

# Simona Picardi

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## Education

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2019

**PhD, Wildlife Ecology and Conservation, University of Florida**

Dissertation: “Movement Ecology of Wood Storks in the Southeastern U.S.”

Advisors: Mathieu Basille, Peter Frederick

2015

**MSc, Ecology, University of Rome La Sapienza – *Cum laude***

Thesis: “Movement Trajectories of Roe Deer in Alpine Environments”

Advisors: Luigi Boitani, Francesca Cagnacci

2012

**BSc, Biological Sciences, University of Rome La Sapienza – *Cum laude***

Thesis: “Mammal Dispersal and its Implications for Conservation”

Advisor: Luigi Boitani

## Employment History

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February 2020 – present

**Postdoctoral Researcher, Utah State University, USA**

Sage-Grouse Habitat Assessment Framework Coordinator

Jack H. Berryman Institute, Department of Wildland Resources

August 2015 – December 2019

**Graduate Researcher, University of Florida, USA**

Department of Wildlife Ecology and Conservation

March 2014 – March 2015

**Graduate Researcher, Edmund Mach Foundation, Italy**

Research and Innovation Centre, Movement and Conservation Ecology Research Group

## Publications

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### Peer-reviewed

1. Joo, R., **Picardi, S.**, Clay, T.A., Boone, M.E., Patrick, S.C., Basille, M. Recent trends in movement ecology of animals and human mobility. 2022. *Movement Ecology* (in press)
2. Carpenter, B.G., Sieving, K.E., Terhune, T., **Picardi, S.**, Griffith, A., Shields, R., Pittman, H.T. Linking wild turkey hen movement data to nesting behavior. 2022. *Wildlife Society Bulletin*.  
<https://doi.org/10.1002/wsb.1267>
3. **Picardi, S.**, Coates, P.S., Kolar, J., Mathews, S.R., O’Neil, S., Dahlgren, D.K. Behavioral state-dependent habitat selection and implications for animal translocations. 2021. *Journal of Applied Ecology*.  
<https://doi.org/10.1111/1365-2664.14080>
4. **Picardi, S.**, Ranc, N., Smith, B.J., Coates, P.S., Mathews, S.R., Dahlgren, D.K. Individual variation in temporal dynamics of post-release habitat selection. 2021. *Frontiers in Conservation Science* 2:703906. Part of Special Issue “Animal Behavior After Translocation into Novel Environments”.  
<https://doi.org/10.3389/fcsc.2021.703906>
5. Gould, M.J., Gramza, A.R., **Picardi, S.** Editorial: Early Career Researchers’ Views on Publishing in The Journal of Wildlife Management. 2021. *The Journal of Wildlife Management* 1-4.  
<https://doi.org/10.1002/jwmg.22130>
6. **Picardi, S.**, Messmer, T., Crabb, B., Kohl, M., Dahlgren, D., Frey, N., Larsen, R., Baxter, R. Predicting greater sage-grouse habitat selection at the southern periphery of their range. 2020. *Ecology and Evolution* 10(23):13451-13463. <https://doi.org/10.1002/ece3.6950>
7. Bruant, A.\*, **Picardi, S.**, Basille, M. Parental care in wood stork (*Mycteria americana*) and its effect on fledging success. 2020. *Waterbirds* 43(2):134-146. <https://doi.org/10.1675/063.043.0202> \*student mentee
8. **Picardi, S.**, Smith, B.J., Boone, M.E., Frederick, P.C., Cecere, J.G., Rubolini, D., Serra, L., Pirrello, S., Borkhataria, R.R., Basille, M. Analysis of movement recursions to detect reproductive events and estimate their fate in central place foragers. 2020. *Movement Ecology* 8(1):1-14.  
<https://doi.org/10.1186/s40462-020-00201-1>
9. **Picardi, S.**, Frederick, P.C., Borkhataria, R.R., Basille, M. Partial migration in a subtropical wading bird in the southeastern United States. 2020. *Ecosphere* 11(2): e03054. <https://doi.org/10.1002/ecs2.3054>
10. **Picardi, S.**, Basille, M., Peters, W., Ponciano, J.M., Boitani, L., Cagnacci, F. Movement responses of roe deer to hunting risk. 2019. *The Journal of Wildlife Management* 83(1):43-51.  
<https://doi.org/10.1002/jwmg.21576>
11. **Picardi, S.**, Borkhataria, R.R., Bryan, A.L.Jr., Frederick, P.C., Basille, M. GPS telemetry reveals occasional dispersal of wood stork (*Mycteria americana*) from the southeastern US to Mexico. 2018. *Caribbean Naturalist* 2:23-29. Part of Special Issue Endangered and Threatened Species of the Caribbean Region

