Craig searching for pirate Blackbeard’s ship

By Sally Harris

James Craig is excited that the grains of gold he is studying most likely came from Blackbeard’s flagship, but the gold probably didn’t belong to Blackbeard, one of the most feared pirates of all times.

Craig is one of a group of scientists studying the remains of a ship found off the coast of North Carolina after the hurricanes of 1996 uncovered the ship from the sand. Believed to be Blackbeard’s Queen Anne’s Revenge, the ship is yielding all sorts of items for study, including several cannon, barrel rings, pewter platters, and the grains of gold, that will help determine if it is indeed Blackbeard’s flagship.

Craig has been studying gold for many years and also has studied what happens to metals when they are exposed to reducing agents. So he has been working with the North Carolina Division of Cultural Research’s Underwater Archaeology Unit to study the variety of artifacts—precious and base metals—that have been lying on the ocean floor for over 250 years to determine if they could have been on Blackbeard’s ship. “These objects have survived burial with only minimal alteration and are easily recognized and analyzed,” Craig said. He is studying the artifacts with John E. Callahan of Appalachian State University’s geology department and J. William Miller of the Environmental Studies Department of the University of North Carolina at Asheville.

Blackbeard’s ship stuck on a sandbar and went down in that area in 1718, but Blackbeard and his crew escaped on his other ships. He was later caught and beheaded and his head hung on a yardarm. Craig said, “Legend is that his body swam around the ship three times after his head was cut off.”

The items recovered from the ocean at the location of the wreckage are encrusted and stuck together so that they have to be cleaned before they can be studied. A prize find is another cannon as Blackbeard’s ship was said to have had as many as 40 cannon aboard. So far, the researchers have recovered more than 20 of the big guns. They also have found great quantities of lead shot of a variety of sizes, evidence of its wide use of pistols and all types of cannon.

“The shot has developed protective coating of lead hydroxy carbonate, which have minimized saltwater corrosion in oxidizing environments,” the scientists said. “Other cemented clusters of lead shot and sand contain galena and small grains of pyrite, evidencing long burial under reducing conditions.”

Up to this point, Craig said, the archeologists have found nothing that does not fit the time, place, and the ship that would have been Blackbeard’s. A number of researchers are working at first to be the date 1730, which would have been too recent for the pirate ship; but the number turned out to have to do with the weight of the gun, not a date. Similarly, some of the researchers are studying what little wood was left to determine the year in which it was cut, another date that could prove or disprove the ship as Blackbeard’s. Several items—the tin-based pewter platters, a medical syringe containing mercury used in treatments, and the cannon—are from the right time period to be from Blackbeard’s sunken ship.

The study of the ship’s remains so excited Craig that he undertook the strenuous process of becoming scuba certified so he could visit the underwater site himself. Now he is studying two aspects of the wreckage—the gold grains and the corrosion of the underwater metal to determine how long it will survive. He is looking at the lead shot to determine what minerals are formed when the lead reacts with the seawater, forming a protective coating. These corrosions are forming...

(See CRAIG in 4)

Meszaros returning to CHRE faculty

By Larry Hincker

Provost Peggy S. Meszaros has announced that she will return to the faculty in the College of Human Resources and Education as an endowed professor for human development effective September 1.

“I have been provost for more than five years and during that time we have accomplished all that the university get back on the track to excellence after the lean years of the early 90s. We have solidified our focus, remained among the world’s best engineering schools, and emerged as a leader in the biotechnology and information-technology fields. I think Virginia Tech is now ready to enter a new phase of building for the future, poised to reach the top rungs of academic excellence. It’s time for me to find new challenges in my discipline helping children, families, and communities,” Meszaros said.

“Peggy challenged the university community to reach new levels of excellence and at the same time was a force for collegial cooperation and faculty and staff involvement. She has served and led the institution with distinction,” President Charles W. Steger said.

Meszaros oversaw efforts to re-energize the research agenda finding new opportunities for faculty members through the ASPIRES program, a kind of pump-priming effort sponsoring first-stage research grants. Every dollar spent on ASPIRES grants returned six dollars of sponsored research. She was personally charged with developing the university academic agenda—the implementation plan to the university’s strategic plan. She led the (See MESZAROS on 3)

Bohland named interim provost

By Larry Hincker

President Charles Steger has named James R. Bohland as the interim provost to replace Peggy S. Meszaros, who will return to the faculty in the College of Human Resources and Education effective September 1. Bohland currently is director of the School of Public and International Affairs (SPIA) in the College of Architecture and Urban Studies and the College of Arts and Sciences.

