

Virginia Tech's Involvement in Senegal Spans 14 Years

Virginia Tech has become a comprehensive institution of international prominence, successfully integrating a global perspective into the instruction, research, and outreach elements of its mission as a land-grant institution. This success has come from Virginia Tech's continuing involvement in international projects. For the past 14 years, Virginia Tech, with the help of its Office for International Research and Development, has served as a leader for several major projects in the West African country of Senegal. These projects include the Senegal Reforestation Project, the Community-Based Natural Resource Management Project, and the Development of Biopesticides for Grasshopper and Locust Control in Sub-Saharan Africa Project.

Senegal Reforestation Project

Like its neighboring countries in the Sahel, Senegal was hit by a serious drought in the late 1960's. Since that time, Senegal's ecology has dramatically changed. Average annual rainfall and agricultural production decreased, while the country's forest resources were disappearing. The Senegal Forest Service had focused on reforesta-

tion activities, but they had never sought to involve the private sector. That is, until the Senegal Reforestation Project. This effort grew out of a concern to mitigate the effects of desertification in the Sahelian country.

Virginia Tech served as the lead university for this project, working with Senegal's Ministry of the Environment and Protection of Nature (MEPN), the South-East Consortium for International Development (SECID), and Louis Berger International to assist the government of Senegal in overcoming the rapid and serious deterioration of land and forest resources. Lasting from 1987 to 1995, the project was the largest USAID-funded project in Senegal at the time.

The Senegal Reforestation Project was designed to help promote private investment in tree planting and to support the Forest Service in handling new policies and



Private investment in tree planting was a very important component of the Senegal Reforestation Project, which was headed by Virginia Tech.

fulfilling its newly defined role. The focus of the project was on encouraging farmers, local communities, and businessmen to plant trees for short and long-term economic benefits rather than primarily for fuel wood. By providing opportunities for economic benefits, the project's approach mo-

See **SENEGAL**, Page 6

Perspectives

From the desk of Dr. S.K. De Datta, Director of the Office of International Research and Development (OIRD), Outreach Division, Office of the Provost, and Associate Dean of the College of Agriculture and Life Sciences



Starting this year, the Office of International Research and Development has actively branched out to the cutting edge of science and technology. Over the past ten years, OIRD has managed projects and programs that have been primarily driven by donors. These projects and programs covered all three missions of the land-grant university—research, education, and technical assistance (service). With these land-grant missions, opportunities for OIRD/Virginia Tech came in the areas of natural resource management, agriculture and food security, environment, business incubation, and Integrated Pest Management (IPM).

This year, for the first time, OIRD is aggressively pursuing opportunities in other areas: such things as using biotechnology tools to develop germplasms with resistance to prevalent pests such as insects, diseases, nematodes and weeds. In choosing these pests, utmost care is taken to address only those pests which

are widespread in a particular region and on which one can have a huge impact if the problem is tackled using biotechnology tools. Care must be exercised where other traditional IPM approaches have made limited or no progress. With the encouragement and in some instances, the insistence of USAID, faculty will use biotechnology tools to mitigate difficult-to-control pest problems while involved in one of the global projects which OIRD manages (IPM CRSP). These technologies will improve the chances of success of IPM interventions in targeted crops—primarily vegetables and fruit trees.

Another area of cutting-edge science that OIRD/Virginia Tech is currently pursuing is Information Technology (IT). Virginia Tech has rich resources in both knowledge and technology in the IT field. The world has learned to appreciate that the digital divide between developed and developing countries is huge and still growing at an unacceptable rate. Donor communities realize that they need to intervene in a major way to narrow this gap.

See **PERSPECTIVES**, Page 5

Notables *Faculty Involvement Around Campus*

College of Agriculture and Life Sciences

Jean M. Cobb from the Department of Biochemistry and the Pesticide Residue Laboratory, **Patricia A. Hipkins** from the Department of Entomology and Virginia Tech Pesticide Programs, and Entomology Professor **Donald E. Mullins** visited Mali in West Africa early in 2001 as part of an ongoing USAID-funded project, IPM CRSP. The team's activities included providing technical assistance to the Environmental Quality Laboratory (EQL), developing a pesticide safety program for Malian farmers and assessing pesticide distribution and use patterns in the horticultural crop production region.

