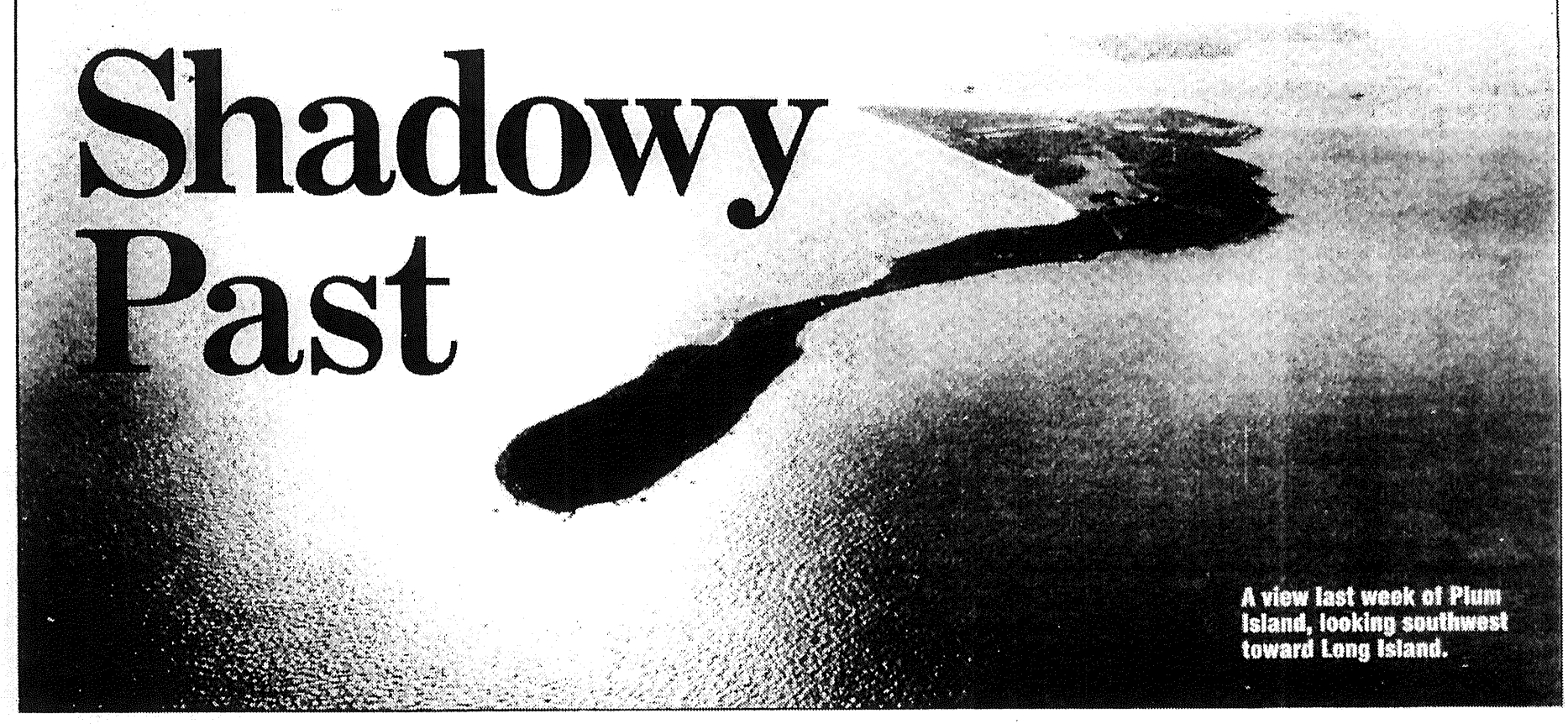
PLUM ISLAND'S

Shadowy Past



A view last week of Plum Island, looking southwest toward Long Island.

Once-secret documents: lab's mission was germ warfare

By John McDonald
STAFF WRITER

A 1950s military plan to cripple the Soviet economy by killing horses, cattle and swine called for making biological warfare weapons out of exotic animal diseases at a Plum Island laboratory, now-declassified Army records reveal.

Documents and interviews disclose for the first time what officials have denied for years: that the mysterious and closely guarded animal lab off the East End of Long Island was originally designed to conduct top-secret research into replicating dangerous viruses that could be used to destroy enemy livestock.

While officials say any such research was short-lived and ceased when the lab was turned over to the Agriculture Department in 1954, two of the diseases targeted by the military — foot-and-mouth disease and African swine fever — remain top priority research projects on Plum Island today. Two other diseases identified in the military plan, Rift Valley fever and rinderpest, also have been the focus of recent research.

