



**Okaloosa County School District**  
**Best in Florida**

## Renowned Scientist Impressed with Niceville's NaGISA Project

Sunday, January 25, 2009

"You  
have to  
see it to  
believe  
it!"



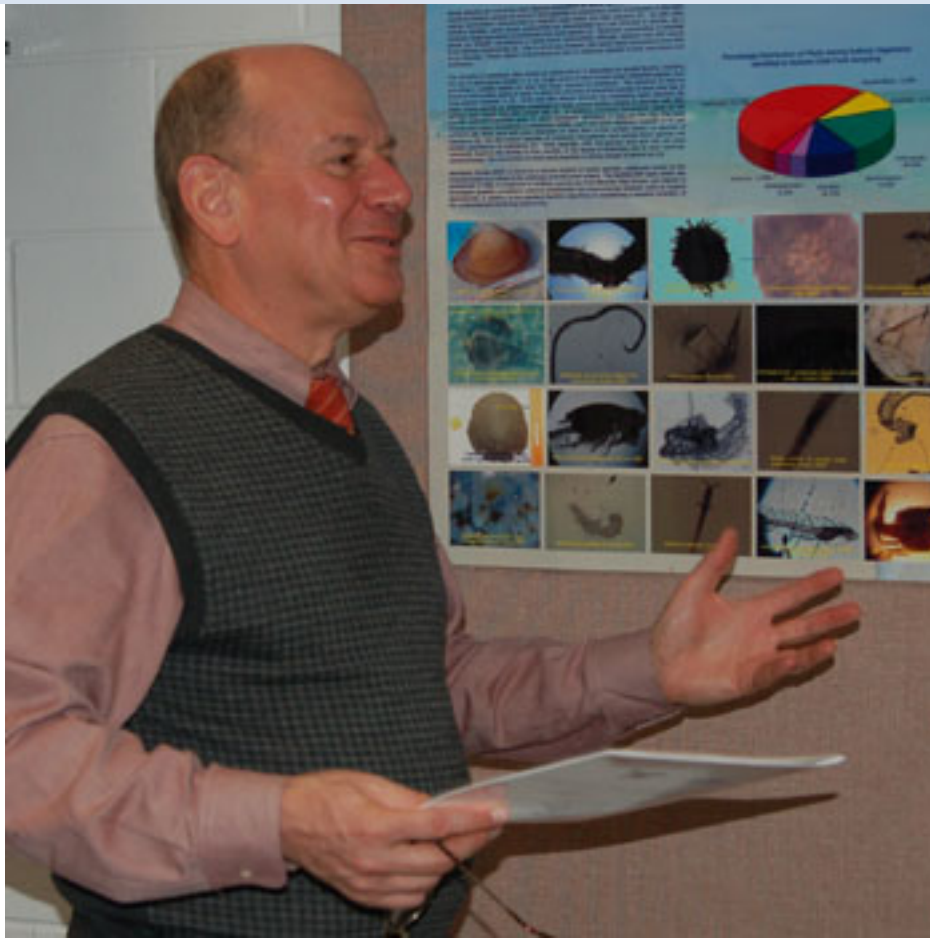
Jesse Ausubel, Program Director for the Alfred P. Sloan Foundation and Director of the Program for Human Environment at Rockefeller University, takes a look at the microscopic organisms collected by Niceville High School students.



Ausubel gave an animated slide presentation about the enormous Census of Marine Life project, a global undertaking which seeks to identify and track all of the planet's marine life species.



Students from Niceville's "Gifted" program demonstrated the protocol they use to take a census of coastal marine life as part of the worldwide NaGISA project.



Ausubel was impressed by the meticulous care the students displayed toward the data collection. In the background is the poster they prepared for the NaGISA conference in Japan in 2006.



Most of the organisms found are microscopic, so extreme care must be taken in handling the specimens.



The students demonstrated how they carefully turn very fine netting upside down and use salt water to rinse any organisms into the collection dish.



Superintendent Alexis Tibbetts and Chief Officer of Quality Assurance Guyla Hendricks line up with Ausubel, Principal Linda Smith and "Gifted" instructor, Richard Hernandez, who was

named Niceville High School's "Teacher of the Year."



The students enjoy doing "real science" for the project, which will continue around the globe for 50 years.

said environmental research scientist [Jesse Ausubel](#) after watching a demonstration of the Niceville High School's NaGISA\* team's census of coastal marine life. The Director of the Program for the Human Environment at Rockefeller University visited the high school Friday afternoon to observe the students in action and to give an animated slideshow presentation about the Census of Marine Life, a worldwide 10-year study of marine life, which he oversees.

He was impressed by the seriousness and dedication of the students, noting that the "whole edifice of science" rests on the efforts of individual scientists, who painstakingly gather data. "Somebody has to have the patience," he said.

Ausubel is also the Program Director for the Alfred P. Sloan Foundation, which has given thousands of dollars to help fund Niceville's NaGISA project. The students are charged with taking a yearly census of all the coastal marine life they find, from the shoreline up to a depth of 20 meters. Their work includes finding and identifying macroscopic and microscopic organisms, some of which have not yet been classified in

local taxonomies. Niceville was the first high school to become part of the NaGISA project, and the students have since been charged with training other high school students around the globe to follow the protocol.

Last year, the Niceville students trained a group of students in Tanzania, and this March, they will travel to the Greek island of Crete to train another group.

The students follow a very strict international protocol for the census. They use GPS technology to ensure that the data is collected from the exact same locations on Henderson Beach each year. The team consists of about 50-60 students who collect the specimens and photograph, analyze and preserve them for the study.

### **DNA Analysis May Identify New Species**

After his visit, Ausubel put "Gifted" instructor Rick Hernandez, who leads the NaGISA project team at the school, in contact with Gustav Paulay, a University of Florida research professor who is a leading expert in marine biodiversity, as well as the curator for the Florida Museum of Natural History. Paulay's goal is to DNA barcode all of Florida's marine invertebrates.

"The biggest problem we've had is identifying what we're looking at," explained Hernandez. "Taxonomic guides to Northwest Florida are practically non-existent. Testing their DNA will give us an opportunity to identify these organisms beyond a shadow of doubt. It may even be that we are discovering new species. This is cutting-edge."

Hernandez added that universities alone cannot supply the manpower and resources to fully document coastal marine life. The goal of Niceville's NaGISA team is to train other high schools in coastal areas around the globe, so that scientists will have a broader snapshot of the state of coastal marine life today, enabling them to track changes to it over the 50-year period.

### **80 Countries Track Marine Life**

The [NaGISA](#) project is one of 14 different projects which make up the [Census of Marine Life](#), which aims to identify and track marine species all over the globe. The project has identified over 5600 previously unidentified species, with 230,000 known species already collected in natural history museums throughout the 80 participating countries.

"International cooperation is extremely important," said Ausubel, who flew to Antarctica on a Chilean Air Force plane and has worked with

scientists from all over the world on this and other projects, including the first UN World Climate Conference in 1979. "The cooperation has to go on, regardless of politics. When you're working with your colleagues, politics goes away."

### **Fundraising Help Still Needed**

The team's trip to Greece to train a new group of scientists in the protocol is still short of funds. If you would like to donate to the NaGISA project for this trip or for any of the equipment they use in the classroom and on the beach during the collections, please contact Niceville High School at 850-833-4114, or email [Rick Hernandez](#).

\*NaGISA: Natural Geography In Shore Area Project

To learn more about Niceville High School's role in the project, [click here](#).

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