

ANNUAL REPORT: June 1, 2015 – May 31, 2016
(i.e., Summer 2015, AY 2015-2016)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

*****PLEASE DO NOT INSERT TABLES FOR ANY CATEGORIES*****

NAME: James P. Gibbs

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

<u>Course No.</u>	<u>Title</u>	<u>Credit Hrs.</u>	<u>Students</u>	<u>No. Sections</u>	<u>No. of Lab.</u>
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SUMMER:

FALL:

SPRING:

EFB413 *Introduction to Conservation Biology*, 3 cr , 100 students, no lab sections

EFB419 *Problem-solving in Conservation Biology*, 3 cr, 62 students, no lab sections

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.

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>
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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>
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Urban Ecology EST 220 1 lecture

Herpetology EFB 485 2 lectures

Diversity of Life EFB 211 2 lectures

II. STUDENT ADVISING

- A. Number of undergraduates for whom you are the student's official advisor **16** and unofficial advisor 0
B. Graduate Students: (list 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

Fishman, Michael S EFB Conservation Biology MS Jan 2006
Kudalkar, Sahila EFB Conservation Biology MS Aug 2012
Paltsyn, Mikhail Y. EFB Conservation Biology, PhD Jan 2013
Igorova, Ielizaveta, EFB Conservation Biology MS Aug 2014
Dean, Samantha EFB Conservation Biology MS Jan 2015
Bruckman, Joline EFB Conservation Biology MS Aug 2015
Diefenbacher, Eric EFB Conservation Biology PhD Aug 2015
Nagel, Leah EFB Conservation Biology MS Aug 2015
Goldspiel, Harrison Conservation Biology MS Jan 2016
Vanaman, Julia Conservation Biology MS May 2016

CO-MAJOR PROFESSOR

Youker, Tess E EFB Conservation Biology MS Aug 2013 (co-advised with S. Ryan)
Tapia Aguilera, Washington Ph.D., University of Malaga (I serve as thesis director along with Dra. Maria del Mar)

MEMBER, STEERING COMMITTEE (other than those listed above)

Avis, Michelle L, Master of Science, EFB
Devlin, Allison L, Doctor of Philosophy, EFB
Gurdak, Daniel J, Doctor of Philosophy, EFB
Holevinski, Robin A, Doctor of Philosophy, EFB
Koczek, Alison R, Master of Science, EFB
Barr, Brandon, Doctor of Philosophy, EFB
Weber, Justine, Doctor of Philosophy, EFB

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Mudoch University, Perth, Australia (external PhD thesis reviewer)

III. RESEARCH COMPLETED OR UNDERWAY

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

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)

National Academy of Sciences, Partnerships for Enhanced Engagement in Research (PEER), "Quantifying biodiversity impacts of hydroelectric expansion and river use changes in the Brazilian Amazon," D. Norris, F. Michalski, J. Gibbs, \$225,525, 1/2016-12/2018 (various graduate students at Amapa State Univ. supported)
US National Park Service, National Center for Preservation Technology and Training, "Novel electronic technology for real-time detection of trespass at archeological sites", J. Gibbs and S. Burnett, \$40,000, 1/2016-5/2017.
US Dept. Agriculture / Northeastern States Research Cooperative (NSRC), "Using social media to quantify forest-based tourism in the Northern Forest," D. Kuehn and J. P. Gibbs, \$116,000, 9/2016-8/2018.

National Aeronautics and Space Administration (NASA) (Science Mission Directorate / Earth Science Division), "Management of Social-Ecological Grazing Systems in the Altai Mountain Transboundary Zone" G. Mountrakis and J. P. Gibbs, \$779,061, 6/1/15-5/30/18 (Mikhail Y. Paltsyn, Ielizaveta Iegorova supported).

National Science Foundation/Population and Community Ecology: "How Environment, Physiology and Life History Interact to Determine Pattern in Animal Migration Proposal 1258062," J. P. Gibbs, S. Blake, S. Deem, J. Frair. 3/13-2/15. \$600,000 (Dr. Guillaume Bastille-Rousseau supported).

BASF Corporation, "Status, movements, and habitat assessment for map turtles (*Graptemys geographica*) within the Hudson River in the vicinity of Rensselaer, New York," J.P. Gibbs, \$245,198, 1/1/15 – 12/31/16 (Stewart LaPan & Julia Vanaman supported)

US National Park Service, "Assessment of natural resource condition for Weir Farm NHS," G. Tierney and J.P. Gibbs, \$45,000, 9/15/14-3/31/16 (Dr. G. Tierney supported)

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

National Science Foundation DEB, "Selection in the Anthropocene: Is Urbanization Driving Polymorphism in a Wide-Ranging Mammal? ", pre-proposal accepted, full proposal pending. B. Zuckerberg, J. Pauli, D. Bonter, B. Cosentino, J. P. Gibbs.