College of Architecture and Urban Studies

Professor **Joe Rees**, Director for the Center for Public Administration & Policy, presented a paper in July 2001 entitled "Physician: Manage Thyself. A History of Self Regulation in the American Hospital Industry," at a conference at Central European University in Budapest, Hungary. The conference was sponsored jointly by the Law & Society Association and the Research Committee on Sociology of Law of the International Sociological Association. • Five faculty members visited Europe over the summer to teach students involved in the Interdisciplinary Environmental Study Abroad Program. This program is sponsored by University Units, which is affiliated with the School of Public and International Affairs. Political Science Professor **Richard Rich** led the first two weeks of the program in Sweden, Denmark, the Netherlands and Germany, as the group studied urban environmental and land use issues. **Waldon Kerns**, Professor of Agriculture and Applied Economics, taught a 3-credit hour class on Environment and Sustainable Development Economics in Riva San Vitale, Switzerland. Kerns, Agricultural and Applied Economics Assistant Professor **David Lamie**, and Urban Affairs and Planning Assistant Professor **Jesse Richardson** led a study trip to the Catalan area of Southern France and Northern Spain, where students studied urban and rural development issues. Back in Switzerland, Crops and Soils Environmental Science Professor **Jim McKenna** taught a 3-credit hour class on World Crops and Cropping Systems and Richardson taught a 3-credit hour class on Land Use and Environment. McKenna and Kerns also led tours of agricultural experiment stations in England and Ireland, respectively. • **Mehdi Setareh**, Professor of Architecture, presented a paper entitled "Development of a Collaborative Design Tool for Structural Analysis in an Immersive Virtual Environment" at the 7th International Building Performance Simulation Association Conference on August 13 through 15 in Rio de Janeiro, Brazil. The paper's co-authors are Professor **Doug A. Bowman** and **Pradeep Tumati** from the Computer Science Department. The paper focuses on the results of an on-going collaborative research effort between the Departments of Architecture and Computer Science that is being funded by the National Science Foundation.

College of Arts and Sciences

Four members of the Virginia Tech Political Science Department participated in the International Studies Association Hong Kong

Conference on July 26 through 28. **Douglas A. Borer** presented two papers, "Beyond Containment and Engagement: The WTO's Impact on the Use of Economic Statecraft in U.S. Foreign Policy" and "International Affairs Online: Challenges of Teaching a Global Classroom." He also chaired the panel, "International Affairs Online: Global Education Using the Internet." **Timothy W. Luke** presented a paper entitled "International Affairs Online: The Challenges of Building a Global Online Master's Program" and **Scott G. Nelson** presented a paper entitled "Globalism, Justice, and Democracy: John Rawls' Law of Peoples and the Disciplinary Directives of IR." Nelson also chaired and served as the discussant on the panel "Cultures of Resistance and Globalization." **Charles L. Taylor** presented a paper titled "The Globalization of Intrastate Conflict and Cooperation." • Peters Professor of Chemistry, **Neal Castagnoli, Jr.**, and **Kay Castagnoli**, Senior Research Scientist at the Harvey W. Peters Research Center, were invited speakers at a conference on Neurotoxicity in Pucon, Chile on March 16 through 19. "Mechanisms for Neurodegenerative Disorders, Alzheimer, Dystonia, ALS and Parkinson's Disease: Differential Diagnosis. Present and Future Treatments" was sponsored by the Department of Molecular and Clinical Pharmacology at the University of Santiago, Chile. Professor Castagnoli's lecture described the "Effects of chronic (R)-deprenyl treatment on neostriatal DA levels in the MPTP treated C57BL/6 mouse model of Parkinson's disease" and Kay Castagnoli's lecture described "Neuroprotection in the C57BL/6 mouse model of Parkinson's disease by constituents of tobacco and tobacco smoke". In addition, Neal Castagnoli, Jr. has accepted an invitation to become a member of a Regional Directorate to help coordinate the establishment of the Society for the Study of Neurotoxicity in North America. • For two weeks in July, **Gary Downey**, Professor of Science and Technology Studies, co-taught a two-week version of an Engineering Cultures course at the International Institute for Women Engineers (IIWE) in Paris, France. Funded by a grant from the U.S. National Science Foundation and hosted by EPF: Ecole d'Ingénieurs, the event brought together 30 outstanding female engineering students from all over the world to learn about the global dimensions of engineering practice and their implications for women. The purpose of Engineering Cultures is to help students become global engineers by learning to work with people who define problems differently than they do. The course explores how engineering knowledge varies significantly around the world. • **Mark Gifford**, Associate Professor of Philosophy, presented a paper entitled "The Role of Functions in Aristotle's Ethics" at an international conference on Ethics, Psychology and Biology in the Ancient Greek Tradition, which was held in Pyrgos, Greece in July. As an invited speaker, he also presented a paper entitled "Philosophy, Rhetoric, and Wisdom in Plato's *Phaedrus*" at an international conference on The Philosophy of Communication held in Rhodes, Greece in August. • **Len Hatfield**, **Dan Mosser**, and **Ernest W. Sullivan, II**, Professors in the Department of English, presented a paper, "'Identify the Watermark, Hal': The Gravell Watermark Archive in 2001," during the conference of the Early Book Society at University College Cork in Ireland on July 14 through 18. The Thomas L. Gravell Watermark Archive is part of the Virginia Tech Center for

