

# 2013 - 2020 ODUM SCHOOL OF ECOLOGY STRATEGIC PLAN

## A. MISSION

*Our mission is to shape the future of ecological inquiry and application to better understand our rapidly changing planet. To succeed we will conduct disciplinary and interdisciplinary research on the interrelations of organisms and their environments, recognizing the dominant influence of humans. We will educate the next generation of ecologists and citizens and engage in outreach and service for the broader public.*

## B. CULTURE AND DIVERSITY

We recognize that effective, innovative thinkers work in and create great cultures. Our goal is to foster an open, creative, ethical, productive and joyful culture. The most important components of this culture are that (1) we value the capacity to learn and continually adapt to new problems and (2) we view meaningful work and meaningful relationships as essential to our success. We share a core belief that our well-being depends on close collaboration and collegiality among our staff, students and faculty.

### **GOAL B.1. Promote collegiality by creating opportunities for more informal interactions.**

We will continue to provide ongoing opportunities for both intellectual and social gatherings through our seminar series, weekly coffee hour, First Fridays, Chili Cookoff, holiday lunch and Spring Fling and we recognize the need for more activities that are particularly conducive to staff participation.

**ACTION B.1.1.** Beginning in Fall 2013, OSE leadership will institute an annual back-to-school social gathering.

*✂ September 2013 and 2014 back-to-school cookouts were held.*

**ACTION B.1.2.** Beginning in Fall 2014-Spring 2015, OSE leadership will sponsor a learning, sports or service activity involving the entire school at least once per year.

*✂The Fall 2014-Spring 2015 project is underway to prepare the Schattler home for adoptions.*

**ACTION B.1.3.** Beginning in Spring 2015, faculty/students will offer tours of their labs to staff on a periodic basis.

### **GOAL B.2. Identify and resolve challenges and sources of friction before they become problematic by maintaining an open door policy that welcomes complaints and solutions and providing opportunities for group problem-solving.**

Faculty meetings have frequently been used for this purpose and will continue to be; we recognize the importance of providing similar formal opportunities for communication between the OSE administration and staff and students.

**ACTION B.2.1.** Beginning in Spring 2013, OSE leadership will contact and actively solicit input from staff and students at least bi-annually to determine if there are issues to be resolved and to develop strategies for doing so.

*✂ In 2013 and 2014 annual staff retreats and learning hours were held.*

*✂ In 2014 the Dean attended graduate student meetings upon invitation.*

The richness in diversity of our students, faculty and staff contributes to the strength of the OSE and the University. Exposure to diverse backgrounds, ethnicities, perspectives and experiences energizes and enlightens our community. The education of our students is enriched by having people of varied backgrounds in teaching and leadership positions.

**GOAL B.3. Enhance and sustain an institutional climate that values and welcomes diversity and inclusion.**

*∕In Fall 2014 OSE graduate students played a leadership role in establishing and chairing a new UGA organization, Women in Science, with the goal of building a campus community of scientists interested in promoting equality by offering opportunities for mentoring, networking, and career development.*

**ACTION B.3.1.** In 2015 in conjunction with the UGA Office of Diversity, we will host a workshop/s to develop strategies for achieving our diversity goals as well as metrics for evaluating OSE diversity in terms of student, faculty and staff recruitment, retention, professional development and quality of life.

**ACTION B.3.2.** Upon conclusion of the workshop/s, the OSE leadership will develop and implement a strategy for ensuring each new student, faculty and staff member is aware of our commitment to and policies for achieving diversity.

**ACTION B.3.3.** Beginning in Fall 2015 the Seminar Committee will incorporate an annual lecture on diversity to be included in the seminar series and investigate naming the event after a retired faculty member.

**ACTION B.3.4.** Beginning in Fall 2015 the Seminar Committee will include diversity as a goal in assembling each year's roster of speakers.

**GOAL B.4. Support UGA's existing and future diversity-specific events and initiatives.**

**ACTION B.4.1.** Beginning in Fall 2014 a member of the OSE administrative staff will develop and maintain a list of these opportunities and alert the OSE community through emails and other means applicable.

*∕Graduate coordinator Katherine Adams initiated this list and alert process in Fall 2014.*

**GOAL B.5. Support diverse faculty/staff recruitment and retention.**

**ACTION B.5.1.** The Dean will charge the chairs of every faculty and staff search committee to identify and implement strategies to recruit and interview qualified female and minority candidates.

**ACTION B.5.2.** In Fall 2015 the OSE leadership will evaluate (1) the salaries of faculty and staff across "equivalent" lines and (2) adequacy of tenure support for all faculty and make recommendations if necessary to achieve equity.

**GOAL B.6. Support diverse student recruitment and retention.**

**ACTION B.6.1.** Beginning in 2014 our undergraduate and graduate coordinators will work closely with UGA's Office of Diversity and the Graduate School Office of Outreach and Diversity to assure we avail ourselves of all university-sponsored opportunities to recruit and maintain diversity including participating in the Graduate School Department of Recruitment and Diversity Initiatives.

**ACTION B.6.2.** Beginning in 2014 the OSE Director of Development, working with the undergraduate and graduate committees, will recruit additional monies for our Graduate Opportunities Award to support graduate-level ethnic diversity initiatives.

**ACTION B.6.3.** Beginning in Spring 2016 our undergraduate and graduate committees will annually evaluate the previous year's recruitment efforts as they relate to diversity and develop new strategies as needed.

**GOAL B.7. Provide students with diverse educational opportunities in the classroom, internships and community.**

**ACTION B.7.1.** Beginning in Fall 2015, the River Basin Center and/or another entity will develop and disseminate to the OSE community a database of service-learning activities, volunteer community service activities and internships in underserved communities of need.

