

ANNUAL REPORT: June 1, 2016 – May 31, 2017
(i.e., Summer 2016, AY 2016-2017)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

NAME: Donald J. Stewart

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:	EFB 202	Ecol. Monitor. & Biodiv. Assess.	3	~75	4 days [Aquatics Section]
SPRING:	EFB 486	Ichthyology	3	75	4
	EFB 523	Tropical Ecology [w/ Martin Dovciak]	3	11	[In Dominica]

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.

In Ichthyology (EFB 486, EFB 796), we do surveys each year of fish communities in central New York. This year we studied the fishes in Jamesville Reservoir and nearshore of Oneida Lake. When new or unusual fish distributions are found, the DEC may be advised, and sometimes, specimens are preserved and provided to the New York State Museum of Natural History, Albany, or archived in ESF's Roosevelt Wildlife Collection. Periodically, such results are provided to NYS DEC personnel who monitor conservation status of fish populations in the state.

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>
FALL:	EFB 999	Doctoral Thesis Research	3	3
SPRING:	EFB 420	Internship	1	4
	EFB 495	Undergrad Exp/Coll Teach	4(2,2)	2
	EFB 498	Independent Res./EFB	1	1
	EFB 796	Advanced Ichthyology	3	2
	EFB 899	Masters Thesis Research	5	1
	EFB 999	Doctoral Thesis Research	3	3

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>
SPRING	EFB 211	DIVERSITY OF LIFE II	2

II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor ~24 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

Gurdak, Daniel J., Doctor of Philosophy (joint MPA at SU), EFB Ecology, May, 2009.
Hermann, Theodore W., Doctor of Philosophy (joint MPA at SU), EFB Fish & Wildlife Biology & Mgt, Aug., 2010.
Mandrekar, Kapil D., Doctor of Philosophy, EFB Ecology, Aug., 2009
Matillano, Joie D., Doctor of Philosophy, EFB Fish & Wildlife Biology & Mgt, Jan., 2012 [medical leave 2016-17]

CO-MAJOR PROFESSOR

Saavedra, Nicole, Master of Science, Co-MP with G. Paterson, EFB Fish & Wildlife Biology & Mgt, Jan. 2016.

MEMBER, STEERING COMMITTEE (other than those listed above)

Brainard, Andrew, Doctor of Philosophy, EFB Fish & Wildlife Biology & Mgt, MP Schulz.
Samson, Melvin A., Doctor of Philosophy, EFB Fish & Wildlife Biology & Mgt, MP Limburg

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Chairman of Thesis Defense, Amanda Miller, MS Candidate, Environmental Science, May 2017.

III. RESEARCH COMPLETED OR UNDERWAY

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

Phylogeography and Conservation of Bowfins (*Amia*, Amiidae) – a research agenda for undergraduate Honors Students, presently engaging Mr. Daniel Sinopoli studying Bowfin diversity in the Mississippi River basin. This is a collaboration with Dr. Jeremy Wright, New York State Museum, Ichthyology Laboratory in Troy, NY, and other colleagues at Cornell University.

Publications in prep:

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)

1) CEnter for Biodiversity in Amazonia (<http://www.labex-ceba.fr>), Is the bony-tongue fish *Arapaima* (Teleostei, Osteoglossiformes) really a monotypic genus? US\$ 12,651 [11,292 Euros], P.I. - C. Tougard, Institut des Sciences de l'Evolution de Montpellier, France, and Co-P.I.s D.J. Stewart, F. Justy, P. Gaubert, and C.R. García-Dávila (May 2017 – Feb. 2018). [Funds are paying for Next Generation Sequencing of complete mitogenomes for about 30 *Arapaima* specimens representing 8-10 species, including extant holotypes of three nominal species; primary goal is a phylogeny of the taxa represented].

2) EPA-F2013-STAR-F1: Aquatic Systems Ecology; Unraveling linkages between river floodplain dynamics, fish populations, and habitat structure in the Amazon. \$10,000 + Graduate Research Fellowship for Daniel Gurdak (Sept., 2014 – Aug., 2016).

