

NC STATE UNIVERSITY

# THE PINE-TUM

Journal for the College of Natural Resources  
76th Edition

2010-2011



# The College of Natural Resources at North Carolina State University

## About College of Natural Resources

Established in 1929, the College of Natural Resources is one of the oldest, and currently, one of the largest schools of its kind in the nation. The College includes three academic departments: Forestry and Environmental Resources; Parks, Recreation and Tourism Management; and Forest Biomaterials. All offer undergraduate and graduate educational opportunities and conduct teaching, research, and extension activities directed toward understanding and conserving a healthy productive environment.

## Our Vision

We desire to improve the sustainability of the world's natural resources and the economic and social condition of its people through education, innovation, and the discovery and dissemination of new knowledge.

## Our Mission

Our mission is to serve as a leader in our disciplines in North Carolina, the nation and the world. We seek to strengthen natural resource management, enhance environmental quality and conservation values, increase the sustainable yield of forestland goods and services, increase the value and competitiveness of the forest products and natural resource-based industries, expand recreation and tourism opportunities, and enhance the health and well-being of our citizens through superior professional education, innovative scientific research, and dissemination of credible and timely information.

## Our Values

- Academic excellence in all of its forms the scholarships of discovery, teaching, information transfer and scientific integration.
- Both cutting-edge research in fundamental science and translational research to address practical problems in North Carolina, the United States and the world.
- Diversity of disciplines, people, places and ideas.
- Our students, staff and faculty and our commitment to nurturing all.
- We admire academic and scientific rigor and dedication.
- We seek innovative and creative solutions to today's problems.
- We strive for collegiality and appreciate friendly service.

## Grow with Us!

Like decades of alumni before you, we rely on your gifts to fund scholarships, fellowships, professorships, academic programs, research and facility improvements by making an investment in your school. Your support ensures our future!

## Give back to your Alma Mater!

You may give online at [cnr.ncsu.edu](http://cnr.ncsu.edu) or mail checks to:

College of Natural Resources Campus Box 8010 Raleigh NC 27685

Makes checks payable to one of the following funds:

- Friends of Wood Products
- Pulp and Paper Foundation
- Friends of Fisheries and Wildlife
- Friends of Forestry and Environmental Resources
- Friends of Parks, Recreation and Tourism Management

For more information on giving opportunities contact xxxxxxxx at 919.515.7734

## Dedication To Dr. Richard "Dick" Lancia



**The 2010-2011 Pinetum is dedicated to Dr. Richard "Dick" Lancia, Professor in the Department of Forestry and Environmental Resources. In June 2011, Dick will retire after over 3 decades of service to North Carolina State University.**

Dr. Lancia's life and career are best described in one word **service**.

Dr. Lancia served his country during the Vietnam War as a Lieutenant in the United States Marine Corps and was awarded the Purple Heart. He served his profession through dedicated involvement in The Wildlife Society (TWS) as a member since 1968. Dr Lancia served the society as Editor-in-Chief of the Journal of Wildlife Management, President of The North Carolina Chapter, President of the Southeastern Section, Southeastern Section Representative on the TWS Council, and President of the national chapter. In 2004, Dr. Lancia received the prestigious Fellow Award from TWS. Additionally, he served NC State as Director of Undergraduate Programs in the Department of Forestry, as the Interim Director of the Faculty Center for Teaching and Learning, Chairman of the Academy of Outstanding Teachers Executive Council, Director of the University Honors Council, President of the NCSU Chapter of Sigma Xi, and Coordinator of the Fisheries and Wildlife Sciences Program.

Dr. Lancia mentored over 45 graduate students and authored or co-authored over 80 peer-reviewed journal articles. He and his students studied a variety of wildlife species, including wild turkey, songbirds, beavers, bobcats, feral hogs, and white-tailed deer. He is best known for his research on estimating animal abundance and for his studies on the effects of land management practices on wildlife.

Dr. Lancia has been a dedicated and conscientious teacher and was named NCSU Alumni Distinguished Undergraduate Professor. Additionally, he received the College of Natural Resources Outstanding Advisor Award and twice was the College of Natural Resources Nominee for the NCSU Board of Governor's Award for Outstanding Teaching and Learning. Throughout his career, Dick taught 10 different courses in wildlife biology and management and mentored hundreds of undergraduate students.

Dick is best known by most undergraduate students for his 23 years of leadership during the Fisheries and Wildlife Summer Camp. Each summer, he spent 6 weeks living at Hill Forest with rising Fisheries and Wildlife Sciences seniors. During the long days of field study in close quarters, Dick developed a unique mentoring relationship with many students. In fact, Dick is famous for teaching the students how to tick-proof their field clothes using duct tape.

Despite his many accomplishments, Dick is unassuming, modest, and has a selfless attitude. "Dick always puts the well-being of others ahead of his own interests, and is incredibly humble considering his exceptional accomplishments. Dick's achievements truly were for the betterment of students, the university, the profession, and the environment," says Dr. Chris Moorman, Coordinator of the Fisheries, Wildlife, and Conservation Biology Program.



## Memoriam to Bruce Zobel

by Steven McKeand and Bob Kellison

**Dr. Bruce Zobel, long-time Professor in the Department of Forestry and pioneer in the field of forest genetics, died Feb. 5, 2011 at his home in Raleigh. He was 90.**

A native of California, Zobel earned a forestry degree from the University of California, Berkeley in 1943 and took a job as a logging engineer in redwood forests until he was drafted the following year. The Marine served in California, Virginia, and North Carolina, where he was appointed forestry officer at Camp Lejeune near Jacksonville, NC.

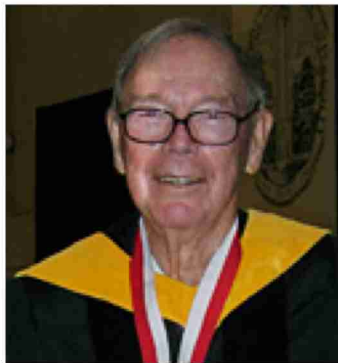
After his military service, Zobel returned to Berkeley to earn masters and doctoral degrees in forestry. He oversaw a new program in forest genetics at Texas A&M University until 1956 and then moved to NC State to initiate and lead the Cooperative Tree Improvement Program until his first "retirement" in 1979. The second phase of his active life extended to 2001, during which time he was instrumental in founding the Camcore program in gene conservation and forest genetics and did consulting work around the world while authoring six books and mentoring more than 100 graduate students. Because of his unique ability to convey thinking and independent reasoning to students at both the graduate and undergraduate level many of them advanced to hold leadership positions with universities, government and industry throughout the world. That accomplishment led him and his wife to create the Bruce and Barbara Zobel Endowment for International Forestry in 1998, which allowed selected students to study abroad.

Among the distinctions bestowed on the E.F. Conger Distinguished Professor of Forestry were the O. Max Gardner award in 1972 by the UNC Board of Governors for outstanding contributions to the welfare of humankind, the TAPPI Gold Medal for outstanding contributions to the technical progress of the pulp and paper industry in 1975, and the Alexander Quarles Holladay Medal for Excellence by the North Carolina State University Board of Trustees in 2004 in recognition of his outstanding career at NC State.

Zobel's accomplishments with the Cooperative Tree Improvement Program in the southern US as well as throughout the world were truly revolutionary. Because of his influence, forestry and the productivity of forest plantations have been forever enhanced. For example, more than 75 percent of the nation's tree planting occurs in the U. S. South. That effort requires planting more than one billion southern pine seedlings each year, of which more than 95 percent of the seedlings are genetically improved. Bruce was directly or indirectly responsible for initiating the majority of that effort.

One of Dr. Zobel's great contribution to NC State and the forestry and scientific communities was the contribution of his extensive personal library to NCSU Libraries (<http://www.lib.ncsu.edu/findingaids/>). A guide to this collection is available at: <http://www.lib.ncsu.edu/findingaids/mc00259>, and a summary of Bruce's contributions can be found at: <http://www.lib.ncsu.edu/findingaids/mc00259#CollectionSummary>

As tree breeders and foresters, we have unique responsibilities. Our legacy to forestry lives in perpetuity. The trees we breed today are the foundation for future forests. Stewardship of our genetic resources is a responsibility that that we cherish and respect. No tree breeder has had a greater influence on forests and forestry than Bruce Zobel. We will miss him, and we thank him.





## A Message from the Dean Dr. Robert Brown

### **On behalf of the College of Natural Resources, congratulations to the graduating class of 2011!**

We have hopefully given you the best education available in your respective fields. Now the task is up to you to continue that education. Most of you will be going on to jobs, some will be entering graduate school, some may continue their job searches, and some may decide to take a "transition year" to travel or do volunteer work. Whatever your plan, it is important to stay connected to your field. The technical information we provided you will become obsolete in a very few years. The important things you learned here were the life skills of creative problem solving; team collaboration; verbal, written and graphic communications; and leadership. These skills will never go out of style.

### **"The job market may still be somewhat limited, but the flood of openings is on the horizon."**

All of you have the opportunity to connect with your professional associations. Be it the Wildlife Society, PGA, NRPA, Society of American Foresters, TAPPI, or another professional society, join up now and stay on their mailing lists. Read their newsletters, attend their state and regional meetings, and their national meetings if you can, and stay up with what is going on in your field. Many of these organizations offer workshops to renew and enhance your technical skills. They also help with

networking and job hunting. For those of you who are certified in your discipline, you'll need this activity for continuing education credits to stay certified.