## **C. INTELLECTUAL DEVELOPMENT**

Current problems in modern ecology require multiple, interdisciplinary approaches. Our faculty are unique in their capacity to employ and integrate various levels of biological organization (from individual organism to ecosystem), methodology (comparative, experimental, field) and to utilize the latest in computational, informatics and theoretical advances from local to global scales. Strategically, we mainly focus on three core areas: Conservation Ecology, Disease Ecology, and Ecosystem Ecology.

Administratively, we view our small size as an asset, allowing greater cohesion and interaction; we actively use two Centers to initiate new theoretical ideas (Center for Computational Ecology) and to ensure solutions from our science (River Basin Center). An engaged, diverse and interactive faculty allows the OSE as a unit to achieve and solve big ecological problems. This is the heart of our mission.

### **C.1. NEW HIRES**

We will build bridges across current strengths and fill crucial gaps by hiring the best researchers who look for opportunities to collaborate and explore new directions in their research. **We aim to hire six or seven new faculty members by 2020, for a total of approximately 30 faculty, with the following specific goals in recruitment:**

**GOAL C.1.1. Hire faculty members who reinforce current strengths and add novel approaches, study systems or questions.**

To hire ecologists doing the most exciting science, we will search broadly and be flexible to capitalize on unforeseen opportunities. We acknowledge that the hiring of a tenure track/tenured faculty member is a rare gift; we take seriously the task that with each and every search we will aim to hire the best.

**GOAL C.1.2. Hire faculty who will promote collaboration between Ecology and other academic units to maintain and enhance our status as a hub of interdisciplinary activity on campus.**

We aim to build bridges with other units through interdisciplinary hires, as we have done in the recent past (e.g. 25% of our current faculty have joint appointments).

*✓In Spring 2014 in partnership with the College of Veterinary Medicine and the Department of Genetics respectively, we hired Courtney Murdock, a disease ecologist, and Jill Anderson, a theoretical ecologist, pursuant to a Presidential Interdisciplinary Hiring Initiative.*

**GOAL C.1.3. Achieve balanced demographics in the unit and move towards a more stable rank distribution.**

The age/rank distribution of our unit has shifted dramatically in the past 10 years from a predominance of full professors to a large percentage of newly-hired assistant professors. We aim to increase the representation of research-active full professors who will provide leadership and serve as role models and mentors to junior faculty within the unit.

Five **areas that we will prioritize for future hires**, as identified in our 2012 faculty retreat, are noted below. Hiring in each of these areas will fill gaps in our expertise while building bridges between existing areas of strength. We note that these areas do not fall cleanly within a single axis as identified above, but rather fall on different axes (e.g., methodology, thematic areas, systems).

**Community Ecology:** This field represents a crucial bridge between population and ecosystem ecology, two areas of current strength in OSE. A new hire in this area might focus on the dynamics of species interactions and the causes and consequences of community composition and species diversity. Our graduate students identified this as the most important need for graduate training and curriculum development, and our faculty agree that community ecology is a keystone bridge field that links us all.

*✓ We hired Craig Osenberg effective Fall 2014.*

**Molecular Ecology:** This is one of the most rapidly developing areas in ecology and focuses on applying new molecular tools (including genomics) to traditional ecological questions such as the conservation of small populations, animal behavior and the assessment of biodiversity. High demand to collaborate with molecular ecologists exists among both faculty and students in our unit. Questions that can be solved with molecular techniques include those centered on dispersal, abundance, hidden diversity, and the interplay between ecological and evolutionary dynamics. A colleague here will bring new tools to answer questions that are of great interest to OSE and that cannot be answered with more conventional techniques.

*✓ We hired Jill Anderson in partnership with the genetics department effective Fall 2014.*

**Microbial Ecology:** Ecologists are increasingly aware of the extreme abundance, diversity and importance of microbial organisms in shaping communities and driving ecosystems processes. Microbial life can have effects ranging from regulating biogeochemical cycles to determining the susceptibility of an individual animal to invasion by a novel pathogen. This is a missing link in understanding how ecosystems function – we need more richness and depth of understanding the ecological dynamics driven by microbiota.

**Theoretical Ecology:** Theory drives many research questions and is universal for scientific inquiry. A hire in theoretical ecology will offer opportunities for research development and student training across diverse taxa and research themes. We seek to recruit a theoretical ecologist who excels at formalizing mechanisms across sub-disciplines of ecology and who engages in diverse collaborations. S/he would add to our complement of mathematical, statistical and computational faculty members, help establish the Center for Computational Disease Ecology, and foster interactions with other units on campus.

*✓ We hired Pej Rohani pursuant to a Presidential Extraordinary Hiring Initiative in partnership with the College of Veterinary Medicine effective Fall 2015.*

**Sustainability Science:** We are looking for an ecologist studying system responses to anthropogenic changes or an economist or other social scientist with experience in environmental science and policy/management. We recognize that our core program will be enriched by perspectives beyond the ecological sciences, and that hiring in this area will enhance opportunities for interdisciplinary collaboration with other units.

*✓ We hired Krista Capps in part to help us better address sustainability science effective Fall 2015.*

**GOAL C.1.4. Increase the Odum Chair Endowment and create an additional two endowments to provide supplementary resources for new hires.**

**Action C.1.4.1.** In 2015-2016 the Director of Development working with the Dean and the IDEA Board will develop and initiate a strategy for generating funds to create Endowed Chairs in

Conservation/Sustainability, Disease Ecology and Ecosystems as well as enhance the Odum Chair.

## **C.2. INTELLECTUAL ACTIVITIES**

Beyond our hiring goals, we aim to **foster intellectual engagement of the community of scholars in OSE** and other colleges through activities that promote interaction, collaboration and faculty development. We recognize that these activities will increase the intellectual rigor of scholarly activity in our unit, will elevate our national and international profile and are in line with our goals of fostering a supportive and stimulating culture.