Grant-Supported Publications in prep:

- 1) Gurdak D.J., Thomas, M., Klimley, A.P., and Stewart, D.J. [MS in Prep.] Seasonal migration and site fidelity of arapaima in the Lower Amazon, Brazil: Implications for conservation and management. For submission to: Canadian Journal of Fisheries and Aquatic Sciences.
- 2) Gurdak, D.J., Stewart, D.J., Castello, L., and Arantes, C.C. [MS in Prep.] Reproductive ecology of *Arapaima* sp. in várzea floodplains of the Lower Amazon. For submission to: Ecology of Freshwater Fishes.
- 3) Watson, L.C., Stewart, D.J., Clifford, K., Jafferally, D., James, S., Watkins, G.G., and Norman, Z. [MS in Prep.]

Tragedy of Guyanese *Arapaima*: Community engagement, mixed recoveries and future prospects. For submission to: Oryx.

4) Gillette, J.P., Teece, M.A., Stewart, D.J., and Schulz, K.L. [MS in Prep.] You are what you eat (and produce): quantifying autotrophic and heterotrophic biomass production in mixotrophic phytoplankton. For submission to: Limnology and Oceanography, or related journal.

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

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

1) Watson, L.C., D.J. Stewart, and A.M. Kretzer. 2016. Genetic diversity and population structure of the threatened giant *Arapaima* in Southwestern Guyana: Implications for their conservation. *Copeia* 104(4): 864-872.

2) Silva, E.A., and D.J. Stewart. [Accepted, pending final edits]. Reproduction, feeding and migration patterns of *Prochilodus nigricans* (Characiformes: Prochilodontidae) in northeastern Ecuador. *Neotropical Ichthyology*.

B. Non-refereed Publications

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

1) Stewart, D.J. Taxonomic and conservation status of *Arapaima mapae*: data deficient fishes in limited habitat, 6-10 Jul. 2016, Annual Meeting American Society of Ichthyologists and Herpetologists, New Orleans, LA.

2) Palumbo, J., Clifford, K., and Stewart, D.J. Morphological variation among Bowfin (*Amia*) populations from the Carolinas and Laurentian Great Lakes: Taxonomic and conservation implications, 22 Aug. 2016, Annual Meeting American Fisheries Society. Invited presentation to special symposium: Angling for Dinosaurs: Status and Future Study of the Ecology, Conservation and Management of Ancient Fishes, Kansas City, MO.

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

1) SUNY-ESF Chapter of The Wildlife Society, Seeking and saving the diversity of *Arapaima*: Charismatic megafishes of the Amazon. 23 Mar. 2017, est. 20 attending.

2) Cranberry Lake EFB 202 Class, evening lecture, Seeking and saving the diversity of *Arapaima*: Charismatic megafishes of the Amazon. 31 May 2017, est. 25 attending.

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

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

2. Professional Society Membership

American Fisheries Society

American Society of Ichthyologists and Herpetologists

Sigma Xi

Sociedade Brasileira de Ictiologia (Brazilian Society of Ichthyology)

Neotropical Ichthyological Association

3. Other Professional Activities

a. Editorial activity

Journal (s)

Responsibility

Other (books, symposia, etc.)

b. Reviewer

Journal(s)

No. of manuscripts

Copeia

1

Freshwater Biology

1

JEZ Part B: Molecular and Developmental Evolution

1

Journal of Fish Biology

1

Neotropical Ichthyology

1

Ecology of Freshwater Fish

1

Agency

No. of proposals

Other

c. Participation (workshops, symposia, etc.)

Name of workshop, etc.

Date

Place

The Seventh Annual Student Conference on Conservation Science – New York (SCCS-NY) 20-21 October, 2016 American Museum of Natural History

Served as Judge of Student Oral Presentations, and Mentor for Aquatic Sciences at a luncheon table.

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

D. Foreign Travel (Where, When, Purpose)

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

Coordinator, Aquatic and Fisheries Science 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.

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)

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2013
 - a. Course(s) to be offered

 - b. Proposed research activity

 - c. University, professional society, and public service

2. Fall Semester 2013
 - a. Course(s) to be offered

 - b. Proposed research activity

 - c. University, Professional society, and public service

3. Spring Semester 2014
 - a. Course(s) to be offered

 - b. Proposed research activity

 - c. University, professional society, and public service