“Virginia Tech now has considerable academic momentum and Dr. Bohland is just the right person to keep us moving forward,” said Peggy Meszaros. “He is an excellent choice for provost.”

Virginia Tech now has considerable academic momentum and Dr. Bohland is just the right person to keep us moving as we consider the society’s search for a permanent provost. Jim has a well-established record of scholarship, considerable experience in the international arena, and a long history of involvement in university governance. There are many challenges, such as the Institute for (See BOHLAND on 2)

Society honors Tech’s Lindsay

By Jeffrey Douglas

A parasitologist on the faculty of the Virginia-Maryland Regional College of Veterinary Medicine was recently recognized with the most distinguished honor conferred by the American Society of Parasitology. David S. Lindsay, associate professor, Department of Biomedical Sciences and Pathobiology, was presented the Henry Baldwin Ward Medal for 2000. Lindsay received the award during the society’s annual meeting in San Juan, Puerto Rico in June.

Lindsay has been a major figure in international parasitology research for much of the past two decades. Much of his work has involved the examination of the protozoal parasites causing diseases like cryptosporidiosis, coccidiosis infection in pigs, and toxoplasmosis.

More recently, he has been recognized for his work as part of a USDA-funded team that made a major breakthrough in the understanding of an economically significant parasitic disease afflicting cattle.

(See SOCIETY on 4)

BOV to meet

By David Nutter

The Virginia Tech Board of Visitors will hold its quarterly meeting Sunday, Aug. 20, and Monday, Aug. 21, at the Hotel Roanoke.

The Board of Visitors will also hold a planning retreat at the Hotel Roanoke, from Friday evening Aug. 18, through Saturday, Aug. 19.

The board will consider, among other business, revisions to the Honor System Constitution, university participation in an airport authority, the issuance of a treasury (See BOV on 4)
Students’ arrival affects parking, traffic

Through August 20, more than 8,700 students and their families will be arriving on campus to check into the residence halls. This will cause a significant change in parking and traffic patterns on campus.

During the check-in, streets and parking lots closest to the residence halls will be designated as one-hour loading. These areas include parking lots at Shultz, Owens, Dietrich, Coleseum, half of the Aggie Quad, and Engels lots, and the following streets: Turner, Kent, and Washington streets and the south side of the Drillfield (War Memorial Gym side) from Sandy Hall up to the Library.

Any vehicles parked in these areas, other than for the purpose of unloading, will be ticketed to provide space for the move-in process.

Washington Street may become a one-way street through August 19. Traffic will move from west to east (from the Coleseum toward Kent Street and downtown Blacksburg). Traffic will be very slow moving along this corridor and Parking Services strongly suggests avoiding Washington Street during these days.

Faculty and staff members should park in areas not designated for one-hour loading. Parking Services recommends using C/G section of the Litton-Reaves Lot (located behind Litton Reaves Hall off Washington Street) and/or B Lot (off Prices Fork Rd).

**MALL REOPENING**

The Mall entrance to campus has reopened with all lanes open to vehicular traffic. Work will continue on Torgersen Hall so caution should be used when passing by the construction site.

For more information, call Parking Services at 1-3200 or the University Police at 1-2411.

**BOHLAND**

Continued from 1

Bioinformatics or addressing our enrollment mix that must be given studious attention. Importantly, he shares my commitment to diversity,” Steger said.

Bohland is former head of the Department of Urban Affairs and Planning, a post he held for 12 years. He was instrumental in developing Washington Street and downtown Blacksburg.

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Employment

Classified Positions

The following classified positions are currently available. For details on these positions, specific application procedures and position-closing dates may be found on the Personnel Services website web.ps.vt.edu. Available positions are also listed on the JobLine, a 24-hour recorded message service. For information on all job listings, call 1-5300. Some of the following positions include state benefits. Positions with numbers beginning with a “W” are hourly and do not include state benefits. Individuals with disabilities desiring assistance or accommodation in the application process should call by the application deadline.