**GOAL C.2.1. Develop a seminar series that is a vibrant intellectual centerpiece of our unit. By 2016 we aim to have 80% or better attendance of OSE faculty and leadership at our seminars.**

**ACTION C.2.1.1** In spring 2013, OSE leadership will recruit a Seminar Committee w/ diverse representation and develop a strategy to maximize college-wide interest and participation and to promote the series.

*✓ The committee was established in 2013 and the strategy is being implemented.*

**ACTION C.2.1.2.** Beginning in Fall 2015 the OSE Seminar Committee will advertise the series to science teachers at Clarke Central and Cedar Shoals High Schools.

**ACTION B.3.3.** (see above) Beginning in Fall 2015 the OSE Seminar Committee will incorporate an annual lecture on diversity to be included in the seminar series and investigate naming the event after a retired faculty member.

**ACTION B.3.4.** (see above) Beginning in Fall 2015 the Seminar Committee will include diversity as a goal in assembling each year's roster of speakers.

## **C.3. PROFESSIONAL DEVELOPMENT**

**GOAL C.3.1. Increase opportunities for faculty and staff professional development and recognition.**

**ACTION C.3.1.1.** In 2014 the Dean will create a faculty and staff professional development fund and will develop a policy for awarding these funds. Funds will support costs associated with meetings and workshops, publication fees for outstanding journals, and acquisition of new skills and technology.

*✓The policy and funds were established in Fall 2014.*

**ACTION C.3.1.2.** In 2014 the Executive Committee will develop guidelines for a program that allows faculty to pursue scholarly work away from campus every five years for personal renewal and professional development.

*✓The policy was established in Fall 2014.*

**ACTION C.3.1.3.** In 2014 the Executive Committee will develop a strategy for ensuring that we promote our faculty, staff and students' achievements by nominating them for awards and other recognition programs.

*✓The strategy was established in Fall 2014.*

**ACTION C.3.1.4.** In 2016 the Director of Development working with OSE leadership and the IDEA Board will develop and initiate a strategy for generating private funding to supplement state dollars used for this purpose.

**ACTION C.3.1.5.** By Fall 2016 the Dean will hire a staff member to support grant efforts.

**GOAL C.3.2. Attract the best scholars from other institutions for short-term appointments in OSE to offer opportunities for project development, collaboration and grant writing activities among current faculty and students.**

**ACTION C.3.2.1.** By Fall 2017 the Director of Development working with the Executive Committee will develop and initiate a strategy for generating funds to support an endowed postdoctoral fellows program and guidelines for such a program.

**ACTION C.3.2.2.** By Fall 2018 the Director of Development working with the Executive Committee will develop and initiate a strategy for generating funds to support a scholars-in-residence program for visiting faculty and guidelines for such a program. Visitors will present their work as part of our seminar series and be engaged in OSE programs and collaborations.

## **C.4. PARTNERSHIPS**

Our partnerships with other UGA institutions as well as affiliate organizations provide us with intellectual stimulation; access to research sites, research experiences and internships for our students; and other opportunities.

**GOAL C.4.1. Maintain and enhance support for existing partnerships and initiate new collaborations when appropriate.**

Valued partners include the Georgia Museum of Natural History, the Savannah River Ecology Laboratory, the Skidaway Institute of Oceanography, the Marine Institute at Sapelo Island, the Wormsloe Institute, the UGA Long-Term Ecological Research sites at Coweeta and Sapelo, the Joseph W. Jones Ecological Research Center, the Georgia Sea Turtle Center, the Highlands Biological Station and the Organization for Tropical Studies; federal agencies including the U.S. Geological Survey, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the U.S. Forest Service and the U.S. Army Corps of Engineers; and state agencies including the Georgia Department of Natural Resources and its divisions and the Georgia Environmental Finance Authority.

## **D. ACADEMIC PROGRAMS**

### **D.1. UNDERGRADUATE EDUCATION**

The OSE undergraduate program is relatively new, having been established in only 1995. Our undergraduate students are high achievers and have consistently earned the University's highest honors and gone on to outstanding graduate programs and careers. Concomitant with resources, we seek both to expand our current B.S. program and to create a new B.A. program that provides a rigorous basis in ecology as an underpinning for students whose ultimate career objectives are in environmental protection fields other than the ecological sciences.

*In FY 2014, 30 of our 110 majors (27%) are honors students; this is triple the university's percentage of honors students (9%).*

**GOAL D.1.1. To meet growing interest and demand for ecological training, foster a vibrant critical mass of undergraduate scholars and maintain financial support for our program, we will increase student enrollment in Ecology courses while maintaining the exceptional quality of teaching and mentorship we currently offer. By 2018 we will increase the number of ecology majors (using the 2013 baseline of approximately 90 sole and dual majors) by 10-15%.**

*An FY 2014 we had 110 majors.*

**ACTION D.1.1.1.** In 2013 we will appoint a tenure-track, teaching-emphasis faculty member to support our highest enrollment courses and to contribute to undergraduate program development.  
*✓ We hired Scott Connelly effective Fall 2013.*

**ACTION D.1.1.2.** Beginning in summer 2014 we will explore development of new online courses, starting with ECOL 1000.

**ACTION D.1.1.3.** Beginning in Spring 2014 we will develop an internal procedure to track enrollment in courses and numbers of majors. The undergraduate program staff will conduct an audit which shows how ecology courses meet requirements of other colleges' degree and certificate programs.

*✓ The audit was completed in Spring 2014.*

**ACTION D. 1.1.4.** Beginning in 2014 we will identify opportunities for generating credits for undergraduate research over the summer.

