

**ANNUAL REPORT: June 1, 2016 – May 31, 2017**  
**(i.e., Summer 2016, AY 2016-2017)**  
**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

Course No.	Title	Credit Hrs.	No. Students	No. of Lab. Sections
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SUMMER:

FALL:

SPRING:

EFB413 *Introduction to Conservation Biology*, 3 cr , 103 students, no lab sections

EFB419 *Problem-solving in Conservation Biology*, 3 cr, 58 students, no lab sections

EFB485 *Herpetology*, 3 cr , 89 students, three lab sections

EFB 202 *Ecological Monitoring and Biodiversity Assessment* (Session A: Herpetology), 4 groups of 14-15 students (in field)

**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)

Course No.	Title	Credit Hrs.	No. Students
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3. Continuing Education and Extension (short courses, workshops, etc.)

4. Guest Lecture Activities

Course No.	Title	No. of Lectures
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*Diversity of Life* EFB 211 2 lectures

*Freshman seminar* (Conservation Biology) 1 lecture

**II. STUDENT ADVISING**

A. Number of undergraduates for whom you are the student's official advisor **19** and unofficial advisor \_\_\_\_\_

- 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 “Roost and foraging habitat for Indiana bats (*Myotis sodalis*) in the southeastern Ontario lake plain of New York State” completed: May 2017  
Kudalkar, Sahila EFB Conservation Biology MS Aug 2012 “Microhabitat relationships of two murid rodents *Rattus andamanensis* and *Niviventer fulvescens* in protected forests of northeastern India” completed: Dec 2016  
Igorova, Ielizaveta, EFB Conservation Biology MS Aug 2014 “Interacting effects of socio-political and environmental factors on rangeland dynamics in the Altai Mountains in central Asia” completed: May 2017  
Dean, Samantha EFB Conservation Biology MS Jan 2015 “Distribution, Abundance, and Habitat Associations of Amphibians and Reptiles within an Urban Protected Area: The Home of Franklin D. Roosevelt National Historic Site” defended: May 2017 (final revisions pending)

Paltsyn, Mikhail Y. EFB Conservation Biology, PhD Jan 2013  
Nagel, Leah EFB Conservation Biology MS Aug 2015  
Goldspiel, Harrison Conservation Biology MS Jan 2016  
Vanaman, Julia Conservation Biology MS May 2016  
Pliosungnoen, Manoon "Ki" EFB Conservation Biology, PhD Aug 2016  
Lumbsden, Joanna EFB MPS Jan 1 2017

**CO-MAJOR PROFESSOR**

Tapia Aguilera, Washington Ph.D., University of Malaga (I serve as thesis director along with Dra. Maria del Mar)  
Youker, Tess E EFB Conservation Biology MS Aug 2013 (co-advised with S. Ryan) “Epidemics of an Amphibian Ranavirus in Two Species of Vernal Pool-Breeding Anurans: Disease Surveillance and Environmental Drivers of Prevalence.” completed: Dec. 2016

**MEMBER, STEERING COMMITTEE** (other than those listed above)

Devlin, Allison L, Doctor of Philosophy, EFB  
Gurdak, Daniel J, Doctor of Philosophy, EFB  
Barr, Brandon, Doctor of Philosophy, EFB  
Weber, Justine, Doctor of Philosophy, EFB  
Koczek, Alison R, Master of Science, EFB  
Tim Pede Master of Science, ERE  
Thomas Baker, Master of Landscape Architecture, LSA

**CHAIRMAN OR READER ON THESIS EXAMS, ETC.**

Geoffrey Kay, Doctor of Philosophy, Australian National University, Canberra

**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)

BASF Corporation, \$245,198, Status, Movements, and Habitat Assessment for Map Turtles, Gibbs, Dr. James (01-Jan-2015 31-Dec-2016) (Julia Vanaman supported)

National Science Foundation, \$600,000, How Environment, Physiology and Life History Interact to Determine Pattern in Animal Migration, Gibbs, Dr. James (01-Mar-2016 28-Feb-2017) (Dr. Guillaume Bastille-Rousseau supported)

