology) August – October 2017
UNSW Sydney, Sydney, Australia

- Assisted in monitoring and providing an introductory evolutionary and functional biology course to first-year students.

Primary Instructor, Introduction to Research Fall 2015 – Spring 2016
Florida Atlantic University High School, Boca Raton, Florida

- Designed and implemented a research course intended for 9th grade students which provided an introduction to research methods, as part of a STEM program.

Graduate Teaching Assistant Fall 2013, Spring 2014, Spring 2015, Summer 2015
Florida Atlantic University, Boca Raton, Florida

- Primary instructor of Biodiversity and Bioprinciples lab for undergraduate students. Responsible for evaluating and grading quizzes, assignments, and lab-practicals.

Undergraduate Teaching Assistant Spring 2013
Canisius College, Buffalo, New York

- Assisted professor with laboratory set-up and demonstration in Ornithology. Taught bird identification lectures as part of the lab. Provided assistance on homework and exams to students outside of class time.

PROFESSIONAL EXPERIENCE

Scientific Technical Officer 2018-2019
Australian Museum Research Institute

- Supervisor: Dr. Jodi Rowley
- Conducting statistical analyses and providing oversight on design and implementation of a national citizen science FrogID app

Research Associate 2015-2016

Florida Atlantic University, Boca Raton, Florida

- Supervisor: Dr. Dale E. Gawlik
- Conducting statistical analyses and modeling in order to link a global hydrology dataset to breeding waterbirds.

Graduate Research Assistant

2013-2015

Florida Atlantic University, Boca Raton, Florida

- Supervisor: Dr. Dale E. Gawlik
- Conducted a diet analysis of Purple Swamphen in south Florida and conducted vegetation surveys in order to demonstrate selectivity of the swamphen. Also developed a conceptual framework in which to prioritize nonnative avian species' dispersal from urban to natural habitat.

Undergraduate Research Assistant

2010-2013

Canisius College, Buffalo, New York

- Supervisor: Dr. Sara R. Morris
- Studied migrant flight call behavior in wood-warblers: Investigated the effect of sound cues on flight calling behavior in wood-warbler species.

U.S. Fish and Wildlife Service Biological Science Technician

2011-2013

Iroquois National Wildlife Refuge, Alabama, New York

- Gained experience in a variety of biological facets; bathymetry, bird surveys, migratory bird banding, refuge management practices, invasive species surveys, managing high school students, plant surveys, etc.

INVITED PRESENTATIONS

7. Callaghan, C. T. Northeastern Natural History Conference 2021 – April 18th, 2021; Title: *A framework for dynamic biodiversity sampling with citizen science.*
6. Callaghan, C. T. Trees, People, and the Built Environment, International Urban Trees Research Conference – February 3rd, 2021; Title: *How to make an urban greenspace attractive to biodiversity.*
5. Callaghan, C. T. Australian Museum/Royal Botanic Gardens ECR Forum – February 27th, 2019; Title: *Measuring the 'urbanness' of bird species and communities.*
4. Callaghan, C. T. University of Wollongong, Centre for Sustainable Ecosystems Solutions Seminar Series – September 6th, 2018; Title: *Macroecological responses of birds to urbanization.*
3. Callaghan, C. T. Applied Aspects of Avian Urban Ecology – An International Initiative – August 20th, 2018; Title: *Beyond backyard birding: birds, big data, and bright lights.*
2. Callaghan, C. T. UNSW Sydney, School of Biological, Earth and Environmental Sciences Seminar Series – May 4th, 2018; Title: *Using a global dataset to understand avian responses to urbanization at local and global scales.*
1. Callaghan, C. T. Australian Museum Research Institute Seminar Series – January 24th, 2018; Title: *Quantifying the ecological value of citizen science data for urban greenspaces.*

CONFERENCE PRESENTATIONS

19. Lee, J., Callaghan, C. T., and Cornwell, W. 2020. Using citizen science and trait data to measure recolonization of birds after Australian 2019-20 megafire. Ecological Society of Australia virtual conference. *Poster Presentation*

