

NATURAL RESOURCES AND THE ENVIRONMENT (GRADUATE FIELD)

Program Website (<https://cals.cornell.edu/natural-resources-environment/degrees-programs/graduate/>)

Field Description

Students join a cross-disciplinary group of scholars committed to addressing environmental, natural resources, and climate problems. About two-thirds of our field faculty are in the Department of Natural Resources and the Environment, with another third from veterinary wildlife, resource economics, international sustainable development, and other disciplines. We strive to create a community where biological, physical, and social scientists and humanists work together to address the pressing issues facing our planet and society.

The M.S. and Ph.D. programs emphasize research and require students to complete a thesis or dissertation. The Master of Professional Studies (MPS) degree focuses on course work and a professional project.

MS and PhD students work with their faculty advisor to design their graduate program, including courses and a research project. Students may conduct research in the US or internationally and have access to excellent laboratory and field facilities. The focus is on research, including its applications to real-world problems.

Prior to applying, prospective MS and PhD students must identify a faculty member who expresses interest in supervising their graduate program. Therefore, it is critical that prospective MS or PhD students correspond with potential faculty advisors during the application process. If a prospective student does not get a positive response from a potential faculty advisor, it is unlikely they will get admitted.

MPS students choose courses and identify a professional project that will advance their professional career. They work together as a cohort of about ten students each year under the direction of the MPS program director. They do not need to identify a faculty member with whom they will work prior to applying.

Data and Statistics

- Professional Master's Program Statistics (<https://gradschool.cornell.edu/about/program-metrics-assessments-and-outcomes/professional-masters-program-statistics/?SelectGradField=54>)
- Research Master's Program Statistics (<https://gradschool.cornell.edu/about/program-metrics-assessments-and-outcomes/research-masters-program-statistics/?SelectGradField=54>)
- Doctoral Program Statistics (<https://gradschool.cornell.edu/about/program-metrics-assessments-and-outcomes/doctoral-program-statistics/?SelectGradField=54>)

Field Manual

- Manual (<https://cals.cornell.edu/natural-resources-environment/degrees-programs/graduate-studies/natural-resources-and-environment-graduate-field-handbook/>)

Subject and Degrees

Natural Resources

- Natural Resources (MS) (<https://catalog.cornell.edu/programs/natural-resources-ms/>)
- Natural Resources (PhD) (<https://catalog.cornell.edu/programs/natural-resources-phd/>)
- Natural Resources and the Environment (MPS) (<https://catalog.cornell.edu/programs/natural-resources-mps/>)

Concentrations by Subject

Natural Resources

- applied ecology
- community-based natural resources management
- conservation biology
- ecosystem biology and biogeochemistry
- fishery and aquatic science
- forest science
- human dimensions of natural resources management
- policy and institutional analysis
- program development and evaluation
- quantitative ecology
- risk analysis and management
- wildlife science

Faculty

Ginger RH Allington (<http://cals.cornell.edu/ginger-rose-hagan-allington/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; community-based natural resources management; human dimensions of natural resources management
- **Research Interests:** landscape ecology; social-ecological systems modeling; land use/land cover change; rangelands & pastoralists; remote sensing

Zoe Almeida (<http://cals.cornell.edu/zoe-almeida/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; fishery and aquatic science; quantitative ecology
- **Research Interests:** Aquatic ecology Population ecology Fisheries ecology Fish early life history ecology

Jose A. Andres (<http://ecologyandevolution.cornell.edu/research-teaching-and-extension-faculty/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* conservation biology; fishery and aquatic science; wildlife science
- **Research Interests:** ecological genetics, systematics, population biology, molecular population genetics; evolutionary-ecological genomics; environmental DNA

Christopher Brendan Barrett (<http://dyson.cornell.edu/people/profiles/barrett.php>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* community-based natural resources management; human dimensions of natural resources management; policy and institutional analysis; program development and evaluation; risk analysis and management
- **Research Interests:** poverty-environment relationship; natural resources management in developing country agriculture; tropical biodiversity conservation; environment and development economics

Bernd Blossey (<http://cals.cornell.edu/bernd-blossey/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; conservation biology; ecosystem biology and biogeochemistry; fishery and aquatic science; forest science
- **Research Interests:** forest and wetland ecology; impact of invasive species; plant-insect interactions; biological control; management of multiple stressors

David N. Bonter (<http://www.birds.cornell.edu/pfw/Bonter/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; conservation biology; wildlife science
- **Research Interests:** avian ecology, general ecology, citizen science

Evan G Cooch (<http://cals.cornell.edu/evan-g-cooch/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; conservation biology; ecosystem biology and biogeochemistry; quantitative ecology; risk analysis and management
- **Research Interests:** wildlife ecology and management; population dynamics; population modeling; quantitative methods; theoretical ecology

Anna Margaret Davidson (<http://cals.cornell.edu/anna-m-davidson/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* program development and evaluation
- **Research Interests:** Ecological Arts, Visual Art, Environment & Sustainability, Science Communication, Interdisciplinary Education Research in Art and Science.