The job market may still be somewhat limited, but the flood of openings is on the horizon. A full 1/3 of the American population is "baby boomers," born between 1945 and 1964, or who are now between the ages of 47 and 66. Although some held on to their jobs a bit longer than usual, they are retiring now by the hundreds of thousands. Federal agencies like the U.S. Forest Service, EPA and U.S. Fish & Wildlife Service are reporting tens of thousands of retirements, leading to a binge in hiring. Likewise, state and local agencies, non-governmental organizations (NGOs) and private companies, from timber companies to golf courses, are reporting similar trends. Admittedly, the current economy has caused some governmental agencies and NGOs to hold off on filling some positions. But the economy is turning around from our 2007 - 2010 recession, and the jobs will follow. Your first job will probably not be your last one, so choose carefully and stay on top of your field for later opportunities that might arise. It is not unusual in many natural resource fields for graduates to have two or three temporary, 3 to 12 month positions before landing a permanent job. That's why staying in touch with your field, as mentioned above, is so important. Some of you may even want to consider non-thesis masters degrees, which we now offer via distance education in several fields, while you are working. Or, you can even take a course or two by distance as a "non-degree seeking student."

And while you are out there in the "real world," don't forget to be a good citizen. I used to remind graduates to read newspapers and news magazines, but most of you will get your news from the internet or TV. That's fine, and it's important to be a well-informed citizen and to vote regularly. An educated citizenry is the key to a stable democracy. And finally, though you may be swamped with a new job and tight on money, try to give something back to your community. Whether you volunteer at a church, a Little League or Boy Scout group, or with a community charity or conservation group, your time is valuable and your expertise will be appreciated, and you'll feel good about doing it.

**So best wishes from us all; and don't forget to stay in touch with us here in the College of Natural Resources, your professional network starts here.**

## Highlights from Academic Affairs

by Dr. Andrianna Kirkman



**Front row:** Katie Lucey, Tiffany McLean, Yvonne Lee, Adrianna Kirkman, Greg Robinson  
**Back row:** Angie Barefoot, Richard Norris, Dustin Duckwall, Charlie Morris, Josh Gira

### Academic Affairs

We've had 2 additions to Academic Affairs family:

#### Katie Lucey

Student Services Assistant

Katie comes to us most recently from NCSU Housing Division. She is a native of Pennsylvania and a big Penn State fan. She serves as the AA receptionist and support staff for various student activities and enrollment management.

#### Tiffany McLean

Director of Enrollment Management

Tiffany joined us from the Admissions Office at Georgia Tech University, where she specialized in recruiting underrepresented populations, particularly women into the College of Engineering. She is a native of South Carolina and is a big University of Alabama fan. She oversees the CNR recruiting and retention activities, as well as the CNR Ambassadors Program.

Excitement and energy have been the norm in 2010-11 for the Academic Affairs and IT Office. We have seen innovation and change in many areas of the AA/IT realm—classrooms renovated and enhanced, new recruiting and outreach activities implemented, further development of instructional technology expertise and solutions for faculty and students to use in the teaching and learning processes, and new systems in student services, to name a few.

### Career Exploration

In a joint effort between Enrollment Management and the CNR departments, a Career Exploration Day was initiated in February to market the college to select sophomores and juniors in high schools across the state. It was such a big success that 2 high schools sent additional students to follow-up events. These events will help us further build our undergraduate applications and continue the trend of growth in enrollments in CNR degree programs. Our 2010-11 enrollments are 1334 undergraduates and 319 graduate students, resulting in a 5-year growth trend of 32% for undergrads and 54% for graduate students.

### CNR Photo Contest

CNR hosted our first, annual photography contest. There are some great photographers in this college! There were 200 entries comprised of local, national, and international images. First, second and honorable mention prizes were given. Some of those wonderful pictures are a part of this edition of the Pinetum.

### Classroom Improvements

Improvements to several CNR classrooms are in process as we go to press with the Pinetum. By the end of the academic year, we will have better acoustics and more space in Jordan 5103, better lighting, carpet, central control of AV and computer equipment in 3018 Biltmore, and better acoustics and lighting in 2102 Biltmore. We are also upgrading several rooms with document cameras, Smart Podium technology, and cameras to supplement classroom capture using MediaSite equipment. These changes will greatly improve the environment for teaching and learning in CNR.

### Information and Instructional Technology Activities

Through the efforts of the CNR faculty and the CNR IT group, the college is the campus leader in classroom capture using Relay software. We are now adding the functionality of the MediaSite system to provide additional post-production capability and visual capture in addition to the audio and electronic information captured by Relay. These systems are being used to benefit on-campus student access as well as for the CNR distance education programs. The PRT DE masters program is piloting the use of iPads for their graduate student cohort. In addition, the college is developing applications for new software called WordPress for students to develop e-Portfolios of their academic work across their careers at NCSU.

### CNR Website

The website for the main college site has been largely revamped, and one new feature is a blog site, also using WordPress, which allows greater, more dynamic access to CNR information and activities than a standard webpage. We currently have 4 students blogging on the site from study abroad locations. Ashley Massey, Germany & Finland; David Gamble, New Zealand; Megan Binkley, Scotland; Gretchen Stokes, New Guinea. Entries can be found at <http://cnr.ncsu.edu/blogs/>.



### Internship Abroad

David Gamble of the PGM Program is doing an internship at a golf course in New Zealand. Here is his first entry to the blog:

#### *A wolf in NZ?*

Posted on February 9, 2011 by dsгамble  
 At Cape Kidnappers Golf Course I meet people from all around the world! About half our play during the day are international guests from Europe, Asia, Australia, and North America in countries such as Germany, Canada, Sweden, France, Ireland, South Africa, Japan, China, and the United States. Whether our guests stay at Cape Kidnappers' Lodge or are just in for a day visit we always build a relationship with them. We listen to their exciting travels, and adventures throughout New Zealand and across the world. We may be from different countries and in some cases speak a different language, but we are all here because we have something in common. Maybe it's the golf course, the scenery, or the extraordinary feeling of adventuring into a different country. The other day there was a group consisting of two ladies and their husbands who were playing. I was fortunate enough to caddie for the two ladies and discovered one was an NC State alumnus and the other lady's daughter was a current student at NCSU. I knew she was still a die-hard fan when she raised her hand high and presented the wolfpack sign with her fingers. It took me 10,000 miles and almost halfway across the globe to realize how small the world really is."

### Jim Wall Challenge Course

In a different, fresh-air version of a teaching and learning space, CNR and NCSU dedicated the Jim Wall Challenge Course at the Schenck Forest in April. The facility was donated by Mr. Wall, a CNR alumnus is administered by NCSU Campus Recreation, and is a state-of-the-art ropes course comprised of two levels:

#### *The Low Course*

A series of group initiatives and problem-solving activities focusing on the core aspects of team building; fostering communication, trust, conflict resolution and decision-making that physically and mentally challenge participants,

#### *The High Course*

The high ropes course features a series of individual elements in which participants are challenged to expand their comfort zone, build self-confidence, and overcome self-imposed barriers.

## Special Recognitions

### Undergraduate Research in CNR

CNR has a number of students who participate in research projects with faculty in the college. These experiences can broaden a student's understanding of data collect, analysis and problem-solving in their field. The following students presented posters at one of the NCSU Undergraduate Research Symposia held over the past year.

#### *Forestry and Environmental Resources (FER):*

- Andrew Blake
- Ryan Davis
- Terri Mane
- Heather Shipman
- Andrew McEachran
- Asia Murphy
- Colin Geisenhoffer
- Bryan Levan

#### *Forest Biomaterials (FB):*

- Daniel Carta
- Kimberly Phillips
- Kelly Fitzwater

#### *Parks, Recreation & Tourism Management (PRTM)*

- Ryan Andrew Jones

### CNR Senators

The Student Senate acts as an advocacy body, addressing the concerns of the student body, and bringing these concerns to the attention of the University. It is comprised of 64 students who proportionally represent each of the University's colleges. The College of Natural Resources has two Student Senate representatives: Sam Dillard and Matt Tucker

### Special Recognition

The Council members would like to recognize Colby Jackson for his service for 2 and a half years as the Council president and as the current Past President. In his extended tenure as president, he provided leadership and more structured processes for the Council. In his role as past-president, he has provided additional continuity for the group. Colby is a graduating senior with dual degrees in Paper Science and Engineering and Chemical Engineering and he plans to go graduate or law school.

### Faculty Teaching Recognitions for 2010-2011

#### Outstanding Teacher

Dr. Todd Steelman  
Forestry and Environmental Resources

#### Board of Governor's Award for CNR

Dr. George Hess  
Forestry and Environmental Resources

#### Alumni Distinguished Undergraduate Professor

Dr. Medwick Byrd  
Forest Biomaterials

#### Alumni Distinguished Graduate Professor

Dr. Hugh Devine  
Parks, Recreation and Tourism Management





# CNR Ambassador

Without the support of the CNR Ambassadors, the College of Natural Resources could not provide the level of personalized attention that we provide to all of our visitors.

Here to our 2010-2011 Ambassadors!

The College of Natural Resources (CNR) Ambassadors are a group of students who serve as liaisons between CNR and the outside community including prospective students, parents, distinguished guests, and alumni. Their majors cover a wide span of curricula within CNR, and their interests and extracurricular activities are equally diverse. They have a strong commitment to scholarly achievement that fosters academic excellence, maturation and inclusion of all students.



