



EDUCATION SECTION NEWSLETTER

of

The Ecological Society of America

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• A Note from the Vice President for Education & Human Resources

This is an exciting time to be engaged in ecological education, and to call members to action. Indeed, members of the Education Section stand at the forefront of exciting changes and progress in ecological education.

In the last 10 years, we have seen a tremendous expansion in the number of symposia, contributed paper and poster sessions, workshops, and discussions at the ESA annual meetings. Moreover, the contributions of ecological educators are being recognized by the Ecological Society with the Eugene Odum Award for Ecological Education. This year we name the fourth winner of this prestigious award. And we have new venues for communicating our work in the society publications - *Frontiers in Ecology and the Environment*, *Ecology*, *Ecological Applications*, and TIEE (*Teaching Issues & Experiments in Ecology*).

But there are challenges looming that require the attention and action of all of our members. Beginning in 2007, the “No Child Left Behind Legislation” calls for standardized testing in the sciences in grades K-12 throughout the United States. In the haste to ensure no child is left behind, is there a risk of leaving important fields of science, such as ecology, behind? And what about innovative pedagogical approaches that incorporate sense of place and schoolyard ecology? Members of the ESA, and the education section in particular, will need to play an important role in the dialogs that ensue in our local school districts and states. We need to make sure ecological sciences are not left behind in this era of focusing on standardized tests that undoubtedly already are driving curricular decisions in the K-12 arena.

Likewise, in the coming few years, there are fundamental questions to discuss and answer. 1) What do we want ecologists in the 21st century to know and be able to do? 2) How can we successfully translate new ecological knowledge, both for our students and for the general public? 3) And how will we know our educational efforts have been successful?

There are many ways to participate in the dialog and I invite you to lend your voice and expertise to the discussion. Now, more than ever before, we are looking for interested members to get more involved in education initiatives championed by the ESA. We need your input and feedback. Please take the time to let me know what you consider the three to four highest priority needs for action for the EHRC

committee to initiate/continue in the coming three years.

Another way you can contribute is to share your ideas in these pages of the ESA Education Section Newsletter. In this issue you will find descriptions of ecological education programs, profiles of past Odum Ecology Education Award winners, listings of recent publications related to ecological education, an overview of the upcoming annual meeting in Savannah, GA, and information about how you can become more involved in the education initiatives underway in the ESA. I hope we see your contributions in the next newsletter.

In the meantime, let Jason Taylor (Jason@esa.org), the ESA Education Director, and me know what you would like to see in the section newsletter. I will look forward to hearing from you and to your participation in the many education activities during the upcoming ESA meeting in Savannah, GA.

Best regards and see you in Savannah,

Carol Brewer, The University of Montana
(brewerc@mso.umt.edu)
VP Education & Human Resources

• News from the Education Section Chair

Carol Brewer's article in the issue of the Education Section Newsletter encourages all of us to become involved in the section and to participate in the dialog on the role that ESA should play in promoting ecological literacy. Many of us became active in the section because we think that teaching, outreach, and changing the face of ecology are important. Carol's call for involvement provides an opportunity to review the section's objectives and some of our activities.

The Education Section now has a page, http://www.esa.org/education/education_section/, located on the ESA web-site. The page contains a link to the section's objectives:

- To increase the diversity of ecologists, including representation of cultural, ethnic, gender, intellectual and disciplinary perspectives, and persons with disabilities.
- To contribute to ecological curricula and instruction in the formal and non-formal educational settings.
- To develop collaborations and partnerships with groups of environmental and science educators.
- To increase, within the Society, the recognition and value of educational activities.
- To increase and promote the understanding of ecological science among the public.

These objectives make clear that our section is involved in activities that touch all members of ESA and that we are a critical part of the effort to make sure that ecology remains relevant as a science that serves people.

This issue of the newsletter highlights three education efforts coordinated by ESA's Education Office or by education section members: SEEDS - Strategies for Ecology Education, Development and Sustainability; FIRST - Faculty Institutes for Reforming Science Teaching Through Field Stations; and TIEE - Teaching Issues and Experiments in Ecology: WWW and CD-ROM teaching resources. Each of these programs was started by people in the section who sought to address issues relating to the diversity of ecologists and ecology instruction. As more of us become involved in the section and its activities there will be more programs and initiatives to address the section's objectives.

The ESA-EdWeb page can be accessed through the ESA Education site: <http://www.science.widener.edu/~grant/esa/edweb.html>. The EdWeb page is another example of a project started by a section member. The page contains a number of web-based links for teaching ecology and related disciplines. Why not add your course or outreach project to the ecology syllabus exchange located at EdWeb: <http://www.esa.org/education/syllabus/>?