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

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

- Garrick, Ryan C., Brittney Kajdacs, Michael A. Russello, Edgar Benavides, Chaz Hyseni, James P. Gibbs, Washington Tapia, and Adalgisa Caccone. Naturally rare versus newly rare: demographic inferences on two timescales inform conservation of Galápagos giant tortoises. *Ecology and evolution* 5, no. 3 (2015): 676-694.
- Johnson, B. D., Gibbs, J. P., Bell, T. A., & Shoemaker, K. T. (2016). Manipulation of basking sites for endangered eastern massasauga rattlesnakes. *The Journal of Wildlife Management*. *In press*.
- Paltsyn, M., A Poyarkov, S. Spitsyn, A. Kuksin, J. P. Gibbs, R. M. Jackson, J. Castner, S. Kozlova, A. Karnaukhov, M. S. Korablev, E. Zvychainaya, & V. Rozhnov. 2016. Northern Range: Russia. Snow Leopards (1st Edition, T. McCarthy & D. Mallon, eds.), *Biodiversity of the World: Conservation from Genes to Landscapes*. Academic Press, *In press*.
- Poulakakis, N., Edwards, D.L., Chiari, Y., Garrick, R.C., Russello, M.A., Benavides, E., Watkins-Colwell, G.J., Glaberman, S., Tapia, W., Gibbs, J.P. and Cayot, L.J., 2015. Description of a New Galapagos Giant Tortoise Species (*Chelonoidis*; Testudines: Testudinidae) from Cerro Fatal on Santa Cruz Island. *PloS one*, 10(10), p.e0138779.
- Ross, A. M., G. Johnson, and J. P. Gibbs. Spruce grouse decline in maturing lowland boreal forests of New York. *Forest Ecology and Management* 359 (2016): 118-125.
- Steen, D. A., P. A. Osborne, M. Dovčiak, D. A. Patrick, J. P. Gibbs. 2015 A Preliminary Investigation into the Short-Term Effects of a Prescribed Fire on Habitat Quality for a Snake Assemblage. *Herpetological Conservation and Biology* 10(1):263–272.
- Winchell, K. M., and J. P. Gibbs. Golf courses as habitat for aquatic turtles in urbanized landscapes. *Landscape and Urban Planning* 147 (2016): 59-70.

B. Non-refereed Publications

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

“Conservation Agriculture: Quantifying Results and Expanding Territory,” ASLA 2015 Annual Meeting and EXPO, Chicago, Nov 8, 2015 (joint presentation by T. Woltz, Z. Wolf and J. Gibbs), 200 attendees.

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

“Integrating Science and Management to Advance Giant Tortoise Conservation in Galapagos, Ecuador.” Redpath Museum, McGill University, Montreal, QC, Canada, Feb 25, 2015 (40 attendees)

V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

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

2. Industrial and Commercial Groups, etc.

General Electric Corporation (on-going consultation regarding wildlife research on Upper Hudson River)

Janice Parker Landscape Architects (on-going consultation regarding property restoration, Southampton, Long Island)

Galapagos Conservancy (on-going consultation as co-leader of Galapagos Conservancy’s Giant Tortoise Restoration Initiative and as Galapagos Conservancy’s Adjunct Scientist)

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

CUNY faculty promotion external review

On-going consultation with “COMMON” Foundation Holland: External Science Advisor for 5 year project focused on application of Groasis / Waterboxx Technology for ecosystem restoration and enhancing agricultural production in arid areas

VI. PROFESSIONAL DEVELOPMENT

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

SUNY Chancellor’s Award for Scholarship and Creative Activities 2016

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

Member of the General Assembly, Charles Darwin Foundation (elected, term ended Oct 2015)

Board member, The Wetland Trust

Board member, Altai Assistance Project

Board member, Nine Mile Creek Conservation Council

2. Professional Society Membership

3. Other Professional Activities

a. Editorial activity

Journal (s)

Responsibility

Other (books, symposia, etc.)

b. Reviewer

Journal(s)

No. of manuscripts

Agency

No. of proposals

National Science Foundation 1 research proposal
US Forest Service 1 research proposal
Elsevier 2 book proposals

Other

c. Participation (workshops, symposia, etc.)