## Under review

1. **Picardi, S.**, Abrahms, B., Gelzer, E., Morrison, T., Verzuh, T., Merkle, J. Defining null expectations for animal site fidelity. *Ecology Letters*.
2. Bar-Ziv, E.\*, **Picardi, S.**, Kaplan, A., Avgar, T., Berger-Tal, O. Sex differences dictate the movement patterns of striped hyenas in a human-dominated landscape. *Frontiers in Ecology and Evolution*.

## In preparation (manuscript available upon request)

3. **Picardi, S.**, Frederick, P.C., Borkhataria, R.R., Basille, M. Fitness consequences of behavioral heterogeneity in a partially migratory population along an urban gradient. Target journal: *Proceedings of the Royal Society B*.
4. Kohl, M.T., **Picardi, S.**, Dahlgren, D.K., Frey, S.N., Larsen, R.T., Thacker, E.T., Allred, B.W., Naugle, D.E., Reese, J., Cook, A., Messmer, T.A. Mapping greater sage-grouse distribution across Utah in relation to habitat availability using generalized functional response habitat models. Target journal: *Ecological Applications*.
5. Small, J.\* **Picardi, S.**, Kohl, M.T., Messmer, T.A. A tool to prioritize conifer removal treatments for the benefit of greater sage-grouse habitat in Utah. Target journal: *Rangeland Ecology and Management*. \*student mentee.
6. Dahlgren, D., Fox, S.\*, Woolwine, D., Bedrosian, B., **Picardi, S.**, Hemenway, J., Thacker, E.T., Messmer, T.A. Geophagy influences winter habitat selection for greater sage-grouse in Wyoming. Target journal: *The Journal of Wildlife Management*. \*student mentee
7. Wayment, H.\* **Picardi, S.**, Stoner, D., Thacker, E., Messmer, T.A. Brood-rearing habitat selection of greater sage-grouse under different cattle grazing management systems in Utah. Target journal: *The Journal of Wildlife Management*. \*student mentee

## Technical/not peer-reviewed

8. **Picardi, S.**, Frederick, P.C., Borkhataria, R.R., Basille, M. 2020. Wood storks: Iconic wetland dwellers in the southeastern USA. *Bulletin of the Ecological Society of America* 101(3):e01693. <https://doi.org/10.1002/bes2.1693>
9. Cagnacci, F., Ossi, F., Peters, W., Ranc, N., Semenzato, P., Mancinelli, S., Bianchini, F., **Picardi, S.**, Zini, V., Simeone, M., Nicoloso, S., Rocca, M. 2015. 2C2T: Capriolo e Cervo in Trentino e Tecnologia. *Il Cacciatore Trentino*.

## Grants, Scholarships, and Awards

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Total funds awarded: \$124,250

- **Sage-grouse Data Management, Analysis, and Reporting Habitat Assessment Framework.** Bureau of Land Management, Utah Department of Natural Resources, Utah Watershed Restoration Initiative. PI: Messmer, T. Co-PI: Picardi, S. - \$100,000