The Education Section's activities planned for the 2003 ESA Annual Meeting are listed in this newsletter. Please attend the symposium, and the paper sessions, poster sessions, and workshops that will take place between Sunday and Thursday. Make sure to attend and participate in the section's business meeting and mixer on Monday evening. It's an excellent opportunity to provide input on the section's activities and a good way to meet your colleagues.

Charles Nilon, University of Missouri
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- **News from the Education Office**

This has indeed been an exciting year for ecology education within the Ecological Society of America. In June 2002, ESA established an Education Office, acknowledging the important role that education plays in many of our members' daily activities. The education office develops and manages programs that aim to increase the diversity of ecology-related professions and improve the quality of ecology education at all levels. It's been a long road since 1997 when the first part-time education staff member was hired to assist with the Strategies for Ecology Education, Development and Sustainability (SEEDS) Program. Now, we have two full time and one part time staff and two interns, all dedicated to the Society's ecological education programs.

This has enabled us to expand on our main education projects, the BioSci Education Network (BEN) and SEEDS, as well as becoming more active in education activities occurring both nationally and in the D.C. area. For instance, staff attend meetings with Project Kaleidoscope, an informal national alliance working to build strong learning environments for undergraduate students in mathematics, engineering and the various fields of science, and the Environmental Education Coalition, a broad coalition of organizations interested in environmental education. We also engage in many outreach activities such as dissemination of education materials through our website and mail. This year we participated in two Girl Scout ECO Expos in the DC area; over 1000 girls attended the events and learned about careers in ecology while participating in experiments to learn more about ecological issues.

With the assistance of interns, Dara Zycherman and Richard Mankhey, we have expanded the education materials and resources available online. The *Focus on*

Ecologists- What do Ecologists Do? profiles page has been updated with new ecologists (www.esa.org/education/whatdoecologistsdo.htm) and the ESA Ecology Course Syllabus Exchange has been revamped and is accepting new syllabus submissions (www.esa.org/education/syllabus). We have also created an Ecological Education listserv. The purpose of this listserv is to stimulate discussion of some of the issues relating to ecological education. Visit (<http://ecoed.net/mailman/listinfo/ecoed>) to join and follow the subscription directions.

For all of these activities to be successful, the education office relies on the volunteer involvement of ESA members who provide their valuable time and expertise. I urge those of you not already involved to review the five focal areas identified in the Education and Human Resource Committee Update found in this issue. The above-mentioned listserv will be the ideal place to start discussing and identifying the areas that we need to focus on.

I look forward to seeing you all at this year's Annual Meeting in Savannah, GA, the perfect venue for sharing ideas and visions for the future of ecological education.

Jason Taylor, ESA Education Director

Education Office Staff (May 2003)

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- **Program Update: SEEDS**

The SEEDS (Strategies for Ecology Education, Development and Sustainability) Program has broadened its impact in many exciting ways over the last year. SEEDS, which works to increase the number of underrepresented minorities in the field of ecology by promoting ecology opportunities for minority students and their faculty, received renewed funding from the Andrew W. Mellon Foundation last July.

While the SEEDS Program has been in existence since 1996, the new funding has allowed SEEDS to promote several new opportunities. This spring the program welcomed eighteen Campus Ecology Chapters at minority-serving institutions across the country. These Chapters receive funds to support activities that increase student awareness of, and interest in the field of ecology. Student members of each Chapter engage in meetings and promote ecology through education, outreach, recruitment and career development activities and events. Melissa Jurgenson-Armstrong, SEEDS Regional Coordinator, has made several site visits to Tribal College Chapters in order to meet students, faculty and to see their accomplishments first-hand. Chapters can also apply for additional funds to support special projects and faculty development; several such projects are already underway.

Undergraduate Research Fellowships, the second new component of SEEDS, provide authentic research experiences in the field of ecology and engage ESA members from research institutions in the SEEDS program. Fellowship applications will soon be under review and placements for the 2003-2004 year will be made by early summer. We believe that by engaging students in the process of science, fellowships will have a profound impact on their career development.

The ESA Annual Meeting remains the cornerstone of SEEDS; 10 faculty and 22

students attended the 2002 ESA Annual Meeting Tucson, AZ. They participated in meeting events, special SEEDS events, and poster presentations of their research. Participants valued the opportunity to explore graduate school and career options, the advice of their meeting mentor, and overwhelmingly, the connection with other students with similar interests. SEEDS staff and participants look forward to the 2003 ESA Annual Meeting in Savannah, GA where we will sponsor new events including a student outing and a participant dinner.

In November, SEEDS sponsored a field trip to the Great Smoky Mountains National Park and the Oak Ridge National Laboratory. The field trip highlighted the experiments of the Laboratory's Environmental Sciences Division and small mammal research being conducted in the Park. Sixteen students from thirteen schools attended and the feedback we received confirmed what we witnessed – the field trip was a highly motivational learning experience. SEEDS is sponsoring a week-long field trip to Stanford University's Jasper Ridge Biological Preserve and Hopkins Marine Station in June and predicts another successful experience.