Closing dates for advertised positions is 1 p.m. Monday. An EO/AA employer committed to diversity.

Full Time
Accountant, N/A, Grade 9, Virginia Tech Foundation.
Animal Care Supervisor, 6988J, Grade 11, Veterinary Teaching Hospital.
Animal Care Technician B, 496J, Grade 5, Veterinary Teaching Hospital.
Applications Analyst, 2145L, Grade 6, Web Application Development.
Applications Analyst, 1226L, Grade 6, Web Application Development.
Architect Senior, 7643G, Grade 13, Office of University Architect.
Banquet Manager (Food Operations Manager Assistant), 1118G, Grade 6, DBHCC.
Budget Analyst, 6927T, Grade 10, Budget/Financial Planning.
Business Researcher, 7616D, Grade 11, VTIC.

Full Time

Online Program Assistant Director, 5797G, Grade 15, Capital Design/Construction.
Certified Nurse Practitioner/Phlemanic Assistant Category 1, 7652J, Grade 14, Cancer Center.
Computer Network Support Technician Senior, 3492G, Grade 10, EH.
Computer Systems Engineer, 1082T, Grade 14, Computer Science.
Data Warehouse Architect, 6701L, Grade 0, Information Systems/Computing.
Development Assistant, 1964L, Grade 6, University Development/Corporate/Foundation Relations.

Electrical, 7656G, Grade 7, Physical Plant.

Electronic Technician Supervisor, 7632J, Grade 11, VTIC.

Electronics Technician, 7656J, Grade 9, VTIC.

Executive Secretary, 7473T, Grade 6, Provost.

Sixteen full-time operation positions are available; five part-time positions.
Food Operations Manager A/Sous Chef, 0940H, Grade 8, Residential/Dining/Programs/Shuttle Gate Bake Shop.
Food Operations Manager A/Sous Chef, 0959H, Grade 8, Residential/Dining/Programs/Owens Food Court.
Food Operations Manager B/Executive Chef, 1015T, Grade 10, Residential/Dining/Programs/Shuttle Dining Center.
Housekeeping Supervisor, 0824H, Grade 4, Residential/Dining/Programs.
Housekeeping Worker, 1631G, Grade 1, DBHCC.
Housekeeping Worker, 1025H, Grade 1, Residential/Dining/Programs.
Housekeeping Worker, 7650C, Grade 1, Physical Plant.
Housekeeping Worker, 2846J, Grade 1, Recreational Sports.
Housekeeping Worker Senior, 6929H, Grade 3, Residential/Dining/Programs.
Interpreter for the Deaf, 7472J, Grade 8, Dean of Students.
Mechanic C (Smart Road Testing Technician), 7655J, Grade 8, VTIC.
Lab Assistant, 2008T, Grade 9, Veterinary Medicine Experimental Station.
Laboratory Assistant, 7302M, Grade 9, Veterinary Medicine.
Laboratory Technician, 7519T, Grade 4, Chemistry.
Medical Technologist, 2637J, Grade 9, Veterinary Teaching Hospital.
Office Services Specialist, 1719T, Grade 5, University Registrar.
Office Services Specialist, 2022J, Grade 5, Veterinary Medicine.
Office Services Specialist, 1310T, Grade 5, VTIC.
Office Services Specialist, 7442H, Grade 5, Residential/Dining/Programs/Residence Education.
Office Services Specialist, W022100G, Grade 5, Physical Plant/Grades/Recycling/Solid Waste.
Office Services Specialist, 1015T, Grade 5, Marketing.
Oracle DBA, 67780, Grade 9, Information Systems/Computing.
Oracle Support Technician, 2718T, Grade 6, Personnel Services.
Program Support Technician, 1928J, Grade 6, USA.
Program Support Technician, 7511G, Grade 6, Public Service Programs.
Program Support Technician, 1534J, Grade 6, Graduate School.
Program Support Technician (Asst. Mgr. for Guest Services), 6685G, Grade 6, DBHCC.
Program Support Technician Senior, 1584T, Grade 7, College of Business.
Program Support Technician Sr, 3507J, Grade 7, Water Resources Research Center.
Programmer, 1864F, Grade 10, University Libraries.
Programmer, 6656F, Grade 10, University Libraries.
Program Analyst, 1643T, Grade 12, Broadcasting.
Programmer/Analyst, N/A, Grade 13, Virginia Tech Foundation, Inc.
Research Analyst Specialist, LC075J, Grade 10, Athletics.
Recreation Center Supervisor (Recreation/Res Life), 6595J, Grade 7, USA.
Research Software Developer, 7637T, Grade 14, Virginia Bioinformatics Institute.
Security Guard, W020470G, Grade 2, Police Department.