National Park Service, \$34,000, Reptile and Amphibian Surveys of Franklin D. Roosevelt NHS, Gibbs, Dr. James (01-Jul-2014 30-Jun-2017) (San Dean supported)

NASA Washington, \$779,061, Management of Social-Ecological Grazing Systems in the Altai Mountain Transboundary Zone, Mountrakis, Dr. Georgios E. : Gibbs, Dr. James (01-Jan-2015 31-Dec-2017) (Liza Yegorova, Misha Paltsyn, Shahriar Heyderi supported)

National Academy of Sciences, \$55,200, Where is my Turtle? Quantifying Biodiversity Impacts of Hydroelectric Expansion and River Use Changes in Brazilian Amazon, Gibbs, Dr. James (23-Feb-2016 31-Dec-2017)

Cornell University, \$10,040, Linking Land Use and Climate Dynamics to Ecological Responses of Amphibians and Reptiles within New York State Watersheds: An Integrative Approach Using Citizen Science, Gibbs, Dr. James (01-Apr-2017 31-Dec-2017)

National Park Service, \$44,811, Assessment of Natural Resource Condition for Saint-Gaudens National Historic Site, Gibbs, Dr. James : Tierney, Dr. Geraldine (01-Oct-2016 16-May-2018)

Northeastern States Research Cooperative, \$110,881, Using Social Media to Quantify Forest-Based Tourism in the Northern Forest, Kuehn, Dr. Diane M : Gibbs, Dr. James (01-Sep-2016 31-Aug-2018)

Wildlife Conservation Society, \$36,000, Enhancing Tiger Conservation in Thailand: The Role of Peripheral Protected Areas in Supporting Regional Tiger Populations, Gibbs, Dr. James (29-Aug-2016 31-Aug-2018) (Manoon Pliosungnoen supported)

Environmental Protection Agency, \$324,516, Determining the Importance of Vernal Pools Across Geophysical and urbanization Gradients to Inform Regulation, Conservation, and Management, Gibbs, Dr. James : McNulty, Ms. Stacy A. : Evans, Ms. Dorothy J. : Schlesinger, Dr. Matthew D. (01-Jan-2016 30-Jun-2019) (Leah Nagel supported)

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

3. Research Proposals submitted, but rejected (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.

#### **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

Bastille-Rousseau, Guillaume, James P. Gibbs, Karl Campbell, Charles B. Yackulic, and Stephen Blake. "Ecosystem implications of conserving endemic versus eradicating introduced large herbivores in the Galapagos Archipelago." *Biological Conservation* 209 (2017): 1-10.

Chestin, Igor E., Mikhail Yu Paltsyn, Olga B. Pereladova, Liza V. Iegorova, and James P. Gibbs. "Tiger re-establishment potential to former Caspian tiger (*Panthera tigris virgata*) range in Central Asia." *Biological Conservation* 205 (2017): 42-51.

Cosentino, Bradley J., Jean-David Moore, Nancy E. Karraker, Martin Ouellet and James P. Gibbs. In press. "Climate and land use interact to shape geographic variation in a genetically based trait", *Ecology and Evolution*.

Gibbs, James P., Shahrokh Rouhani, and Leyla Shams. "Frog and Toad Habitat Occupancy across a Polychlorinated Biphenyl (PCB) Contamination Gradient." *Journal of Herpetology* 51, no. 2 (2017): 209-214

Gibbs, James P., Shahrokh Rouhani, and Leyla Shams. "Population status of freshwater turtles across a PCB contamination gradient." *Aquatic Biology* 26 (2017): 57-68.