The SEEDS Program also continues its collaboration with the United Negro College Fund. This winter five UNCF schools were selected to receive Program Activity Grants in order to fund three areas - curriculum development, faculty development and student recruitment – over the next two years. To learn more about the Program visit our new website: www.esa.org/seeds/, or e-mail seeds@esa.org.



• Education and Human Resources Committee Update

The "Education and Human Resources Committee" (EHRC) is one of the very active standing committees of the Ecological Society of America. The committee is chaired by the Vice President for Education and Human Resources and charged with identifying and leading efforts within the Ecological Society to "*foster the development of a scientific community that embraces diversity and allows all professionals to flourish regardless of gender, racial, or cultural background.*" Committee members often are drawn from ESA members participating in activities of the Education Section (see list of current EHRC Members), and represent a diversity of ideas, experiences, and interests. Over the years, committee members have championed, proposed, endorsed and/or led activities that relate to teaching, equity, environmental justice, the annual meeting, and the ecological profession.

This spring, education leaders representing the committee came together at the Kananaskis Field Station near Calgary, Canada, to draft a vision for education and diversity initiatives for the next decade. More information will be available at the ESA annual meeting at Savannah, GA, in August and I hope you will critique the document and provide feedback. Some recent and/or continuing initiatives include the **SEEDS Diversity Initiative** (started by Alan Berkowitz, and now led by Jason Taylor with input from an advisory board chaired by Laura Huenneke), and developing excellent peer-reviewed, web-based ecology teaching resources through the **TIEE Project** (Charlene D'Avanzo and Bruce Grant, leaders). EHRC members also have worked with the editors of ESA journals to provide new venues for publishing research papers on ecological education. I hope you will consider submitting your work for peer

review and possible publication in *Frontiers in Ecology and the Environment*, *Ecology*, or *Ecological Applications*.

As members of the ESA and the Education Section, you are invited to work with the EHRC committee to see new initiatives to fruition and completion. In particular, five focal groups continue to need volunteers: 1) minority initiatives, 2) womens' initiatives, 3) K-12 and informal ecology education, 4) undergraduate and graduate ecology education, and 5) policy trends (internal and external to the ESA) that influence ecological education. If you are interested in volunteering with any of these groups, please send an e-mail message to Carol Brewer (ESA Vice President for Education and Human Resources; brewerc@mso.umt.edu) and/or Jason Taylor (Education Director of the ESA; jason@esa.org). Indicate the focal area of greatest interest to you, along with any ideas you have about current needs and future initiatives, and we will connect you with the current working group. A time will be reserved during the education section mixer at the ESA annual meeting in Savannah (August 2003) to meet and share ideas and successes.



SEEDS Field Trip to the Smoky Mountains

Education and Human Resources Committee

OBJECTIVES

To advance the field of ecology, by:

- Broadening the field of ecology, its scope and definition, to be more inclusive and comprehensive (continuum);
- Diversifying the field of practitioners in ecology; and
- Fostering diverse input into framing the field, its questions and approaches, and facilitating two-way communication between ecology and people.

Get ecological understanding (knowledge, skills, and information) to people who want and need it, by:

- Recognizing and rewarding ecologists' work in teaching, outreach and public service;
- Enabling and supporting ecologists' work in teaching, outreach, and public service; and
- Teaching and providing information for people (K-12 students, college students, pre-service teachers and informal educators, practicing teachers and informal educators, the general public, decision makers, etc.).

Foster people's appreciation of ecological knowledge [science], by:

- Securing a strong place for ecology in the curriculum;
- Providing adequate financial support for ecological science; and
- Encouraging use of ecological knowledge in decision-making, policy and management.

(Adopted Spring 1999)

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• Profiles of the Eugene P. Odum Education Award Winners

The **Eugene P. Odum Award for Excellence in Ecology Education** is a new award that was given for the first time at the annual meeting in 2000 at Snowbird, UT. This award recognizes an ecologist for outstanding work in education. The award was generously endowed by the distinguished ecologist Eugene P. Odum, Callaway Professor Emeritus of Ecology at the University of Georgia, Athens. This award draws the attention of the discipline as a whole to the education-related work accomplished by our colleagues, who through their teaching, outreach, and mentoring activities, relate basic ecological principles to human affairs and contribute toward a better world. The winner of the 2003 award will be announced at the annual meeting in Savannah. Please consider nominating an outstanding ecological educator for the 2004 award. Nominations for the 2004 award will be accepted through December 2003. You can learn more about eligibility and the nomination process by contacting the Odum Award Subcommittee chair, Dr. Linda Wallace (lwallace@ou.edu).