**ACTION D.1.1.5.** By Fall 2014 we will designate a laboratory coordinator to work with faculty and graduate instructors to implement efficient use of vehicles, wet lab and computer lab space and supplies. The organization and coordination of the departmental resources used for laboratory instruction is a critical need in the undergraduate program. This need becomes even more pressing with the planned expansion of the laboratory sections of ECOL 1000 and 3500.

*✓ We hired Paul Frankson as part-time Laboratory Coordinator in 2013.*

**ACTION D.1.1.6.** Beginning in Spring 2015 the Dean and Associate Deans will meet periodically with the appropriate unit heads in Forestry, Veterinary Medicine, Agriculture, Environment and Design, and Arts and Sciences to coordinate and promote courses in ecology and collaborative programs among our schools.

**ACTION D.1.1.7.** Beginning in 2015 and continuing annually we will select a mid-enrollment course and build its enrollment to 90-100 students.

**ACTION D.1.1.8.** By 2016 we will hire a new staff member to provide administrative support to the undergraduate program.

**ACTION D.1.1.9.** By Fall 2016 we will secure support to expand enrollment in ECOL courses. This will include funds for 5 TA lines, vans, lab and computer facilities to support expanded enrollment in ECOL 1000, 2100, 3500 and 3530.

**ACTION D.1.1.10.** By 2017 we will create a mid-sized, high-quality teaching lab to support expansion of our laboratory courses.

**ACTION D.1.1.11.** By Fall 2017 we will revise ECOL 3505H to include separate lab sections that will only be open to Honors students. This will include creation of new lab exercises.

#### **GOAL D.1.2. Create a B.A. program in Translational Ecology.**

There is a large but untapped interest in ecology from students across campus whose needs are not met by the current B.S. degree program. These students seek training in ecology with interests that overlap with policy and law, conservation, urban planning, art and music, economics, journalism, and business. These translational ecologists would become professionals who can help decision makers and stakeholders work effectively with the scientific community. This role is as necessary for the applied scientist who needs to conduct research that is relevant for the public as it is for the decision makers and stakeholders who need to make effective use of the science. Students pursuing the B.A. degree will be well equipped for careers in governmental agencies, industry, non-profits and environmental consulting firms, and will translate the basic principles of ecology and environmental science into solutions for applied problems.

**ACTION D.1.2.1.** Starting in 2013, the Dean, the Director of Development and the IDEA Board will seek funding to create the program.

*✓ A grant proposal was submitted in 2013 and we are exploring further opportunities.*

**ACTION D.1.2.2.** In Fall 2014 the Dean will appoint a committee to develop the details of the B.A. program building on the proposal drafted by Carroll and Fowler.

*✗ The Committee developed and submitted the proposal to establish the B.A. program to the University Council in Spring 2015.*

**GOAL D.1.3. Evaluate requirements for the BS degree in Ecology and increase opportunities for ecology majors to take upper-level ecology courses.**

The Odum School offers a wealth of discipline-spanning courses reflecting the diversity and expertise of our faculty. We are committed to providing a strong foundation in ecology while recognizing that university requirements can limit the number of courses taken in the major. By providing a captivating introduction to ecological science in ECOL 3500, we aim to increase enrollment in upper level Ecology courses and expand knowledge of modern ecological science among the entire university student body.

**ACTION D.1.3.1.** In 2013 the undergraduate committee will convene a subcommittee to critically re-evaluate prerequisites and the core curriculum.

*✗ The evaluation was completed in Fall 2013.*

**ACTION D.1.3.2.** By Summer 2014 the Undergraduate Committee will clarify links between the Ecology degree and career tracks by developing sample curricula for current and future students.

*✗ These sample curricula were completed in Spring 2014.*

**ACTION D.1.3.3.** The undergraduate coordinator will work with faculty to recruit students and build enrollment in upper level Ecology courses.

**GOAL D.1.4. 100% undergraduate participation in research.**

Undergraduate research is a rewarding activity both for students and their faculty mentors, and can be a vital experience for those students seeking to pursue a graduate degree. By 2018 we aim to ensure that all undergraduate majors participate in a minimum of the equivalent of 1 credit hour (15 contact hours) out-of-classroom independent study, as a research, apprenticeship, directed readings, internship or volunteer activity. We expect all faculty to regularly supervise undergraduate research. Our goal is commensurate with UGA's goal of 100% experiential learning for all undergraduates.

**ACTION D.1.4.1.** By Spring 2014 each faculty member will develop a list of potential research projects which will be posted on their lab website and/or provided to the undergraduate coordinator.

**ACTION D.1.4.2.** By Fall 2014 the undergraduate coordinator will develop an online database of final reports and scientific papers resulting from student research projects and internships. These research opportunities and reports will be available to other students seeking research experience.

**ACTION D.1.4.3.** By Spring 2015 the undergraduate coordinator will develop a list of local organizations willing to take on student interns.

**ACTION D.1.4.4.** By Spring 2015 the undergraduate coordinator and committee will develop a strategy for capturing credits for undergraduate research, including research conducted in the analytical lab.

**ACTION D.1.4.5.** By Spring 2016 a subcommittee of the graduate and undergraduate committees will work together to develop a new graduate-level mentorship course, where graduate students take the lead in supervising undergraduate research projects, and receive training and feedback on their mentoring skills by the faculty advisor.

**GOAL D.1.5. Support and facilitate the engagement of undergraduates with natural history and environmental issues in Georgia and beyond.**

The Odum School takes great pride in the high proportion of undergraduates who engage in extra-curricular activities related to local biodiversity and environmental issues through the Ecology Club. While recognizing that this is a student-led body, we aim to ensure that the Ecology Club continues to thrive, and that membership of the Ecology Club from students across campus increases.