Notables *Faculty Involvement Around Campus*

Applied Technologies in the Humanities. • **Sharon P. Johnson**, Assistant Professor of French in the Department of Foreign Languages and Literatures, was elected to serve on the Editorial Board (Comité Scientifique) of the 9th Annual International Conference, GLAT 2002, Groupe de Linguistique Appliqué aux Télécommunications. The theme of the May 2002 conference, organized by the Ecole Nationale Supérieure des Télécommunications de Bretagne, is “Les langues spécialisées et besoins spécifiques: théorie et pratique.” • Associate Professor of Chemistry **Timothy E. Long** presented a lecture at the “Polymers in the Third Millennium” conference on September 1 through 6 in Montpellier, France. The title of his lecture was “Synthesis of Star-Shaped Polymers: A Search for New Constellations.” The conference was sponsored by the Journal Polymer International. Long is an invited member of the Executive Advisory Board for this international scientific journal, which is based in the United Kingdom. • Chemistry Professor **Harold McNair** was invited as a plenary lecturer and member of the scientific committee to the 4th International Symposium on Pharmaceutical Analyses on June 3 through 6 on the Aeolian Island, Lipari in north Sicily, Italy. McNair presented a lecture entitled “Recent Advances in HPLC,” and he chaired a technical session and presented two student posters. McNair also presented a plenary lecture to the annual meeting of the Discussion Group of the German Chemical Society, “Chromatographie” at the University of Bayreuth in Germany on October 8 through 10. • **Richard E. Nance**, Director of the Systems Research Center and RADM John Adolphus Dahlgreen Professor in the Department of Computer Science received a continuation of his appointment for a second year as a Visiting Professor in the Department of Information Systems and Computing at Brunel University in Uxbridge, UK for the 2001/2002 academic session. • In June and July 2001, **Uwe Tauber**, Assistant Professor of Physics, visited several institutions in Germany, including the Technical University of Munich, the Ludwig-Maximilian University at Munich, the Heinrich-Heine University at Dusseldorf, the University of Essen, and the Martin-Luther University at Halle. He gave presentations about his ongoing research projects at several of the universities. • **Doris T. Zallen**, Professor of Science and Technology Studies, presented a public lecture at the Wellcome Trust Centre for the History of Medicine at University College London on July 17. She also was a coorganizer of the Witness Seminar on “Genetic Testing,” which was held July 13 at the Wellcome Trust Centre.