2000 Award: Dr. Peter Feinsinger

The winner for 2000, and first recipient of the Odum Award for Excellence in Ecology Education, was Dr. Peter Feinsinger, Adjunct Professor of Biology, Northern Arizona University. Feinsinger has a distinguished record of research in ecology (including work on hummingbirds, foraging, and pollination ecology), but his devotion to and leadership in ecology education at all levels (locally, nationally, and internationally) is simply outstanding. Peter was an innovator in inquiry-based teaching and learning in college biology courses well before such approaches became accepted (e.g., in the late 1970's and early 1980's). Colleagues and students

regard Feinsinger as an inspirational mentor in ecological education for students at all educational levels, and it is clear to those who have worked with him that he is motivated by his love and enthusiasm for the natural world, rather than personal ambition. Moreover, he is admired as an excellent communicator and collaborator.

Feinsinger has played a key leadership role in promoting excellence in ecological education for young children for at least 20 years. What began as a concern for the education of his own children has led to years of commitment and action, broadly influencing ecological literacy throughout our hemisphere through the education of literally thousands of teachers and children. In an influential essay published in *TREE*, Feinsinger questioned the value of teaching young children about ecology through books and TV specials that featured enchanting animals living in far away places. He suggested, instead, that teaching children to observe and learn about the habitats in their own neighborhoods would be both more interesting for the children and lead to deeper understandings of ecology and ecological relationships (Feinsinger 1987). At the annual meeting in 1987, held in Columbus, Ohio, he formed the *Committee for the Education of Young Children*, and became both a catalyst and leader in the Society's outreach efforts in this area.

Putting his philosophy into action, Peter began working with graduate students at the University of Florida to compile a suite of investigations, focused on schoolyards that teachers could use to catalyze ecological teaching and learning. Through his leadership and inspiration, the schoolyard ecology movement was born (e.g., Feinsinger et al. 1997a, 1997b). Feinsinger produced a book with M. Minno titled, "Handbook to Schoolyard Plants and Animals of North Central Florida" and an accompanying text, "The Schoolyard and Wildlife Activity Guide." These books included detailed information about the local

biota, highlighted key ecological principles and concepts, suggested imaginative questions to motivate outdoor explorations, and helped teachers bridge from more traditional approaches to investigative inquiry approaches for teaching children about ecology. These books formed the centerpiece of the Florida Game and Freshwater Fish Commission's education initiative and have inspired similar approaches around the USA. In the mid-1990's, Peter was a collaborator on the NSF-funded project, "Schoolyard Ecology for Elementary School Children," and more recently, he has championed the schoolyard ecology movement throughout Central and South America.

Dr. Feinsinger is quite unique in his appreciation of fundamental principles of ecology, their relevance to conservation biology, and the importance of translating this knowledge in ways that can be appreciated and understood by young children and the general public alike. Peter serves as a model for how an ecologist can contribute effectively to promoting ecological literacy for people of all ages. He has done this in his own humble way by working behind the scenes and, with great passion and enthusiasm, inspiring his colleagues to get involved. In the spirit of this award, Peter Feinsinger has, through his teaching, outreach and mentoring activities, related basic ecological principles to human affairs and contributed toward a better world.

Literature Cited

- Feinsinger, P. 1987. Professional ecologists and the education of young children (Commentary). *Trends in Ecology and Evolution* 2:51-52.
- Feinsinger, P., L. Margutti, and R. D. Oviedo. 1997. School yards and nature trails: ecology education outside the university. *Trends in Ecology and Evolution* 12:115-120.

Feinsinger, P., A. Grajal, and A. Berkowitz. 1997. Some themes appropriate for schoolyard ecology and other hands-on ecology education. *Bulletin of the Ecological Society of America* 78:144-146.

2000 Odum Award Subcommittee

Monica Turner (Chairperson), Gary Barrett, Richard Bowden, Carol Brewer, V. Holland, Janet Lanza, Jim MacMahon, Linda Wallace.

2001 Award: Dr. James Brown



James Brown, Ph.D.

Dr. James H. Brown, Regents Professor of Biology at the University of New Mexico, was selected as the Odum Award winner for 2001. Dr. Brown has a distinguished record of achievement in ecological research as well, particularly in community ecology and biogeography, but his excellence in mentoring young ecologists is outstanding. He has successfully guided more than 40 students to their doctoral degrees and worked with over 14 postdoctoral associates. Many of these former associates are themselves now well-known ecologists. However, Jim encourages his students in many career options, and his students have become employed as ecological consultants, science writers, and ecologists for conservation organizations.

Former and current students (both graduate and undergraduate students) expressed their tremendous respect and appreciation for the guidance and inspiration that he has provided. He expects his students to be motivated and independent, and he treats his students as peers from the very beginning, with obvious courtesy and respect.

