

# Simona Picardi

<https://picardiecology.com>

[simona.picardi@usu.edu](mailto:simona.picardi@usu.edu)

## 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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August 2022 – present

**Research Assistant Professor, Utah State University, USA**

Department of Wildland Resources

February 2020 – July 2022

**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. 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. 2022. *Frontiers in Ecology and Evolution* 10:897132. Part of Special Issue “Proximate and Ultimate Approaches to Behavior in a Changing World”. <https://doi.org/10.3389/fevo.2022.897132>
2. 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* 10(1):1-20. <https://doi.org/10.1186/s40462-022-00322-9>
3. Carpenter, B.G., Sieving, K.E., Terhune, T., **Picardi, S.**, Griffith, A., Sheilds, R., Pittman, H.T. Linking wild turkey hen movement data to nesting behavior. 2022. *Wildlife Society Bulletin* 46:31267. <https://doi.org/10.1002/wsb.1267>
4. **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* 59(2):624-635. <https://doi.org/10.1111/1365-2664.14080>
5. **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/fcosc.2021.703906>
6. 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* 85(8):1523-1526. <https://doi.org/10.1002/jwmg.22130>
7. **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>
8. 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
9. **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>

10. **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>
11. **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>
12. **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*.

## In preparation (manuscript available upon request)

2. **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*.
3. 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*.
4. 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.
5. 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
6. 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

7. **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>
8. 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: \$233,073

- **Assessing and improving CWD surveillance for wild cervids in Utah – part 2.** U.S. Department of Agriculture – APHIS. PI: Stout, V. (Utah Division of Wildlife Resources) Co-PIs: Manlove, K. (Utah State University), **Picardi, S.** (Utah State University) - \$108,823
- **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. (Utah State University) Co-PI: **Picardi, S.** (Utah State University) - \$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

**International Statistical Ecology Conference.** 2022. Analyzing behavioral state-dependent habitat selection using Hidden Markov Models in combination with Integrated Step Selection Analysis. Cape Town, South Africa.

**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.

## Students

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### Advising

**Courtney Check, MS student.** Utah State University (in progress)

**Ronan Hart, MS student.** Utah State University (in progress)

### Graduate committees

**Codi Backen, MS student.** Utah State University (in progress)

**Melissa Chelak, PhD student.** Utah State University (in progress)

**Amanda Hayes-Puttfarcken, MS student.** Utah State University (in progress)

### Mentoring

**Alexis Bruant, MS 2018.** University of Florida

**Chuck Carpenter, MS student.** Utah State University (in progress)

**Scott Fox, MS student.** Utah State University (in progress)

**Justin Small, PhD 2021.** Utah State University



**Hailey Wayment, MS 2022.** Utah State University

## Professional Service and Leadership

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**TWS Leadership Institute.** 2022. Part of the 2022 Class of the Leadership Institute, a program that offers formal leadership training to a select group of early-career members of The Wildlife Society.

**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.

**Referee Services.** Journal of Animal Ecology, Journal of Applied Ecology, Behavioral Ecology, Movement Ecology, Ecological Applications, Ecology and Evolution, Journal of Wildlife Management, Wildlife Society Bulletin, Wildlife Biology, 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.

## Diversity, Equity, and Inclusion

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**USU Native American Summer Mentorship Program.** 2022. Mentoring of Native American undergraduate students at Utah State University with a focus on STEM fields and research in academia.

**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.

## 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