While each ambassador's experience varies, below are just a few of the activities they were involved with this year:

- Assisting with planning, execution, and hosting of college-wide recruitment events including Open House, Admitted Student Visitation Days and Career Exploration Days for over 600 prospective high school students and their families
- Blogging about their international experiences on the new CNR website and video conferencing from Equatorial Guinea and Scotland to speak with our Park Scholar Finalists
- Attending college fairs and visiting local high schools to create awareness of our CNR programs
- Providing CNR tours to prospective students, alumni, and special guests
- Serving as marshals for CNR Fall and Spring Graduation
- Communicating with admitted students through emails, notecards, and phone calls
- Representing the students of CNR at alumni and special guest functions such as the Jim Wall Challenge Course Dedication
- Coordinating 150 boy scouts for the NCSU Merit Badge College Program
- Representing the CNR at NCSU Arbor Day at the State Farmers Market

## Environmental Technology and Management

- Brittany Anstead
- Emily Forbes
- Mija Nichols
- Alexandra Shannon
- Kristin Smith
- Deja Smith

## Professional Golf Management

- David Gamble
- Ivy Witherington

## Wood Products

- Brad Foley

## Fisheries, Wildlife & Conservation Biology

- Julia Baubin
- Megan Binkley
- Summer Higdon
- Melana Horton
- Kyle Meadows
- Morgan Parks
- Barbara Stevens
- Gretchen Stokes

## Paper Science & Engineering

- Elijah Gore
- Cedric Harville
- Robert MgGonigle
- Kimberly Phillips

## Natural Resources

- Amelia Forbes
- Katlin Mooneyham

## Parks, Recreation & Tourism Management

- Kate Gilbertson
- Elizabeth Robson

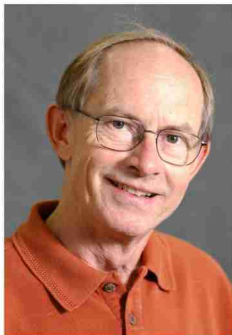
## Sport Management

- Miles Clark
- Amanda Dinkel
- Ira Dogruyol
- Patrick Giggey
- Kyle Kiser
- Sammie Marshall
- Carly Swanson

## Development and Foundations

Sustaining the Future

by David Ashcraft



Congratulations to the 2011 graduating class which is moving forward from the College of Natural Resources at NC State to make its mark in the world. The opportunities for new graduates are greater than ever, but there are many potential roadblocks that must be overcome. Students from CNR are well prepared; "go get 'em."

The economy continued to have a positive impact on the Foundation during the past year. Less than 25% of endowments remain underwater, and income from Hofmann Forest operations stabilized. The number of scholarships offered to students has increased, and the philanthropic outlook is much more positive than in the past.

The most recent Economic Impact of Forest Products showed that Forest Products continues to be the largest manufacturing segment in North Carolina. When the Forest Products statistics are combined with those for tourism and land owners, our college "touches" more of the state's economy than any other college on the NC State campus. Our students can be proud of their contributions to our state and the legacy they continue to build.

We live in a changing world, and no doubt there will be changes in our college as we join in implementing the Strategic Plan for NC State. Our college and its students, the faculty and staff and our donors are ready to accept the challenge of change. Building upon our strengths, we can help make NC State and the College of Natural Resources even greater for the citizens of North Carolina.

As you graduate and move forward into adult hood and the world of work, please keep in touch and join us in the continuing mission of both the College of Natural Resources and NC State. With your support, future students will be afforded similar opportunities to make a positive impact on our world.

## College of Natural Resources

### Student Organizations

### Special Recognition

Colby Jackson

The Council members would like to recognize Colby Jackson for his service for 2 and a half years as the Council president and as the current Past President. In his extended tenure as president, he provided leadership and more structured processes for the Council. In his role as past-president, he has provided additional continuity for the group. Colby is a graduating senior with dual degrees in Paper Science and Engineering and Chemical Engineering and he plans to go to graduate or law school.



## CNR Council



**Administrative Board Members of MANRRS.**

The College of Natural Resources (CNR) is home to eight recognized clubs, including two honors fraternities and five organizations tied to departments within CNR. The CNR Council links these organizations and serves as the student council for the entire college. It is comprised of council officers, a representative for each recognized club and the student senate, plus a liaison from the CNR yearly publication, the Pinetum, that chronicles all college activities and clubs. The Council meets monthly to discuss current issues, problems, achievements and concerns as well as to develop ideas for better serving students. It is also responsible for allocating funds from academic fees to the student organizations for special projects. Funds are distributed based on attendance, need, support and the contributions made by that particular organization. The Council also seeks to unite the students in CNR's different departments.

### **Council Presidents:**

Colby Jackson and Sam Griffith

### **Council Secretaries:**

Michael Rook and Stephen Kinane

### **Council Advisor:**

Dr. Adrianna Kirkman



Russell Myers, Michael Rook, Michael Woolford, Colby Jackson, Shanna Wood, Park Watson, Samantha Marshall, Grayson Pridden, Will Hutchens, Sam Griffith

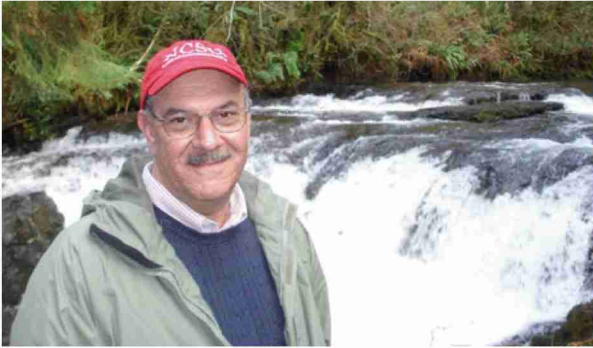
## Minorities in Agriculture, Natural Resources Related Sciences (MANRRS)

The NC State Chapter of Minorities of Agriculture, Natural Resources and Related Sciences is a national society that promotes and implements initiatives which foster inclusion and advancement of members of ethnic/cultural groups.

This year we conducted a number of activities, developing members professionally and personally while also developing our communities. In the fall semester, some of our members volunteered at the Microsoft Campus U event on campus. We also had members volunteer their assistance at the men's soup kitchen in downtown Raleigh. We continued our successful bi-annual fish fry. Members will also assist with

Embrace NC State this year as a way to welcome some of the incoming freshmen for next year. We have had three speakers to give professional development presentations. Jocelyn Todd and Guillermo Coward both spoke on behalf of Novozymes and discussed internship and job opportunities with the company. We also had a speaker from Kelly Scientific come and discuss what types of jobs were available to students in related fields of science. We've also had two representatives from the USDA who gave a presentation about job availability and the importance of being willing to relocate in order to receive a job.

## Department of Forestry and Environmental Resources



Department Head's View  
Dr. Barry Goldfarb

It is hard to be bored when the world is your classroom. The Department of Forestry and Environmental Resources has a long history of innovation, but we must always keep on our toes to be adaptive, remain creative, stay engaged, and lead into the future. Whether it is at the local or international level, our students, staff, and faculty are learning from and making an impact in the world beyond school walls.

Our students are dedicated not only to their own education and careers, but also to making a real difference in the world. Even as economic and academic pressures have grown, our students have found ways to increase their participation in student clubs, accomplish more activities, and expand their service to others. The beginnings of two new FER-led clubs were created this year. The Natural Resources / Environmental Technology and Management Club, while still building its base, has already combined their academic interests with community service and spent an afternoon in canoes cleaning up Yates Mill Pond. The Dendrology and Forest Ecology Club also sprouted this year with the purpose of sharpening their skills while promoting dendrology and ecology at NC State and surrounding areas.

The Forestry and Environmental Resources Graduate Student Association (FERGSA), whose mission is to enhance graduate students' educational and social experiences, has remained strong this year, hosting Cream Social, and leading the effort to designate our campus as a Tree Campus USA. The International Society for Tropical Foresters (ISTF) will be hosting its fourth Annual Spring Symposium soon, with a topic of broad interest: "Forest Certification: A Global Perspective." This has been a great year also for the Leopold Wildlife Club and the Forestry Club, with participation in fundraising, involvement in outreach and service, and academic and technical achievement at their respective regional Student Conclaves. Both of these

clubs will have their hands full in the next couple of years as they bring the spirit of friendly competition and cooperation to NC State by hosting the Southern Forestry Conclave in 2012 and the Wildlife Southeastern Conclave in 2013. These are huge undertakings for both of these student groups, and the commitment it takes to plan and organize such a large-scale event as a regional conclave is a testament to the high merit and dedication of our students.

The NCSU Chapter of the Society of American Foresters (SAF) had both their intellect and survivorship tested this year during their wilderness leadership trip prior to the SAF National Convention in Albuquerque, New Mexico. They encountered snow, sub-freezing temperatures, and 45 mph winds in the Pecos Wilderness area, but they pooled their resources, made it out safely, and even turned out to be the "best dressed" at the conference's Student Quiz Bowl while making it to the third round.

In addition to group accomplishments like those above, our students are involved in numerous service-learning activities, undergraduate and graduate research, teaching assistantships, and public outreach efforts. There were so many events that our students participated in this year that it is hard to overstate the importance of their contributions. Many thanks to so many individuals and groups for making the following events, among others, such terrific successes this year: Aquatics Day Camp, Arbor Day, Boy Scout Merit Badge College, CNR Volunteer Days, Fall Open House, FER Career Fair, Fisheries and Wildlife Alumni Society Reunion, Forestry 1975-79 Alumni Reunion, Rolleo, Visitation Days, and WakeNature Volunteer Days.

These activities are just some examples of how we continue to build on our belief that students learn best by doing. These and the many other opportunities we provide for hands-on,

engaged learning reinforce concepts learned in class. Our Study Abroad programs continue to provide students with a global perspective in a truly unique and personal way. Destinations of some of our recent and upcoming study abroad programs led by FER faculty include the Bahamas, Canada, Chile, Namibia, Nicaragua, South Africa, and Sweden. Development of meaningful study abroad programming and other opportunities, such as the Atlantis international engagement. Transatlantic Masters Program and our Brazil Student Exchange Program, are examples of FER's commitment to providing the life-affirming experiences that can come from international engagement.