- Gibbs, James P., Shahrokh Rouhani, and Leyla Shams. "Scale-dependence in polychlorinated biphenyl (PCB) exposure effects on waterbird habitat occupancy." *Ecotoxicology* (2017): 1-10.
- Johnson, Brent D., James P. Gibbs, Kevin T. Shoemaker, and Jonathan B. Cohen. "Demography of a Small and Isolated Population of Eastern Massasauga Rattlesnakes (*Sistrurus catenatus*) Threatened by Vegetative Succession." *Journal of Herpetology* 50, no. 4 (2016): 534-540.
- Johnson, Brent D., James P. Gibbs, Thomas A. Bell, and Kevin T. Shoemaker. "Manipulation of basking sites for endangered eastern massasauga rattlesnakes." *The Journal of Wildlife Management* 80, no. 5 (2016): 803-811.
- Paltsyn, Mikhail Yu., James P. Gibbs, Liza Yegorova, and Giorgos Mountrakis. In press. Estimation and Prediction of Grassland Cover in Western Mongolia using MODIS-derived Vegetation Indices. *Rangeland Ecology & Management*

#### B. Non-refereed Publications

- Gibbs, James P. Galapagos giant tortoises make a comeback, thanks to innovative conservation strategies. The Conversation. February 15, 2017 <https://theconversation.com/galapagos-giant-tortoises-make-a-comeback-thanks-to-innovative-conservation-strategies-67591> (25,000 "reads" to date)
- Gibbs, James P. Home Again: The long journey of Lonesome George. Galapagos Conservancy Blog March 27 2017 <https://www.galapagos.org/blog/long-journey-of-lonesome-george/>
- Cayot, L.J., Gibbs, J.P., Tapia, W. & Caccone, A. 2017. *Chelonoidis porteri* - (Rothschild, 1903) IUCN Red List of Threatened Species. [www.iucnredlist.org](http://www.iucnredlist.org).
- Cayot, L.J., Gibbs, J.P., Tapia, W. & Caccone, A. 2017. *Chelonoidis becki* - (Rothschild, 1901). IUCN Red List of Threatened Species. [www.iucnredlist.org](http://www.iucnredlist.org).
- Cayot, L.J., Gibbs, J.P., Tapia, W. & Caccone, A. 2017. *Chelonoidis chathamensis* - (Van Denburgh, 1907). IUCN Red List of Threatened Species. [www.iucnredlist.org](http://www.iucnredlist.org).
- Cayot, L.J., Gibbs, J.P., Tapia, W. & Caccone, A. 2017. *Chelonoidis donfaustoi* - Poulakakis, Edwards & Caccone, 2015. IUCN Red List of Threatened Species. [www.iucnredlist.org](http://www.iucnredlist.org).
- Cayot, L.J., Gibbs, J.P., Tapia, W. & Caccone, A. 2017. *Chelonoidis hoodensis* - (Van Denburgh, 1907). IUCN Red List of Threatened Species. [www.iucnredlist.org](http://www.iucnredlist.org).
- Cayot, L.J., Gibbs, J.P., Tapia, W. & Caccone, A. 2017. *Chelonoidis duncanensis* - (Garman in Pritchard, 1996). IUCN Red List of Threatened Species. [www.iucnredlist.org](http://www.iucnredlist.org).
- Cayot, L.J., Gibbs, J.P., Tapia, W. & Caccone, A. 2017. *Chelonoidis niger* - (Quoy & Gaimard, 1824). IUCN Red List of Threatened Species. [www.iucnredlist.org](http://www.iucnredlist.org).
- Cayot, L.J., Gibbs, J.P., Tapia, W. & Caccone, A. 2017. *Chelonoidis porteri* - (Rothschild, 1903). IUCN Red List of Threatened Species. [www.iucnredlist.org](http://www.iucnredlist.org).

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

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

Dale Travis Lecture: Restoring the Giant Tortoise Dynasties of Galapagos October 18, 2016 (attendees ~350[?]), SUNY-ESF

### V. PUBLIC SERVICE

#### A. Funded Service (include consulting activities)

1. Government Agencies (Federal, State, Local):
2. Industrial and Commercial Groups, etc.

Participant, Montpelier - Design Congress - October 10-12 2017, Nelson Byrd Woltz LSA and The Montpelier Foundation.

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.

On-going unfunded 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.)

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

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

Other

c. Participation (workshops, symposia, etc.)

Name of workshop, etc.