**ACTION D.1.5.1.** In Fall 2014, the Dean will appoint two Odum School faculty as co-advisors to the club. The advisors will lead field trips and share their expertise through informal venues coordinated through the Ecology Club and will work with students to develop community service, outreach and research projects and coordinate club activities. Faculty co-advisors will serve as liaisons to the Odum School leadership and their service will be considered part of their OSE committee service.

**ACTION D.1.5.2.** By Spring 2015 we will provide the Ecology Club with a permanent web presence on the Odum School website.

**D.2. GRADUATE EDUCATION**

The Odum School of Ecology has a long tradition of training some of the brightest minds in ecological research and pedagogy, as well as in professional career-tracks associated with ecology, environmental science and policy. We intend to strengthen our program by filling particular needs that are currently unmet, as follows:

**Goal D.2.1. Provide the best possible graduate-level education in the discipline of ecology.**

**ACTION D.2.1.1.** In Fall 2015 the Graduate Committee will conduct a formal internal review of the current core curriculum. This will involve questionnaires to graduate students and faculty, as well as discussions with faculty teaching each of the core courses. The Committee will recommend the frequency of future reviews.

**ACTION D.2.1.2.** By Fall 2016 the Graduate Committee will evaluate the best approach to provide training in methods in ecology. This current gap in our program could be filled with either a general methods course in the core, or with a core series that students could choose among (e.g., the Perspectives courses, or Park's Methods in Disease Ecology course).

**GOAL D.2.2. Provide high quality training for academic and professional careers in ecology.**

*In FY 2014, our students were awarded more NSF graduate research fellowships (xx) than any other unit on campus.*

**ACTION D.2.2.1.** In Fall 2014 the Graduate Coordinator will assemble, maintain and distribute periodically to the OSE community a list of UGA's science communication workshops and other opportunities.

**ACTION D.2.2.2.** The OSE will support the initiatives of the UGA Graduate School and the Office of Research to develop and offer training in science communication.

**ACTION D.2.2.3.** By Fall 2015 the Graduate Committee will evaluate and make plans to implement the best method for training students in science communication. This might include development of a new course and/or a minimum requirement of one semester of teaching assistantships for all Ph.D. students, with exemptions provided on a case-by-case basis. It might also include partnerships with other colleges, such as the Grady School of Journalism. Exemptions may be appropriate for students with professional career paths, where courses in science education, ethics and other training routes may be more appropriate.

**ACTION D.2.2.4.** By Fall 2015 the Graduate Committee will provide students with guidance and support in professional development through an informal seminar/discussion series (perhaps brown bag lunch style) in which faculty and post-docs present information and answer student questions on topics such as applying and interviewing for jobs, C.V. development, peer review of journal articles, giving research seminars (job talks) and career development.

**ACTION D.2.2.5.** By Spring 2016 the Graduate Committee will investigate and promote the potential and avenues for graduate students to mentor undergraduates. This would include Center for Teaching and Learning (CTL) courses on mentorship.

**ACTION D.2.2.6.** By Spring 2016 the Graduate Committee with assistance from Scott Connelly and possibly the Center for Teaching and Learning will review and upgrade the TA program to assure that TAs are provided ongoing oversight to help them achieve excellence in teaching skills.

**ACTION D.2.2.7.** By 2017 we will provide all graduate students in Ecology with the opportunity for teaching assistantships or teaching experiences in Ecology classes. While students currently often have the opportunity to TA ecology-related topics in lower-division classes for Biology majors, there are few opportunities to TA at the upper division and graduate level, and it is at those levels that the greatest training need is currently seen. Teaching assistantships and other opportunities to provide guest lectures and otherwise assist in upper-division classes will provide students with the opportunity to learn how to develop specialized courses – a useful and competitive skill if they seek employment in academia.

**GOAL D.2.3. Provide a supportive and stimulating environment for graduate education and research.**

**ACTION D.2.3.1.** Beginning in 2014, the Director of Development will seek to increase external support for the Small Grants Program and the Graduate Student Symposium.  
*≠Funding for the Small Grants Program has increased each year since 2013.*

**ACTION D.2.3.2.** By Fall 2014 we will provide office space for all graduate students.  
*≠ This was achieved in 2014 with the renovation of the Electronic Shop and creation of carrels for students in the River Basin Center.*

**ACTION D.2.3.3.** By Fall 2016 the Odum leadership will create a common community space for the graduate students to study and engage in informal interaction.

**ACTION D.2.3.4.** In Spring 2015 the faculty, aided by the Graduate Committee, will develop and begin implementing a plan for achieving parity between the TA pay of our graduate students with those teaching the same courses in other biological units.

**ACTION D.2.3.5.** In 2015-2016 the Director of Development with the Graduate Committee and the IDEA Board will develop and initiate a campaign to achieve to the extent possible guaranteed five-year support for entering doctoral students, via a combination of teaching and research assistantships, grants and fellowships. The practice of guaranteed five-year support is consistent w/ many of our peer and aspirational schools such as the University of Michigan, University of Virginia, Cornell University, University of Washington, and the University of California LA and Berkeley. After their first five years, students in good standing to remain eligible for support, but we will prioritize the awarding of Odum funds to junior students.

**ACTION D.2.3.6.** By Spring 2015 the Director of Development with the Graduate Committee and the IDEA Board will develop and initiate a campaign to fund an endowment for 10 prestigious Odum Fellowships.

**GOAL D.2.4. Continue to develop an interdisciplinary curriculum/program and service-learning and experiential programs through our Conservation Ecology and Sustainable Development master's program (CESD), participation and leadership in the UGA Integrated Conservation Program (ICON) and our interdisciplinary Environmental Practicum.**

**ACTION D.2.4.1.** In Fall 2014-Spring 2015 the CESD committee will evaluate the CESD program and make recommendations regarding recruitment, required courses, suggested tracks of study, collaborations with other colleges to increase enrollment in CESD courses and internship opportunities.