*"Student's learn best by doing."*

The depth and breadth to which our faculty members have made positive impacts to people and the environment are demonstrated by their achievement of local to global recognition. Highlights of faculty achievement this year include: Toddi Steelman's College of Natural Resources Outstanding Teacher Award; George Hess's nomination from CNR for the Board of Governor's Award for Excellence in Teaching; Erin Sills's Outstanding Global Engagement Award; Lee Allen's Barrington Moore Memorial Award in Biological Science from the Society of American Foresters; and Ron Sederoff being named 2011 Forest Biotechnologist of the Year by the Institute of Forest Biotechnology. Congratulations to all of these well-deserved recipients and many others who received recognition and praise from their colleagues and mentees this year.

Joining the faculty this year are Ryan Emanuel, Assistant Professor of Hydrology, and Beth Gardner, Assistant Professor of Quantitative Wildlife Biology. As an ecohydrologist, Ryan brings to the department an integrated approach to the understanding of the movement of water. Beth's expertise in statistical modeling brings new skills and understandings of wildlife populations. Following a long and distinguished career of dedication to his students, numerous teaching awards, and an outstanding research record, Dick Lancia is retiring from NC State, where he has the distinction of having taught 23 years of Fisheries and Wildlife Summer Camp. This year we saw the passing of a legend in forest genetics, Bruce Zobel, Professor Emeritus of Forestry. He was 90 years old.

Christi Standley joined us on staff this year as Undergraduate Program Coordinator and has been busy bringing in more future leaders. Enrollment continues to climb, setting another recent record for the number of undergraduate students (517). We also set an all-time record for graduate students, with 165. In collaboration with other departments on campus, we added two new Professional Masters Degrees this year: the Master of Environmental Assessment is an online, interdisciplinary program, jointly administered by CNR and CALS, which focuses on environmental issues and problem solving; the Master of Geospatial Information Science and Technology, jointly administered by FER and PRM, is available as both an on-campus or on-line degree and focuses on understanding and managing spatial phenomena.

The development of a spatial resource analysis database for woody biomass availability has been a major effort of Forestry Extension this year. This database, and the analysis it will afford, will help us and others around the world address global climate change, energy markets, and resource policies. Forestry Extension is also bringing advances in teleconferencing and webinars to reach even great numbers of people with their high-quality programming. Environmental education opportunities for youth have soared this year with a record number of educators trained this year through Project Learning Tree and the Sustainable Forestry Teacher's Academy.

Employment seems to be on the rebound for upcoming graduates. While the recession hit some of our sectors particularly hard, we expect that forthcoming retirements of baby boomers will open the path to many new opportunities for our graduates. We are already seeing increased hiring activity from our employers in recent months. They look to us, because they know that our graduates can meet and exceed their expectations.

Our faculty, staff and students' perspective of the world as our classroom contributes in a great way to our renowned reputation of innovation. Whether it is learning new technologies and methods, studying in a foreign country, or applying intellect and elbow grease to local problems, we are improving the environment – one student at a time.

# Department of Forestry and Environmental Resources

## Student Organizations

Xi Sigma Phi

NCSU Forestry Club

Society of American Foresters

Leopold Wildlife Club

International Society of Tropical Foresters

## Xi Sigma Phi

Xi Sigma Phi is the only national scholastic honor society that recognizes achievement in forestry and environmental resources education. The society was founded at the University of Washington in 1908. The Mu Chapter at North Carolina State University was added in 1940 as the first chapter in the Southern Region of the United States. There are only eleven chapters in the United States older than the chapter at N.C. State.

The objectives of the society are to secure and maintain a high standard of scholarship in natural resources education, to work for the improvement of natural resources professions, and to promote a related fraternal spirit among those engaged in activities related to natural resources.

Each year the society holds an annual banquet for the induction of new members into Xi Sigma Phi. Inductees and current members enjoy a social gathering, dinner, and an induction ceremony. In April 2011 the society inducted 40 new members at the annual banquet.

### **Mu Chapter President:**

Kara Dziwulski

### **Vice President:**

Morgan Parks, Kristin Smith

### **Ranger and Chapter Advisor:**

Dr. Richard R. Braham.



2011 Chapter Members

The Forestry Club of NC State has a long and distinguished history with the College of Natural Resources. The club consists of students, faculty advisors and technical advisors dedicated to furthering the interests of forestry. Active memberships are open to all students pursuing forestry related studies.

## NCSU Forestry Club

The NC State Forestry Club has had a very busy schedule this year. Starting the year off strong with a 3rd place finish at Haywood Community College's annual Woodsman's Meet at the Cradle of Forestry. Along with the 3rd place overall finish, Sam Honeycutt, Mike Cheston, Victor Wassack, and Jay Dysart finished 1st in the quiz bowl bringing the Owl Trophy back to NC State for the year. After that, the Forestry Club hosted our own annual Rolleo Competition at the Schenck Forest in Raleigh. Our Wolfpack foresters showed the other 3 schools how to get things done with a 1st place finish. The Forestry Club rounded up the pre-Conclave competitions with another 1st place finish in Blacksburg, VA at Mini-Conclave hosted by Virginia Tech. The competition year was concluded with the Forestry Club traveling to Athens, GA for the 54th Annual Association of Southern Forestry Clubs Conclave, where the NC State Forestry Club finished 4th in both physical and technical events with a 5th place overall against 14 other schools. Along with the Conclave Competition is a special event hosted by Stihl. Stihl allows one contender from each school to compete for a prize of \$1000. Our own Victor Wassack represented NC State and finished 2nd, only two points behind the leader. To top off an excellent showing at Conclave, the NC State Forestry Club was awarded a new cross-cut saw as the Sportsmanship Award given every year at the competition.

Along with their busy competition schedule, the Forestry Club still got the bills paid through fund raising. Selling firewood is the number one source of revenue for the Forestry Club and after the extremely cold winter, last year, the stock was a little low. This meant lots of work for club members. Fire wood is cut off Schenck and Hill forests and is sold by the cord or half cord.

For more details contact Forestry Club President  
Mike Cheston: [cmchesto@ncsu.edu](mailto:cmchesto@ncsu.edu)



Log Burling Competition at Conclave



Axe Throwing Competition at Conclave



Sam Honeycutt, Aaron Griffith, Travis Howell, Mike Cheston, Victor Wassack, Ed Hull, Tim Leimer, Neil Williams, Lauren Lesak, Priscilla Morris, Aaron Boyd, Jay Dysart, Mary Talley

# Society of American Foresters

## NCSU SAE Chapter's Trip to the National Convention

by Ernest Dixon, IV (NCSU SAF Chair)

Six other students from NCSU have just returned to Raleigh after spending a little over a week in New Mexico attending the National SAF Convention and also NCSU's yearly wilderness experience. We had planned on backpacking for the first five days of our trip in the Pecos Wilderness, with the eventual goal of tackling the summit of Truchas Peak on day three; but we had to abandon this plan when the weather turned from the expected 60 degree days and 30 degree nights to 30 degree days, 15 degree nights, six inches of snow, and 45 plus mile per hour sustained winds! For safety we withdrew to lower elevations of the Bandelier National Monument, which turned out to be just as exciting and maybe even more interesting as we got a chance to not only explore the ancient Native American ruins and around the canyons and ridges of the area, but also an opportunity to see two more very different ecosystems than what we had seen high up in the Pecos.



**SAF Chapter at the edge of the Pecos River Valley**

We returned to Albuquerque on Wednesday for the Student Quiz Bowl, where we made it to the third round; and although we didn't win, we had a great time. And beat last year's champs in the first round! The rest of the week, we enjoyed the convention; visiting the booths in the expo center, talking with potential employers at the career fair, attending the many presentations, and meeting NCSU alumni at our annual luncheon. We'd like to thank the following people and organizations who helped to make our time at the convention so great: Joe Roise, Lisa Schabenberger, Sarah Slover, Barry Goldfarb, NCSU FER, and last, but not least, APSAF, whose donation of \$560 really helped make the trip possible for the seven of us

We look forward to meeting many of you at the APSAF meeting in Charleston this spring and hopefully also at the national convention in Hawaii next year! The people we met and the professional experience we gain at these conventions are some of the most valuable parts of our education.

The Society of American Foresters (SAF) is the national scientific and educational organization representing the forestry profession in the United States. The mission of the Society of American Foresters is to advance the science, education, technology, and practice of forestry; to enhance the competency of its members; to establish professional excellence; and, to use the knowledge, skills, and conservation ethic of the profession to ensure the continued health and use of forest ecosystems and the present and future availability of forest resources to benefit society. The NCSU student SAF chapter is comprised of students, both graduate and undergraduate who believe and abide by the codes set forth by the SAF. The student chapter holds regular business meetings throughout the year, and also attends local and national meetings. The local meetings regularly attended by the NCSU SAF student chapter are the Triangle Chapter meetings and the annual APSAF meetings.



## Leopold Wildlife Club

The Leopold Wildlife Club is the student chapter of The Wildlife Society at NCSU. We pride ourselves in promoting the importance of wildlife conservation as well as providing students with experiences that will help them in future careers. Our members enjoy hearing from a variety of speakers at our bi-monthly meetings. This year's speakers have included: Endangered Species Biologists, Wildlife Officers, graduate students, and professors.

