

ECOLOGY & EVOLUTION CAREERS

General Information

- **The Ecology & Evolution (E&E) major Ecology provides students with interdisciplinary skills necessary for understanding and solving problems in ecology, evolution, behavior, and physiology.**
- Ecologists study the relationships and evolutionary adaptations of plants and animals to their environments by examining past and present patterns of abundance, distribution, and diversity at the individual, population, community, ecosystem, and global levels.
- Jobs exist in agricultural, animal science, environmental, forensics, genetics, molecular, and wildlife fields. Most E&E jobs require a Bachelor's degree. Administrative, University level teaching/research, and Level 3/Grade 09+ positions require a graduate degree.
- It is critical to gain relevant field experience through internships, research, jobs, & volunteering.

The following list provides a brief sample of responsibilities, employers, jobs, and industries for individuals with a degree in this major. This is by no means an exhaustive listing, but is simply designed to give initial insight into a particular career field that would employ the skills and knowledge gained through this major.

Areas	Employers	
Agricultural/Environmental <ul style="list-style-type: none"> • Investigate impacts of urban development and sustainable energy sources on wildlife and resources. • Examine influences of toxins and outside influences on aquatic and terrestrial ecosystems and wildlife. • Monitor the health and condition of agricultural animals, urban wildlife, and quality of air, food, soil, and water. 	<ul style="list-style-type: none"> • ARS • BLM • DOE • EPA • GEI • NOAA • USDA 	
Animal Care/Husbandry <ul style="list-style-type: none"> • Educate the public about conservation of wildlife. • Provide animal care and rehabilitation services to injured animals. • Conduct daily health, nutrition, and dental examinations on animals and to detect, prevent, and treat illnesses and diseases. 	<ul style="list-style-type: none"> • AZA • Aquariums • Research facilities • Wildlife rehabs • Zoos 	
Government (State & Federal) <ul style="list-style-type: none"> • Monitor, manage, and restore natural resources and wildlife populations. • Use scientific data to advise local, state, and federal policy makers. • Investigate ecological issues and topics of concern for all taxa. • Educate the public about responsible recreation and ways to conserve and enhance wildlife populations, habitats, and resources. • Examine the spread of infectious diseases among urban, domestic, & wildlife animals to prevent outbreaks of interspecific & zoonotic diseases. 	<ul style="list-style-type: none"> • BLM • CDC • DOD • DOI • EPA • NOAA • USDA • USFS • USFWS • USGS 	<ul style="list-style-type: none"> • Army Corp of Engineers • Military • National Parks • Private Contractors • State Wildlife Agencies • Tribal
Private Organizations <ul style="list-style-type: none"> • Assess the ecological impacts of developers, contractors, and military operations and make recommendations to solve issues of concern. • Display and store collections of plants and animals from all taxa. • Perform environmental impact assessments to manage and protect wildlife species and habitats. 	<ul style="list-style-type: none"> • NIH • NWF • SCB • Consultants • Ducks Unlim. 	<ul style="list-style-type: none"> • Military • Museums • Nat'l Audubon Society • Nature Conservancy

<p>Research (Field or Laboratory)</p> <ul style="list-style-type: none"> • Collect field and lab data to answer ecological, environmental, and health related questions using scientific methods. • Genetic and molecular analysis of plant and animal populations to determine species distribution, assess environmental health impacts, & monitor species status. • GIS, statistical, and population analysis of plant and animals. • Diagnose, treat, and research medical condition of pets, livestock, and wild animals. 	<ul style="list-style-type: none"> • CDC • NIH • Health Dept. • Private Companies • Research Universities & Institutions • Scripps • Veterinarians
<p>Teaching</p> <ul style="list-style-type: none"> • Educate the general public about ecology and environmental issues. • Lecture about the systems and advances in E&E. • Conduct E&E research, write grants and publications, and teach/train students. 	<ul style="list-style-type: none"> • Primary, Secondary Schools • Nature Centers • Community Colleges • Universities, Public Health Schools

Job Titles	
Agriculturist Animal trainer Biologist (Env., fisheries, plant, marine, wildlife) Biochemist Biophysicist Biostatistician Botanist Conservationist Ecologist Ecotoxologist Educator, science program coordinator Engineer Entomologist Environmental scientist Forester Geneticist Horticulturist	Land acquisitionist Journalist Naturalist Natural resource manager Oceanographer Park ranger Professor Research coordinator, specialist, tech Science writer Toxicologist Veterinarian (domestic or wildlife) Wildlife manager Wildlife photographer Wildlife specialist, technician Zoologist Zoo keeper
Industries	
Academia Agriculture Biotechnology Consulting Ecological medicine Ecotourism Education Engineering Environmental design, landscaping Government	Healthcare Hospitals Law Medical Research Lab Military Non-profit Pharmaceutical Private companies Regulatory agencies Research & Development

References:

- <http://www.esa.org/esa/education-and-diversity/info-for-undergraduate-students/>
- <http://www.bu.edu/cecb/resources/career-resources/>
- <http://work.chron.com/wildlife-ecology-jobs-14513.html>