Jim is strongly motivated by wanting to know how nature works. His students comment on his keen desire to know the truth, even if his ideas are proven wrong in the end. From the letters supporting his nomination, it is clear that he encourages and inspires students to cultivate their own curiosity. His down-to-earth attitude and ability to be genuinely excited about his work and his students' achievements provides tremendous motivation to his students. He is able to provide a unique balance of independence and support for his students' research.

Ecology also has always been a collaborative enterprise for him, and Jim has encouraged his students to be effective collaborators. He leads by example; always willing to share ideas and data, and believing strongly that open sharing is the only way for science truly to progress. Students commented that they learned that a productive lab does not have to be a contentious or competitive one.

Jim has devoted considerable time and effort to produce books that have become key in the training of young ecologists. He co-edited a volume of key papers that were especially influential in the development of contemporary ecology (Real and Brown 1991), and this text has itself become a foundation of undergraduate and graduate education in ecology, providing many a student with an entrée into an important body of literature. Interestingly, the committee learned that the profits from the Foundations volume are donated to an Ecological Society of America fund that

supports graduate and postdoctoral fellowships. Jim also co-authored a text on biogeography (initially Brown and Gibson 1983, most recently Brown and Lomolino 1998), which some consider the best reference available on this topic. Brown also co-edited a volume on the biology of the Heteromyidea (Genoways and Brown 1993). These volumes fall within the traditional realm of academic publishing, yet their influence has been far reaching. Such choices also require a commitment to education from the authors and editors. Through his teaching and mentoring activities, Jim is clearly a very gifted and effective educator of the next generation of ecologists, and in the spirit of the award, related basic ecological principles to human affairs and contributed toward a better world.

Profile:

http://esa.org/education/ecologist_profiles/james_brown.htm

Literature cited

- Brown, J. H. and A. C. Gibson. 1983. *Biogeography*. Mosby, St. Louis, MO.
- Brown, J. H. and M. V. Lomolino. 1998. *Biogeography (2nd edition)*. Sinauer, Sunderland, MA.
- Genoways, H. H. and J. H. Brown (editors). 1993. *Biology of the Heteromyidae*. Special Publication No. 10, American Society of Mammalogists.
- Real, L. and J. H. Brown (editors). 1991. *Foundations of ecology*. University of Chicago Press, Chicago.

2001 Odum Award Subcommittee

Monica Turner (Chair), Gary Barrett, Richard Bowden, Carol Brewer, V. L. Holland, Janet Lanza, James MacMahon, Linda Wallace.

2002 Award: Dr. Margaret D. Lowman



Margaret Lowman, Ph.D.

Dr. Lowman is the Director and the Jesse B. Cox Chair in Tropical Botany at the Marie Selby Botanical Gardens in Sarasota, Florida, and Odum Award winner for 2002. She has a truly impressive record of excellence in and commitment to elementary teaching and curriculum development, ecology outreach programs, including teacher training, adult education, distance learning, virtual laboratories and development of ecology programs at nature centers and for the general public.

The diversity of outreach and innovative educational efforts lead by Dr. Lowman is very impressive. She taught science at the country's first summer environmental science program (Burgundy Science Camp) and co-wrote curriculum from that program for the Department of Health, Education and Welfare. In 1993, she produced a Reading Rainbow feature film about trees; this is part of a national series to educate K-9 students about science and reading. As chief scientist of The JASON V Project, an international K-12 science education project, Dr. Lowman completed 61 live classes (via satellite link) from the rain forest canopy of Belize and wrote curriculum with the National Science Teachers Association. Examples of her

participation can be seen at <http://www.jasonproject.org/expeditions/past.html>, clicking on "Rainforest—a wet and wild adventure," then on to guest scientists.

As Director of the Selby Botanical Gardens, Dr. Lowman has established education and outreach programs that are rivaled by few others. The gardens work closely with the Sarasota County School District to design and implement educational activities for elementary and middle school students. Initiatives that Dr. Lowman developed on biology of plants in Florida are now available for educators throughout the region. The innovative educational activities are also apparent at the Garden's web site, <http://www.selby.org/welcome.htm>.

Dr. Lowman was one of the first researchers to work in forest canopies, and she initiated the increasing trend to construct forest canopy walkways worldwide. She has opened a previously inaccessible area of the forest to scientific inquiry and to public interest with her canopy walk designs. Dr. Lowman has used these extensively to take students into the forest canopy, eliciting tremendous enthusiasm as students of all ages observe and begin to appreciate and understand these complex systems. She mentors students of all grades and the general public in rainforest conservation, global ecology and science in general. Her overall impact in the arena of ecological education is very high.