### Conclave

The Southeastern Wildlife Conclave is a wildlife oriented competition between other wildlife clubs at universities and colleges all over the southeastern United States. This year's conclave was held at Auburn University in Alabama with 19 universities/colleges attending. Congratulations to Rachel Conley and Ryan Davis, they placed 2nd in the Dendrology competition. The club also participated in several other events including quiz bowl, overall team competition, orienteering, radio telemetry, canoeing, trap shooting, archery, field photography, and obstacle course. The club hopes to have an even stronger showing at next year's conclave.

#### Leopold Wildlife Club at Southeastern Wildlife Conclave Auburn University, Alabama

Ryan Davis, Mark Parsons, Michael Rook, Ian Dudley Park Watson, Jennifer Powell, Rachel Conley, Casey Williams, Kyle Meadows, Mija Nichols, Ross Snotherly, Bradley Hulín, Dr. Moorman, William Wood, Melana Horton, Caleb Macdonald



### Activities

Over the past year, the Leopold Wildlife Club has been involved in a variety of activities. In the fall, the club held two birds walks at Schenck Forest led by Dr. Moorman, one of our club advisors. The groups saw a variety of species including the Yellow-billed Cuckoo, Carolina Chickadee, and Scarlet Tanager just to list a few. The club also volunteered at National Hunting and Fishing Day, where we helped facilitate many educational events such as outdoor cooking, archery, and tracking. Each spring we volunteer at the Dixie Deer Classic where we run a booth informing visitors of the club's activities and conservation efforts, and raise money by raffling off merchandise. In addition, we help with the scavenger hunt held at the Dixie Deer Classic so younger participants have a chance to learn about wildlife. We also are part of the Adopt-A-Highway program on Penny Road, and hold two roadside cleanups a year. Additionally, we maintain and monitor wood duck boxes at Yates Mill Pond. All these amazing volunteer opportunities provide our members with hands-on fieldwork and leadership experience.

For inquiries or if interested in joining the Leopold Wildlife Club please contact Dr. Moorman at: [chris\\_moorman@ncsu.edu](mailto:chris_moorman@ncsu.edu)

# International Society of Tropical Foresters

The International Society of Tropical Foresters (ISTF) at NC State is a student-run non-profit organization that connects students and faculty who share an interest in international forestry and environmental issues. As the world of forestry evolves year to year, the topics and concerns discussed within ISTF evolve as well.

ISTF hosts a guest speaker at every monthly meeting to lead a discussion that typically deals with the speaker's current research or area of expertise. In addition to these monthly meetings, ISTF typically participates in at least one other conference at another school every year. In 2011, ISTF was invited to Duke University's symposium on current global water issues.

Every spring, ISTF hosts a symposium to bring together students, faculty, and interested professionals to discuss and analyze a major issue in the field of international forestry. The symposium is completely student-directed, and is a great opportunity for learning about current global forestry issues and networking with invited speakers.

The goals of ISTF are:

- To advance the science, technology, education and practice of professional forestry in the tropics and to use the knowledge and skills of the profession to benefit society as a whole.
- .
- To encourage and support the activities of the international programs of the CNR and the Department of Forestry and Environmental Resources at NC State.
- .
- To encourage and support ISTF members in their personal and professional development while undertaking their degree programs at NC State.

## 4th Annual Spring Symposium

*"Forest Certification: A Global Perspective"*  
NC State University, Jordan Hall

Discussion topics ranged from the current status of the forest certification system to how it could be improved.

### Symposium Topics:

Speaker: Fred Cabbage, NC State University  
Title: Impacts, Costs, and Benefits of Forest Certification in North and South America

Speaker: Claudia Romero, University of Florida  
Title: What we do and don't know about forest certification impacts in the tropics

Speaker: Bob Johnston, Tropical Forest Foundation  
Title: Process and Benefits of Reduced Impact Logging

Speaker: Gun Lidestav, Swedish University of Agricultural Sciences  
Title: Forest certification in Sweden - an instrument for improved forest management or just more of the same?

Speaker: Bryan Hulka, Weyerhaeuser  
Title: Forest Certification - Industry's Journey





## Department Head's View Dr. Steve Kelley

### Growing New Leaders in our Fields

With our new name, the Department of Forest Biomaterials continues to grow engineers, scientists and technology leaders who will develop the renewable materials and energy products that our Nation demands. This year's graduates face some immediate challenges, which demand their skills, energy and attention. The industries we serve are recovering, albeit more slowly than we would like, and now more than ever need innovative and creative young professionals to help run today's businesses while planning for tomorrow's opportunities. It is crystal clear that the new professionals coming from the Department of Forest Biomaterials will help grow our economy, based on domestically produced, renewable, value-added products.

This past year the successes of our faculty were recognized in several ways. Dr. Med Byrd was recognized as the University Distinguished Undergraduate Professor for the College. This award highlighted Dr. Byrd's critical and enthusiastic role in teaching and mentoring our Paper Science and Engineering undergraduate students. Dr. Byrd has developed new teaching approaches and content for his PSE classes and is also teaching more than 200 freshmen engineering students. Dr. Byrd and Dr. Hasan Jameel were recognized by the students in the "Thank a Teacher" program for their dedication and success in teaching. Dr. Dave Tilotta was recognized as the College's Outstanding Extension Faculty. In particular, Dr. Tilotta's award highlighted his contributions to resilient and sustainable housing. The importance of this work was highlighted by recent tornados and floods that have allowed well designed and constructed houses to better withstand serve weather events.

This was also the first year since 1997 that Dr. Mike Kocurek was not in the classroom teaching a new class of NCSU Paper Science and Engineering students the wonders and joys of papermaking. Dr. Kocurek retired over the summer, but returned to NCSU to help mentoring and professional development of the freshmen. We hope that he will continue in this critical role for many years to come.

We also need to applaud the time, energy and ability of four other critical volunteers who are supporting the Department in different ways. Dr. Richard Phillips continues to share his 32 years of industrial experience to the PSE seniors and teach them critical skills in process economics and project management. Dr. Hou-min Chang continues to assist with a variety of graduate student projects, and serve as the intellectual driver for the wood chemistry skills required for many projects. Dr. Ernie Alexander and Gus Cottros continue to assist with the Pulp and Paper Foundation, and the College Natural Resources Foundation helping to raise the funds used to support scholarships awarded across the Department.

### Academic Programs Great Jobs in Great Industries

This year's graduates are still finding great jobs with great companies, and they continue to have great opportunities for the future. Our undergraduates in both Paper Science and Engineering and Wood Products have rock solid engineering, technology and management skills that allow them to obtain great jobs in these trying economic times. Equally important, they have the fundamental knowledge and have developed the analytical thinking and teamwork skills that will allow them to thrive as the renewable materials industries grow and change. Students in both programs have had a wide variety

of opportunities for learning outside the classroom, and outside the country!

Highlights include:

### *Transatlantic Paper Science and Engineering*

The first group of seven NCSU PSE students traveled to Finland and Germany for a full year of study aboard in the Transatlantic Paper Science and Engineering program. These students studied in Tampere and Jyväskylä, Finland, and Munich, Germany. Due to careful planning, and a lot of hard work, they will earn an International BS degree from the University of Munich as a result of their study aboard. NCSU hosted five students from Finland and Germany as part of this exchange program. All these students have also gained tremendous experiences from these study aboard opportunities. The PSE students who remained on campus have learned a great deal from taking classes with the international students.

### *What Goes Up, Must (at some point) Come Down*

Wood Products students continue to develop their manufacturing and technical insights. As part of the WP program, an increasing emphasis is being placed on "Service Learning". This past year this included classes that assisted Wake County Habitat for Humanity with both construction and deconstruction projects. Several undergraduate projects also focused on housing and aspects of resilience. The WP students continue to learn the connections to real world problems with their senior design projects.

## **Research Successes Creating Knowledge for the Renewable Economy**

Our research program continues to thrive. The faculty continue to attract funding from a wide variety of federal, state and industrial sources. In addition to training graduate students, many of these research projects provide opportunities for undergraduate research and summer internships for students.

One example of this success is the Wood to Ethanol Research Consortium (WERC) which has attracted 15 private and public partners interested in producing biofuels from wood. This consortium is led by Drs. Phillips, Jameel, and Chang, and will include a wide range of experimental and process modeling tasks. This same team, along with Drs. Kelley, Park, Saloni, Tilotta and Venditti, are involved in a series of Federal and State funded Bioenergy research projects investigating new science and technology for the production of biofuels, and biomass power. As part of these projects the Life Cycle footprint, and in particular the carbon cycles for bioenergy products are being evaluated. These

projects are an outstanding example of the interdisciplinary being conducted within the Department, and highlights the value of connecting fundamental and applied research programs.

Resilient and Sustainable Housing is also a rapidly expanding research and Extension program within the Department. The concept of making housing more sustainable is relatively well developed, but the concept of Resilient Housing, housing that is designed to better withstand and recover from an extreme weather event such as a hurricane, tornado or flood is less well understood and accepted. With the

Resilient and Sustainable Housing work a team lead by Dr. Tilotta, and including Drs. Dasmohapatra, Lemaster, Mitchell and Saloni, are evaluating technology issues and consumer acceptance issues. One key aspect of this work is the need to convert complex information about wood materials and design, into guidelines that can be understood and acted upon by builders or homeowners. In particular, understand what motivates a homeowner to renovate an existing home is a key component of their work.