Experts say there's no evidence such biological weapons were ever used against the Soviet Union as the early documents envisioned. Agriculture Department officials who run the Plum Island Animal Disease Center have long denied any involvement in biological warfare research and say their work is restricted to experiments designed to protect the nation's livestock from potentially fatal plagues, such as foot-and-mouth disease. The current director expressed surprise over the laboratory's military history.

But military documents once stamped SECRET and recently obtained by Newsday from the Army Chemical and Biological Defense Agency shed light on the thinking of an earlier era, describing in unusually candid language the need to construct a laboratory on Plum Island for offensive germ warfare. The island was then the site of a military base called Fort Terry.

"The Operations Research Office has made a comprehensive study of offensive potentiality of anti-animal agents. The report emphasized the importance of livestock in the economy of the USSR and the probable feasibility of attack. The U.S. Air Force has established a firm requirement for offensive munitions and agents for use against horses, cattle and swine," said a 1951 Army document, one of several released in response to Freedom of Information Act requests. Officials said dozens more related documents are warehoused in non-indexed boxes that could take years to sort, and other information about the work may still be classified because it potentially could pose a security threat.

"My understanding is that Plum Island never became a big operation," said Norman Covert, base historian and public information officer at Fort Detrick in Maryland, the nation's primary center for biological warfare research until such work was outlawed by President Richard Nixon in 1969. "It became a test site for the scientists at Fort Detrick in offensive

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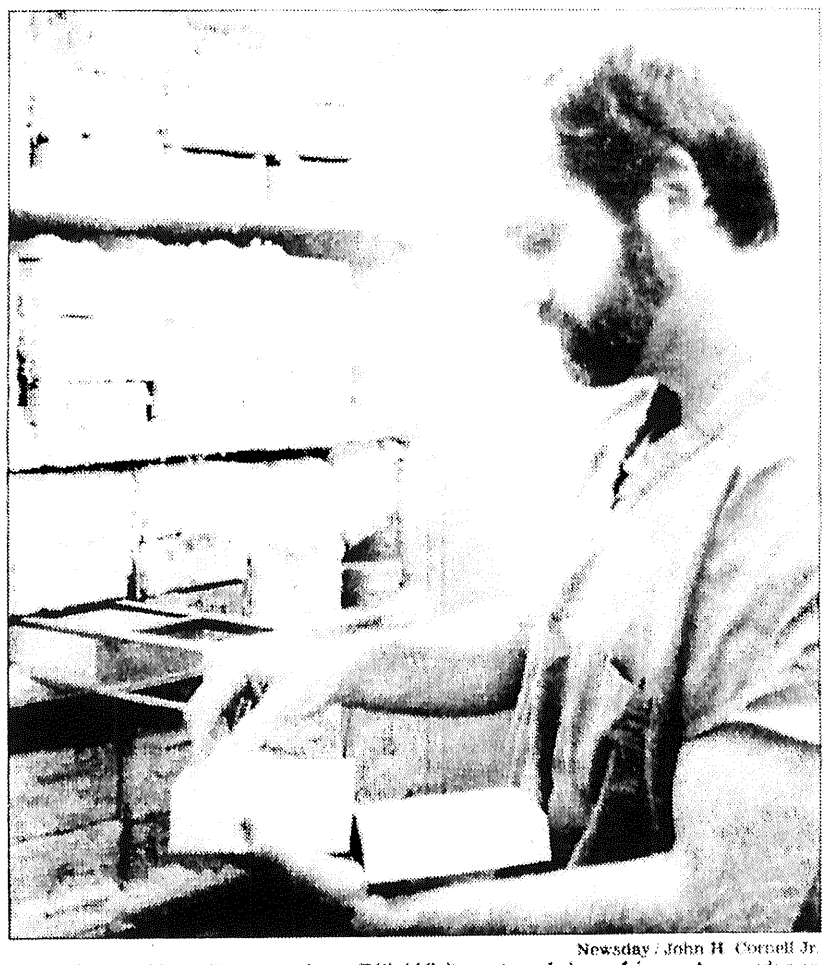

Newsday / John H. Cornell Jr.

Post-Cold War: Researcher Bill White at a lab refrigerator, where viruses are stored at 70 degrees below zero centigrade

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and defensive agent development."

Dr. William Hess, an Agriculture Department scientist who directed research on African swine fever at Plum Island during the 1950s, said in a recent interview from his New Hampshire home that he personally didn't do work for the military but was aware offensive biological warfare projects were being conducted in the lab.