- 2019 **Outstanding Graduate Student Award**, Department of Wildlife Ecology and Conservation, University of Florida
- 2018 **Everglades Foundation** ForEverglades Graduate Student Scholarship - \$13,000
- 2019 **Florida Chapter of the Wildlife Society** Courtney A. Tye Graduate Student Scholarship - \$2,000
- 2015-2016 **University of Florida Department of Wildlife Ecology and Conservation** Jennings Scholarship - \$2,000
- 2017-2018 **Florida Wildlife Federation** Graduate Student Scholarship - \$1,200
- 2017 **University of Florida Fort Lauderdale Research and Education Center** Jack A. Falk III Scholarship for Everglades Conservation, Restoration, and Sustainability - \$1,000
- 2019 **TWS Biometrics Working Group** Student Travel Grant - \$700
- 2018 **University of Florida College of Agricultural and Life Sciences** James Davidson Graduate Travel Scholarship - \$650
- 2022 **International Statistical Ecology Conference** Travel Grant - \$600
- 2019 **TWS Spatial Ecology and Telemetry Working Group** Student Travel Grant - \$500
- 2019 **University of Florida Carpentries Club** Travel Award - \$500
- Fall 2019 **University of Florida Office of Research** Travel Grant - \$400
- Spring 2019 **University of Florida Office of Research** Travel Grant - \$400
- 2019 **University of Florida Graduate Student Council** Travel Grant - \$350
- 2018 **Ecological Society of America Long-Term Studies Section** J. T. Callahan Student Travel Award - \$250
- 2018 **University of Florida Institute of Food and Agricultural Sciences** Graduate Student Travel Grant - \$250
- 2019 **University of Florida WEC Graduate Student Association** Travel Grant - \$250
- 2022 **Utah Chapter of The Wildlife Society Annual Meeting** Best Professional Presentation
- 2021 **Utah Chapter of The Wildlife Society Annual Meeting** Best Professional Presentation
- 2019 **Florida Chapter of The Wildlife Society Spring Meeting** Best Student Presentation - \$100
- 2018 **Florida Chapter of The Wildlife Society Spring Meeting** Best Student Presentation - \$100

## Presentations

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### Invited

**Department Seminar, Department of Biology and Biotechnologies “Charles Darwin”, University of Rome La Sapienza.** 2021. Fitness consequences of behavioral heterogeneity in a partially migratory population. Roma (RM), Italy.

**Gordon Research Seminar on Movement Ecology of Animals.** 2019. Use of GPS-tracking data to estimate avian reproductive outcome. Barga (LU), Italy.

**Italian Institute for Environmental Protection and Research (ISPRA).** 2019. Use of GPS-tracking data to estimate avian reproductive outcome. Ozzano nell’Emilia (BO), Italy.

**Florida Chapter of The Wildlife Society Meeting.** 2019. Locating wood stork nests and estimating reproductive outcome from GPS-tracking data. Melbourne, FL. \*Winner of best student presentation award

**University of Florida Wildlife Ecology and Conservation Graduate Student Association Seminar Series.** 2019. The nestR package to locate nest sites and estimate avian reproductive outcome from telemetry data. Gainesville, FL.

### Contributed

**Utah Chapter of the Wildlife Society Annual Meeting.** 2022. Behavioral state-dependent habitat selection in greater sage-grouse. Virtual presentation. \*Winner of best professional presentation award

**Western Association of Fish and Wildlife Agencies Sage and Columbian Sharp-Tailed Grouse Workshop.** 2021. Behavioral state-dependent habitat selection in translocated greater sage-grouse in North Dakota. Virtual presentation.

**Utah Chapter of the Wildlife Society Annual Meeting.** 2021. Greater sage-grouse habitat selection at the southern periphery of their range. Virtual presentation. \*Winner of best professional presentation award

**Utah Bureau of Land Management Prescribed Fire and Fuels Workshop.** 2020. Effectiveness of fuel and vegetation treatments and restoration within Utah BLM: are we making a difference? Virtual presentation.

**Utah Community-Based Conservation Program Seminar Series.** 2020. A tool for prioritizing vegetation treatments in sage-grouse habitat. Virtual presentation.

**Utah Sage-Grouse Plan Implementation Council Annual Meeting.** 2020. Sage-grouse seasonal habitat selection in Utah. Virtual presentation.

**Gordon Research Conference on Movement Ecology of Animals.** 2019. Locating nests and estimating reproductive outcome from avian telemetry data. Barga (LU), Italy. Poster

**The Wildlife Society & The American Fisheries Society Joint Conference.** 2019. Mechanisms for shifts of migratory patterns – a case-study with a partially migratory wading bird. Reno, NV.

**Greater Everglades Ecosystem Restoration Conference.** 2019. Estimating wood stork reproductive outcome from movement data. Coral Springs, FL.

**University of Florida Fort Lauderdale Research and Education Center Seminar Series.** 2019. Movement ecology of wood storks in the southeastern U.S. Davie, FL.