Security Guard (Parking Enforcement Off.), W020119G, Grade 3, Parking Services.

Security Guard (Parking Enforcement Off.), 7653G, Grade 3, Parking Services.

Student Services Specialist, 7648T, Grade 8, University Honors—Provost.
Systems Administrator, 7634T, Grade 16, Virginia Bioinformatics Institute.
Trades Utilities Senior Worker, 7115G, Grade 6, Physical Plant.

Part Time

Agricultural Technician B, W02203J, Grade 5, Veterinary Teaching Hospital.
Animal Care Technician A, W02215J, Grade 3, Veterinary Teaching Hospital.
Labor Management Consultant, W02215L, Grade 6, Information Technology.
Laboratory Assistant, W023085T, Grade 6, Women’s Center.

Fiscal Assistant, W022887F, Grade 6, Bursar’s Office.

Golf Course Starter/Shop Attendant (Office Services Aide), W02113J, Grade 2, Golf Clubhouse.

Housekeeping Worker, W020214J, Grade 1, Health Center.

Housekeeping Worker, W020574G, Grade 1, DBHCC.

Housekeeping Worker, W020190C, Grade 1, Physical Plant/Housekeeping Services.

Housekeeping Worker, W024898H, Grade 1, Residential/Dining Programs.

Instrument/Equipment Technician, W02046T, Grade 8, Physical Plant.
Laboratory Technician Senior, W020117T, Grade 5, EHS.
Laboratory Technician Senior, W020627T, Grade 5, Chemistry.

Office Services Assistant, W022638G, Grade 4, Office of the President.
Office Services Assistant, W023102G, Grade 4, English Language Institute.

Pharmacy Assistant A, W020839J, Grade 4, Veterinary Teaching Hospital.

Pilot, Second In Comm/, W021029D, Grade 12, Air Transportation Services.

Program Support Technician, W020100J, Grade 10, 3rd Street c/o Finance.

Program Support Technician Sr, W023050J, Grade 7, Research/Graduate Studies.

Radiologic Technologist, W022238J, Grade 7, Health Center.

Receptionist, W0202297L, Grade 2, Computing Center.

Security Guard, W020355C, Grade 2, Police Department.

Stenographer, W022291J, Grade 4, Veterinary Teaching Hospital.

Off Campus

Human Services Program Specialist, 7644J, Grade 11, CAPS.

Laboratory Specialist, 3969J, Grade 8, Occidental Corporation.

Office Services Assistant, 7651J, Grade 4, HNSE.

Research Specialist Senior, 4119M, Grade 9, Eastern Shore Research/Extension Center.

Secretary Senior, 2019J, Grade 5, Norman Virginia Center.

Facility Positions

INSTRUCTIONAL

Department of Agricultural/Applied Economics. Assistant/Associate Professor. Contact: Jeffrey Alwang, 215-H Hutcheson (0401). Review begins December 1.

Department of Aerospace/Ocean Engineering. Assistant/Associate Professor. Assistant/Associate Professor. Contact: Bernard Grossman, 7645M (0205). Review begins September 15.

NON-INSTRUCTIONAL

Virginia Tech Transportation Institute. Human Resources Assistant Research Associate. Contact: Tracey Schroeder, 3500 Transportation Research Plaza, Blacksburg, VA 24060. Review begins immediately.

Office of the Executive Vice President. Director of Internal Audit/Management Services. Contact: Minnis Ritenour, 710-B Burchs (0148). Review begins September 15.

Department of Mining/Minerals Engineering. Department Head. Contact: Michael Karmis, 100 Holden (0239). Review begins October 1.


