The U.S. National Tick Collection (USNTC)

For more information regarding the tick collection, contact Colleen Evans, Collections Manager, at crevans@GeorgiaSouthern.edu.

With over 125,000 accessioned lots, over one million specimens, their associated data, and an extensive library (reprints, monographs, and books), the U.S. National Tick collection is one of the largest curated tick collections in the World, if not the largest. It belongs to the U. S. National Museum of Natural History (Smithsonian Institution) and has been housed at Georgia Southern University since 1990. The collection contains specimens from all continents, most of the approximately 860 known species of ticks, and a quarter of the primary tick types.

Ticks (Ixodida) are haematophagous mites (Acari). During their blood meal, ticks can acquire and/or transmit a number of microorganisms, some of which can cause diseases in humans, domestic and wild animals. Because of the impact of ticks on human and veterinary medicine, the USNTC is not only a significant resource of material and information for tick taxonomists but also for public health officials.

History

At the very beginning of the last century, while studying Rocky Mountain spotted fever outbreaks in Montana and Idaho, a team led by Dr. Howard T. Ricketts discovered the role of ticks in transmitting pathogens to humans. This finding galvanized the interest of scientists in tick systematics. The historical core of the present collection was maintained by Dr. Robert A. Cooley (1873-1968) and one of his students, Dr. Glen M. Kohls, in the Department of Entomology and Zoology of Montana State College. In 1931 the collection and its curators moved to the newly funded Rocky Mountain Laboratories (RML). The RML tick collection rapidly increased in size and taxonomic breadth thanks to donations, acquisitions (Paul Schulze and Fred C. Bishopp collections), and active fieldwork expeditions organized by the curators and their collaborators around the World. A long-standing collaboration with Dr Harry H. Hoogstraal a civilian working for the U.S. Navy in Cairo and arguably the most productive tick taxonomist in history, was instrumental in securing additional holdings, particularly from Asia and the Middle East. Dr. Carleton M. Clifford and Dr. James E. Keirans were nominated curators in 1961 and 1969, respectively. The RML collection became the USNTC when it was donated, in 1983, to the U. S. National Museum of National History (Smithsonian Institution - SI). At his death, in 1986, Dr. Hoogstraal left his large tick collection to the USNTC, which became
one of the most comprehensive tick collection in the World. Under the curation of Dr. Keirans, in 1990, the USNTC was transferred to Georgia Southern on a long-term enhancement loan to Georgia Southern and through a Memorandum of Understanding between Georgia Southern and the SI. Dr. Keirans, assisted by Dr Lance A. Durden from 1992 to 2003, was in charge of the collection until 2005. His research and the network of collaborations he established with U.S and international researchers were crucial in the transition from traditional tick alpha-taxonomy into modern, morphological and molecular-based, tick systematics. For more historical information: L.A. Durden, J. E. Keirans, and J.H. Oliver (1996). The U.S. National Tick Collection: a vital resource for systematics and human and animal welfare. American Entomologist 42: 239-243.

Research

The facility includes fully equipped morphological and molecular laboratories. Specimens and their associated data are used for original scientific research on the systematics, evolutionary history, and population genetics of ticks and their related pathogens. Staff members are involved in morphological and molecular studies of target taxa. (see staff web pages). The research carried out at the USNTC, since its transfer to Georgia Southern, generated hundreds of publications written by the curators and associated scientific collaborators and visitors. Since 2005 the curators were involved in over 50 presentations in national and international peer-reviewed meetings. In addition to their basic taxonomic research, the curators are also revising all USNTC holdings, in order to make them progressively available to the research community and the public through the Smithsonian Entomology Collection web site.