Dr. Lowman is also a prolific scientist with a wealth of impressive research publications but also publicly accessible books for lay readers. Her 1999 autobiographical book, *Life in the Treetops*, has won many awards (e.g., The John Burroughs Medal, The New York Book Award for the Best Debut of 1999, the 1998-2000 Educator's Award, and more), received a glowing review in the New York Times Book Review, and was on the New York Public Library's list of "Books every

teenager should read" in 2000. She was also a featured scientist in the National Geographic TV special, "Heroes of the high frontier."

In sum, Dr. Lowman is an ecologist who is a passionate and effective educator who has successfully reached colleagues, students, children, and the general public. She manifests many attributes that the Odum award was designed to recognize and honor. Her nomination also reflects a striking and enviable ability both to contribute new knowledge and to make it accessible to the widest possible audience.

Profile:

http://esa.org/education/ecologist_profiles/margaret_lowman.htm

2002 Odum Award Subcommittee

Monica Turner (Chair), Gary Barrett, Rich Bowden, Carol Brewer, Janet Lanza, Jim MacMahon, and Linda Wallace.

FIRST ~ Faculty Institutes for Reforming Science Teaching

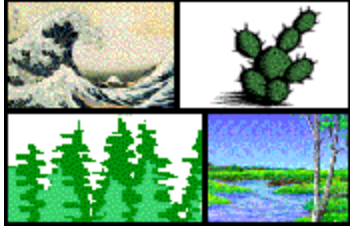
FIRST II (Faculty Institutes for Reforming Science Teaching) is a National Dissemination project funded by the National Science Foundation. The project is designed to provide a long-term support structure and processes to engage faculty in the dynamic reform of undergraduate science teaching and learning. Biological field stations and marine laboratories serve as both the intellectual and inspirational foci for faculty to learn how develop and sustain student-centered courses and curriculum through active, inquiry-based learning. Together teams of faculty in eight regions throughout the US are building new types of collaborations that mirror their traditional collaborations in research, but now focus on the work of enabling more students to learn science well. For the past year FIRST teams have developed and participated in a number of professional development experiences designed to address the questions and needs about educational reform.

The workshops at Hancock Biological Station Field Station at Murray State University focus on assessment of student learning. The Hancock teams are examining various forms of research about teaching and learning in response to the need for evidence that indeed, the reforms they are implementing improve student learning. The University of Akron and the University of Washington teams workshops with the faculty teams in their regions introduced faculty to the goals of FIRST II, explored active learning ideas and strategies, and planned for reform in their courses and curriculum. The Louisiana Universities Marine Consortium (LUMCON) Team is using videoconferencing as a communication tool between the field station team and the faculty teams from the five universities involved in FIRST II. Their long-term goal is to establish a state of Louisiana FIRST model (one state down, 49

to go!). Members of the San Diego State University FIRST II faculty include many community college faculty who teach introductory biology. Their focus is to develop effective reforms that articulate between these two-year programs and the University. The W. K. Kellogg Biological Station Team at Michigan State University is engaged in assessment of student learning among all of the teams. As the Upper Peninsular leaders, Michigan Tech University and Northern Michigan University are actively leading seminars in their own colleges on reform of undergraduate science education. The Archbold Biological Station Team and the Washington Urban FIRST Team, based at Howard University, are beginning professional development activities with institutions in their regions this spring.

Who are the faculty involved in the FIRST II project and what type of colleges and universities do they represent? In terms of rank, FIRST II faculty are diverse --- 38% assistant professors, 26% associate professors, 20% lecturers, and 12% are professors. In terms of experience, 29% have taught for less than 5 years, 25% for between 5 to 10 years, 23% for between 10 to 15 years, and 22% for over 15 years. FIRST II faculty represent the full range of institutions of higher education: 20% Doctoral-extensive, 15% Doctoral-intensive, 32% Masters I, 3% Baccalaureate General, 5% Baccalaureate Liberal Arts, and 25% Associates. Why do faculty choose to participate in FIRST? Their reasons vary, however, all are deeply committed to improving student learning of science and all value the opportunity to actively engage in thinking about reforming teaching with their peers in this national network.

The FIRST II web site is at <http://www.first2.org/>.



**F aculty
I nstitutes
R eforming
S cience
T eaching**

For more information about the FIRST II Project contact:

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• **Ecology Education Publications**

ESA Education Section members are actively engaged in research, scholarship and publication of teaching resources for ecology education. As a service for members and to highlight scholarship and leadership provided in Ecology Education, listed below is a small collection of publications and programs developed by Section members in 2002 and 2003.

If you have any recent publications in Ecology Education that you would like to bring to the attention of the Section members in future newsletters, please forward to Jason Taylor (Jason@esa.org), Director of Education at ESA.

Publications

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- **News from other Sections**

ESA Student Section

In recent months, the ESA Student Section has focused its attention on expanding the existing section web page into a more informative and interactive format. Retaining the logo developed by Faith Kearns, modifications include a list of student ecology conferences, a reading list of ecological literature suggested by ecology students and a page for students to display electronic versions of their recent publications. The site is located under the student section of the ESA website.