18. Thompson, M., Callaghan, C. T., Rowley, J. J. L. 2020. What signals time to breed? Citizen science reveals exogenous influences to frog calling across Australia. Ecological Society of Australia virtual conference. *Oral Presentation*.
17. Callaghan, C. T., Nakagawa, S., and Cornwell, W. 2020. Estimating global population size for 10,000 birds. International Statistical Ecology Conference (vISEC) virtual conference. *Oral Presentation*
16. Callaghan, C. T. 2019. Tracking biodiversity changes by integrating big data: an example using bird responses to urbanization. International Congress on Conservation Biology (ICCB) 2019, Kuala Lumpur, Malaysia. *Oral Presentation*.
15. Callaghan, C. T. 2019. Deriving and applying a continuous measure of urban tolerance for assessing species adaptations and community changes in urban environments. Australasian Ornithological Conference, Darwin, Northern Territory, Australia. *Oral Presentation*.
14. Rowley, J. L. L., C. T. Callaghan, T. Cutajar, C. Portway, and S. Mahony. 2019. FrogID: citizen scientists provide validated biodiversity data on Australia's frogs. Australian Society of Herpetologists, Kindilan, Queensland. *Oral Presentation*.
13. Mitchell, B. A., C. T. Callaghan, and J. L. L. Rowley. 2019. Using large-scale citizen science data to examine acoustic responses of frogs to anthropogenic disturbance. Australian Society of Herpetologists, Kindilan, Queensland. *Poster Presentation*.
12. Callaghan, C. T., R. E. Major, M. B. Lyons, J. M. Martin, and R. T. Kingsford. 2018. A global analysis of the effects of local and landscape habitat attributes in urban greenspaces. International Ornithological Congress, Vancouver, British Columbia, Canada. *Oral Presentation*.
11. Callaghan, C. T., M. B. Lyons, K. J. Brandis, and R. T. Kingsford. 2018. Assisted monitoring of large wading bird colonies using unmanned aerial vehicles. Waterbird Society, Vancouver, British Columbia, Canada. *Oral Presentation*.
10. Callaghan, C. T., M. Slater, R. E. Major, M. Morrison, J. M. Martin, and R. T. Kingsford. 2017. A bird in the bush is worth \$223,851 in the hand. Ecological Society of Australia EcoTAS Conference, Pokolbin, NSW, Australia. *Oral Presentation and Poster Presentation*.
8. Callaghan, C. T., J. M., Martin, R. E. Major, and R. T. Kingsford. 2017. Citizen Science adds ecological value in urban greenspaces. Australasian Ornithological Conference, Geelong, Victoria, Australia. *Oral Presentation*.
8. Callaghan, C. T., K. M. Conlan, and D. M. Brooks. 2016. Ecology, Behavior, and Reproduction of Invasive Egyptian Geese (*Alopochen aegyptiaca*) in Texas. North American Ornithological Conference, Washington D. C., United States. *Poster Presentation*.
7. Callaghan, C. T. 2015. Bridging the gap between birding and science. Audubon Society of the Everglades, West Palm Beach, FL. *Oral Presentation*.
6. Callaghan, C. T., and D. E. Gawlik. 2015. Invasion trajectories of nonnative avian species in Florida. Association of Field Ornithologists, Wilson Ornithological Society, and Society of Canadian Ornithologists Annual Meeting, Wolfville, Nova Scotia, Canada. *Oral Presentation*.
5. Callaghan, C. T., and D. E. Gawlik. 2015. The diet and selectivity of the Purple Swamphen in south Florida. Greater Everglades Ecosystem Restoration Conference, Coral Springs, FL. *Oral Presentation*.
4. Callaghan, C. T., and D. E. Gawlik. 2015. The diet and selectivity of the Purple Swamphen in south Florida. GPSA Research Day, Florida Atlantic University, Boca Raton, FL. *Poster Presentation*.
3. Callaghan, C. T., D. E. Gawlik, and J. Eckles. 2015. The diet and selectivity of the Purple Swamphen in south Florida. A.R.M. Loxahatchee National Wildlife Refuge Science Workshop, West Palm Beach, FL. *Poster Presentation*.

2. Calle, L., C. T. Callaghan, J. Klassen, M. Denton, and P. Klarman. 2014. A Multi-criteria decision analysis tool for resource prioritization. The Wildlife Society of Florida Spring Conference, Safety Harbor, FL. *Breakout Session*.
1. Callaghan, C. T., S. R. Morris. 2013. Latency in Magnolia Warbler flight calling. Wilson Ornithological Society Annual Conference, Williamsburg, VA. *Oral Presentation*.

