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# David La Puma

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## Education

**Rutgers University** New Brunswick, New Jersey 2004 - Present

**Ph.D. Candidate**

**Department of Ecology, Evolution & Natural Resources**

**Thesis Topic:** Effects of Fire on the Cape Sable Seaside Sparrow (*Ammodramus maritimus mirabilis*)

**Florida International University**, Miami, Florida 2000- 2001

Graduate coursework in Biology

**Ithaca College**, Ithaca, New York 1993-1997

**BA in Planned Studies / Environmental Studies**

Concentration in Land Management

## Related Coursework

**Courses (Graduate level):** Conservation Ecology, Concepts in Evolution, Community Dynamics, Winter Field Ecology, Quantitative Ecology, Advanced Remote Sensing, Tropical Botany, Plant Ecology, Advanced Ecology: Populations and Communities, Advanced Ecology: Ecosystems, Statistics for Research I, Statistics for Research II, Introduction to Biological Research

**Courses:** Field Ornithology, Ecology of Aquatic Communities, Plant Ecology, Biology of Non-Woody Plants, Biology, Chemistry, Intermediate GIS and ArcView, Intro to GIS and ArcView, Geographical Information Systems (GIS/GPS), Writing as a Naturalist, Environmental Politics, Environmental Economics, Economics of Natural Resources, United States Environmental History, Environmental Ethics, Small Group Communications, Public Communications

**Computer Skills:** Proficiency in eCompanion, ArcInfo/GIS 9, ArcView GIS 3.x, ERDAS Imagine 8.4, Microsoft Access, Word, Excel, Outlook, Adobe PhotoShop, Adobe Illustrator, Adobe Acrobat, Dreamweaver MX; Experience with CADD 6, IDRISI, HTML, CSS, and JavaScript

## Research Experience

**Cartographic Technician**, Everglades National Park. Homestead, Florida. July 2002 – January 2004

- Designed a GIS Geodatabase to manage 50 years of fire perimeter data for the 1.5 million acre National Park
- Populated the GIS with fire perimeter data through digitization of hardcopy, as well as digitally obtained Data
- Developed Standard Operating Procedures for GPS data collection
- Provided primary GIS support during both prescription and wildland fire operations
- Managed all Everglades Fire GIS data
- Provided daily GIS and GPS support for 35 Everglades Fire Management personnel

**Research Assistant**, Fairchild Tropical Garden Research Center. Miami, Florida. February 2000 – November 2001

- Mapped, tagged, and monitored all known extant populations of *Jacquemontia reclinata* (Beach Jacquemontia) using GPS (Trimble ProXRS) and GIS (ArcView 3.2; ERDAS Imagine)
- Created a GIS database of all known individual *J. reclinata* plants
- Created professional digital and paper-based maps of *J. reclinata* populations
- Designed several field experiments to test effects of microhabitat variables on *J. reclinata* recruitment and establishment
- Excavated and illustrated root system of *J. reclinata*
- Prepared annual and semi-annual reports for U.S. Fish and Wildlife Service
- Collected GPS data and created a GIS project for the monitoring and restoration of *Pseudophoenix sargentii* to Elliott Key, Florida
- Created digital and paper-based maps to aid in the monitoring of four endangered species endemic to the South Florida Pine Rockland community
- Created a database of all plant species found in the Coastal Dune community of South Florida
- Collaborated with land managers at county, state, and national levels
- Provided field and office support for Director of Conservation
- Assisted senior scientists in collection of data and analysis of results

**Field Biologist**, University of California, Santa Cruz. June 2001 – July 2001; December 2001 – July 2002

- Used GPS and GIS to design and install a two-square kilometer study plot in Everglades National Park
- Created a dynamic GIS project to monitor the effects of fire on the endangered Cape Sable Seaside Sparrow (CSSS) (*Ammodramus maritimus mirabilis*)
- Resighted color-banded CSSS individuals
- Created territory maps for CSSS individuals within the study plot

**Field Biologist**, Tropical Forestry Initiative, Costa Rica. Dec 2000 – January 2001

- Used GPS and GIS to map TFI property and locations of study transects, quadrats, and individual trees
- Created an expandable GIS project to aid in the reforestation efforts of TFI
- Created digital and paper-based maps to aid in the relocation of study sites
- Collected and processed tree measurement data

**Research Technician**, Avian Assessment Study. Costa Rica. May 1999 – July 1999

- Independently conducted point counts in three distinct habitats: monoculture plantation, native forest and pastureland
- Assessed vegetation at each site by measuring DBH, canopy height, percent canopy cover and understory density
- Mastered the identification of over 250 bird species in SW Costa Rica by sight and sound
- Marked 50 meter fixed radius points to prepare sites for censusing
- Analyzed topographical maps and other data to select viable sites

**Research Technician**, Dr. A. Carl Leopold, Tropical Forestry Initiative, Costa Rica. February 1998 – March 1998

- Collected and processed data for rainforest restoration project
- Designed new transects and quadrants for future study
- Identified local flora and fauna including an extensive number of plant species
- Ability to work independently and adapt easily to foreign surroundings resulted in early completion of project