"A lot of the work was, well, we were doing things like studying how to produce quantities of the virus and so forth," Hess said. "When it changed from offensive to defensive, well, we were not interested in the delivery system of how to get this material off as a weapon or deliver it as a weapon. It changed to study vaccines that might help us protect against the spread of the disease."

Dr. Jerry J. Callis, an Agriculture Department veterinarian who did research at Plum Island during the lab's early years and later served as the lab's director for 25 years, confirmed that the Army set up the laboratory but said he was unaware of any role played by the military after the lab became operational.

The Army had operated Fort Terry as an artillery base from 1899 until 1948, when it was abandoned and nearly sold to Suffolk County for use as a tourist attraction.

After the Army decided it needed a biological warfare laboratory to research exotic animal diseases, the government canceled the sale in 1952 and the Army spent about $5 million rehabilitating a laboratory that opened the following year, including then top-of-the-line biocontainment systems, designed with a special air flow and filter system to keep viruses from escaping. A separate lab was built on the island for about $10 million by the Agriculture Department, which since 1954 has operated both labs.

"Our early task was to devise a method to propagate foot-and-mouth disease virus in tissue cultures. Tissue cultures were in their infancy at the time," Callis said. Once the method was devised, quantities of the virus were produced as part of a plan to develop vaccine supplies.

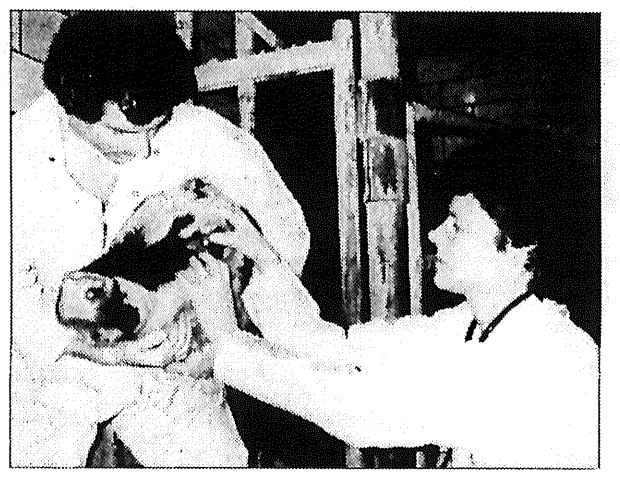
Precisely that work, however, is described in documents as the first mission of the military facility: Devising a way to replicate the deadly virus for use as a weapon.

Covert, the army historian, said it was likely most scientists at the lab were unaware of the military's work. While the military may have assigned tasks to Agriculture Department scientists, he said, the Army would have avoided sharing its intentions with civilian scientists.

Even when told about the declassified documents, the scientist who headed the foot-and-mouth disease research on the island at the time, Dr. Howard Bachrach, said in a recent interview that military involvement was out of the question: "I brought the first test tube on the island, and I never worked for the Army. The Army never did any research."

"In many cases there were only maybe five people who knew what was going on in weapons research," Covert said. "People in one lab didn't know what happened in the next lab, and they didn't ask."

The divergent views by scientists who worked side-by-side underscore a national debate over the often-blurry lines between what constitutes military research and what is scientific research into infectious diseases. The overlap has sparked debate in the scientific community and prompted a 1968 campaign by U.S. scientists to sign pledges not to participate in biological warfare research.



Newsday; John H. Cornell Jr.

Animal caretaker foreman Jeffery Babcock holds steady a well cow's head as Corne Brown of the Lead Pathology Section examines it at Plum Island lab.

Department of Agriculture Photo

The former gun emplacement and ammunition storage areas of Ft. Terry served as pens for quarantined animals at the lab in this early 1970s photo.

"Infectious disease research is open to the public and anybody can have information," said Prof. Jonathan King, director of the biomedical electron microscopy department at the Massachusetts Institute of Technology and leader of the pledge campaign. "Generally we are not terribly worried if scientists from any nation can have access to our research."

He said the longstanding resistance by Agriculture Department officials to allow any outsiders access to Plum Island "is a reason for concern."

USDA officials, who only last December lifted 40-year-old restrictions on routine press visits to Plum Island, maintain the lack of access is a legitimate response to prevent the release of highly toxic and sometimes lethal germs to the mainland — not an attempt to hide secret research.

Dr. Roger Breeze, current director of the center, expressed surprise when shown copies of the military records. "No, I never heard this," he said. "The reason for the establishment of the lab as far as I know was that . . . there was an outbreak of foot-and-mouth disease in Mexico. The U.S. spent a lot of money and time; it took several years to control it."

