

ANNUAL REPORT: June 1, 2011 – May 31, 2012
(i.e., Summer 2011, AY 2011-2012)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

NAME: Jonathan Cohen

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

	<u>Course No.</u>	<u>Title</u>	<u>Credit Hrs.</u>	<u>No. Students</u>	<u>No. of Lab. Sections</u>
SUMMER:					
FALL:	EFB 493	Wildlife Habitats and Populations	4	39	2
	EFB 693	Wildlife Habitats and Populations	4	7	2
	EFB 797	Grant Writing in Fish. & Wildl.	1	9	
SPRING:	EFB 797	Adaptive Peaks	1	7	

NOTE: PLEASE INDICATE WHICH COURSE(S) HAD A SERVICE-LEARNING COMPONENT AND BRIEFLY EXPLAIN THE NATURE OF THIS COMPONENT. For examples of service-learning in courses, see: <http://www.esf.edu/students/service/courses.htm>. Service-learning is a form of structured experiential education in which students engage with the community to be active learners, to enrich their sense of civic responsibility, and to explore practical application for course content. Faculty oversight, reflective thinking, and reciprocity are key components of service-learning. EFB courses currently listed with service-learning components include: 416/6/1, 486, 518, 521, 532, 446/646.

2. Non-Scheduled Course Offerings (e.g., 496, 899, 999)

	<u>Course No.</u>	<u>Title</u>	<u>Credit Hrs.</u>	<u>No. Students</u>
	EFB 796	Population Parameter Estimation	3	9
	EFB 498	Research Problem	3	1

3. Continuing Education and Extension (short courses, workshops, etc.)

4. Guest Lecture Activities

	<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
	EFB 414	Senior Synthesis in Con. Bio.	1
	EFB 132	Orientation Seminar	1

II. STUDENT ADVISING

- A. Number of undergraduates for whom you are the student's official advisor 20 and unofficial advisor 0
- B. Graduate Students: (Name, degree sought, starting date, month & year; if a degree was completed, please give date and full citation for the thesis or dissertation).

MAJOR PROFESSOR

Maureen Durkin, M.S., August 2011

Laurel Nowak-Boyd, M.S. August 2011

Alison Kocek, M.S. January 2012

Michelle Avis, M.S. (coming Aug. 2012, conducting her first field season under my supervision Mar. 2012)

CO-MAJOR PROFESSOR

Anand Chaudhary, M.S., August 2011 (Fulbright; I have been acting as the principal advisor)

MEMBER, STEERING COMMITTEE (other than those listed above)

Shannon Buckley (EFB, M.S.)

Jill Mandel (EFB, M.S.)

John Hartigan (EFB, M.S.)

Adam Costello (EFB, M.S.)

Lewis Grove (EFB, Ph. D.)

Katharine DeVilbiss (EFB, M.S.)

Brent Johnson (EFB, M.S.)

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Joshua Stiller (EFB, M. S., examiner, defended)

Sara Hansen (EFB, M. S., examiner)

Andy Something (EFB, M.S., examiner)

Nicholas Pasco (ERE, M.S., chairman)

III. RESEARCH COMPLETED OR UNDERWAY

- A. A. Departmental Research (unsupported, boot-legged; title - % time spent)

Stopover Ecology of Red Knots in Virginia – 1%

- B. 1. Grant-supported Research (source, subject, amount - total award and current year, award period starting and ending dates; list graduate research assistants supported by each grant)

Population Viability Analysis of Florida Snowy Plovers – U.S. Fish and Wildlife Service, \$20,000 2011. 1/2011 – 12/2014, supporting Maureen Durkin

Piping Plover Movements and Flight Heights During the Breeding Season – U.S. Fish and Wildlife Service, \$295,000 2011, 1/2011 – 8/2014, supporting Michelle Avis

Piping Plover Movements and Flight Heights During the Breeding Season, supplemental – N.J. Division of Wildlife, \$50,000 2012, 3/2012 – 8/2013, supporting Michelle Avis

Effect of Salt Marsh Changes on Breeding Birds, With Emphasis on the Saltmarsh Sparrow – NYDEC, \$120,000 2012, 4/1/2012-3/31/2015, supporting Alison Kocek