College of Engineering

C. Gene Haugh, Professor of Biological Systems Engineering and a Fellow of ASAE, received the Carl-Heinrich-Dencker Honorary Award 2001 of the Verein zur Förderung der Landtechnik Bonn from the Dean of the Faculty of Agriculture of the Rheinische Friedrich-Wilhelms-Universität (RFWU) Bonn on July 6 in Bonn, Germany. This annual award was given in recognition of Dr. Haugh’s contributions to the German-American partnership in research and teaching and his cooperation with the department of Agricultural Engineering at RFWU Bonn in the field of physical properties of biological materials. Haugh also presented a paper,

“Agricultural/Bio-Engineering Departments in the United States,” at the Internationales VDI-MEG Kolloquium Nr. 35 held on July 5 and 6 in Bonn, Germany. • **Erdogan Kiran**, Professor of Chemical Engineering and Department Head, was the invited Plenary Lecturer at the 6th Conference on Supercritical Fluids and Their Applications, which was held in Maiori (Amalfi Coast, Salerno) in Italy on September 9 through 12. His presentation was entitled “Pressure-induced miscibility and kinetics of phase separation in polymer solutions: Microstructured polymers and blends.” Kiran has been active in this area for more than 15 years and his work is internationally known. • **Kenneth L. Reifsnider**, Professor in the Department of Engineering Science and Mechanics, was a visiting scholar at the Science University of Tokyo (SUT) during the month of November. An internationally recognized scholar in the areas of composite materials and fatigue, Reifsnider will lecture at SUT, Kitami Institute of Technology, and the Japan Society of Composite Materials on fuel cells and other advances in the field of composites.

College of Human Resources and Education



Octavia Madison-Colmore (center), Assistant Professor in the Department of Education Leadership and Policy Studies’ Counselor Education Program, poses with students from the Tainan Women’s College of Arts and Technology in Taiwan. Madison-Colmore and doctoral student Vanessa Cooke conducted a lecture series on Substance Abuse and Human Immunodeficiency Virus (HIV) and performed research while visiting the college.

David Alexander, Professor and Department Head of Educational Leadership and Policy Studies, co-directed the Joan L. Curcio International Women’s Leadership Conference with **Claire Cole Vaught Curcio**, Professor Emeritus of Counselor Education, and **Janet Johnson**, Dean of College of Human Resources and Education. The conference was held at St. Hilda’s College, Oxford University, from July 28 through August 3. **Peggy Meszaros**, former Provost of Virginia Tech, and **Kusum Singh**, Professor and Program Area Leader of Educational Research, were among the invited international speakers. The goals of the conference were to provide an opportunity for professional educators to network and share experiences in the cultural and historical setting of Oxford University. Alexander also co-directed the Second Annual International Perspectives on Quality in Higher Education with **Don Creamer** and **Steve Janosik**, Professors of Higher Education and Student Affairs. The event was held at Exeter College, Oxford

Notables *Faculty Involvement Around Campus*

University from July 21 through 28. International perspectives on quality and other issues in higher education by educational leaders from Europe, Great Britain, and the United States formed the cornerstone of the conference. Alexander also served as co-director for the Twelfth Annual Leadership and Ethics Conference, which was held at Exeter College, Oxford University from

March 17 through 24. One of the goals for this conference is the study of the English educational system in relation to education reform issues in the United States, as well as encouraging participant interaction to establish networks. Alexander was co-director for the Educational Leadership Conference, The China Experience 2001, which was held in Beijing and Xian, China from July 13 through 16. This conference focused on the cultural heritage, modernization process, and educational development of the world's most populous country. • **Octavia Madison-Colmore**, Assistant Professor in the Department of Education Leadership and Policy Studies' Counselor Education Program, and doctoral student **Vanessa**