**University of Florida Wildlife Ecology and Conservation Seminar Series.** 2019. Movement ecology of wood storks in the southeastern U.S. Gainesville, FL. October 2019

**Ecological Society of America Annual Meeting.** 2018. Partial migration by a large wading bird in a highly unpredictable environment. New Orleans, LA.

**Florida Chapter of The Wildlife Society Meeting.** 2018. Exploring the spectrum of migratory behaviors in wood stork (*Mycteria americana*). Crystal River, FL. \*Winner of best student presentation award

**Florida Ornithological Society Meeting.** 2018. Partial migration and seasonal distribution patterns in wood storks. Davie, FL.

**UF Institute of Food and Agricultural Sciences Graduate Student Symposium.** 2018. Eggs in different baskets: how moving helps Wood Storks persist. Immokalee, FL. Poster

**Greater Everglades Ecosystem Restoration Conference.** 2017. Tracking large-scale movements of wood stork in the Greater Everglades Ecosystem. Coral Springs, FL.

**Florida Ornithological Society Meeting.** 2017. GPS telemetry reveals occasional dispersal of wood stork (*Mycteria americana*) from the Southeastern US to Mexico. Gainesville, FL.

**Ecological Society of America Annual Meeting.** 2016. Running safely from hunters: movement behavior of roe deer (*Capreolus capreolus*) within and outside a protected area in the Italian Alps. Fort Lauderdale, FL.

**UF Institute of Food and Agricultural Sciences Graduate Student Symposium.** 2016. Running safely from hunters: movement behavior of roe deer (*Capreolus capreolus*) within and outside a protected area in the Italian Alps. Immokalee, FL. Poster

## Technical

**Ecological Society of America Annual Meeting, iDigBio Data Help Desk.** 2018. Handling and managing animal tracking data in R (presentation and demo). New Orleans, LA.

**University of Florida “R Meetups” Seminar Series.** 2018. Working with wildlife tracking data in R (presentation and demo). Gainesville, FL.

**Wildlife Ecology and Conservation “MoveGroup” Seminar Series.** 2018. Demo: Introduction to handling tracking data in R and an example of First Passage Time analysis for path segmentation. Gainesville, FL.

## Outreach

**University of Florida Institute of Agricultural and Life Sciences Wildlife Extension Seminar Series.** 2019. Wood storks – from Everglades birds to urban dwellers. Davie, FL.

**Sun City Center Audubon Club.** 2019. Chasing Wood Storks – Ornithology Research in the Era of Technology. Sun City Center, FL.

**Manatee County Chapter of the Audubon Society.** 2018. Chasing Wood Storks – Ornithology Research in the Era of Technology. Bradenton, FL.

**University of Florida Wildlife Graduate Student Association “Suds and Science” Event.** 2018. A spectrum of migratory behaviors: Wood Stork movements in the southeastern US. Gainesville, FL. Poster

## Teaching

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### Curricular courses

**Plant and Animal Populations (WILD 3810).** Undergraduate course, Spring 2022. Utah State University. Role: instructor of record.

**Reproducible Data Science (WILD 6900).** Graduate course, Spring 2021. Utah State University. Role: instructor of record. Materials available at <https://ecorepsci.github.io/reproducible-science/>

**Next Generation Data Management in Movement Ecology (WIS 6934).** Graduate course, Summer 2016 and 2017. University of Florida Fort Lauderdale Research and Education center. Instructor of record: Dr. Mathieu Basille. Role: co-instructor.

**Landscape Ecology (WIS 4203).** Undergraduate course, Spring 2016. University of Florida. Instructor of record: Dr. Robert Fletcher. Role: teaching assistant.

### Extra-curricular courses

**Collaborative Science with Git and GitHub.** 2-day workshop, 2021. University of Wyoming. Role: instructor.

**Data Carpentry for Ecologists.** Eight 2-day workshops between 2017 and 2019. Roles (varying): organizer, instructor, teaching assistant.

**Data Management, Manipulation, and Visualization in R.** 2-day workshop, 2019. Florida Atlantic University. Role: co-instructor.

### Guest lectures

**Ecology of Our World.** Undergraduate course, Fall 2021. Utah State University. Instructor of record: Dr. Tal Avgar. Habitat selection in translocated animals: a case-study with greater sage-grouse in North Dakota.