Monitoring Techniques for Ring-Necked Pheasants – NYDEC, \$50,803 2012, 4/2012 – 8/2015, supporting Laurel Nowak-Boyd

Community Composition and Mercury and Chromium Levels of Onondaga Lake Waste Bed Birds – US Fish and Wildlife Service, \$34,851 2012, 6/2012 – 6/2013

2. Research Proposals pending (include information as in B.1., above).

Factors Limiting New England Cottontail Populations in New York – NYDEC, \$860,000, 8/2012 – 7/2016

Fall Migratory Staging of Roseate Terns in Massachusetts: Distribution, Abundance, and the Effects of Human Activities – National Park Service. \$311,569. Year 1 \$52,746. 5/13 – 8/14.

3. Research Proposals submitted, but rejected (include information as in B.1., above)

Phenological mismatch between Red Knots and their bivalve prey. National Science Foundation Long Term Ecological Research. \$900,000, Year 1: \$90,000, 4/2013 – 4/2023

A critical test of the effectiveness of protected lands for conserving forest bird biodiversity and mitigating the effects of climate change. USDA Northeastern States Research Cooperative. \$90,799. Year 1 \$46,105. 9/11 – 8/13. Michelle Peach.

Snowy Plover survival and dispersal in Florida – U.S. Fish and Wildlife Service Neotropical Migratory Bird Conservation Act. \$11,082. 5/12 – 8/13 Maureen Durkin

Snowy Plover survival and dispersal in Florida – SUNY-ESF SEED grant. \$8,000. 5/12 – 8/13. Maureen Durkin

Trends in Forest Bird Diversity over a 20 Year Period: Effects of land Protection and Climate Change. USFWS \$59,067, 9/11 – 8/13. Michelle Peach.

IV. PUBLICATIONS (Full bibliographic citation, i.e., do not use "with Jones," or "Jones, et al."; please list only publications published, in press, or actually submitted during this reporting period --- **do not list manuscripts in preparation**).

A. Refereed Publications

Durkin MM, **Cohen JB**, Zdravkovic M. Submitted, in review. Human disturbance of breeding snowy plovers (*Charadrius nivosus*) in northwest Florida. Waterbirds.

Fraser JD, Karpanty SM, **Cohen JB**, Truitt BR. Submitted, in review. The red knot decline: is there a lemming connection? Canadian Journal of Zoology

Cohen JB, Gerber BD, Karpanty SM, Fraser JD, and Truitt BR. 2011. Day and night foraging of Red Knots (*Calidris canutus*) during spring stopover in Virginia, USA. *Waterbirds* 34:352-356.

Karpanty SM, **Cohen JB**, Fraser JD, Berkson J. 2011. Effect of foraging birds on horseshoe crab egg resources during spring migratory stopover in Delaware Bay. *Journal of Wildlife Management*.

Cohen JB, Gratto-Trevor C. 2011. Survival, site fidelity, and population dynamics of piping plovers in Saskatchewan. *Journal of Field Ornithology* 82:373-394

B. Non-refereed Publications

C. Papers Presented at Science Meetings (give title, date, occasion, and location)

Durkin MM, **Cohen JB**, Zdravkovic M. Human disturbance of breeding snowy plovers in Florida. 11/2011. Waterbird Society Annual Meeting, Annapolis, MD

Cohen JB. Proposed study of the effects of wind turbines on breeding piping plovers. 1/2012. Piping Plover and Least Tern Workshop, Sheperdstown, WV

D. Public Service Presentations (lectures, seminars, etc. to and for the public; give group or occasion, date(s), and attendance)

Virginia: Secret of the Red Knot. Onondaga Audubon Society. 3/2011, attendance: 10

V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

1. Government Agencies (Federal, State, Local):

2. Industrial and Commercial Groups, etc.

B. Unfunded Service to Governmental Agencies, Public Interest Groups, etc.

Advisory board for the Goldenrod Foundation (private nonprofit)

Advisor to the U.S. Shorebird Conservation Plan (US Fish and Wildlife Service)

V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

1. Government Agencies (Federal, State, Local):

2. Industrial and Commercial Groups, etc.

B. Unfunded Service to Governmental Agencies, Public Interest Groups, etc.

VI. PROFESSIONAL DEVELOPMENT

A. A. Professional Honors and Awards (for teaching, research, outreach, etc.)

Outstanding Publication Award, Monograph Category, The Wildlife Society. Cohen JB, Fraser JD, Houghton LM. 2009. Nesting density and reproductive success of piping plovers in relation to storm- and human-created habitat changes. Wildlife Monographs 173:1-24.