If you are a student (graduate or undergraduate) and want other students to know about your recently published work, you are welcome to list your paper on the ESA Student Section website. Please submit electronic versions (e.g., pdf, wpd, or doc) to Alan Wilson via email: alan.Wilson@biology.gatech.edu. If you have read a book or paper that you consider important reading for other ecology students, you forward the reference citation to cgrant@unlserve.unl.edu.

To facilitate schedule planning by the individual student (for the annual meeting in Savannah) and to encourage increased attendance through greater visibility, a roommate finder and a listing of student-focused activities have also been added to the web page. The sites are: www.esa.org/students/roommates.htm and www.esa.org/students/annualactivities.htm. Messages advertising these features were posted on Ecolog to reach those students who have not yet registered with the Society this year. If other sections and committees have events that they judge to be of strong interest to students, the Student Section would be happy to list such events on our web page.

To better gauge the interests of the entire Student Section membership, a

survey was sent out in late March by email. The questions were designed to find out what features of the web-page were considered relevant, what additional features should be incorporated, which students were interested in taking an active role in the section, and which ecologists students would enjoy interacting within the setting of the Student Lounge at the 88th annual meeting. Plans to have informal chats with some of the suggested ecologists are in the early stages. The number one feature that students would like to see added to the web page is a bulletin board or chat capacity where students could exchange messages. The executive committee of the section (Colleen Grant, Jeff Lake, and section webmaster, Alan Wilson) will look into the feasibility of this suggestion regarding the time requirements for moderating a message forum and the technical aspects.

Also, in preparation for the 88th Annual Meeting, the Student Section is working with Jason Taylor (Director of Education Programs) to set up a job/recruitment event.

Colleen Grant, University of Nebraska-Lincoln
2003 Chair – ESA Student Section
cgrant@unlserve.unl.edu

**ESA/ISEM 2003 ANNUAL MEETING ~ SAVANNAH, GA.
AUGUST 3 – 8, 2003**

PRELIMINARY SCHEDULE for EDUCATION SYMPOSIA, WORKSHOPS & DISCUSSIONS

Saturday, August 2, 2003

SD-1: SEEDS Student Orientation Meeting, 9 AM to 11 AM, Hyatt Regency Savannah, Lobby Level, Savannah Room

SD-2: SEEDS Savannah Outing: Trolley Tour, Departs from? 11:30 AM and Returns to? at 3 PM

SD-3: SEEDS Mentor's Orientation, 4:30 PM to 7 PM, Hyatt Regency Savannah, Lobby Level, Savannah Room

SD-4: SEEDS Dinner in Savannah, 7:30 PM to 9 PM, Hyatt Regency Savannah, River Street Level, Harborside Center West

Sunday, August 3, 2003

WK-3: Introduction to TIEE (Teaching Issues and Experiments in Ecology), 8 AM to 12:30 PM, SCAD Library, Computer Lab #2

WK-4: TIEE (Teaching Issues and Experiments in Ecology) Authors Workshop, NOON to 5 PM, SCAD Library, Computer Lab #2

WK-5: Innovative Teaching and Active Learning in Ecology, 8:30 AM to 4:30 PM, SITCC, First Floor, Meeting Rooms 101 and 102

WK-8: Inquiry-Guided Learning for Ecosystem Management Education, 12:30 PM to 4:45 PM, SITCC, Second Floor, Meeting Room 204

WK-11: Developing a Successful Undergraduate Research Program: How Do We Know if We are Doing it Right?, 12:30 PM to 4:45 PM, SITCC, Second Floor, Meeting Rooms 201 and 202

Monday, August 4, 2003

SD-5: SEEDS Mentors' Breakfast, 7 AM to 8 AM, SITCC, Second Floor, Chatham Ballroom A

WK-15: ESA Education Section Charter: A Vision for the Future (fee includes Grab-and-Go-Lunch ticket), 11:30 AM to 1:15 PM, SITCC, Second Floor, Meeting Room 205

ESA Education Section Business Meeting and Mixer: 6:30 PM to 8 PM, Hyatt Regency Savannah, Lobby Level, Savannah Room

EV-2: Environmental Justice- A Role for Ecologists in Education and Research, 8 PM to 10 PM, Hyatt Regency Savannah, Second Floor, Regency Ballroom D

EV-8: Minority Student Mentoring Workshop, 8 PM to 10 PM, Hyatt Regency Savannah, Second Floor, Westbrook Room

Tuesday, August 5, 2003

ESA Student Section Meeting and Brown Bag Lunch: 11:30 AM to 1 PM, SITCC, Second Floor, Meeting Room 200

WK-16: Introduction to SEEDS Brown Bag Lunch, 11:30 AM to 1:15 PM, SITCC, Second Floor, Meeting Room 205