Value-added Biomaterials continue to be a focus of the research work across the department. This work includes fundamental work on nanocrystalline cellulose, composites made from hemicelluloses and cellulose or wood fibers, lignin-based materials and chemicals, water-soluble polymers useful in pulp and paper applications, and modified wood fibers useful for recovery of spilled oil. Every faculty member in the Department plays a specialized equipment, tremendous cultural experiences and professional contacts that will serve them throughout their careers. Dr. Saloni has hosted a series of Venezuelan students doing research projects as part of a collaboration between NCSU-Andres Bello Catholic University (UCAB). These projects included a small group of UCAB students working on senior research projects, and a summer teaching and research program, joint with the NCSU College of Engineering, focused on manufacturing. Students from UCAB who have been through these programs in prior years are now returning to NCSU as high functioning graduate students.

## **Extension, Engagement & Economic Development Supporting Business within the State and Across the Country**

Forest Biomaterials faculty continue to provide outstanding training and consulting services to the wood products and pulp and paper industry within North Carolina and across the country. Wood Products Extension faculty, with help from undergraduate and graduate students, are assisting industrial manufacturers with advice on the lay-out of their work centers, with improving inventory tracking, quality assurance programs and options for investments in new manufacturing technology. This advice and training is even more valued in these economically demanding times as these companies work to remain competitive and provide high-quality manufacturing jobs.

The need for a well-trained workforce is as high as ever. The pulp and paper short courses are in high demand as companies work to create a flexible, efficient workforce. Several new paper manufacturing facilities have sent large groups of new employees to NCSU to have them trained in the technical details of the paper making process, and receive hands-on laboratory instructions. Unique new trainings were conducted by Dr. Park, who created a one week short course in cellulose and fiber technology for a group from the Korean Mint, and Dr. Hubbe who provided a one week short course on paper making chemicals to 150 attendees at the Shahid Beheshi University.

## CNR's Own Peer-Reviewed Journal Gaining Higher Visibility

by Dr. Hubbe

Six years ago two professors in Forest Biomaterials started a peer-reviewed scholarly journal called BioResources ([www.bioresources.com](http://www.bioresources.com)). Martin Hubbe and Lucian Lucia had the idea that an electronic journal, free on the Internet, would help stimulate progress in our fields of interest.

The journal's scope roughly matches the interest areas of the department, including scientific work related to wood, papermaking, cellulosic biofuels, and related topics.

The journal now publishes about one article each day. The journal is being "discovered" by graduate students and professors around the world whose research involves cellulosic materials. Authors are attracted by the journal's "impact factor", which indicates how likely an article published in BioResources is to be cited in other articles. Our impact factor gives the journal a ranking of third out of 26 journals in the world that deal with materials science related to cellulose, paper, and related topics.

Recently the journal has started something new – employing undergraduate students. Jesse Shade and Emily Walsh have been "pre-editing" submitted articles, getting them ready for the peer-review process. Through their pre-editing work these students are learning a lot about scholarly writing and about scientific advances in their wider field of interest. PSE senior Alyson Ward has been tabulating and sending thank-you notes for the page-expense contributions that are being sent to the journal from satisfied authors. Patti Woodbury in the Foundation office has been working with Alyson on this critical task, which Jesse will be taking over for the coming summer. With its excess funds the journal already has established an undergraduate scholarship.



Co-editors being recognized by the associates in China who prepare the Print Edition of the journal.

## Technical Association for the Pulp and Paper Industry (TAPPI)



David Froggatt, Doug Kaminskas, Kyle Lindsay,  
Colby Jackson and Jamie Pye

North Carolina State's TAPPI chapter is an organization composed of Paper Science and Engineering students working to improve the knowledge, networking, and professionalism of its members. TAPPI sponsors annual events and trips, such as regional and national conferences, as well as frequent social events. TAPPI holds one social event each month in which all TAPPI members are invited to join. A popular event is to go bowling on Hillsborough Street. TAPPI also organizes multiple IM sports teams each semester.

Our TAPPI student chapter is active in service projects to improve community involvement and to teach the community about the paper industry. The chapter annually participates in Service Raleigh and Earth Day events. The chapter also participates annually in its own service program, Paper Express. Paper Express is a program in which paper science students travel to elementary schools to teach children about the paper industry. This includes a brief history of paper, how paper is made, and how recycling helps the environment. The children then get to make their own small pieces of paper.

Members of TAPPI are given numerous job opportunities as well as opportunities to learn more about the industry as well. Pre-night events are a part of this process, where prospective companies give a catered presentation about their company, as well as current openings. These events occur regularly in the fall and spring semesters for TAPPI members. This gives students a chance to get a good meal and enhance their knowledge of each company they plan to interview with. Having this knowledge helps the members to become more well-rounded and desirable in the job market. TAPPI is an excellent student professional organization that helps the paper science students at NC State grow and evolve into skilled members of the workforce.

### 2010 - 2011 Officers

#### Presidents:

Doug Kaminskas

#### Vice President:

Jamie Pye

#### Treasurer:

Kyle Lindsay

#### Secretaries:

Ashleigh Eason and Maria Luna

#### E-Council Rep:

Geoffrey Bogner

#### CNR Rep:

Michael Woolford

#### Program Co-Chairs:

Danny Martin and Nick Hale

#### Activities Chair:

David Froggatt

#### IM Sports Coordinator

Sam Fipps

#### Service Chair:

Kim Phillips

## Department Head's View Dr. Dorothy H. Anderson

This academic year has been another year of successes despite the continued challenges the economy throws at us. Our undergraduate program continues to thrive. Our students graduate from here and are in high demand in both the public and private sectors. Enrollment in these degree programs topped over 600 undergraduate students this academic year. All three of our undergraduate degree programs remain strong and the demand for them is greater than our capacity to handle all of the students who want access to our programs. To help meet that demand we hired Dr. Kim Bush and Ms. Susanne Morais this year as teaching faculty. Dr. Bush graduated from the Ohio State University and teaches courses in marketing, sport finance and economics, psychological dimensions in sport, and diversity and inclusion in recreation and sport. Prior to joining us Ms. Morais served as the Director of Penn State's Shaver Creek Environmental Education Center. Ms. Morais teaches the introductory course in PRT and an outdoor education course. Both of these individuals also advise a large number of our undergraduates.

Our graduate programs are also healthy. Dr. Myron Floyd is in his first full year as Director of Graduate Programs for PRTM and under his leadership we are already experiencing change for the better. For example, this year we launched the online distance education Masters in Parks, Recreation, Tourism, and Sport Management (MPRTM). First year enrollment exceeded our expectations with more than 60 applicants of which we accepted 32. We have gone through the applications for 2011-12 and we have accepted 30 students who will join us next year. For the most part these students are professionals who have been working in the PRTSM field for a number of years. The geographic reach of our program includes a large number of students from North Carolina with a number of students from Vermont, California, Arizona, West Virginia and the Yukon Territories. The Masters of Geospatial Information Science and Technology (MGIST) online distance masters is also new this year and experiencing an explosion of growth. This program is coordinated by Dr. Hugh Devine who also serves as the Director of the College of Natural Resources Center for Earth Observation. Currently over 60 students are enrolled in the MGIST degree.

this year and experiencing an explosion of growth. This program is coordinated by Dr. Hugh Devine who also serves as the Director of the College of Natural Resources Center for Earth Observation. Currently over 60 students are enrolled in the MGIST degree.

Our Master of Science (MS) and doctoral (PhD) programs are also standing on solid ground. We started the year with 18 MS and 19 Ph.D. students. This year through contracts, grants, fellowships, and other departmental money we have been able to put \$415,000 on graduate support. Support includes a living stipend, tuition, fees and benefits. We also have allocated about \$25,000 to support graduate students' attendance at conferences to present their work.

The success of our graduate program goes beyond the dollars we spend on our students, it also includes the mentoring of our graduate students by our faculty, professional development activities such as serving as teaching assistants to faculty, being the lead instructor in a course, and attending and presenting their research at conferences across the country. This year one of our doctoral students, Candice Bruton was the plenary speaker at a major national conference—that is an unheard of honor for a graduate student and speaks to the quality of our students. Another of our doctoral students, Jordan Smith successfully competed for a National Science Foundation fellowship, is a Hofmann Fellow, and was awarded his second National Fellowship with the Cooperating Ecosystems Studies Unit administered by the National Park Service.

This year Dr. Jonathan Casper was promoted to associate professor with tenure. Dr. Casper's promotion and tenure is well deserved and adds to the strength of our graduate faculty. PRTM faculty routinely are recognized by others in the profession for the outstanding work they do. This year Dr. Karla Henderson was named Senior Fellow in World Leisure Academy, received the World Leisure Society's George Torkildsen Literary Award, and was the Recipient of the National Recreation and Park Association's Literary Award. Dr. Hugh Devine received North Carolina State University Graduate School's Outstanding Graduate Faculty award. These are all prestigious awards and honors and they only come about to those with a true passion for the field and a willingness to share their passion and knowledge with their colleagues, students, and other inside and out of the profession.

George Torkildsen Literary Award, and was the Recipient of the National Recreation and Park Association's Literary Award. Dr. Hugh Devine received North Carolina State University Graduate School's Outstanding Graduate Faculty award. These are all prestigious awards and honors and they only come about to those with a true passion for the field and a willingness to share their passion and knowledge with their colleagues, students, and other inside and out of the profession.

Each year PRTM faculty and their collaborators compete for and are awarded external research grants and contracts totaling more than \$1,000,000. These funds are critical to advancing our research agenda, supporting our graduate program, and preparing the next generation of leaders in our field. With that said, our research program in all areas continues to grow and be nationally recognized. In the area of active living PRTM faculty are nationally and internationally recognized for the work they have done and continue to do in the areas of physical activity and healthy lifestyles. Our tourism and tourism extension faculty are engaged in regional, national, and international research whose aim is to bring about economic development in rural areas by strengthening rural livelihoods and well-being through tourism and agritourism entrepreneurship.