Examples of NSF/NIH funded ongoing research at the USNTC

NSF Collaborative-Linked EID award #914390 – Testing alternative hypotheses for gradients in Lyme disease in the eastern United States: climate, host, community and vector genetic structure (PI: L. Beati)

REVSYS NSF grant #1026146 – Exploiting a large existing resource for biogeographical and host-parasite data: linking immature and adult amblyommine ticks (PI: L. Beati)

The National Institute of Health: Systematics of medically important Dermacentor tick vectors (PI: D.A. Apanaskevich)

Recent Publication

Selected Examples of Recent Publications (43 Since the Arrival of the New Curatorial Team in 2005)


**Education**

Researchers studying tick systematics are declining in number around the World. In order to prepare new generations of taxonomists it is, therefore, essential to include students in our curatorial and research activities. In the last 6 years, about 16 undergraduate and 9 graduate students from Georgia Southern benefited from the USNTC resources while carrying out their Biology research projects (4890, 7890, honor student thesis, master thesis). The curators are involved in teaching in a number of external workshops and summer programs, in particular the Ohio State Acarology Summer Program.

**Scientific Visitors**
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**Forms (Loans and Accessions)**

For loans or tick accessions, please fill in the following forms and submit them by e-mail to the USNTC e-mail address. Loans are usually discussed with the requestors, as shipping of ethanol-containing vials and (even dead) disease vectors often require special permits. When possible, the USNTC will generate high quality images for the requestor making sure that all of the important taxonomic characters are visible, instead of shipping materials.
Georgia Southern University’s student feature magazine, The Reflector, recently earned two first-place honors, and its student literary magazine, Miscellany, received a top 10 ranking at the National College Media Convention in Austin, Texas.

The Reflector won first-place in the College Media Association’s Pinnacle Awards for best design of a sports page or spread for a weightlifting feature designed by Alexandra Tobia, a 2015 graduate who
is now a professional designer in Jacksonville, Florida. The article was written by Tayler Critchlow of Rome, Georgia, and photographed by Ryan Woodham, a 2015 graduate now working as an engineer in North Charleston, South Carolina.

The Reflector’s Twitter page, designed by Kate Rakoczy of Decatur, Georgia, and Jeff Licciardello of Kennesaw, Georgia, won the best social media main page award.

Publications represented at the conference also were eligible to enter one issue for a “best of show” contest sponsored by Associated College Press. Miscellany magazine ranked seventh in the literary magazine category.

“These awards in national competitions are welcome recognition for the many students who put their talent and hard work into our magazines,” said Director of Student Media David Simpson.

Simpson presented at the conference on news interviewing and feature writing. Business Coordinator Samantha Reid presented on training sales representatives. Jennifer Curington, a 2014 Georgia Southern graduate and former reporter and editor with The George-Anne student newspaper, presented on effective Twitter practices and on what she has learned as a young professional with the Austin Community Impact news site.

Six current University students from Georgia who attended the conference include Casey Cargle of Marietta, Lauren Gorla of Warner Robins, Ian Leonard of Johns Creek, Cydney Long of Franklin, Rashida Otunba of Conyers and Yasmeen Waliaga of Alpharetta.

Georgia Southern University, a public Carnegie Doctoral/Research University founded in 1906, offers more than 125 degree programs serving more than 20,500 students. Through eight colleges, the University offers bachelor’s, master’s and doctoral degree programs built on more than a century of academic achievement. Georgia Southern is recognized for its student-centered and hands-on approach to education. Visit GeorgiaSouthern.edu
Georgia Southern hosts the 11th annual Southern Scholars Showcase

DECEMBER 3, 2015

Georgia Southern will host its 11th annual Southern Scholars Showcase on December 4-5, bringing more than 140 of the brightest high school seniors from Georgia, across the nation and the world to our campus to interview for valuable and prestigious academic scholarships.

To be invited to this interview event, students must have outstanding test scores and high school grade point averages. They are among the very best in their respective high schools. Last year the average test scores for attendees were 1349 SAT (Math and Critical Reading only) and 30 composite ACT. In addition to interviewing for scholarships, students and their parents will have the opportunity to attend a variety of informative sessions about the University ranging from topics on engineering to study abroad.