Cooke were selected to participate in Morehead State University's (MSU) Academic Scholar's Program. This program provides opportunities for scholars from MSU and across the nation to lecture, conduct research, and provide public performances at colleges and universities in Asia. Madison-Colmore and Cooke were invited to lecture and conduct research at Tainan Women's College of Arts and Technology in Taiwan on May 14 through 31. Nearly 300 undergraduate students participated in the lecture series on Substance Abuse and Human Immunodeficiency Virus (HIV) and 200 students volunteered to participate in a research study. Using the Core Alcohol and Drug Survey, Madison-Colmore and Cooke examined the extent of substance abuse among the participants at this particular college. In addition to teaching and conducting research, they joined Tainan Woman's College President Teug-Chi Kuo and faculty and staff in the graduation procession, which took place on May 15. • **Don Creamer**, Professor of Higher Education and Student Affairs, made three international visits during the summer and early fall of 2001 to establish collaborative relations with colleagues in Europe in an effort to expand and enrich the curriculum in Higher Education and Student Affairs. These contacts and collaborative agreements will yield mutual benefit, but should directly influence what is taught in the department's doctoral programs. Creamer hopes to extend this outreach to include making presentations to the European Association for Institutional Research in the fall of 2002 at its meeting in Prague. • **Thomas H. Hohenshil**, Professor of Counselor Education, was recently appointed to the editorial board of *Career Development International*. This professional journal is published in England and has regional offices in North America, East Asia, and Japan, and is offered in both hard copy

and online formats. The journal deals with management, career development, and personnel issues in business and government. **Brian J. Mihalik**, Professor of Hospitality and Tourism Management and Department Head, was a Congress Session Track Chair for Global Sustainable Development, and presented two papers at the Tenth Annual International Management Development Association World Business Congress in Zagreb, Croatia on July 4 through 8. Mihalik presented "The Development of an Agricultural-Tourism Marketing Strategy: A Case Study of Virginia" authored by P. Couture, A. Blacka and B. Mihalik and "An Examination of the Effects of Motivation and Satisfaction on Loyalty" authored by Y. Yoon, M. Uysal and B. Mihalik. On June 19, Mihalik provided welcoming comments to the 2001 "Economic Impact of Tourism Symposium" in Abha, Saudi Arabia. In the audience were His Royal Highness Prince Khalid Al Faisal, Governor of the Asir Province; His Royal Highness Prince Sultan Bin Salman, General Secretary of the Supreme Commission of Tourism in Saudi Arabia; and His Royal Highness Prince Bandar Bin Saud, Head of the Board of Trustees for the Prince Sultan College for Tourism and Hotel Sciences. On June 20, Mihalik made a presentation entitled "Introduction to the Economic Impacts of Tourism" at the same event. Mihalik and **Muzaffer Uysal**, Professor of Hospitality and Tourism Management, conducted a preliminary academic program and facility site review for the Prince Sultan College (PSC) of Tourism and Hotel Sciences in Abha, Saudi Arabia. Their visit was part of a multi-year assistance grant from Prince Sultan College to the Virginia Tech Hospitality and Tourism Management Department. One component of this grant will be to assist the faculty at PSC in preparing for a formal accreditation review. **Mike Olsen** and **Ken W. McCleary**, Professors of Hospitality and Tourism Management, also visited the college in April to review the curriculum and other issues. • **William Dee Nichols**, Associate Professor in the Department of Teaching and Learning, was the co-chair and first author/presenter of a paper at a symposium on "Emotional and Cognitive Aspects of Learning at School" at the European Association for Research on Learning and Instruction's (Earli) 9th Annual Conference in Fribourg, Switzerland, which was held from August 28 to September 1. Nichols also presented his paper at the University of Education in Ludwigsburg, Germany. His presentation was based on three years of collaborative research with his colleagues at Ludwigsburg. • **Jennifer A. Sughrue**, Assistant Professor of Educational Leadership and Policy Studies, served as the Principal Investigator for a 2-year grant, "Incorporating Research to Encourage Ongoing Development and Evaluation of Malawi Basic Education Policy and Programs," which is funded by the Association Liaison Office for University Cooperation in Development through the American Council of Education. This is a collaborative effort



Hospitality and Tourism Management faculty members **Ken W. McCleary** (second from left) and **Mike Olsen** (fifth from left) visited Prince Sultan College for Tourism and Hotel Sciences in Saudi Arabia.