**Preserve Management Coordinator**, The Finger Lakes Land Trust. Ithaca, New York. September 1997 – December 1997

- Worked with Preserve Management Committee to develop management plans for nature preserves in upstate New York
- Compiled work plans for implementing management plans
- Coordinated the efforts of volunteer organizations and local schools in implementing work plans
- Developed strategies to address various controversial issues in management of natural areas
- Created expandable workbook outlining duties for future interns. Structure and content set standard for job workbooks within entire organization by providing a means for efficient training of student interns in a busy nonprofit setting
- Conducted extensive landowner research, completed reports on preserve visits, designed hiking trails, and participated in flora and fauna identification
- Provided administrative support for the Director of Land Management and Office Manager

**Assistant**, North American Breeding Birds Survey, Central New York. Summer 1997

- Collected data towards an accurate survey of Upstate New York's bird populations

**Graduate Teaching Assistant**, Department of Ecology & Evolution, Rutgers University, New Brunswick, New Jersey. January 2007 – Present

- Developed curriculum for laboratory portion of Ornithology course, including original lecture material, laboratory procedures and interactive course website (eCompanion)
- Designed two semester-long field projects, digital photography and bioacoustics, for students to apply concepts learned in lecture
- Developed two practical laboratory exams per semester
- Guest lecturer for Ornithology lecture period on three occasions
- Supported lecturer by facilitating group discussions during lecture
- Prepared online quizzes twice a week to test student knowledge of lecture material
- Provided performance evaluations for each student, twice during the semester
- Held regular office hours during the week to provide student support and engagement
- Organized evening review sessions before each of the two cumulative examinations

## Teaching Experience

**Graduate Teaching Assistant**, Department of Life Sciences, Rutgers University, New Brunswick, New Jersey.  
August 2006 – December 2006

- Taught 2 laboratory sections of Introduction to Biology, composed of a lecture, lab demonstration, and support during execution
- Developed two practical laboratory exams per semester
- Researched and prepared lab experiments
- Provided performance evaluations for each student, twice during the semester
- Held regular office hours during the week to provide student support and engagement
- Organized evening review sessions before each of the two cumulative examinations
- Provided administrative support for lecture instructor through proctoring examinations, switching discussion topics, and substitute teaching

**Graduate Teaching Assistant**, Department of Biological Sciences, Florida International University. Miami, Florida.  
August 2002 – December 2002

- Taught 3 laboratory sections of Introduction to Biology, composed of a short lecture, lab demonstration, and support during lab implementation
- Developed weekly quizzes to reinforce material and provide students with a comprehensive understanding of the course
- Researched and prepared lab experiments
- Provided performance evaluations for each student, twice during the semester
- Held regular office hours during the week to provide student support and engagement
- Organized evening review sessions before each of the two cumulative examinations
- Provided administrative support for lecture instructor through proctoring examinations, switching discussion topics, and substitute teaching

**Environmental Educator**, Miami-Dade Community College Environmental Center. February 1998 – September 1999

- Conducted environmental education activities for children grades K-9
- Created curriculum and provided instruction on diverse topics including: Everglades Wildlife, Plants of South Florida, Native Plant Landscaping, Florida's Water, Alternative Energy, Organic Gardening and Butterfly Gardening
- Constructed nature trails and restored native pineland
- Developed a program teaching children bird identification techniques
- Designed and maintained organic and butterfly gardens
- Trained new instructors
- Gained extensive knowledge of South Florida's ecosystems, flora and fauna and natural history

**Naturalist Guide**, The Original Canopy Tour, Monteverde, Costa Rica. March 1998 – May 1998

- Lead three nature walks per day through primary and secondary Cloud Forest
- Taught about local flora and fauna as well as local history
- Guided groups through a system of cables and platforms 80-110 feet above the ground, immersed in the forest canopy
- Gained knowledge of canopy flora and fauna as well as rock climbing gear and safety techniques

## Publications

In Press La Puma, D.A., Lockwood, J.L., Davis, M.J., Endangered species management requires a new look at the benefit of fire: The Cape Sable seaside sparrow in the Everglades ecosystem. *Biological Conservation*

## Reports

2004 Lockwood, J.L. and D. La Puma. Fire effects on Cape Sable seaside sparrow demography: 2004 final report. US Fish and Wildlife Service, Vero Beach, Florida.

## Professional Presentations

2006 Homestead, Florida – From Lopez to the Landscape: Beginning to See the Big Picture. Everglades Fire Management working group.

2006 Veracruz, Mexico – Poster presentation; Little Sparrow on the Prairie: A Landscape Approach to Estimating Return Time of the Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*) following fire. North American Ornithological Congress.

2005 Homestead, Florida – Fire, Who Needs It? An empirical look at fire effects on the Cape Sable seaside sparrow in Everglades National Park. Everglades Fire Management working group

2005 Santa Barbara, California – Fire, Who Needs It? An empirical look at fire effects on the Cape Sable seaside sparrow in Everglades National Park. American Ornithologists' Union

2004 Homestead, Florida – And a Fire Runs Through It: The Return of the Cape Sable seaside sparrow following fire. Everglades Fire Management working group.

### **Membership**

2006 – American Ornithologists' Union  
2005 – American Association for the Advancement of Science  
2004 – 2005 Society for Conservation Biology

### **Additional Skills**

- Knowledge of written and spoken Spanish
- Red Cross CPR and Emergency First Aid certification