**ACTION D.2.4.2.** In Fall 2016 we will promote the program and recruit new ideas as we celebrate CESD's 20<sup>th</sup> anniversary with a campus-wide event featuring alumni and other prominent speakers.

**D.3. INTERNATIONAL EDUCATION**

Understanding how to sustain biodiversity is of global importance. Given that over half of the planet's species live in tropical regions we encourage all students to engage in first-hand experiences in tropical biology. A major goal is to increase the percentage of undergraduate and graduate students in courses and field work dealing with tropical biology.

**GOAL D.3.1. Increase international learning experiences by offering opportunities for hands-on research at UGA Costa Rica and through enrollment in Organization for Tropical Studies (OTS) courses.**

**ACTION D.3.1.1.** The OSE Director of Development, working with our faculty who teach tropical ecology courses, will develop and begin implementing a plan to generate funding for five \$1000 scholarships for undergraduates enrolled in tropical ecology courses in San Luis and five \$3000 travel awards for beginning graduate students to encourage research at San Luis. *✓The Ron Carroll and Carol Hoffman Costa Rica Travel Award for Undergraduates was established in 2013.*

**ACTION D.3.1.2.** In Fall 2013 OSE tropical ecology faculty will "test broadcast" ecology lectures from San Luis to Athens and from Athens to San Luis using Skype, with the anticipation of incorporating such technical advances to link students and instructors on different continents into courses such as Global Climate Change. *✓This course was offered in Fall 2013.*

**ACTION D.3.1.3.** OSE tropical ecology faculty will continue to develop techniques and take advantage of opportunities to facilitate learning between students on our Costa Rica campus and our Athens campus using Skype and other real-time internet technology.

**ACTION D.3.1.4.** By Spring 2016 OSE tropical ecology faculty will evaluate the need for and feasibility of developing new on-campus undergraduate and graduate courses in aspects of tropical ecology and tropical stream ecology that have field components in Costa Rica.

**ACTION D.3.1.5.** By Spring 2016 OSE tropical ecology faculty will create an informal discussion group among other colleges regarding the best strategies for tropical education.

**ACTION D.3.1.6.** By 2017 faculty will develop a proposal for NSF support of a Research Experience for Undergraduates (REU) program on tropical ecology that includes research at San Luis and collaborating field stations in Monteverde.

## **E. PUBLIC SERVICE AND OUTREACH**

The Odum School has a strong tradition of public service and outreach; in the earliest days of our unit our founders promoted public awareness of the ecological and economic importance of the salt marshes of Georgia, resulting in one of the nation's strongest marsh protection acts.

**GOAL E.1. Encourage and facilitate participation by all OSE faculty, staff and students in public service and outreach (PSO) opportunities activities. As of 2013, 65% of OSE members engage in PSO activities, by 2020 we aim to increase this to 90%.**

**ACTION E.1.1.** By Fall 2013 faculty engagement will be incentivized by formal recognition of PSO in annual evaluations.

*✚ This became effective in our 2014 Annual Reviews.*

**ACTION E.1.2.** In Fall 2015, the River Basin Center (RBC) or other staff appointed by OSE leadership, working with the co-advisors to the Ecology Club, will create and maintain a directory of local organizations and schools which would benefit from the assistance of OSE personnel, to be disseminated and updated annually.

**ACTION E.1.3.** In Fall 2015-Spring 2016 OSE leadership will investigate the potential for creating a small grants program for PSO activities to incentivize student engagement.

**ACTION E.1.4.** By Fall 2015 Odum leadership will promote opportunities for faculty to apply for UGA's PSO Fellowships and Seed Grants by offering an annual informational session by VPPSO.

**GOAL E.2. Conduct cutting-edge ecological and policy research responsive to needs of decision-makers.**

**ACTION E.2.1.** By Fall 2013 we will hire a new tenure-track director for the RBC.

*✚ We hired Seth Wenger effective Spring 2014.*

**ACTION E.2.2.** By Spring 2014 OSE will provide funding for administrative support for the RBC.

*✚ Jenny Yearwood served in this capacity from Fall 2013-Summer 2014; OSE is advertising for this position in Spring 2015.*

**ACTION E.2.3.** By 2014 OSE leadership will procure space for the RBC close to the Ecology building.

*✚ RBC moved into the former Electronics Shop in Fall 2013.*

**ACTION E.2.4.** By Fall 2014 RBC faculty with assistance from its advisory board will update its strategic plan which will be incorporated into this strategic plan.

*✚ This plan is incorporated as Appendix A.*

**GOAL E.3. Provide time and resources to educate local K-12 students and their families on basic ecological issues through activities of EcoReach.**

**ACTION E.3.1.** Beginning in 2014 Odum leadership and EcoReach leaders will recruit support from the Athens-Clarke County school district to fund graduate student RAs.

*✚ In Fall 2014 we secured partial RA funding for EcoReach (via the Ray C. Anderson grant) to develop and teach lessons on watershed issues in schools within the campus watershed and we are pursuing additional funding.*

**ACTION E.3.2.** In Fall 2015 the Graduate Committee will investigate the potential for awarding course credits to graduate and undergraduate students who volunteer a minimum number of hours to EcoReach and if appropriate, will make recommendations to the Graduate Committee for initiating same.

## F. COMMUNICATIONS

Given the magnitude of both the environmental threats and the opportunities before us, it is critical that the Odum School of Ecology communicate the results of our scientific inquiry to inspire public interest in our field and better inform public health and natural resource management decisions across the globe.

