

ANNUAL REPORT: June 1, 2013 – May 31, 2014
(i.e., Summer 2013, AY 2013-2014)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

NAME: Donald J. Stewart

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

	Course No.	Title	Credit Hrs.	No. Students	No. of Lab. Sections
SUMMER:	EFB 202	Ecol. Monitor. & Biodiv. Assess.	3	~75	4 days [Aquatics Section]
SPRING:	EFB 486	Ichthyology	3	74	4
	EFB/FOR 523	Tropical Ecology [w/ Colin Beier]	3	15	[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 a survey each year of fish communities along a river gradient in central New York. This year we studied the gradient along Chittenango Creek. 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. 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)

	Course No.	Title	Credit Hrs.	No. Students
FALL:	EFB 798	Research Problems – EFB	6	1
	EFB 899	Masters Thesis Research	3	1
	EFB 999	Doctoral Thesis Research	23(1,1,9,8,6)	5
SPRING:	EFB 495	Undergrad Exp/Coll Teach	4(2,2)	2
	EFB 498	Independent Res./EFB	4(3,1)	2
	EFB 796	Advanced Ichthyology	3	2
	EFB 798	Research Problems – EFB	2	1
	EFB 899	Masters Thesis Research	1	1
	EFB 999	Doctoral Thesis Research	18(1,1,9,1,6)	5

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>
FALL:	EFB 132	ORIENTATION SEMINAR: EFB	2
SPRING	EFB 211	DIVERSITY OF LIFE II	1

II. STUDENT ADVISING

- A. Number of undergraduates for whom you are the student's official advisor _20_ 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

Clifford, Kean M., Master of Science (joint MPA at SU), EFB Ecology, started Aug., 2011.

Completed May 2014: Morphological Variation in the Bowfin (*Amia calva* Linneaus, 1766), with a Review of Nominal Species: Conservation Implications. 80 pp., 2 tab., 10 fig., 13 append. tab.

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.

CO-MAJOR PROFESSOR

Gillette, Jacob, Doctor of Philosophy, Co-MP with M. Teece, EFB Ecology, May 2006.

MEMBER, STEERING COMMITTEE (other than those listed above)

Bauer, Eric F., Master of Science, EFB Fish & Wildlife Biology & Mgt, MP Whipps (finished Aug., 2013).

Brainard, Andrew, Doctor of Philosophy, EFB Fish & Wildlife Biology & Mgt, MP Schulz.

Connerton, Michael J., Doctor of Philosophy, EFB Fish & Wildlife Biology & Mgt, MP Ringler.

Kirby, Lucas J., Doctor of Philosophy, EFB Ecology, MP Ringler.

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Chairman of Thesis Defense, Aayushi Patel, MS Candidate, ESC Coupled Natural and Human Systems, May 2014.

III. RESEARCH COMPLETED OR UNDERWAY

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

Publications in prep:

Olsen, J.E.B., K.D. Mandrekar, and D.J. Stewart. MS In Prep. Predation avoidance mechanisms of juvenile *Arapaima*: Significance of synchronized breathing and sound production. (Based on Honors Thesis of J. Olsen)

Mandrekar, K.D., C. Powers, and D.J. Stewart. MS In Prep. Daily changes in activity and surface breathing rates in juvenile arapaima (*Arapaima spp.*). For submission to Neotropical Ichthyology.

Watson, L.C., and D.J. Stewart. MS In Prep. Growth and mortality of the giant *Arapaima* in Guyana: implications for recovery of a distressed population. For submission to Environmental Biology of Fishes.

- 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) National Geographic Society. **Tracking arapaima to create sustainable reserves for inland fisheries in the Brazilian Amazon**, \$27,200, 1 Dec. 2013—30 Nov. 2014, would partially support PhD thesis research of Daniel Gurdak. Co-Investigator (PI: Peter Klimley, UC Davis; 4 other Brazilian and US Co-Investigators).

2) USAID, funds administered by a Peruvian resource agency. **Caracterización morfológica y molecular de *Arapaima gigas* en tres localidades de la Amazonía peruana**, \$27,000, Aug. 2013—Dec. 2014, Co-Investigator (PI: Carmen R. García Dávila, IIAP, Iquitos, Peru; 5 other Peruvian and French Co-Investigators); Project in progress.

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

Castello, L., C.C. Arantes, D.G. McGrath, D.J. Stewart, and F. Sarmiento de Sousa. In Press. Understanding fishing-induced extinctions in the Amazon. *Aquatic Conservation: Marine and Freshwater Ecosystems*.

Watson, L.C., D.J. Stewart, and A.M. Kretzer. MS in Review. Genetic assessment of the threatened *Arapaima* in Guyana: implications for conservation of a giant fish. Submitted to: *Conservation Genetics*.

Following is final complete reference for a paper 'accepted pending edits' in 2013.

Castello, L., D.J. Stewart, and C.C. Arantes. 2014. O que sabemos e precisamos fazer a respeito da conservação do pirarucu (*Arapaima* spp.) na Amazônia. Pages 17-32. In: *Biologia, conservação e manejo participativo de pirarucus na Pan-Amazônia*. Amaral, E.S. (ed.) Instituto de Desenvolvimento Sustentável Mamirauá, Tefé, AM.

B. Non-refereed Publications

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)

Stewart, D.J. Seeking and saving the diversity of *Arapaima*: Giant air-breathing fishes of the Amazon. The Dale L. Travis Lecture Series, SUNY-ESF, 26 Mar. 2014.

Stewart, D.J. Conservation of Amazonian giant fishes: Implications of unrecognized diversity in *Arapaima*. Invited Seminar, Biology Department, SUNY New Paltz, 18 Oct. 2013.

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.)

The publication “Stewart, Donald J. 2013. Re-description of *Arapaima agassizii* (Valenciennes), a rare fish from Brazil (Osteoglossomorpha: Osteoglossidae). *Copeia* 2013(1): 38-51.” has been chosen as the Best Paper, Ichthyology in the 2013 volume of *Copeia*. The decision was made a committee of Associate Editors and Editorial Board members.

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

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)

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

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