

SCIENCE & TECHNOLOGY

THE BATTALION

A&M researcher heads Project Neptune 2K

Texas Sea Grant Program sponsors project to examine buried vessels with sonar techniques

BY ARUN ARJUNAN
The Battalion

Pointe Du Hoc, an ocean front extending into the English Channel and lying off the southern coast of France, overlooks the remains of many of the vessels of American forces that invaded Normandy on D-Day, June 6, 1944.

Brett Phaneuf, a researcher at Texas A&M's Institute of Nautical Archaeology, is leading Project Neptune 2K, an effort to survey the wrecks of the ships from the invasion.

"We need to study the battlefields, including the underwater portion, to get a handle on what happened," he said. "We don't know exactly how many ships were there. We're not sure how many people were lost on the ships or in the water."

Several procedures were used to locate the various vessels. Magnetometers, which measure magnetic shifts produced from the iron of ships, are used to pinpoint the location of the vessels. Phaneuf said, once a deviation in the magnetic field is detected, the location of the vessel is confirmed by side-scanning sonar. The side-scanning sonar technique

produces an image of the sea floor. Then the location of the vessel along the sea floor is discovered by cross-referencing the signal from the magnetometer with the image provided by the sonar.

The geographic positioning of the wreck is also compared with older maps of the conflict to see whether historical documents

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Texas A&M researcher

of the battle are comparable with the position of the shipwrecks.

The invasion used more amphibious vessels than any other World War II operation. Many lost and undocumented sea crafts are among the some 4,000 troops that

rest in the depths of the English Channel. Many of the ships were most likely involved in Operation Neptune, an attempt to ferry troops and equipment to the areas of heavy fighting.

"Originally, the British planned the Allied landing for May 1944," Phaneuf said. "If the forces had attempted to take Normandy, then the turbulent weather would have yielded even greater damage to the ships."

Project Neptune 2K, sponsored by the Texas Sea Grant College Program, began this year. The areas of investigation include Pointe du Hoc and Omaha and Utah beaches (where the assault took place).

Dr. Roger Beaumont, an A&M history professor, said the Allies sustained the greatest damage at these locations.

"Of the five fronts on Normandy, the most activity happened on Omaha Beach and Utah Beach," Beaumont said.

Phaneuf said many wrecks have been discovered since the project's initiation.

"We have found shipwrecks of landing craft tanks, Higgins boats, coastal barges, Sherman tanks and rhino barges 100 meters to 3.4 kilometers away from the coast,"

Phaneuf said.

Phaneuf also said that the team may have discovered several British double duty tanks used in the amphibious assault of Normandy. These tanks were rigged to float, but they failed in action and sank as soon as they were released.

They brought down the troops and equipment they carried.

"A lot of these men are in tanks and landing ships that never made it to shore," he said.

Although Project Neptune 2K is an archeological exploration, none of the artifacts will be recovered.

Phaneuf said he doubts any of the wrecks will be dug up for exhibition to the public because of the expense of preserving the remains.

He said the intrinsic value of the sunken ships as grave sites is another reason the ships will be left underwater. "Certainly, these sites are every bit as hallowed as the grounds of the American cemetery (in Normandy)," he said.

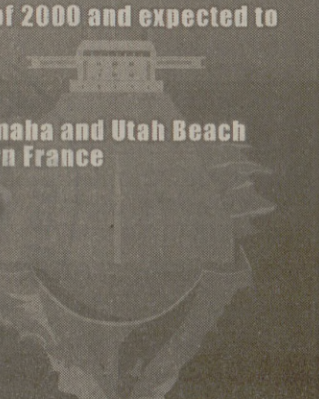
"There's no statute of limitations on the respect and debts owed to those who paid the ultimate price."

WHO:
Texas A&M's Institute of Nautical Archaeology

WHAT:
Project Neptune 2K, exploratory effort to survey the wrecks of vessels from the invasion of Normandy

WHEN:
Began in spring of 2000 and expected to finish in 2003

WHERE:
Pointe Du Hoc, Omaha and Utah Beach Fronts in Southern France



RUBEN DELUNA/THE BATTALION

— Science in Brief — Presentation on evolution tonight

Pulitzer Prize-winner Jonathan Weiner will give a presentation titled "Evolution in Action: The View from Darwin's Islands and Benzer's Bottles" in the George Bush Presidential Conference Center auditorium tonight at 7:30.

Weiner, a writer in residence at Rockefeller University in New York, will discuss the status of the study of evolution.

"I'll argue that one of the most interesting new directions in science today is the study of genes and behavior, and I'll talk about some of the first studies of this subject by molecular biologists," Weiner said in a press release.

One of Weiner's books, "The Beak of the Finch" won a Pulitzer Prize for general nonfiction and the Los Angeles Times Book Prize for Science.

Bioengineered corn being held off markets

WASHINGTON (AP) — Amid growing uneasiness about genetically engineered crops, a major biotechnology company announced Monday it would restrict plantings next year of a type of gene-altered corn and delay commercialization of another variety until 2002.

The moves by the Monsanto Co. are meant to avoid upsetting export markets for U.S. corn and repeating the problems encountered this fall when biotech corn developed by one of its competitors appeared in the food supply without being approved for human consumption.

"We can't stop the development of this technology, but we are going to use restraint," Hendrik Verfaillie, Monsanto's president and chief executive officer, said.

A variety of corn developed by Monsanto to be resistant to the com-

pany's popular Roundup weedkiller will be distributed for sale next year only to farmers in areas where grain is seldom sold for export, Verfaillie said. The corn is approved for food use in both the United States and Japan but not in Europe. Traces of the corn were found this fall in British-made tortilla chips.

The second Monsanto corn variety, which will not be put on the market until 2002, is toxic to an insect pest, the corn rootworm. It is yet to be approved in either Japan or Europe.

The actions announced yesterday do not affect Monsanto's most popular gene-altered crops, which include Roundup-resistant soybeans and cotton and a variety of corn that is toxic to another pest, the European corn borer.

A representative of the National

Corn Growers Association, which

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— Susan Keith
senior director of public policy

is especially concerned about losing sales to Japan, praised Monsan-

to's moves.

"We could not jeopardize our biggest corn market by supporting the commercialization of a corn variety that was not approved by that country," said Susan Keith, senior director of public policy for the growers group.

The biotechnology industry was rocked this fall by the discovery of StarLink corn, developed by Aventis CropScience, in taco shells in the United States.

StarLink was approved only for animal feed or industrial use because of unresolved questions about its potential to cause allergic reactions.

U.S. corn exports have fallen sharply this fall, especially to Japan, the biggest foreign customer for the grain.

Critics inside and outside the biotech industry say StarLink, the

only gene-altered crop not allowed in food, never should have been put on the market without being approved for human consumption.

Aventis, meanwhile, disclosed last week that a special protein in the StarLink corn has also been found in a variety of corn sold by Garst Seed Co.

Aventis officials, who say they do not know how the protein, known as Cry9C, got in the Garst corn, met privately with representatives from the Agriculture Department and other seed companies to discuss the problem.

Monsanto's surveys of farmers indicate that sales of its biotech seeds could increase by 16 percent even as other polling by the company indicates that consumer confidence in gene-altered crops is slipping, Verfaillie said.

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