Courtney Lynn Davis (<http://www.birds.cornell.edu/home/staff/courtney-davis/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; conservation biology; quantitative ecology; wildlife science
- **Research Interests:** My research program leverages population and community ecology, and conservation biology, and information science to quantify the status, trends, drivers, and benefits of biodiversity across spatiotemporal scales and levels of biological organization.

Gregory P. Dietl (<http://fellows.atkinson.cornell.edu/view.php?NetID=gpd3>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; conservation biology; fishery and aquatic science
- **Research Interests:** Research Interests: ecology and paleoecology of marine ecosystems; conservation paleobiology; knowledge co-production in conservation science; natural security

Kathryn Fiorella (<http://www.kathrynfiorella.com/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* conservation biology; fishery and aquatic science; human dimensions of natural resources management; program development and evaluation
- **Research Interests:** planetary health/one health, fisheries, food and livelihood security, nutrition

Alexander S Flecker (<http://ecologyandevolution.cornell.edu/alexander-s-flecker/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; conservation biology; ecosystem biology and biogeochemistry; fishery and aquatic science
- **Research Interests:** stream ecology; fish ecology; food web and ecosystem ecology; tropical ecology and conservation

Angela K. Fuller (<http://cals.cornell.edu/angela-fuller/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; community-based natural resources management; conservation biology; quantitative ecology
- **Research Interests:** wildlife ecology and management; landscape ecology; conservation biology; decision analysis

Jacqueline Gerson (<http://cals.cornell.edu/jacqueline-gerson/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* ecosystem biology and biogeochemistry; fishery and aquatic science
- **Research Interests:** I am a watershed biogeochemist and ecosystem ecologist. I study how humans impact biogeochemical cycling in terrestrial and aquatic ecosystems. I am particularly interested in how landscape change, acid deposition, climate change, and the introduction of contaminants alter elemental movement, microbial processing of elements, and the resulting impacts on wildlife and people.

Martin Gilbert (<http://www2.vet.cornell.edu/research/faculty/martin-gilbert/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; community-based natural resources management; conservation biology; human dimensions of natural resources management; wildlife science
- **Research Interests:** Understanding and addressing health threats to the conservation of endangered carnivore and scavenger species. Epidemiology of multi-host pathogens at the domestic-wild animal interface.

Marc Goebel (<http://cals.cornell.edu/marc-goebel/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; ecosystem biology and biogeochemistry; forest science; quantitative ecology
- **Research Interests:** Forest ecosystems & community dynamics, reforestation and seedling establishment, plant soil interactions and belowground growth dynamics, carbon sequestration

Christine L Goodale (<http://ecologyandevolution.cornell.edu/christine-l-goodale/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* ecosystem biology and biogeochemistry; fishery and aquatic science
- **Research Interests:** ecosystem ecology, terrestrial biogeochemistry, global change

Steven M Grodsky (<http://cals.cornell.edu/steve-grodsky/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; community-based natural resources management; conservation biology; ecosystem biology and biogeochemistry; forest science; wildlife science
- **Research Interests:** renewable energy ecology, wildlife ecology and management, entomology, sustainability science

Reem Fouad Hajjar (<http://cals.cornell.edu/natural-resources-environment/natural-resources-and-environment-graduate-field-faculty/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* community-based natural resources management; human dimensions of natural resources management; policy and institutional analysis; program development and evaluation
- **Research Interests:** Forest governance, institutions, and livelihoods; Environmental justice and just conservation; Community forestry; Social-ecological systems; Conservation social sciences

Matthew P. Hare (<http://cals.cornell.edu/matthew-hare/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* conservation biology; fishery and aquatic science
- **Research Interests:** conservation genetics; phylogeography; population genetics

Brandon P Hedrick (<http://www.vet.cornell.edu/brandon-p-hedrick-phd/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; conservation biology; wildlife science
- **Research Interests:** Comparative morphology, functional anatomy, species distribution modeling, movement ecology.

Robert Warren Howarth (<http://ecologyandevolution.cornell.edu/robert-warren-howarth/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; ecosystem biology and biogeochemistry; fishery and aquatic science; policy and institutional analysis; risk analysis and management

- **Research Interests:** aquatic science; resource policy and management; environmental management; biochemistry; aquatic ecosystem science; application of science to environmental management; coastal marine ecology; watershed science and management

Steven Mana'oakamai Johnson (<http://cals.cornell.edu/steven-manaoakamai-johnson/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; community-based natural resources management; fishery and aquatic science; human dimensions of natural resources management
- **Research Interests:** Social-ecological systems, Climate change, Coral reef ecology and conservation, Marine protected areas, Fisheries, Diversity, equity, inclusion, and justice in conservation, Traditional ecological and Indigenous knowledge.