**Applications in Landscape Ecology.** Graduate course, Spring 2021. Colorado State University. Instructor of record: Dr. Kyle Horton. Individual variation in large-scale movement patterns and its fitness consequences in wood storks.

**Ecology of Our World.** Undergraduate course, Fall 2020. Utah State University. Instructor of record: Dr. Tal Avgar. Animal personalities mediate responses to human-driven environmental change: a case-study with a migratory wading bird in Florida.

**Avian Ecology and Conservation.** Graduate course, Fall 2020. University of Florida. Instructor of record: Dr. Jessica Hightower. Fitness consequences of individual movement behavior and habitat selection in wood storks.



**Applied Bayesian Analysis for Ecological Data.** Graduate course, Spring 2020. Utah State University. Instructor of record: Dr. Clark Rushing. Introduction to ‘nimble’ – an R package for fast computation of Bayesian hierarchical models.

**Wildlife Biology and Conservation.** Graduate course, Spring 2019. University of Rome La Sapienza, Italy. Instructor of record: Dr. Luigi Boitani. Partial migration in a subtropical wading bird in the southeastern U.S.

**Wildlife Biology and Conservation.** Graduate course, Spring 2015. University of Rome La Sapienza, Italy. Instructor of record: Dr. Luigi Boitani. Movement trajectories of roe deer in alpine environment.

## Student mentoring

**MS Student Alexis Bruant.** University of Florida, 2017-2018. [Thesis co-advisor.](#)

**MS Student Scott Fox.** Utah State University, 2020. [Thesis mentor.](#)

**PhD Student Justin Small.** Utah State University, 2020-2021. [Dissertation mentor.](#)

**MS Student Hailey Wayment.** Utah State University, 2020-2022. [Thesis mentor.](#)

**PhD Student Melissa Chelak.** Utah State University, 2020-ongoing. [Dissertation mentor.](#)

**MS Student Codi Backen.** Utah State University, 2021-ongoing. [Non-voting committee member.](#)

**MS Student Chuck Carpenter.** Utah State University, 2021-ongoing. [Thesis mentor.](#)

**MS Student Amanda Hayes-Puttfarcken.** Utah State University, 2022-ongoing. [Committee member.](#)

## Professional Service and Leadership

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**TWS Leadership Institute.** 2022. Selected among a group of 10 early-career members of The Wildlife Society to receive formal leadership training.

**Chair-Elect, Gordon Research Seminar on Movement Ecology of Animals.** 2021 (postponed to 2023). International meeting for early-career researchers in movement ecology.

**Elected Board Member, University of Florida Carpentries Club.** 2017-2019. Local chapter of The Carpentries promoting informatics literacy by organizing data science workshops at the University of Florida.

**ESA SEEDS Program Mentor, Ecological Society of America Annual Meeting.** 2018. Mentoring of students from underrepresented minority groups as they attend their first ESA meeting.

**Referee Services.** Journal of Animal Ecology, Journal of Applied Ecology, Behavioral Ecology, Movement Ecology, Ecological Applications, Journal of Wildlife Management, Wildlife Society Bulletin, European Journal of Wildlife Research, Ostrich, Human-Wildlife Interactions, Wilson Journal of Ornithology, Florida Field Naturalist.

**Professional Memberships.** The Wildlife Society, Ecological Society of America.



## Professional Development

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**Inclusive Pedagogy Techniques.** 2021. Utah State University, Logan, UT. Instructor: Emmalee Fishburn

**Bayesian Integrated Population Modeling Using JAGS.** 2019. New Mexico State University, Las Cruces, NM. Instructors: Marc Kéry, Michael Schaub, Fitsum Abadi Gebreselassie

**Pedagogy principles for Software and Data Carpentry instructors.** 2018. University of Florida, Gainesville, FL. Instructors: Kari Jordan, François Michonneau

**Next Generation Data Management in Movement Ecology.** 2015. Edmund Mach Foundation, San Michele All'Adige, Italy. Instructors: Ferdinando Urbano, Francesca Cagnacci, Mathieu Basille, Anne Berger, Hamish Campbell, Timothy Files, Sarah Davidson, Antonio Galea, Duccio Rocchini

**Introduction to Habitat Analyses in R.** 2013. Edmund Mach Foundation, San Michele All'Adige, Italy. Instructor: Mark Hebblewhite