Faculty working in human dimensions of natural and built environments are engaged in research related to developing procedures to monitor and respond quickly to visitor caused impacts on public lands. They're also looking at rural communities impacted by climate change to figure out what makes some communities more resilient than other communities in dealing with change. Our growing reputation as leaders in these areas of research provides us with a powerful way to reach policy makers and practitioners with new ways of knowing and understanding how our work is critical to and helps provide solutions to the issues of the day, such as human health and well-being, poverty alleviation, climate change, and economic development and rural vitality.

### So, where do we stand?

Our enrollments in our undergraduate and graduate programs for the 2010-2011 year are up.

We have two new distance education degree programs on the books that are exceeding our wildest expectations.

Funding and support for our graduate students is at an all-time high.

Research findings are giving us a place at the policy table in areas such as active living and resource management.

Our extension, engagement, and professional schools are all in high demand.

We believe our future looks strong and we look forward to another exciting and productive year.

## Rho Phi Lambda



There are currently 37 active members that make up Rho Phi Lambda, which is the honorary fraternity for the top students in the Department of Parks, Recreation, and Tourism Management. All of the members pride themselves in participating in conferences, community service, and campus activities.

In the fall, Rho presented at the annual NCRPA Conference held in Raleigh at the Convention Center downtown. The members outdid themselves in preparing and did a great job and speaking and having an effective presentation for all of the people in attendance.

Rho has also started up a seminar series this semester for students to attend fun lectures that gives them insight into the industry and offers an opportunity to network. Also for this upcoming fall we are working on starting a mentorship program between alumni, graduate students, and undergraduate students.

April 1st we held our biggest fundraiser of the year with our silent auctions at the PRTM Alumni and Friends Banquet that was also held at the convention center in downtown Raleigh. We were able to raise around \$660 to use toward professional development in the coming years. All the members did a great job of gathering items for the auction and putting it all together for the event. It was a great year for Rho and the future is very bright.

**President:** Lindsay Pitts  
**Vice President:** Blake Barbee  
**Treasurer:** Ivy Witherington  
**Secretary:** Daniel Ellis  
**CNR Council Rep:** Samantha Marshall  
**Professional Development:** Michael Walker and Jake Anderson



## PGA Golf Management

Serving as representatives for N.C. State, the College of Natural Resources, the PGA Golf Management program and the game of golf, 22 different freshmen make up the 2010-2011 PGM Ambassadors program. Each ambassador takes on a number of vital tasks throughout the year, highlighted by the relationship they create with prospective students who have applied to the NC State PGA Golf Management program for 2011-2012. PGM Ambassadors develop as liaisons to these prospective students by sending several hand-written notes as well as contacting them by phone. Ambassadors attend a variety of student visitation sessions and allow students to accompany them to class or to the golf course. In an effort to make sure that prospective students make an informed decision regarding their college commitments, each of the current freshman assists with the University Open House and the College of Natural Resources Open House in the fall.

A major part of an ambassador's duties includes attending leadership development conducted by main advisor, Susan Colby. In addition to this, students build leadership skills through N.C. State's prestigious Center for Student Leadership, Ethics and Public Service. PGM Ambassador's are also encouraged to apply to be ambassadors for the College of Natural Resources during their time at State. Supplementing this foundation, programs such as Luke Davis' "Get Internship Ready" allow students to learn how an effective golf course employee can make an immediate impact at his or her respective facility.

Each year, freshmen and transfer students are selected to be a part of the PGM Ambassadors program. Students are paired with prospective students based on geographic location and ests outside of the game of golf. PGM Ambassadors serve one year but remain involved with the program throughout their time at NC State. Gabriella Sinkovic, a standout ambassador out of Bowie, MD, states, "The PGM Ambassador program has allowed me to connect with fellow classmates as well as our incoming students that will be joining us next fall. By being a part of the PGM program, I feel like we have all made a positive impact not just for our careers, but for our community as well."

After completion of their first year in the PGA Golf Management program, students will take the skills they have developed in the Ambassadors Program to facilities across the country while on internship. Although their time as official PGM Ambassadors is limited, their ability to be ambassadors for the game of golf has just begun.



Gray Roberts, Evan Moser, Jordan Curlee, Zak Smith, Zach Lawing, Travis Taylor, Brandon Bishop, Russ Piercy, Mark Pak, Michael Burton, Will Robison, Mitch Webb, Blaise Tirpak, Kyle Backers, Kalan Fread, Will Hutchens, Anthony Capra, Sean Fairholm, Paul O'Brien, Nick Funk, Russell Gamble, Ben Nelson, Aaron Hartman, Katie Yelle, Gabriella Sinkovic, Kevin Moskevich, Michael Strickland.

Congratulations,  
Graduates!



# Seniors and Graduates

## SUMMER 2010

### Forest Biomaterials

#### Bachelor of Science in Wood Products

Derek C. Queen  
Dylan L. Styers Jr.

#### Doctor of Philosophy in Forest Biomaterials

Laszlo Horvath

### Department of Forestry and Environmental Resources

#### Bachelor of Science in Environmental Technology

Anup F. Engineer  
Carl T. Hughes  
Marcus D. King  
Thomas J. Nara

#### Bachelor of Science in Natural Resources

Kelvin L. Creech

#### Bachelor of Science in Fisheries, Wildlife, and Conservation Biology

Cameron P. Gatling  
Susan K. King  
Stephanie B. Weaver  
Amos H. Williams  
Miranda J. Wood

#### Master of Forestry

Stephen A. Bishop  
Christopher D. Ketchie

#### Master of Science in Forestry

George F. Khan  
Enying Liu  
Bryanne L. Senor

#### Master of Natural Resources

Sadie G. Camfield

#### Master of Fisheries, Wildlife, and Conservation Biology

Cindy L. Carr

#### Master of Science in Fisheries, Wildlife, and Conservation Biology

Christopher R. DeRolph

#### Doctor of Philosophy in Forestry and Environmental Resources

Michael J. Aspinwall  
William P. Cumbie  
Karnjana Sanglimsuwan  
Jin Xiong

### Department of Parks, Recreation and Tourism Management

#### Bachelor of Science in Parks, Recreation and Tourism Management

Brian M. Archis  
Ryan G. Capp  
Kent B. Copeland  
Manuel Delgado Jr.  
Erin J. Dippel  
Kevin P. Gracey  
Troy M. Hagan  
Rachel R. Kornegay

#### Bachelor of Science in Sport Management

Marquette A. Branch  
Jesse L. Bryant  
Martha K. Bumgarner  
Austin R. Cole  
Minsoo Han  
Ashlee S. Kirk  
Danielle L. Molnar  
Michael D. Morris  
Kyle K. O'Connor  
Cody J. Recchion  
Meredith A. Royal  
Jeffrey P. Ruiz  
Jonathan A. Thomas  
Charles D. Winters

#### Master of Natural Resources

Matthew G. Whitman

#### Master of Science in Natural Resources

Damian Maddalena

## FALL 2010

### Forest Biomaterials

#### Bachelor of Science in Paper Science and Engineering

David M. Chen  
Ashleigh E. Eason  
Brandon W. Jones  
Nicholas P. King  
Daniel K. Lawson  
Andrew M. Moore  
Patrick S. O'Neill  
Zachary D. Putnam  
David J. Rojas-Holmquist

#### Bachelor of Science in Wood Products

Thomas M. Chalk  
Madison B. Green  
Kurt L. Wolff  
Brandon M. Zebrine

#### Master of Forest Biomaterials

Wen-Chih Lo

#### Master of Science in Forest Biomaterials

Javon M. Carter  
Hao Chen

### Department of Forestry and Environmental Resources

#### Bachelor of Science in Environmental Technology

Laura S. Brown  
David A. Bunn  
Ian K. Campbell  
Margaret M. Ernest  
Steven C. Harpham  
Andrew J. Harrison  
Russell B. Hill  
Chris J. Lindley  
Jeanne T. Mann  
Dawn S. Markarian  
Kristen L. McKinley  
Thomas J. Moore  
Ryan A. Peterson  
Andrew W. Potter  
Fuad I. Shaikh  
Sarah E. Smith  
James J. Tschupp II  
Katharine M. Youngs

### **Bachelor of Science in Natural Resources**

John A. Atkinson  
Joseph C. Bradley  
Paul B. Jeffreys Jr.  
Emily E. Koone  
Brittany E. Montgomery  
Vivian L. Penry  
Gena E. Simpson  
Johnathan G. Sutton  
LeeAnna T. Young

### **Bachelor of Science in Fisheries, Wildlife, and Conservation Biology**

Kelly A. Dempsey  
Jacob R. Fields  
Jonathan R. Garrow  
Erik N. Green  
Thomas J. Haynes  
Dakotah B. Hunter  
Zenda J. Iannetti  
Jason M. Kiser  
Travis L. Kornegay  
Andrew J. Lawrence  
Justin B. Lott  
Justin E. Mercer  
Charles M. Nunnery  
Janice S. Parker  
William C. Paugh  
Stephen J. Poland  
Kyle T. Rachels  
Mills W. Reagan  
Brock C. Sloan  
Kyle W. Young

### **Master of Science in Forestry**

Arnis Jurevics  
Emily E. Wear

### **Master of Natural Resources**

Christopher T. Sawyer

### **Master of Science in Natural Resources**

Charles W. Macintyre

### **Master of Science in Fisheries, Wildlife, and Conservation Biology**

Carolyn J. A. Dalrymple  
Katherine E. Golden  
Mark R. Sandfoss  
Brandon L. Sherrill

### **Doctor of Philosophy in Forestry and Environmental Resources**

Jose S. A. Munoz  
Valerie C. Garcia  
Lucy B. Laffitte  
Michelle C. Moorman  
Benjamin C. Smith

Jose L. Zerpa

### **Department of Parks, Recreation and Tourism Management**

#### **Bachelor of Science in Parks, Recreation and Tourism Management**

Kelly S. Burke  
James C. Byars, Jr.  
James C. Carter  
Erin M. Cochran  
John A. Crumpton, Jr.  
Andrew R. Eller  
Laura A. Frey  
Kellee M. Gahan  
Michael L. Green  
Andrew D. Guenther  
Alan W. Hinnant  
Kendall Irby  
Nathaniel A. Irving  
Charles H. James  
Erika K. Knox  
Matthew R. Lanouette  
Jeanne T. Mann  
Joseph R. McLeod  
Corwin K. McNeil  
Jonathan J. Payne  
Nancy T. Ratcliffe  
Megan L. Talley  
Stephen M. Venable  
Jarvis D. Williams

#### **Bachelor of Science in Sport Management**

David M. Chen  
Ashleigh E. Eason  
Brandon W. Jones  
Nicholas P. King  
Daniel K. Lawson  
Andrew M. Moore  
Patrick S. O'Neill  
Zachary D. Putnam  
David J. Rojas-Holmquist

#### **Master of Parks, Recreation and Tourism Management**

Sarah S. Reese  
Stephen M. Sumner Jr.