Breeze said the center's primary research projects are focused on foot-and-mouth disease and African swine fever, diseases still considered major threats to the national livestock industry. The Agriculture Department estimates that an outbreak of foot-and-mouth disease in the United States would undermine the export of beef, dairy products, hides and processed meats, and cost the U.S. economy $12 billion over 15 years.

Questions about the true mission of the lab on Plum Island have repeatedly arisen in the past four decades, both because government officials were denied access to the island on all but a few rare occasions and because the nature of the research is so close to that needed to develop biological weapons.

But Plum Island has managed to remain largely aloof from the national controversy over infectious disease research and the military primarily because the center is not one of the scores of nonmilitary labs officially doing biodefense work.

Biological warfare research was outlawed by an international treaty known as the Geneva Protocol or the Biological Weapons Convention, signed by the United States in 1972 and ratified in 1975. But experts say there are gray areas between what's illegal and what's permissible research of defenses against biological weapons.

"There isn't too clear a line as things stand now in terms of the biological weapons treaty," said Susan Wright, a historian of science who edited the book, "Preventing a Biological Arms Race."

"One can test against agents of biological warfare attack, so a nation can test a biological warfare agent and not break the treaty," she explained.

In July, 1992, a team of government biological warfare experts working with the U.S. Arms Control and Disarmament Agency toured Plum Island in connection with ongoing talks in Geneva concerning possible changes in the Geneva protocols, which are administered by the United Nations Biological Warfare Convention, an arm of the World Health Organization. A member of the visiting team said in an interview at the time that while research on Plum Island complies with the provisions of the international treaty, there was concern that proposed changes in the treaty — which never took place — could force a halt to some of that research.

The last known research conducted on the island in cooperation with the Army Medical Research and Development Command at Fort Detrick was in 1990, Breeze said. That year the Plum Island lab provided support services for an Army effort to develop vaccines against Rift Valley fever and Venezuelan equine encephalomyelitis to protect U.S. troops stationed abroad. Both diseases are dangerous to both livestock and humans and have been the focus in recent years of military "biodefense" research, which is permitted under the treaty.

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One legacy of the Army's role in founding the Plum Island lab is its repository for viruses and viral antibodies of the most dangerous animal diseases in the world. In 1954, Lt. Col. Don L. Mace, then-military commander of Plum Island lab, and his soldiers obtained 134 strains of 13 viruses from all over the world and turned them over to the Agriculture Department.

"We've probably got them and more, the originals or their offspring," said Dr. James House, head of reagent and vaccine services at the center.

In the bowels of the old Army lab, which is to be closed in 1995 when a new facility on the island is ready, are freezers where the viruses are kept frozen in liquid nitrogen at temperatures around minus 190 degrees Celsius. "It's interesting hearing this history about biological warfare," said House. "We've tried to get some contracts with the Army for research because they have money, but none ever came through."

Brig. Gen. Charles Loucks, then the deputy chief chemical officer, said in a Sept. 24, 1951, memo on reassigning Fort Terry to the Army Chemical Corps, that laws banning some exotic disease research on the U.S. mainland made Plum Island an ideal location for the biological warfare lab. "Plum Island is further required to evaluate for offensive purposes, viruses of such agents as foot-and-mouth disease and rinderpest," he said.

Five projects were then authorized for development of viral weapons and four were identified by name: foot-and-mouth disease, Rift Valley fever, African swine fever and rinderpest.

In the summer of 1953, Army records said, "The mission of Fort Terry has been changed by action of the Chief Chemical Officer from one which encompassed studies on various exotic animal diseases to determine both their offensive and defensive potentialities as biological warfare agents to one which pertains only to the defensive aspects of foot-and-mouth and rinderpest diseases."

In the 1970s, there were several reports in Newsday about military connections to Plum Island. In a 1971 interview, Mace said that the work done in the 1950s was still classified and that he was unsure whether it was offensive or defensive research. He has since died.

A history of the island facility distributed by Agriculture officials in December, when the policy of allowing reporters regular access to the island was instituted, made no mention of any military role in establishment of the disease center. The lab currently has a staff of about 100 and an annual budget of $13.7 million.

Covert, who's currently preparing a history of biological warfare in compliance with the Geneva protocol said there are mixed feelings among government officials on the release of historical information on biological warfare programs. "Scientists even today have difficulty knowing what they can talk about, and we still have to make a determination about what information of the former programs might still be a value to any potential enemy," he said.

"Last year, I went to a reunion of scientists who worked on the project and they wouldn't even talk to each other about it."

He added, "On the whole, I believe that the more we know, the fewer questions will remain and the less fear we'll have."