

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

NAME: John D. Castello

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 345	Forest Health (with Teale)	3	10	CLBS
	EFB 202	Ecological Monitoring (team taught)	3	75	CLBS
FALL:	EFB 303	Intro Env. Microbiology (with Nakas)	4	51	2
	EFB 210	Diversity of Life (team taught) (2 lectures + lab presented)	3	112	4
SPRING:	EFB 340	Forest & Shade Tree Pathology	3	28	3
	EFB 217	Peoples, Plagues, & Pests (with Teale)	3	124	0

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 999	Doctoral research	14	Mukherjee & Cale
	EFB 899	MS research	6	West
	EFB 420	Internships	6	Ashby & Mahler
	EFB 494	Senior synthesis Forest Health	4	Falco, Mahler, Spitzer, Fagan
	EFB 495	Undergrad teaching	3	Fagan
	EFB 498	Independent study	4	Ruggles & Smith

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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II. STUDENT ADVISING

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

Jonathan Cale, Ph.D, January 2011 (switched from MS into PhD)

Justin West, MS, September 2011

Som Mukherjee, Completed Ph.D degree, December 2011. Dissertation Title: Isolation and Characterization of Tobamo- and Tombusviruses from waters in New Zealand.

CO-MAJOR PROFESSOR

MEMBER, STEERING COMMITTEE (other than those listed above)

Daniel Cucura (S.A. Teale is MP)

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

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)

-M. Johnston (PI), J. Castello, and S.A. Teale (co-PIs). 2011-2013. Fresh taste from a stale pickle: An alternate perception of beech bark disease. McIntire-Stennis Research Grant. \$53,590 to commence in August 2011- August 2013. (Jon Cale & J. West are supported on this project).

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

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

-McGee, G.G. (PI), Castello, J.D., Davis, R. (co-PIs). 2012-2014. An holistic approach to educating forest ecosystem scientists: Management of second-growth northern hardwood forests toward sustainable, multipurpose old growth.

-Castello, J.D. (PI), Teale, S.A., and Johnston, M. (co-PIs). 2012-2014. Linking environmental stressors to beech bark disease. Forest Health and Protection-Special Technology Development Program. \$252,749

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

-Cale, J.A., Letkowski, S.K., Teale, S.A., and Castello, J.D. 2012. Beech bark disease: An evaluation of the predisposition hypothesis in an aftermath forest. *Forest Pathology* 42: 52-56 .

-Cale, J.A., McNulty, S. A., Teale, S.A., and Castello, J.D. 2012 The impact of beech thickets on northern hardwood forest biodiversity. *Biol. Invasions*. (in press).

-Mukherjee, S.S., Lough, T., Hopcroft, D.H., and Castello, J.D. 2012. New tombusviruses isolated from surface waters in New Zealand. *Australasian Plant Pathology* 41:79-84.

-Mukherjee, S.S., Lough, T., Hopcroft, D.H., and Castello, J.D. 2012. Tobamoviruses isolated from the Pohangina river in New Zealand. *Archives of Virology* (in review).

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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)

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 Phytopathological Society

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

-Associate Chair

-Chairman of the departmental Promotion and Tenure Committee

- Coordinator of the Forest Health major
- Faculty coordinator of the 2012 departmental spring awards ceremony
- Unofficial EFB faculty point person for departmental autoclave repair.

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 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, which I'll continue to award based on your contributions to the department and college this reporting period.

I continue to work hard to enhance the Forest Health major within EFB, of which I am the coordinator. This past year (2011-2012), five students graduated from the major. Despite the losses to graduation, the major is small but healthy. We still have 12 students in the major preregistered for the fall semester 2012.

My textbook on Forest Health, coedited with Dr. S.A. Teale, and published by Cambridge University Press in May 2011 received an excellent review in the journal *ECOLOGY* in May 2012. Three research manuscripts have been published or are in press in 2012 to date, and another is in review.

A McIntire-Stennis proposal with M. Johnston and S.A. Teale was funded in 2011, which allows me to continue my research efforts with my two grad students on beech bark disease for the next two years.

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)

My work with S.A. Teale on baseline mortality has made great progress. We have a manuscript ready for submission to *SCIENCE*, which details the analysis of a complex western conifer dataset to evaluate the impacts of mortality attributed to climate change, using the new method for forest health assessment that was described in our book. In addition, a second manuscript utilizing the same method to assess the health of Alaska yellow cedar is currently in preparation. This work represents a collaboration between ESF and two USDA Forest Service scientists from the PNW Station in Juneau, AK. If these two manuscripts are published in high-impact journals, then I intend to begin work immediately on an NSF proposal to fund a large, collaborative, global, research project to utilize our baseline mortality method to assess the impact of climate change on the health of the world's forests.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2012

a. Course(s) to be offered

-None this summer (2012)

b. Proposed research activity

-Continue field work on BBD project with Johnston, Teale, Cale, and West

c. University, professional society, and public service

2. Fall Semester 2012

a. Course(s) to be offered

-EFB 303: Intro Environmental Microbiology with J.P. Nakas

-EFB 210: Diversity of Life (team taught)

b. Proposed research activity

-BBD research

-Baseline Mortality analyses

c. University, Professional society, and public service

-Begin evaluation of four faculty for promotion and/or continuing appointment

-Continue duties as Associate Chair of EFB

3. Spring Semester 2013

a. Course(s) to be offered

-EFB 217: Peoples, Plagues, and Pests (w/o S.A. Teale this year. He is on sabbatical leave)

-EFB 340: Forest and Shade Tree Pathology

b. Proposed research activity

-BBD research

-Baseline mortality analyses

c. University, professional society, and public service

-Conclude P/T evaluations

-Organize EFB spring awards ceremony