**GOAL F.1. Develop and implement a systematic framework for communicating our research and findings to the general public, elected officials, natural resource and public health managers, industry and nongovernmental organizations. [We will add to this upon completion of our communication plan in 2015.]**

**ACTION F.1.1.** In 2013 we will establish a standing Communications Committee to develop a communications plan which will be incorporated into this strategic plan.

*✂ The Committee was established in Fall 2013; in 2014 we hired a consulting firm to help us develop a draft communications plan and the plan will be completed in Spring 2015.*

**ACTION F.1.2.** In Fall 2014 the faculty, students and staff, working through the undergraduate, graduate, graduate student and other committees, will develop and begin maintaining a system of metrics for documenting achievements of the OSE. These will include metrics identified by the provost as well as metrics we determine among ourselves.

*✂ The metrics developed to date are attached as Appendix B.*

**GOAL F.2. Use nontraditional media to promote ecological awareness among new audiences.**

**ACTION F.2.1.** By Spring 2013 we will increase OSE's involvement in the EcoFocus Film Festival by providing additional funds, more direct input on film choice and participating in panel discussions for films associated with our research areas and in 2014 begin an evaluation of the film festival.

*✂ Financial assistance was provided in 2014; in 2015 we are currently evaluating the future of EcoFocus pursuant to our communications planning efforts.*

**ACTION F.2.2.** In 2014-2015 the Communications Committee will investigate the feasibility of working with OSE students and students in the Grady College of Journalism and Mass Communication and/or others in creating short 2-3 minute films highlighting the research of OSE faculty, postdocs and students to be aired at EcoFocus and other OSE outreach and fundraising events.

*✂ Our first film project will be completed by summer 2015.*

**ACTION F.2.3.** OSE leadership will encourage participation by faculty, students and staff in the 'science cafes' (a series of informal, interactive talks in public venues such as local coffee houses, bars and hotels) sponsored by the UGA Research Communications group and consider instituting its own annual open house for the public, perhaps explaining the "Day in the Life of an Ecologist".

*✂ We submitted a funding request for this event to the Provost in December 2014.*

**GOAL F.3. Improve internal communications.**

**ACTION F.3.1.** Beginning in Spring 2015, the Dean will initiate a monthly email to faculty, students and staff regarding ongoing activities at the OSE.

**GOAL F.4. Update the OSE website.**

**ACTION F.4.1.** In Fall 2014 we will seek funds for a website update with input by a committee composed of faculty, staff and students.

*✂ We submitted a funding request for this update to the Provost in December 2014.*

**GOAL F.5. Use the occasion of the 20<sup>th</sup> Anniversary of the Conservation Ecology and Sustainable Development Masters and Certificate Program in Fall 2015 to raise our profile and recruit new students.**

**GOAL F.6. Use the occasion of the 100<sup>th</sup> Anniversary of the Ecological Society of America in August 2015 to celebrate and promote the Odum School's longtime involvement in that society.**

**GOAL F.7. Use the occasion of the 50<sup>th</sup> anniversary of the founding of the Institute of Ecology and the 10<sup>th</sup> anniversary of the establishment of the Odum School of Ecology to celebrate our heritage and plan for the future.** In 2017 we will use this opportunity to highlight our reputation and our national and international influence on the field of ecology and raise funds and friends for the future.

## **G. FACILITIES AND SUSTAINABILITY**

Our faculty and staff are currently distributed among five buildings across campus. The fragmentation poses a barrier to intellectual exchanges and building a sense of community, and creates economic waste. We also face the urgent need for additional space to support the recruitment of future faculty and the expansion of our laboratory courses.

**GOAL G.1. We aim to bring our entire faculty together under one expansive green roof in the next ten years.**

We will build the world's most sustainable laboratory, classroom and collaborative living building using design and construction practices to significantly eliminate and reduce the negative impact of the building on the environment and its occupants. Design features will optimize passive approaches for heating and cooling. Water will be recycled and used as a renewable resource. Building materials will be environmentally safe, cradle-to-grave and reusable. Real time monitoring stations will report cumulative energy savings relative to typical academic buildings as well as conservation of water and air quality. Just as the green building design reflects the best that science and architecture can offer, the design will facilitate the best physical conditions for intellectual exchange within ecology and for embracing other disciplines in collaborative initiatives. The green building will support environmental stewardship, facilitate the intellectual growth of faculty, students and staff and serve as a living laboratory for the entire state.

**ACTION G.1.1.** By 2014 the Dean, the Director of Development and the IDEA Board will recruit a strategic planning committee to develop a strategy for building public support for our Green Building.

*∕ In fall 2013 the IDEA board created this committee and planning is underway.*

**ACTION G.1.2.** The Dean will petition the UGA Senior Administration to incorporate the Green Building into the University's Capital Campaign.

*∕ In spring 2013 the Dean included the Green Building as OSE's highest priority for the Capital Campaign in his request to the senior administration.*

**GOAL G.2. Identify and procure space close to the current OSE building to house programs currently located away from south campus as well as new faculty.**

**ACTION G.2.1.** By 2014 the Dean will petition the OVPR to move the River Basin Center closer to the existing Ecology building.

*∕ RBC moved into the former Electronics Shop, adjacent to the Ecology building in August 2013. The Freeman Lab moved into the EcoShed in Spring –Fall 2014.*

**ACTION G.2.2.** By 2015 the Dean will petition the OVPR to move our computational research programs to the former Electronics Shop.

*✗ Our petition was denied in Spring 2015.*

**ACTION G.2.3.** By Spring 2015 the Dean will petition the Senior Administration for Major Repair and Renovation (MRR) funds to expand and renovate the Electronics Shop for the computational faculty, other faculty not requiring wet lab space, additional graduate student offices, and meeting spaces.