Date

Place

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

D. Foreign Travel (Where, When, Purpose)

Galapagos, Ecuador June 14-July 6 2016

Galapagos, Ecuador Mar 12-18 2017

**VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)**

A. Department-level

Director, Roosevelt Wild Life Station

Member, Promotion and Tenure Committee

Coordinator, Conservation Biology Major

Associate Chair

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.**

For our students I taught two of the three core courses in the Major as well as a popular elective in vertebrate ecology – Herpetology. During the spring semester I orchestrated the ESF-NYSDEC/FW internship program. I advised 10 graduate students of which 5 finished their degrees this year. I advised and helped build the ESF Herpetology Club which grew rapidly this year.

For our Department and College, I serve on the EFB P&T committee, coordinate the department's largest undergraduate major (Conservation Biology), and serve as Director of the Roosevelt Wild Life Station, which has seen significant activity this year: the new Gateway collections facility getting underway, the launch of the Private Lands Wildlife Conservation Initiative secured with a \$500k donation, strong efforts with the Development Office to establish a waterfowl and wetlands program, conceptualizing a proposed Theodore Roosevelt School of Conservation at SUNY-ESF, and outlining the first Roosevelt Roundtable, among other initiatives. A publication on translocating Amur tigers to Kazakhstan (with grad student Misha Paltysn) garnered significant media attention for the College this year. To advance an expressed interest at ESF for the college to get more involved in citizen science I focused a great deal of energy this year on developing the digital New York State "Herp Atlas" (with support from the Water Resources Institute at Cornell, The Wetland Trust, and SUNY-ESF) to be launched Jan 1 2018. Similarly, our established squirrelmapper.org citizen science / contemporary evolution site was featured by SciStarter which boosted engagement now with 21,000 people contributing observations of squirrels to the ESF-based project.

For me professionally, my "Problem-solving in conservation biology and wildlife management" exercise book is still heavily used based on sales and requests for the instructors manual and we are revising the "Fundamentals of Conservation Biology" textbook due at the publisher Dec 2017. 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) with foci this year of continuing to release "analog" (non-native) tortoises to Santa Fe Island as ecosystem engineers, planning the role of tortoises in the future restoration program for Floreana Island, orchestrating the return of the famous tortoise "Lonesome George" from New Jersey back to the archipelago in March 2017, and coordinating development of the next generation of tortoise egg incubation

technology (with Roosevelt Wild Life Station advisor Preston Bruenn) that will produce a new cohort of ~10,000 tortoises over the next decade. For Galapagos Conservancy as adjunct scientist I have also been heavily involved in developing “Shark Count” (a digital citizen science program) for making counts of charismatic marine life now in a “roll out” process in Galapagos. Service as a board member to The Wetland Trust has occurred at a time of progress on significant land protections by this group. Working for many years with the Nine Mile Creek Conservation Council we were delighted to see our steady promotion of the Hudson Farm property in Camillus for protection result in the property now being featured as a primary potential component of the Onondaga Lake restoration program. Our small company Wildlife Intel (now Irbis Solutions) continues to provide anti-trespass technology for remote applications around the world mainly for wildlife protection but this year also protection of sacred sites and archeological sites on NPS lands in California, New Mexico and Arizona.

#### **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)**

For the year ahead I will emphasize continuing to push ahead Roosevelt Wild Life Station development activities, continue to expand a capacity building a project with a small university in Brazil’s least developed state of Amapa, continue to advance the Galapagos Giant Tortoise Restoration Initiative, help bring our NASA-funded research program in the Altai Mountains to conclusion, and try to renovate conservation biology courses and supporting materials (text books). I am very excited to be now enrolled in the American Institute of Biological Sciences “Communications Training Boot Camp for Scientists” in fall 2017.

#### **B. PROJECTED ACTIVITIES FOR NEXT YEAR**

##### 1. Summer 2017

- a. Course(s) to be offered
- b. Proposed research activity
- c. University, professional society, and public service

##### 2. Fall Semester 2017

- a. Course(s) to be offered
- b. Proposed research activity
- c. University, Professional society, and public service

##### 3. Spring Semester 2018

- a. Course(s) to be offered
- b. Proposed research activity

c. University, professional society, and public service