Name of workshop, etc.

Date

Place

“Horizon Scanning for Galapagos”; one of 50 invitees to prioritize top 50 research questions for science and policy in Galapagos, Nov. 2015, Puerto Ayora, Galapagos, Ecuador.

C. Further Education/Re-training Undertaken, Leaves, Workshops, etc.

D. Foreign Travel (Where, When, Purpose)

Galapagos, Nov 11 Dec 2 (coordinate hybrid tortoise project on Volcan Wolf, participate in horizon scanning workshop)

Mexico Feb 1-5 (serve on External Evaluation Committee of INECOL, Xalapa)

Canada Feb 25 (lecture)

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

Director, Roosevelt Wild Life Station

Associate Chair

Member, Promotion and Tenure Committee

Coordinator, Conservation Biology Major

B. College-level

C. University-wide, including Research Foundation

VIII. SUMMARY OF SIGNIFICANT ACTIVITIES AND ACCOMPLISHMENTS DURING THIS REPORTING PERIOD, ESPECIALLY THOSE MOST NOTEWORTHY AND RELATIVE TO THE COLLEGE’S AND DEPARTMENT’S MISSION.

One paragraph on each of the following (i.e., three paragraphs total) would be most helpful: this past year, what have you done for our students, department/college, and self professionally? NOTE: The information in this section (along with the supporting specific information elsewhere in this report) should be your strongest case for being considered for a discretionary raise (when available), which I'll continue to award based on your contributions to the department and college this reporting period.

For our students in January 2016 I re-assumed responsibility for coordinating the Conservation Biology major and worked to streamline the process for petitions and other operations of the major. I continue to teach two of the three core courses in the Major. Notably one of those courses – Introduction to Conservation Biology – serves all members of the major and an equal number of students from around the College plus Syracuse University. I renewed about 1/3 of the material in the Problem-solving in Conservation Biology course to good effect but unfortunately the class now has outgrown capacity for the only room apparently available in which to teach the class (62 students in a room for 60) which made teaching the class a challenge. During the spring semester I orchestrated the ESF-NYSDEC/FWMR internship that placed many EFB students in well-paying internships doing fish and wildlife species protection and habitat management work for NYSDEC. I advise 10 graduate students of which I expect half will graduate next year.

For our Department and College, I serve on the EFB P&T committee, coordinate the department's largest undergraduate major, serve as Director of the Roosevelt Wild Life Station, which has seen significant activity this year. A publication in *PLoS* describing a new species of giant tortoise and also a field expedition in Nov. to harvest hybrid tortoises of purportedly extinct species from Volcan Wolf garnered significant media attention for the College this year.

For myself professionally I was delighted to receive the SUNY Chancellor's Award for Scholarship and Creative Activities for 2016. I continue to push ahead a complicated and ambitious Galapagos Tortoise Restoration Initiative (serving as co-Director of this \$1.2M effort between the Galapagos Conservancy and the Galapagos National Park Service Directorate) that is the culmination of two decades of work. Service as board member to The Wetland Trust has occurred at a time of progress on significant land protections by this group this year.

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)

Roosevelt Wild Life Station development activities are continuous but starting to be productive. I succeeded in developing a research and teaching collaboration with funding from the National Academy of Sciences with a small developing university in Brazil's least developed state of Amapa as a place to invest in capacity development in the next generation of conservation biologists in one of the world's greatest biodiversity hotspots and now need to realize the project. The Galapagos Giant Tortoise Restoration Initiative's activities are peaking 2015-2017 and require a great deal of focus. I'm excited to have landed significant funding from the NSRC to advance research in a new direction – big data mining for natural resources conservation and will initiate that work this fall semester. Also federal support for developing anti-poaching technology has materialized to help advance that program of providing tools for monitoring trespass on remote lands, including for sacred sites and archeological areas, an effort we must push ahead this year. As I will be inheriting Herpetology, a major zoological offering for the Department, next spring semester I will spend part of the fall semester renovating the course in anticipation of offering it alongside Intro Cons Biology and Problem-solving in Conservation Biology.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2016

a. Course(s) to be offered

b. Proposed research activity

All funded research projects, proposal writing for NSF and NASA RFPs

c. University, professional society, and public service

Roosevelt Station initiatives

2. Fall Semester 2016

a. Course(s) to be offered

b. Proposed research activity

c. University, Professional society, and public service

3. Spring Semester 2017

a. Course(s) to be offered

EFB413

EFB419

EFB485

b. Proposed research activity

c. University, professional society, and public service