*✗ No longer applicable (see above).*

**GOAL G.3. Reconfigure/renovate the OSE building to accommodate more personnel and become more environmentally sustainable pending construction of the Green Building.**

**ACTION G.3.1.** In Spring 2015 the Dean will request Campus Architects to assist in developing a space plan.

**ACTION G.3.2.** By Spring 2016 the Dean will seek MRR funds from the University to reconfigure the building and renovate it to become more energy-efficient and otherwise sustainable.

**GOAL G.4. Make sustainability a component of all OSE activities as appropriate.**

Sustainability not only in our buildings but at every level—in our academic, research, public service and outreach programs, student engagement and building and grounds operations as well as event protocol—is critical.

*✗ In late 2014 we were awarded a grant by the Ray C. Anderson Foundation to create a campus-wide conversation (academic/research/service) on sustainability centered around our ongoing campus-stream restoration project. We are partnering with Sustainable UGA on this project.*

**ACTION G.4.1.** In Fall 2015 the Sustainability Committee will update the OSE Sustainability Plan.

**GOAL G.5. Support activities of the UGA Office of Sustainability (Sustainable UGA).**

**ACTION G.5.1.** Encourage OSE faculty, staff and student participation in Sustainable UGA committees by recognition in annual evaluations.

**ACTION G.5.2.** Provide ongoing support in terms of letters, in-kind and financial contributions to exemplary Sustainable UGA grant requests initiated by OSE students.

## APPENDIX A. RBC STRATEGIC PLAN

## APPENDIX B. EVALUATION METRICS DEVELOPED AS OF DECEMBER 2014

*Enrollment information will be reported to the Dean and Associate Deans by February 1st for inclusion in the annual budget proposal due to the provost in late February; the remainder will be due March 1<sup>st</sup> for inclusion in the annual report due to the provost in early April.*

### ENROLLMENT

Undergrad (Misha and Carol)

Total number of majors including joint majors

Number of minors

Number of honors students who are majors and minors

Total number of credit hours generated

Summer Enrollment and Credit Hours: Residential and Online Course Enrollment

Courses and Academic/research opportunities offered in each of these areas:

- Service Learning
- Other Experiential Learning courses
- Interdisciplinary courses including those that are cross-listed and those that aren't
- Total number of undergraduate students engaged in research--- 4990 series, CURO students, those who participate in OSE labs w/o credit, etc.

Specifics regarding courses:

- Document increase in enrollment in courses and number of students turned-away from large enrollment classes b/c of space and other limitations
- Explain importance of small-enrollment courses

Number of students engaged in international experiences

Progress toward reaching all goals regarding the undergraduate education component of the Odum School 2013-2020 Strategic Plan

Graduate (Katherine and Jeb)

Total number of doctoral and masters students

Numbers of students who applied vs. are accepted, test and GRE scores of those who are accepted

Reasoning of students who elected not to enroll

Total number of credit hours generated

Summer Enrollment and Credit Hours: Residential and Online Course Enrollment

Courses and Academic/research opportunities offered in each of these areas:

- Service Learning
- Other Experiential Learning courses
- Interdisciplinary courses including those that are cross-listed and those that aren't

Specifics regarding courses:

- Document increase in enrollment in courses
- Explain importance of small-enrollment courses

Number of students engaged in international experiences

Progress toward reaching all goals regarding the graduate education component of the Odum School 2013-2020 Strategic Plan

## **FUNDING**

Fundraising: New Gifts, Pledges and Planned Gifts including breakdown of gifts from IDEA Board, current faculty, staff and students, and alumni (Lee)

Track Lee's internal goals regarding increase in alumni giving; participation rates of faculty, staff, current students and alumni; corporate and private foundation grants, annual total goal, events

Externally Sponsored Funding: Proposals Submitted and Awarded (faculty report individually and Del captures through FAR)

Sponsored Research: Research Proposals Submitted and Awarded including federal and other (faculty report individually and Del captures through FAR)

Breadth of Funding Sources (Del through FAR and Lee list all the funding sources)

## **PROFESSIONAL CONTRIBUTIONS AND AWARDS**

Professional Service including (a) service on committees including leadership positions; (b) teaching workshops and non-credit classes; (c) participation in REUs; (d) service on review panels for grants and publications

Awards (make sure we are comprehensive in our listings of these and for undergraduates, include number of students who graduate w/ honors)

Publications and Presentations

Editorial Positions

We will track professional contributions and awards through these vehicles:

Faculty (faculty report individually and Del captures through FAR; also particularly compelling and/or comparative recommendations in external letters regarding hiring, P&T and award nominations)

Current students

- Undergraduate (Misha)
- Graduate (Katherine will incorporate information reported in the spring in the annual student progress reports w/ any new information reported in the fall)

Staff (respond to annual survey by Financial Director or Dean's Assistant)

Alumni

To include graduate and post-graduate positions, awards and publications (Lee, Misha and Katherine will accomplish via exit interviews and annual or bi-annual alumni surveys; faculty can help gather this information and we can use alumni events such as ESA 100<sup>th</sup> Anniversary and CESD reunion for this purpose as well)

**PUBLIC SERVICE AND OUTREACH ACTIVITIES**

Number of students, staff and faculty involved, hours and services, and description of impact (RBC Administrator/Annual Survey and Del through FAR)

Progress toward reaching all goals regarding the public service and outreach component of the Odum School 2013-2020 Strategic Plan (Associate Dean and RBC Administrator)

**TECHNOLOGICAL TRANSFERS GENERATED (new item for FAR replacement)**

**To be determined**

**COMMUNICATIONS**

Google analysis of website (Google Analytics)

Progress toward reaching all goals regarding the communications component of the Odum School 2013-2020 Strategic Plan (Communications Committee)

Other measures to be determined