and online formats. The journal deals with management, career development, and personnel issues in business and government. **Brian J. Mihalik**, Professor of Hospitality and Tourism Management and Department Head, was a Congress Session Track Chair for Global Sustainable Development, and presented two papers at the Tenth Annual International Management Development Association World Business Congress in Zagreb, Croatia on July 4 through 8. Mihalik presented "The Development of an Agricultural-Tourism Marketing Strategy: A Case Study of Virginia" authored by P. Couture, A. Blacka and B. Mihalik and "An Examination of the Effects of Motivation and Satisfaction on Loyalty" authored by Y. Yoon, M. Uysal and B. Mihalik. On June 19, Mihalik provided welcoming comments to the 2001 "Economic Impact of Tourism Symposium" in Abha, Saudi Arabia. In the audience were His Royal Highness Prince Khalid Al Faisal, Governor of the Asir Province; His Royal Highness Prince Sultan Bin Salman, General Secretary of the Supreme Commission of Tourism in Saudi Arabia; and His Royal Highness Prince Bandar Bin Saud, Head of the Board of Trustees for the Prince Sultan College for Tourism and Hotel Sciences. On June 20, Mihalik made a presentation entitled "Introduction to the Economic Impacts of Tourism" at the same event. Mihalik and **Muzaffer Uysal**, Professor of Hospitality and Tourism Management, conducted a preliminary academic program and facility site review for the Prince Sultan College (PSC) of Tourism and Hotel Sciences in Abha, Saudi Arabia. Their visit was part of a multi-year assistance grant from Prince Sultan College to the Virginia Tech Hospitality and Tourism Management Department. One component of this grant will be to assist the faculty at PSC in preparing for a formal accreditation review. **Mike Olsen** and **Ken W. McCleary**, Professors of Hospitality and Tourism Management, also visited the college in April to review the curriculum and other issues. • **William Dee Nichols**, Associate Professor in the Department of Teaching and Learning, was the co-chair and first author/presenter of a paper at a symposium on "Emotional and Cognitive Aspects of Learning at School" at the European Association for Research on Learning and Instruction's (Earli) 9th Annual Conference in Fribourg, Switzerland, which was held from August 28 to September 1. Nichols also presented his paper at the University of Education in Ludwigsburg, Germany. His presentation was based on three years of collaborative research with his colleagues at Ludwigsburg. • **Jennifer A. Sughrue**, Assistant Professor of Educational Leadership and Policy Studies, served as the Principal Investigator for a 2-year grant, "Incorporating Research to Encourage Ongoing Development and Evaluation of Malawi Basic Education Policy and Programs," which is funded by the Association Liaison Office for University Cooperation in Development through the American Council of Education. This is a collaborative effort

Notables *Faculty Involvement Around Campus*

between the University Partners to increase human capacity and research in the Institutes of Education in Malawi. Sughrue also taught an introductory Educational Research class in Malawi during the summer of 2001 and attended the Association of Liaison Offices' Annual Conference in Washington, D.C., to give a presentation on the Malawi Project in August. • A new book by Professor of Educational Research and Evaluation **Melanie Uttech** was released in September. The book, "Imaginar, Facilitar, Transformar" (Imagine, Facilitate, Transform), published by Editorial Paidós, stems from applied research in Mexico and is based upon the premise that even teachers with no resources, working in the most marginalized regions of Latin America, have the opportunity and power to facilitate the development of students' social imaginations and academic skills so that they can eventually convert their visions into reality and transform their worlds. The book will be distributed in every Spanish-speaking country except for Cuba.

College of Natural Resources

Several faculty members in the Department of Forestry made presentations at a conference of the International Union of Forestry Research Organizations held in August in Vancouver, British Columbia, Canada. The conference addressed the theme "Forest Modeling for Ecosystem Management." **Harold Burkhart**, University Distinguished Professor and Department Head, delivered a lecture on "Growth and yield models for sustainable management of loblolly pine." Senior Research Associate **Ralph Amateis**, Postdoctoral Research Scientist **Mahadev Sharma**, and Burkhart presented results on "Using miniature scale plantations as experimental tools for assessing sustainability issues." Assistant

PERSPECTIVES Continued from Page 1

Virginia Tech's strong engineering school and computer science programs are well suited to take on the challenges of international IT issues. Some of these IT technologies developed by Virginia Tech's faculty and students are appropriate for developing regions of the world. In addition, Virginia Tech graduate students can take advantage of these emerging opportunities for graduate research.