#### **Master of Science in Parks, Recreation and Tourism Management**

Jonathan F. Page

## **SPRING 2011**

### **Forest Biomaterials**

#### **Bachelor of Science in Paper Science and Engineering**

Samantha C. Ackerly  
Minhazul Arafin  
Patrich M. Buenaventura  
Samuel I. Fipps  
Kristin P. Grant  
Xavier C. Harville  
Colby D. Jackson  
Matthew S. Kollman  
Daniel S. Martin  
Reno H. Mc Gaha  
Douglas L. Mehlenbacher  
Kevin C. Miller  
Nathan M. Moore  
Ryan W. Oliver  
Genevieve L. Pike  
Richard W. Pridgen Jr.  
James R. Pye

#### **Bachelor of Science in Wood Products**

Michael P. Harris  
Jacob D. Mitchell  
Wenjia Zhu

#### **Master of Science in Forest Biomaterials**

Jesse S. Daystar  
Paul M. Jett  
Steven T. Pires  
Zhouyang Xiang

#### **Doctor of Philosophy in Forest Biomaterials**

Ronalds W. Gonzalez  
Maria S. Peresin  
Kelley L. Spence  
Justin O. Zoppe

### **Department of Forestry and Environmental Resources**

#### **Bachelor of Science in Environmental Technology**

Stephen A. Banks  
Andrew B. Blake  
Megan D. Cain  
William C. Dampier  
John M. Diaz  
Elizabeth M. Foote  
Edward J. Gallagher  
Colin E. Geisenhoffer  
Jason R. Hartshorn

Joshua T. Hepler  
Joshua T. Johnson  
Laura A. Johnson  
Sean A. Kennedy  
Joshua L. Kotheimer  
Leigh E. Macemore  
Andrew D. Mceachran  
Christopher C. Mills  
Tyler A. Mills  
Joshua C. Peavey  
Trenton D. Russell  
Zachary E. Schnell  
Della M. Shaw  
Kristin N. Smith  
Amanda R. Standridge  
Taylor C. Young

### **Bachelor of Science in Environmental Technology**

Stephen A. Banks  
Andrew B. Blake  
Megan D. Cain  
William C. Dampier  
John M. Diaz  
Elizabeth M. Foote  
Edward J. Gallagher  
Colin E. Geisenhoffer  
Jason R. Hartshorn  
Joshua T. Hepler  
Joshua T. Johnson  
Laura A. Johnson  
Sean A. Kennedy  
Joshua L. Kotheimer  
Leigh E. Macemore  
Andrew D. Mceachran  
Christopher C. Mills  
Tyler A. Mills  
Joshua C. Peavey  
Trenton D. Russell  
Zachary E. Schnell  
Della M. Shaw  
Kristin N. Smith  
Amanda R. Standridge  
Taylor C. Young

### **Bachelor of Science in Forest Management**

Robert C. L. Conger Jr.  
Ernest Dixon IV  
Austin W. Harriet  
Ian W. Mcinnis  
Joseph C. Phillippi  
Michael E. Powell  
Michael P. Risk  
Nathaniel K. Sellers  
Joel S. Swofford  
William L. Talley Jr.  
Benjamin Z. Webster  
Nathan D. Worsley  
Jessica D. Young

### **Bachelor of Science in Natural Resources**

Travis L. Bolton  
Joseph E. Brewer  
Katlin L. Mooneyham  
Michael T. Neal  
Shirley L. Spruill  
Leeanna L. Wallace

### **Bachelor of Science in Fisheries, Wildlife, and Conservation Biology**

Taurean R. Brown  
Byron J. Currin  
Ryan D. Davis  
Robert B. Delph  
Ian F. Dudley  
Kara E. Dziwulski  
Spike A. Gouge  
Taylor A. Jackson  
Byron M. Levan  
Morgan A. Parks  
Michael S. Rook  
James L. Trammel

### **Master of Science in Forestry**

Christopher L. Dreps  
Anna T. Stout

### **Master of Natural Resources**

Jason A. Briefel  
Helene E. Cser  
Amelia M. Dombrowski  
Jessica D. Knight

### **Master of Science in Natural Resources**

Jesse D. Henderson  
Yekaterina Kuntukova  
Megan E. Malone  
Anne A. Riddle  
Kimberly D. Shumate

### **Master of Fisheries, Wildlife, and Conservation Biology**

Sara R. Marschhauser

### **Master of Science in Fisheries, Wildlife, and Conservation Biology**

Emily B. Blackman  
Brett M. Hartis

### **Doctor of Philosophy in Forestry and Environmental Resources**

Caitlin A. Burke  
Lee K. Rhea

## **Department of Parks, Recreation and Tourism Management**

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### **Bachelor of Science in Professional Golf Management**

Charles A. Becker  
Benjamin J. Cauble  
Jeffrey S. Gill  
Steven C. Houg  
Stephen J. Kerr  
Joseph A. Lecompte  
Justin W. Scott  
Ivy L. Witherington  
Tyler M. Yancey

### **Bachelor of Science in Parks, Recreation and Tourism Management**

Robert J. Anderson  
Caroline B. Baldwin  
Edwin B. Barnett III  
Wesley V. Z. Batchelor  
Lauren E. Bowen  
Erin E. Bradford  
Jordan R. Brown  
Kendall C. Christian  
Mary C. B. Dennison  
Rebecca H. Dooley  
Christopher J. Earp  
Daniel E. Ellis  
Andrew C. Guess  
Caroline M. Gooch  
Elizabeth B. Grandchamp  
Gary B. Gregory Jr.  
Hillman C. Homewood  
James W. Jones  
Chrystal N. Lloyd  
Brooke A. Marangone  
Bradley L. Marcom  
Sean T. Mcbride  
Melissa C. Mcdonald  
Joseph M. Meinzer  
John A. Newson III  
Allison C. Parker  
Lindsay M. Pitts  
Brandon L. Pope  
Katherine A. Roy  
Brian A. Sain  
Alexander O. Smith  
Matthew S. Sprouse  
Geoffrey D. Stephens  
Michael D. Thompson  
Ashley R. Wainer  
Byron M. Weaver  
Amber T. White  
Ivy L. Witherington

### **Bachelor of Science in Sport Management**

Olukorede Aiyegbusi  
 Nishan Akwalia  
 Blake E. Barbee  
 Tia R. E. Bell  
 Colby N. Benfield  
 Samuel T. O. Branch Sr.  
 Lucas B. Carpenter  
 Anthony M. Casper  
 Robert G. Chamra  
 Miles J. K. Clark  
 Claudia L. Cooper  
 Gregory J. Dame  
 Andrew M. Fearnow  
 Mary G. Finch  
 Harrison M. Friedland  
 Lauren E. Gayden  
 Charles M. Gearhart  
 Jeffrey R. Gonza  
 Brian R. Grant  
 Lindsey R. Hall  
 Jonathan L. Hicks  
 Trevor G. Hudson  
 Marcus A. Jones  
 Ryan A. Jones  
 Candice A. Kasischke  
 Cameron L. Ketner  
 Thomas M. Ladew  
 Logan M. Livingstain  
 Andrew R. Medearis  
 Patrick J. Meiburg  
 Albert C. O'Connell  
 Reginald L. Parks Jr.  
 Sommerlyn D. Paschal  
 Jordan R. Pettit  
 Courtney L. Reilly  
 William P. Reynolds  
 Core N. Rindone  
 Harrison A. Ritcher  
 James W. Robinson  
 Jeramie F. Ryan  
 Michael J. Ryan  
 Christopher R. Schaeffer  
 Bradley K. Smith  
 Stephen W. Spangler  
 Brandon S. Stump  
 Daniel R. Stump  
 Kristin C. Tart  
 Lara C. Terry  
 Heath P. Walker  
 Ashley L. Williams  
 Daniel W. Williams

### **Master of Science in Parks, Recreation and Tourism Management**

Liana B. Dern  
 Kristin L. Fowler

### **Master of Science in Natural Resources**

Christopher D. Kollar

### **Master of Parks, Recreation and Tourism Management**

Kyle T. Adams  
 Stephen A. Mellor  
 Daniel J. Popik

# THE PINE-TUM

2010-2011



# CNR

NC STATE UNIVERSITY

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