B. 1. Activities in Professional Organizations (offices held, service as chairman, member, participant or consultant)

The Waterbird Society, Chair of Conservation Committee

2. Professional Society Membership

The Wildlife Society
The Waterbird Society
American Ornithologists Union
Association of Field Ornithologists
Wilson Ornithological Society
American Association for the Advancement of Science
Sigma Xi

3. Other Professional Activities

a. Editorial activity

Journal (s)

Responsibility

Other (books, symposia, etc.)

b. Reviewer

Journal(s)

No. of manuscripts

Prairie Naturalist
Waterbirds

1
1

Agency

No. of proposals

Other

c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
C. <u>Further Education/Re-training Undertaken, Leaves, Workshops, etc.</u> Advising seminar	1/2012	Drumlins

D. Foreign Travel (Where, When, Purpose)

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

Faculty advisor for student chapter of The Wildlife Society
CLBS and TIBS Undergraduate Fellowship Committee Chair
Curriculum Advisory Committee
EFB Open House

B. College-level

Committee on Research
Reviewer for Sussman Internship Applications

C. University-wide, including Research Foundation

In 2012 I began trying to establish my teaching and research programs in earnest. I taught EFB 493/693 as both lecture and lab instructor, and got to know the senior class of wildlife majors very well. Although I stayed fairly close to the course's traditional format as a means to get to know the course, I updated the material with some experimental lectures and additions of modern approaches to wildlife management in lecture and lab. I also taught a seminar in grant and proposal writing for incoming graduate students, that attracted 9 enrollees from EFB and one audit from Syracuse University. I was happy to find that six of the enrollees applied for Sussman Internships and four were successful. In the spring semester I developed a new course on estimation of population parameters using Program MARK, co-taught with Dr. Ryan who focused her section on matrix population modeling. We had 8 enrollees and 1 audit and I learned a good deal about how to present quantitative techniques materials in a lecture format. I also advised a freshman in Conservation Biology for an EFB 498 project, conducting a behavior study of birds in the Rosamond Gifford Zoo aviary. She presented her work in a poster at the Spotlight on Research, and has prepared a manuscript with me that is currently under pre-submission review by another EFB faculty.

I pursued several grants to support existing and prospective graduate students. By May 2012 I had four graduate students with full or part-time research assistantships, and a fifth hired as a Research Analyst on an RF grant to complete her first field season, before she matriculates in August 2012. Managing five research projects with sites in Florida, Cape Cod, Cape May, Brooklyn, western NY, and Syracuse has turned out to be one of the greatest challenges of my career so far, and one of the most rewarding as I get to know my talented and enthusiastic students. I am currently managing \$570,000 in grants and have more pending that appear to be close to an award. Until ESF I had little experience with securing funding for research and was uncertain about my abilities in that area, so I have been happy with my progress so far. I am perhaps even more proud of my graduate students who have begun to demonstrate success at obtaining small grants and fellowships to help support their research (Maureen Durkin received

a travel award to attend the Waterbird Society Annual Meeting and a Sussman, and Alison Kocek received a Gateway Learning Center Fellowship from the National Park Service's Gateway National Recreation Area). I am also using my research projects to provide training and experience to one just-graduated EFB senior and one rising senior, who are serving as technicians in western New York and Brooklyn.

I have attempted to jump into participation in Department and Campus life. At the College level I began my first term on the Committee on Research. During that time I reviewed dozens of proposal for the McIntire Stennis and ESF Seed Grant programs and helped to organize the Spotlight on Research. I also served for another term on the Sussman Review Committee, for which I reviewed approximately 30 proposals. At the Department level I volunteered for the Curriculum Advisory Committee because I felt my knowledge regarding the curriculum side of academia was lacking. I volunteered to host the Wildlife major table at an open house in the fall and in the spring, and enjoyed meeting prospecting and prospective students and discussing potential careers in wildlife. I also began my first year as faculty advisor to The Wildlife Society Student Chapter. This turned out to be a rewarding way to get to know some of the brightest and most eager students in the department. I attended monthly executive meetings to help provide advice on event planning, budget management, and other matters and attended several of the general meetings. I also now served on several steering committees and have been deeply involved in project development for three students in that capacity, and I served as Chair of a defense in ERE.