PROFESSIONAL SERVICE

REVIEWING

Have reviewed >40 manuscripts for 46 different journals: *Austral Ecology*, *Australian Field Ornithology*, *Australian Journal of Zoology*, *Basic and Applied Ecology*, *Biological Conservation*, *Conservation Science and Practice*, *Ecography*, *Ecological Applications*, *Ecology and Evolution*, *Ecology and Society*, *Ecology Letters*, *Ecosphere*, *Emu – Austral Ornithology*, *Global Ecology and Biogeography*, *Journal of Ecotourism*, *Journal of Environmental Economics*, *Journal of Applied Ecology*, *Journal of Biogeography*, *Journal of Environmental Management*, *Journal of Field Ornithology*, *Journal of Ornithology*, *Journal of the American Statistical Association*, *Journal of Urban Ecology*, *Landscape and Urban Planning*, *Landscape Ecology*, *Methods in Ecology and Evolution*, *Oikos*, *PeerJ Computer Science*, *People and Nature*, *PLoS Biology*, *PLoS One*, *Proceedings of the Linnean Society of NSW*, *Proceedings of the Zoological Society*, *Science of the Total Environment*, *Remote Sensing in Ecology and Conservation*, *Scientific Reports*, *The Condor*, *Tourism Management Perspectives*, *Urban Ecosystems*, *Urban Forestry and Urban Greening*.

Publons profile: <https://publons.com/researcher/1234808/corey-callaghan/peer-review/>

I also have reviewed 1 National Science Foundation proposal, 1 Natural Sciences and Engineering Research Council proposal, and 1 proposal for the Vienna Science and Technology Fund.

SUPERVISING AND MENTORING

- Have supervised four different undergraduate projects. Three have been published (see Gorta et al. 2019, Weaver et al. 2020, and Lee et al. 2021 above) and one is in preparation.
- Have co-supervised four honours projects (Australian equivalent to a shortened Masters, that students complete before starting a PhD). Two have been published (see Mitchell et al. 2019 and Laitly et al. 2021 above), one is in minor revisions, and two are in review.
- Am currently co-supervising one PhD student at UNSW Sydney, focused on using citizen science data to understand frog diversity dynamics throughout Australia.

OUTREACH ACTIVITIES

NON-PEER REVIEWED PUBLICATIONS (“PUBLIC OUTREACH”)

5. Callaghan, C.T. (2019): The Greenspace bird Calculator: A tool to help monitor avian biodiversity in urban greenspaces. *Consulting Ecology*, 12, 13-15.
4. Callaghan, C.T. (2018): What impact do cities in the Blue Mountains World Heritage Area have on bird-life? *Australian Wildlife*, 2, 24-26.
3. Callaghan, C.T. (2017) Birders and Exotics – Aesthetics, Ecology, Fair Play: A survey of the birding community’s strongly held views about exotic bird species. *Birding*, 49, 28-36.
2. Callaghan, C.T. (2016) A Global Perspective on the Egyptian Goose (*Alopochen aegyptiaca*): Ten Interesting Tidbits. *Everglade Kite*, Newsletter of the Audubon Society of the Everglades 56, February 2016.
1. Callaghan, C.T. (2014) Shorebirds at Snook Islands. *Everglade Kite*, Newsletter of the Audubon Society of the Everglades 55, December 2014.

VOLUNTEER ACTIVITIES

- Serve as a member of the IUCN SSC Species Monitoring Specialist Group, 2021-2023.
- Have prepared content and given lectures for a weekly Environmental Computing class conducted through the School of BEES at UNSW (2016 – 2020)
- Volunteer content sourcer for the Ecological Society of Australia's bimonthly bulletin (2017 – 2020)
- Have volunteered for > 12 Christmas Bird Counts – a citizen science initiative by the National Audubon Society (2010 – 2016)
- Have appeared on radio interviews discussing urban birds and bird-related research (2017 – present)
- Given talks (N>10) to local birding clubs in the United States and Australia discussing research (2014 – present)