Mobile/Portable Radio Research Group. Research Associate/Research Assistant Professor/Research Associate Professor. Contact: Jeffrey Reed, J232 NEB (0350). Review begins immediately.

Development and University Relations. Assistant to the Vice President for Development and University Relations. Contact: Janis Grubb, 315 Burchs (0253). Review begins September 5.

Spectrum

FRIDAY, AUGUST 18, 2000 3
Aquaculture Center program will focus on future growth

By Lyon Davis

In academia, as in life, good things can come from bad situations. The sudden departure of George Libey, an associate professor of fisheries and director of the university’s Aquaculture Center, has prompted college officials to begin a visioning process that will help position the program for renewed growth and academic excellence.

Three leading aquaculture scientists recently visited Virginia Tech to help the Aquaculture Center update its research focus and mission. Known as one of the premier aquaculture programs in America, the center wants to ensure that it will continue leading the way in breakthrough technologies which are needed for the aquaculture industry, the world’s food needs, and other applications such as cultivation of endangered fish species.

Joe Tomasso from Clemson University, Fred Wheaton from the University of Mary-

land, and Joshua Goldman, CEO of Aquapartners, Inc., a prominent aquaculture firm, visited the campus to review the aquaculture program and assist in formulating a strategy to position the research facility for newly emerging needs in recirculating aquaculture.

Virginia Tech has one of the few indoor recirculating aquaculture research facilities in the nation. Although operating under the department of fisheries and wildlife sciences in the College of Natural Resources, it is a partnership with eight other departments from the College of Engineering, Maryland-Virginia Regional College of Veterinary Medicine, and the College of Agriculture and Life Sciences.

A national-wide search begun, chaired by Associate Professor and fish-genetics researcher Eric Hallerman, to look for a new director, seasoned in research and with a track record in securing funds from external granting agencies. The new leader will be responsible for directing graduate and undergraduate student research in aquaculture, securing funding for student stipends, publishing research findings, and teaching several courses.

The on-campus facility houses more than 20 individual and full-scale aquaculture systems, ranging from 150 to more than 3,500 gallons, seven environmental chambers, a greenhouse, and supporting facilities. On-going research includes evaluation of filtration technology and production of specific fish species. The Hampton facility is geared for saltwater fish and designed so researchers can find the balance between comparatively low construction costs and high return on investment.

Another partner to the program is Virginia Tech’s CSASTF (Commercial Fish and Shellfish Technologies) program, which uses Extension staff members to provide research-based solutions to the seafood industry’s challenges in the areas of food quality and safety, growth and nutrition, pathology and health, and waste management.

Virginia Tech’s aquaculture program accomplishments include the creation of the International Journal of Recirculating Aquaculture and hosting a world-wide Conference on Recirculating Aquaculture Systems every two years. The program has new additional recirculating facilities in Hampton and Saltville.

VTLS database to provide electronic theses, dissertations access

By Susan Trulove

VTLS Inc. has formed a partnership with Virginia Tech to promote and provide a union database for access to theses and dissertations in connection with the Networked Digital Library of Theses and Dissertations (NDLTD). A union database makes it possible to view the material available at each location.

VTLS Inc. is a Blacksburg-based company that develops, markets, and supports solutions for managing library collections and accessing information via computer networks. Customers include more than 900 libraries in 32 countries.

Established through a Virginia Tech research project in 1997, the NDLTD (www.ndltd.org) is now an international federation of universities and other institutions who wish to improve graduate education, promote access to scholarly research, increase sharing of knowledge, help universities build their information infrastructure, and extend the beneficial impact of digital libraries. NDLTD has grown to more than 100 members from 18 nations.

Principal investigators were Edward A. Fox, professor of computer science; John L. Eaton, associate provost for graduate studies, and Gail McMillan, director of the digital library and archives. “As NDLTD continues its rapid expansion, and extends services to members, we are pleased to discuss with VTLS new ventures of mutual interest,” Fox said.

Eaton said, “The ETMD project is an excellent way for universities to let their scholarship be known to the world. In the past, much of this information has been unavailable to researchers."

“On-line thesis and dissertation is an easy way for libraries to improve user services. Our experience with this project has been very positive,” McMillan said.