ESA Education & Human Resources Committee Lunch Meeting: 11:30 AM to 1:30 PM, SITCC, Second Floor, Chatham Ballroom A

TK-3: Student Mixer, 7 PM to 8:30 PM, Reynolds Square

Wednesday, August 6, 2003

SEEDS Advisory Board Meeting: 7 AM to 9 AM, SITCC, First Floor, Greene Board Room

Symposium 12: Integrating Scientific Research and Ecology Education, 8 AM to 11:30 AM, SITCC, Second Floor, Chatham Ballroom C

WK-17: Integrating Scientific Research and Ecology Education Follow-up Discussion, 11:30 AM to 1:15 PM, SITCC, Second Floor, Meeting Room 205

DIS-1: Ecology Education Network Brown Bag Lunch, 11:30 AM to 1 PM, SITCC, First Floor, Meeting Room 106

ESA Traditional Ecological Knowledge Section Brown Bag Lunch: 11:30 AM to 1 PM, SITCC, Second Floor, Meeting Room 201

TK-4: Education Mosaic Mixer, 6:30 PM to 8 PM, Hyatt Regency Savannah, Lobby Level, Chatham Room

EV-14: Finding Your Niche IV: Building Career and Recruitment Networks, 8 PM to 10 PM, Hyatt Regency Savannah, Second Floor, Regency Ballrooms A and B

Thursday, August 7, 2003

SD-6: SEEDS Business Meeting: 8 AM to 11:30 AM, SITCC, First Floor, Jasper Board Room

TK-5: Diversity in Ecology Box Lunch, 11:30 AM to 1:15 PM, SITCC, Second Floor, Chatham Ballroom A



<http://www.esa.org/savannah>

PLEASE REFER TO THE OFFICIAL PROGRAM FOR EXACT DATES AND TIMES. THIS PRELIMINARY SCHEDULE IS DATED MAY 2003 AND IS SUBJECT TO CHANGE.

2003 Call for Nominations: ESA Education Section

Nominations are being sought for the Chair, Chair-Elect and Secretary-Treasurer of the Education Section of The Ecological Society of America. Nominees must be current members of the Education Section in good standing of the Ecological Society of America. The deadline for nominations is **Friday, May 30th, 2003**. Upon receipt of all nominations, the Section Executive Committee shall select at least two candidates for each office. The slate of nominees will be e-mailed to Section members by **Friday, June 13th, 2003**, with an election deadline of **Friday, June 27th, 2003**. Results will be announced at the annual Education Section Business Meeting on **August 04th, 2003**.

Duties & Term of the Chair

(Article 6: Education Section By-laws.) The Chair shall preside at the business meetings of the Section, authorize expenditures of Section funds and promote the interests of the Section. He/she shall represent the Section on the Council of the Society, shall serve as a member of the Sectional Executive Committee, and shall appoint committees as required to promote the interests of the Section. Such committees shall serve until the next annual meeting of the Section, and may be re-appointed at the discretion of the Chairperson. (Article 5: Officers and Elections.) The term of office shall last for one year, beginning 1 January and ending 31 December, inclusive. (Additional Duties) The candidate actually serves as Chair-Elect from August to December, prior to assuming the Chair, serving in the capacity as a program officer within the Sectional Executive Committee to encourage, arrange and assist Section members in submitting symposia, workshop and discussion proposals. The Chair also assists, on an adhoc basis, the Program Committee for the ESA Annual Meeting to review and rank symposia, workshops and evening sessions.

Duties & Term of Secretary-Treasurer

(Article 9: Education Section By-laws.) The Secretary shall keep records of the Section, including current membership and mailing lists. The Secretary shall attend the annual business meeting and report on the activities of the Section annually in the BULLETIN of the Society. The Secretary shall also serve as Treasurer and is responsible for corresponding with the Society Business Manager concerning expenditures made in connection with official Section business. The Secretary shall perform such other duties as may from time to time be assigned to him/her. (Article 5: Officers and Elections ~ Revised 1993) The term of office for Secretary-Treasurer shall be three calendar years beginning 1 January and ending 31 December, inclusive.

Name of Nominee: _____	E-mail: _____
Address: _____	Phone: _____
_____	Fax: _____
Nominator(s): _____	E-mail: _____
Phone: _____	Fax: _____

Qualifications and Recommendations regarding Nominee (2-3 Sentences):

Forward Nominations via email, fax or mail to:

Michael J. Mappin, Past-Chair (2002) ESA Education Section
C/o University of Calgary Kananaskis Field Stations (Barrier Lake)
Biological Sciences Rm. 186, 2500 University Drive, N.W.
Calgary, Alberta, Canada T2N 1N4
E-mail: mmappin@ucalgary.ca Fax: (403) 673-3671