Karim-Aly S. Kassam (<http://cals.cornell.edu/karim-aly-kassam/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* community-based natural resources management; human dimensions of natural resources management; policy and institutional analysis
- **Research Interests:** bio-cultural diversity; indigenous cultures and change; climate change and its impacts; community economic development; gender analysis; human ecology; indigenous knowledge (ways of knowing)

Kade Keranen (<http://www.engineering.cornell.edu/faculty-directory/kade-keranen/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* quantitative ecology; risk analysis and management
- **Research Interests:** I use geophysical and quantitative tools to study physical properties in the subsurface and their relationship to physical processes, including climate change and related hazards. My research has a strong field component, in which I acquire data in forests, in arctic environments, and in agricultural regions, and a strong computational component including everything from synthetic data modeling, data processing, physics-guided inversions, and machine/deep learning. I intend for my work to tie closely to community needs in the regions in which I work, including impacts of climate change, drought, erosion, and natural and cultural resource protection.

Holger Klinck (<http://www.birds.cornell.edu/brp/holger-klinck/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; conservation biology; wildlife science
- **Research Interests:** bioacoustics, passive-acoustic monitoring, acoustic communication, ecoacoustics

Catherine Louise Kling (<http://dyson.cornell.edu/faculty-research/faculty/clk228/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* human dimensions of natural resources management

Clifford E Kraft (<http://cals.cornell.edu/cliff-kraft/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: applied ecology; conservation biology; ecosystem biology and biogeochemistry; fishery and aquatic science
- **Research Interests:** fish ecology; ecology of lakes and streams; aquatic resource conservation and management

Marianne Elizabeth Krasny (<http://cals.cornell.edu/marianne-elizabeth-krasny/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: community-based natural resources management; program development and evaluation
- **Research Interests:** civic ecology; urban environmental stewardship; environmental education; environmental learning in stressed communities

James Philip Lassoie (<http://cals.cornell.edu/james-philip-lassoie/>)

- **Campus:** Ithaca - (Graduate School Professor)
- **Concentrations:** *Natural Resources*: applied ecology; community-based natural resources management; conservation biology
- **Research Interests:** ecoagriculture; forest ecology and management; environmental conservation and sustainable development; international studies

Bruce Lauber (<http://cals.cornell.edu/bruce-lauber/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: community-based natural resources management; human dimensions of natural resources management; program development and evaluation; risk analysis and management
- **Research Interests:** conflict and collaboration in natural resource and environmental management, stakeholder engagement in decision making, risk management and communication related to fisheries management

Chuan Liao (<http://cals.cornell.edu/chuan-liao/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: community-based natural resources management; human dimensions of natural resources management; risk analysis and management
- **Research Interests:** Sustainability; development; spatial data science; human-environment systems

Peter McIntyre (<http://ecologyandevolution.cornell.edu/peter-mcintyre/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: applied ecology; conservation biology; ecosystem biology and biogeochemistry; fishery and aquatic science

Amelia Maginley Moore (<https://catalog.cornell.edu/graduate-school/natural-resources-environment/http/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: community-based natural resources management; fishery and aquatic science; human

dimensions of natural resources management; policy and institutional analysis

- **Research Interests:** I am a sociocultural environmental anthropologist informed by science and technology studies and Black/intersectional studies. My research areas include ocean and environmental justice; antiracist and anticolonial research methods, governance, and institutional praxis; the analysis of small island and archipelagic ecological projects, including coral restoration and ecotourism.

Stephen J. Morreale (<http://cals.cornell.edu/stephen-morreale/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: applied ecology; community-based natural resources management; conservation biology; wildlife science
- **Research Interests:** conservation ecology; vertebrate conservation; marine conservation; remote sensing and telemetry; spatial analysis and GIS; forest biodiversity conservation; amphibian and reptile ecology

Ariel Ortiz-Bobea (<http://aem.cornell.edu/people/profiles/ortiz-bobea.php>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: human dimensions of natural resources management
- **Research Interests:** Climate change; environmental change; impacts and adaptation; agricultural development; geospatial analysis; coupled human and natural systems; quantitative and econometric methods.