With this in mind, OIRD, with strong support from the International Institute of IT headed by Dr. Leonard Ferrari, has submitted two international IT proposals for USAID Mission funding in Egypt. Faculty members from the Colleges of Engineering, Human Resources and Education, Arts and Sciences, Architecture, and Agriculture and Life Sciences participated in the proposal writing for one of these projects. The Blacksburg Electronic Village (BEV) and the Vice President's IT office were also contributors to these efforts. In both of these proposals, it was private sector groups like Deloitte Touche and Pal-Tech which invited Virginia Tech to join the two consortia to bid for the IT projects with considerable donor funding. We at OIRD are determined to engage the entire university's expertise and experience in IT in the international arena. In every effort, OIRD wishes to bring in the substantial resources of Virginia Tech and contribute to Virginia Tech's goal of becoming a top-30 research university with an excellent global standing.



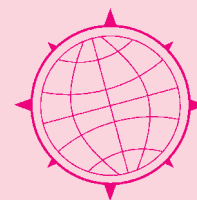
Professor **Philip Radtke**, with coauthors from the University of Idaho, offered "Reverse-engineering forest growth models to recover data sets for further analysis." Radtke made a second presentation with a collaborator from the University of Minnesota on "Evaluating uncertainties in model predictions for long-term, large-scale ecosystem management." Associate Professor **Stephen Prisley** gave a lecture on "Spatial harvest and habitat scheduling for sustainable forest management." • **W. G. Glasser**, Professor and Associate Dean for Research and Graduate Studies in the Department of Wood Science and Forest Products, presented the plenary lecture, "Composites With Wood Fibers and Wood Constituents," at the Symposium und Fachausstellung "Holz Innovativ," which was held in Rosenheim, Germany on March 7 through 8.

College of Veterinary Medicine

Biomedical Sciences and Pathobiology Professor **Tom Inzana** of the Center for Molecular Medicine and Infectious Diseases gave two presentations at a Symposium entitled "Molecular taxonomy and pathogenesis of the bacterial family Pasteurellaceae," which was held August 30 and 31 at the Royal Veterinary and Agricultural University in Copenhagen, Denmark. The papers were entitled "Molecular investigations of polysaccharide antigens in virulence and pathogenesis of *Actinobacillus pleuropneumoniae*" and "Molecular investigations of polysaccharide antigens in virulence and pathogenesis of *Haemophilus somnus*." The focus of this meeting was to review current research on the taxonomy and virulence properties in the bacterial family Pasteurellaceae. • **Michael Murray**, Professor and Adelaide C. Riggs Chair in Equine Medicine at the Marion duPont Scott Equine Medical Center, was a speaker at the 23rd Bain Fallon Lecture Series of the Australian Equine Veterinary Association in Yeppoon, Australia on July 23 through 27. Murray presented 10 lectures on equine gastroenterology.

The University Abroad is prepared by the Faculty and Staff of the Office of International Research and Development (OIRD) at Virginia Tech, Outreach Division of the Office of the University Provost.

S.K. De Datta, Director, OIRD
1060 Litton-Reaves Hall
Blacksburg, VA 24061-0334 USA
Tel: (540) 231-6338
Fax: (540) 231-6741
E-mail: dedatta@vt.edu
<http://www.oird.vt.edu>



OIRD

Please direct submissions to the staff editor: Susan Light
E-mail: sulight@vt.edu

The Office of International Research and Development would like to thank all those individuals who submitted information to the University Abroad Newsletter. Regrettably, some submissions could not be included due to space constraints.