For my own professional development, I collaborated on an NSF pre-proposal with my old colleagues at Virginia Tech and we submitted a manuscript for publication. I reviewed manuscripts for two journals and continued to serve as chair of the Waterbird Society Conservation Committee, for which I oversaw the submission of public comments on federal policy and submission of advocacy letters. I participated in working groups for the Chittenango Ovate Amber Snail which met at the Rosamond Gifford Zoo, and the New England Cottontail which met in Albany.

IX. A. FUTURE PLANS, AMBITIONS, AND POTENTIAL CONTRIBUTIONS FOR YOUR OWN PROFESSIONAL DEVELOPMENT AND THE ENHANCEMENT OF THE PROGRAM IN ENVIRONMENTAL AND FOREST BIOLOGY (brief summary)

Two of my primary ambitions are to more substantially revise EFB 493/693, and to develop more technical graduate-level courses so that we can better attract high-quality graduate students interested in wildlife science and conservation biology. I will be attending a conference in Ithaca in summer 2012 on Adaptive Management, the better to incorporate modern concepts in wildlife management into EFB 493 and my graduate courses. My tentative plan for graduate coursework is to teach my population estimation course again in Spring 2013 while my first experience is fresh in my mind, and then to develop an advance course in habitat quantification to alternate with the population class. This will provide an alternative to 693 for graduate students that wish for a less cursory introduction to advanced techniques. After some experiments in 493 this year, I am considering trying to strike more of a balance than currently exists between problem-sets and report/plan writing.

I have several proposals for graduate student research in submission or in preparation. Some would provide more research support for my current graduate students. One is likely to lead to a new Ph.D. project studying New England Cottontails in the eastern Hudson Valley. I am looking forward to branching out from birds. I will also continue to work on the long-term ecological research grant for NSF with my colleagues at Virginia Tech, as we need to revise and resubmit our most recent preproposal.

For other professional development activities, all of my graduate students will be presenting at least a poster at one regional or national scientific meeting. Some already plan to attend the Wildlife Society Annual Meeting in October. I will be attending a Bird Conservation in the Northeast conference that is unfortunately concurrent with TWS, because I am part of a working group that is meeting there and it will affect one of my graduate student projects. At these meetings, my students and I will endeavor to raise the profile of wildlife research at ESF in the hopes of attracting interest in our projects from potential funders, collaborators, and prospective students.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2012

a. Course(s) to be offered

EFB 202 July session: statistics and project assistance

b. Proposed research activity

M.S. research conducted by A. Chaudhury, M. Durkin, A. Kocek, L. Nowak-Boyd, M. Stantial

c. University, professional society, and public service

Waterbird Society Committee activities

2. Fall Semester 2012

a. Course(s) to be offered

EFB 493/693: Wildlife Habitat and Populations

EFB 797: Grant and Proposal Writing

EFB 797: Adaptive Peaks

b. Proposed research activity

M.S. research conducted by A. Chaudhury, M. Durkin, A. Kocek, L. Nowak-Boyd, M. Stantial

Personal research/data analysis on Red Knot migration ecology

c. University, Professional society, and public service

Research Committee, SUNY-ESF

Advisor, student chapter of TWS

Advisory board for Goldenrod Foundation and U.S. Shorebird Conservation Plan

Chair of Conservation Committee, the Waterbird Society

Stand for elected Council, Waterbird Society

Continue to serve as reviewer for various journals

3. Spring Semester 2013

a. Course(s) to be offered

EFB 796 (4 credits) Population Parameter Estimation

b. Proposed research activity

Continuation of Fall projects

Potential start of New England Cottontail Ph.D. project

c. University, professional society, and public service

Similar to Fall, in addition: Sussman Internship reviewer