Southern Scholars Showcase is just the first chance for prospective Georgia Southern students to earn merit-based, academic scholarships. On February 26-27, 2016, Scholars’ Day will bring an additional 270 students to campus. To qualify for an invitation to this event, a student must earn at least a 1200 on the SAT (Math and Critical Reading only) or 27 composite on the ACT and demonstrate high academic ability within the classroom. Students who are selected as finalists will receive an invitation for Scholars’ Day and have the chance to interview for scholarships.

For more information, or to apply for scholarships or the University Honors Program, please visit GeorgiaSouthern.edu/AdmissionsScholarships. For more information, please contact the Office of Admissions at 912-478-5391 or scholarships@georgiasouthern.edu.
‘Colaboratory: Collaboration for the Greater Good’ M.F.A thesis show opens April 1

March 23, 2016

STATESBORO, Ga. – Georgia Southern University’s Betty Foy Sanders Department of Art presents Colaboratory: Collaboration for the Greater Good an M.F.A. Thesis Exhibition by Stephanie Arends Neal and Lindsay Byrnside Tyson. The work will be on display at Bluprint, 33 West Main St. in Statesboro, from April 1 to May 8 by appointment only. Opening reception will be April 1 from 5 – 6 p.m. at the gallery.

Colaboratory examines how graphic design and collaborative leadership experiences can impact society by igniting social change within a community while inspiring transformation in human behavior.

“The Colaboratory was inspired by the idea of using graphic design to impact the greater good of our community through collaboration,” Tyson said. “Graphic design is a powerful tool that has the power to shift perspective, change human behavior, and impact change. If we can take our skill sets and use them to better ourselves, others, and our communities then we have an obligation as designers to so.”

Tyson and Neal each have more than 10 years of professional experience in graphic design. They pulled from their collective experiences to consider graphic design as innovative problem solving which requires expertise from individuals across multiple disciplines.

“Graphic design is a social science; it takes disciplines such as geography, demographics, psychology, history, communication, sociology and economics all into consideration when solving a problem,” said Neal. “The collaborative approach of this thesis enhances and develops transferable skills through experience-, creative-, research-, and leadership-based solutions that help solve, or call attention to, local, national and global issues while educating the community of the value of graphic design.”

The College of Liberal Arts and Social Sciences (CLASS) is the largest of the eight colleges that make up Georgia Southern University, and it plays a central role in every student’s core of knowledge. CLASS, also described as the University’s College of the Creative Mind, prepares students to achieve academic excellence, develop their analytical skills, enhance their creativity and embrace their responsibilities as citizens of their communities, their nations and the world. CLASS offers more than 20 undergraduate degrees and several interdisciplinary minors from its 11 departments and five
academic centers. CLASS offers eight master’s degrees, two graduate certificates and one doctoral
degree. For more information, visit class.georgiasouthern.edu.

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Mike Jackson Receives Chancellor’s Service Excellence Award

November 17, 2015

On October 21, University System of Georgia Chancellor Hank Huckaby awarded the Chancellor’s Service Excellence Award to N. Mike Jackson, Ph.D., P.E., chair of the Department of Civil Engineering & Construction Management.

The Service Excellence Award – Outstanding Leader recognizes administrator-level employees who, through their extraordinary leadership over the last year, demonstrated outstanding service to students, colleagues and other customers of the USG, and promoted a workforce culture that fosters “above and beyond” service experiences.

Dr. Jackson was nominated by Philip Bruce, Director of Career Services at Georgia Southern, who wrote: “Dr. Jackson has significantly enhanced and expanded the experiential learning program for Civil Engineering and Construction Management. Students in these majors have benefitted greatly from his increased focus on internships and co-op opportunities and more and more recruiters are hiring these students because they participate in these experiences. For these reasons and countless others, Dr. Jackson is most deserving of this award.”

In the 2014-15 academic year, Dr. Jackson incorporated a significant service learning component into the civil engineering and construction management programs. The department promotes community immersion and experiential service learning projects as the central theme of a transformative educational experience.