Steven A. Osofsky (<http://www.vet.cornell.edu/research/faculty/steven-osofsky/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: community-based natural resources management; conservation biology; human dimensions of natural resources management; policy and institutional analysis; wildlife science
- **Research Interests:** wildlife conservation; ecology

Robin William Radcliffe (<http://www.vet.cornell.edu/research/faculty/robin-radcliffe-dvm/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: applied ecology; community-based natural resources management; conservation biology
- **Research Interests:** wildlife conservation, ecology, community conservation

Aaron N. Rice (<http://www.birds.cornell.edu/ccb/aaron-rice/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: applied ecology; conservation biology; fishery and aquatic science
- **Research Interests:** fish ecology, marine biology, conservation, bioacoustics

Amanda Rodewald (<http://cals.cornell.edu/amanda-d-rodewald/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: applied ecology; conservation biology

- **Research Interests:** community ecology, population ecology, conservation biology, avian ecology, urban ecology, wildlife management

Jeffrey Andrew Royle (<http://cals.cornell.edu/j-andrew-royle/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; conservation biology; quantitative ecology; wildlife science
- **Research Interests:** capture-recapture methods, bayesian analysis

Lars Gosta Rudstam (<http://cals.cornell.edu/lars-gosta-rudstam/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; fishery and aquatic science; quantitative ecology
- **Research Interests:** fish biology; fisheries management; aquatic ecology; limnology

Rebecca L. Schneider (<http://cals.cornell.edu/rebecca-l-schneider/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; community-based natural resources management; ecosystem biology and biogeochemistry; quantitative ecology
- **Research Interests:** wetlands; integrated water resource management; landscape ecology; hydrology

Jonathon Schuldt (<http://cals.cornell.edu/jonathon-schuldt/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* human dimensions of natural resources management; risk analysis and management
- **Research Interests:** public opinion, environmental communication, message framing, environmental attitudes and behavior

Suresh Andrew Sethi (<http://cals.cornell.edu/suresh-sethi/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; fishery and aquatic science; human dimensions of natural resources management; quantitative ecology
- **Research Interests:** fisheries aquatic and marine ecosystems; natural resource management; applied statistics; risk assessment and risk management

Richard C. Stedman (<http://cals.cornell.edu/richard-c-stedman/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* community-based natural resources management; human dimensions of natural resources management; policy and institutional analysis; program development and evaluation; risk analysis and management
- **Research Interests:** linkages between social and ecological systems; natural resource and community interactions; natural resources; environmental sociology; human dimensions of natural resource management

Nina Overgaard Therkildsen (<http://cals.cornell.edu/nina-overgaard-therkildsen/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; conservation biology; fishery and aquatic science
- **Research Interests:** population genetics, evolutionary genomics, rapid adaptation, molecular ecology, fisheries, conservation

Keith G. Tidball (<http://cals.cornell.edu/keith-tidball/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* community-based natural resources management; human dimensions of natural resources management
- **Research Interests:** Keith is an environmental anthropologist and naturalist focused on better understanding how to amplify recruitment of citizen conservationists and the development of a 21st century land ethic. His work features efforts to locate and explore portals and pathways into conservation behaviors and other human dimensions of social-ecological systems resilience. Grounded in cultural anthropology, disturbance ecology and environmental psychology, he approaches this challenge via his integrated research and extension work exploring the dynamics of natural resource management in the contexts of trauma, disturbance, disasters and war. Experiences in the military and in the field of international disaster response and relief inform his unique brand of applied scholarship, including stints throughout Asia, Africa and the Americas.

Kurt B. Waldman (<http://cals.cornell.edu/kurt-waldman/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* human dimensions of natural resources management; policy and institutional analysis; risk analysis and management
- **Research Interests:** Areas of research include judgment and decision making related to climate adaptation, food security, and environmental sustainability. My research draws on the disciplines of decision science, environmental psychology, and environmental science and involves quantitative analysis of social and environmental data.

Todd Walter (<http://cals.cornell.edu/m-todd-walter/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; ecosystem biology and biogeochemistry; fishery and aquatic science; quantitative ecology
- **Research Interests:** ecohydrology; water resources; pollutant fate-transport; watershed modeling; biogeochemistry

James Martin Watkins (<http://cals.cornell.edu/james-watkins/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources:* applied ecology; ecosystem biology and biogeochemistry; fishery and aquatic science
- **Research Interests:** Great Lakes, lower food web ecology, new technologies

Steven A. Wolf (<http://cals.cornell.edu/steven-wolf/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: community-based natural resources management; conservation biology; human dimensions of natural resources management; policy and institutional analysis
- **Research Interests:** environmental policy; agricultural development; conservation planning; innovation and technical change; institutional analysis

Joseph B Yavitt (<http://cals.cornell.edu/joseph-b-yavitt/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: ecosystem biology and biogeochemistry
- **Research Interests:** ecology of forest and wetland ecosystems; biogeochemistry

John Aloysius Zinda (<http://cals.cornell.edu/john-alloysius-zinda/>)

- **Campus:** Ithaca
- **Concentrations:** *Natural Resources*: human dimensions of natural resources management
- **Research Interests:** environmental sociology, rural livelihoods, agriculture, forest restoration, risk and disasters, community, political ecology, China