SENEGAL Continued from Page 1

tivated the private sector to participate in forestry-related efforts. The project's goal was to have a positive impact on the environment, economy and agricultural production of Senegal.

Virginia Tech's College of Natural Resources provided leadership in developing, arranging, and conducting training programs for the project. In addition, the college provided advice and technical assistance on the ground in Senegal for nursery operations, tree planting, forest policies, a media campaign, and production and marketing strategies for tree crops products. Faculty members from the college worked closely with the institutions and organizations involved to develop and implement training programs that built on the background of project trainees and helped prepare them for their work in Senegal.

At project's end, awareness of reforestation benefits and the technical knowledge needed to achieve these benefits encouraged rural Senegalese to carry out tree planting using their own resources.

Community-Based Natural Resource Management Project

The \$21 million Community-Based Natural Resource Management Project (CBNRM) was designed to build on the successful experiences of the Senegal Reforestation Project. Virginia Tech also led this seven-year project, which began in 1994, and the SECID served as the prime contractor.

The CBNRM Project assisted rural communities throughout Senegal in identi-

fying, planning, and managing natural resources for sustained economic growth. This project is viewed as a cutting-edge environmental management effort because of its community-based approach. Through the use of dynamic and versatile land-use designs executed with community participation, the CBNRM Project has served as a model for effective NRM strategies for countries throughout the region.

The project's decentralized land use planning and management processes provided an opportunity for socioeconomic development, while responding to the degradation of agricultural and ecological conditions. The land use planning involved training villagers to conduct natural resource assessment/inventory exercises and formulate land-use management plans. With the analysis and design assistance of agronomic and soil science experts, villagers implemented natural resource management projects.

The establishment of a Natural Resource Management (NRM) Committee in each targeted rural community was the central element of the project's strategy. The committees were composed of community leaders who were provided extensive training in NRM planning, leadership, communication and financial management. These efforts succeeded in providing the means to manage not only community-owned resources, but also to stimulate private sector initiatives.

Poor NRM practices, such as the progressive removal of tree and plant cover, led to serious erosion and degraded soil in much of Senegal. The adoption of im-

proved NRM technologies is reversing this trend, with the most obvious benefit being increased agricultural production.

Development of Biopesticides for Grasshopper and Locust Control in Sub-Saharan Africa Project

Virginia Tech leads the Development of Biopesticides for Grasshopper and Locust Control in Sub-Saharan Africa Project funded by USAID's Africa Bureau. Nine institutions from the United States and Africa, including two in Senegal, are carrying out research activities to develop pest control products from the natural diseases of grasshoppers and locusts. Such natural products are specific to grasshoppers and locusts and will someday provide environmentally safe alternatives to the synthetic chemical pesticides that are sprayed over large areas of Africa.

Senegal's national plant protection service (DPV) is responsible for discovering insect pathogens in the field, isolating them in the laboratory, and testing their ability to kill grasshoppers. DPV has also led project efforts resulting in biopesticide registration guidelines being adopted for nine West African countries. Locustox, an ecotoxicology laboratory devoted to measuring environmental impacts of pesticides used for locust control in Sahelian Africa, has developed tests to evaluate the effect of possible microbial control agents on nontarget organisms, such as terrestrial and aquatic invertebrates, fish, and lizards.

Through its involvement with international projects such as those in Senegal, Virginia Tech is on its way to becoming a global leader among land-grant institutions.

Virginia Tech does not discriminate against employees, students, or applicants on the basis of race, sex, disability, age, veteran status, national origin, religion, political affiliation, or sexual orientation. Anyone having questions concerning discrimination should contact the Equal Opportunity/Affirmative Action Office.

VT/016/0801/3.4W/220762

Editor, *The University Abroad*
Office of International Research and Development
Virginia Tech
Blacksburg, VA 24061-0334 U.S.A.
Phone: (540) 231-6338
Fax: (540) 231-6741
Web: www.oird.vt.edu
E-mail: dedatta@vt.edu
Forwarding Service

Non-Profit Org.
BULK MAILING
U.S. Postage
PAID
Blacksburg, VA 24060
Permit No. 28