Vinod Chachra, president of VTLS Inc., will represent VTLS on the NDLTD steering committee. VTLS will actively promote NDLTD among its customers worldwide and will host a union database of electronic theses and dissertations. Contributions for this database will be invited from the libraries participating in the NDLTD project. VTLS provides comprehensive support of Unicode in its Virtua ILS—Integrated Library System. Unicode encoding allows data to be entered into a single database in any language, including non-Roman languages like Arabic, Chinese, English, Greek, Hebrew, and Russian.

“We are delighted to have the opportunity to provide such a valuable service to the world-wide research community,” Chachra said. “Close cooperation with Virginia Tech is always a heartwarming experience for an alumnus of the institution.”

BOV

Continued from 1

BOV loan to finance the expansion of Lane Stadium, and recent developments on the university’s economic impact.

The committees of the board will meet at the following times in the Hotel Roanoke on Sunday, Aug. 20.

The Academic Affairs Committee will meet at 1:30 p.m. in the Bent Mountain Room. The Buildings and Grounds Committee will meet at 1:30 p.m. in the Brush Mountain Room. The Finance and Audit Committee will meet at 1:30 p.m. in the Mill Mountain Room.

The Student Affairs Committee will meet at 1:30 p.m. in the Tinker Mountain Room. The joint meeting of the Finance and Audit Committees and the Building and Grounds Committee will take place at their convenience in the Mill Mountain Room.

The BOV retreat will begin at 7 p.m. on August 18 in the Monroe Room and will last until 8:30 p.m. The retreat will begin at 8 a.m. and run until 5 p.m. Portions of the retreat will take place in executive session when the members discuss specific personnel issues and financial bequests and fund-raising activities of the university pursuant to Sections 2.1-344.1 & 2.1-344.8 of the Code of Virginia.

Baehr memorial set for August 23

There will be a memorial gathering for Stephen Lessing Baehr, at the Donaldson Brown Hotel and Conference Center on Wednesday, Aug. 23, from 5 to 7:30 p.m. Heavy hors d’oeuvres will be served.

Baehr was a professor of Russian and chair of the Russian Studies Program in the Department of Foreign Languages and Literatures. He died June 28.

CRAIG

Continued from 1

sion studies will help decide how to preserve the items, how to curate them, and where to put them—how to treat them so they will not be destroyed or taken with contact air.

Craig has determined that the grains of gold found around the wreckage is placer gold, or panned gold, because of the shape, the typical abraded surfaces, and the presence of high-purity gold-rich rims. But it probably belonged to someone other than Blackbeard, Craig said.

Before Blackbeard commandeered the ship, it was a slave ship that would have carried such gold; when it was boarded by Blackbeard’s gang, someone probably hid a bag of gold grains between two boards and the gold remained there until the ship disintegrated after running afoul of the sandbar and turning over into the depths of the ocean.

The gold did not come from the United States at that time, but potential gold sources then included Africa, South and Central America, and the Caribbean. Gold was constantly redistributed, the scientists said.

Craig has been filmed by the British Broadcasting System in a program about the wreck-age called “Journey to the Bottom of the Sea: Blackbeard’s Revenge.” During filming, Craig was demonstrating gold panning, and one of his lines was “No gold this time.” After rehearsing the scene a couple of times, the cameras came on—and Craig actually found gold in the pan.

Future work will continue to try to find and date all the objects possible and be sure the ship was the Queen Anne’s Revenge. The Maritime Museum in Beaufort, N.C., will hold the ship’s remains once they have been preserved.

SOCIETY

Continued from 1

Working in the college’s Center for Molecular Medicine and Infectious Disease, Lindsay and colleagues demonstrated that the dog is a “definitive host” for Neospora caninum, a single-celled parasitic organism which causes pregnant cows to abort their fetuses.

He is also working on an improved diagnostic test for equine protozoal myelitis (EPM), a recently identified neurological disorder in horses.

In the Ward Medal acceptance speech, Lindsay attributed the honor to “a great deal of luck and association with extremely talented people.” He then chronicled the scientists and the organizations he has been affiliated with during a career that has coincided with major advancements in the field of parasitology.

Lindsay worked at Auburn University and the American Parasitology Institute at Beltsville, Maryland before joining the Virginia Tech faculty in 1997.