

Chapter 6

Dragon on the Last Frontier

In the summer of 1969 the Army drained a small lake in interior Alaska. Though this presumably is not something that occurs every day, the event would be unremarkable except for one thing: From the bottom of the lake the Army recovered about two hundred artillery shells and rockets filled with nerve gas. The lethal weapons had been left on the frozen surface of the lake at Fort Greely's Gerstle River test site during the winter some years earlier. According to the Army, the chemical-filled munitions were scheduled for destruction when they were placed on the ice, but somehow the order to destroy them was never given. Apparently forgotten, the deadly stockpile sank to the bottom when the ice melted under the bright May sun.

The poison gas weapons sank in 1966 and remained in the lake for more than three years before they were retrieved. The Army has not explained why such dangerous

material were handled so carelessly, nor why the loss of a large quantity of nerve gas went unnoticed for so long. After reports of missing nerve gas weapons finally came to the attention of Arctic Test Center authorities, the Army decided to drain the lake in order to remove the weapons. The training was done in secrecy.

The lost chemical weapons were part of the secret CBW program conducted under the aegis of Fort Greely's Arctic Test Center. This bizarre incident is only part of the evidence showing that the protective blanket of national security that shrouds the CBW program elsewhere has concealed the Alaska CBW test activities from the public eye. The story of the lake was unraveled with the story of CBW in Alaska. Together they make a case study in the secrecy with which the CBW program has been managed - and mismanaged.

Fort Greely is an unusual place. It occupies some twelve hundred square miles on the north side of the windy and bitterly cold Alaska Range, a hundred miles southeast of Fairbanks. The reservation encompasses mountains, glaciers, plains, taiga forest, tundra, rivers, and lakes. It is not uncommon for winter temperatures to plunge to fifty degrees below zero for days on end, accompanied by frequent gusty winds which intensify the cold. During the summer, the mercury rises to eighty degrees or higher. Because of the extreme climate and the diverse terrain that characterize the region, Fort Greely is an ideal site for cold weather testing.

The CBW test mission is one of many performed at Fort Greely. The Arctic Test Center conducts field testing operations with all kinds of equipment, from sleeping bags and tents to mortars and tanks. Fort Greely is also the home

of the Army's Northern Warfare Training Center.

For years a curtain of secrecy surrounded the CBW program at Fort Greely. Apart from a few military planners, who weren't doing any talking, nobody in the state seemed to know much about the CBW program. I first heard of Fort Greely's C13W activities from a soldier I met by chance while camping at Mount McKinley park in late 1969. Intrigued by the strange story he told, I decided to learn what I could about the clandestine program. During several months of investigation early in 1970, I could not locate a single state official, from Governor Keith Miller on down, who seemed to be acquainted with the CBW operation in Alaska. Walter J. Hickel, who was governor of Alaska from 1967 through 1968 when he became Secretary of the Interior Under President Nixon, says he knew nothing about CBW activities at Fort Greely.

I quickly learned that it is difficult for the average citizen to find out anything about CBW affairs. Even a senator of the United States is hard put to obtain information regarding these activities in his own state. In 1969 military spokesmen led both U.S. senators from Alaska to believe that reports of CBW test activities at Fort Greely were unfounded. Less than a year later the Army reversed its position and admitted that Alaska had been used as a CBW test site.

Early in 1970 Frank Keim, a graduate student in anthropology at the University of Alaska, noticed a reference to Fort Greely in Richard McCarthy's book, *The Ultimate Folly*, and wrote to Democratic Senator Mike Gravel, Republican Senator Ted Stevens, and then-Congressman Howard Pollock, a Republican. Keim, an outdoorsman with an ecologist's concerns asked his representatives to ". . . look

into this useless pollution of an area I like to hunt and fish in." The divergent responses to Keim's letter give some indication of the confusion one encounters in seeking to learn what is going on in the sensitive area of CBW.

Senator Stevens quickly wrote Keim that Fort Greely was not a C13W center. His letter of February 4, 1970 was brief but to the point:

Concerned about Fort Greely as a center for chemical and biological warfare was brought to my attention last spring by a resident of Big Delta. Inquires conducted last April [1969] by Assistant State Veterinarian James P. Pazaruski in which he talked with Col. Andreeson, Post Commander of Fort Greely and Captain Boyson, Post Veterinarian, determined that a chemical and biological warfare center does not and has never existed at Fort Greely, Alaska.

Senator Stevens maintains that his reply was essentially accurate, but his letter gives the erroneous impression that Keim's inquiry was entirely without basis. It should be noted that Keim had not used the term "CBW center" in his letter. He had simply asked Stevens to "look into the experimentation with CBW agents at Fort Greedy." (For Stevens's letter and other correspondence cited in this chapter see Appendix B.)

Stevens's ready acceptance of the Army's previous denial is surprising. By early 1970 the CBW program at Fort Greely, though still officially disavowed by the Army, had become something of an open secret. Seymour Hersh had published details of open air tests in Alaska involving both nerve gas and germ warfare agents. An NBC-TV documentary on CBW had mentioned Fort Greely as the scene

of CBW testing. Even the Army itself was beginning to acknowledge Fort Greely's part in the CBW program; a 1969 Army pamphlet describing the Chemical Center and School at Fort McClellan matter of factly listed Fort Greely as a CBW "research and development installation."

Keim's inquiry to Senator Gravel fared differently. Though Gravel, like Stevens, had been misled in 1969 when the Army told him that the NBC-TV documentary report was inaccurate, the Alaska Democrat forwarded Keim's query to the Pentagon. In a reply dated February 27, 1970, Col. Raymond T. Reid, Pentagon legislative liaison, confirmed the open secret that "the Army had conducted open air chemical and biological tests in the state of Alaska in the past in support of Department of Defense programs." Colonel Reid also provided Senator Gravel with additional information on a classified basis. According to Reid's letter, the Army had conducted open air tests between 1962 and 1967 with the nerve agents VX and GB and with tularemia, the bacteriological pathogen which produces the disease known as rabbit fever. The security restriction on this information was lifted April 17, 1970; the Army gave Senator Gravel no explanation for the original classification or for the change in status.

Keim's inquiry had elicited two different responses from Alaska's two U.S. senators. Apparently the senators themselves had received different responses from the Army. What prompted the change of tune between 1969 and 1970? The Army had been doubly embarrassed by the Dugway sheep kill of March 1968. The errant nerve gas test was a mistake of major proportions, but the Army compounded its woes by attempting to conceal the truth. Late in 1969 the House Committee on Government Operations

reported to Congress that the test procedures at Dugway were unsafe and that the Army impeded investigation of the incident by denying its test activities, by withholding needed data, and by furnishing false or misleading information.

By the end of 1969, Congress had passed into law provisions requiring disclosure of all CBW activities to appropriate civilian and military authorities. While Congress was reasserting its constitutionally granted control over the military, the executive branch was conducting its first full scale review of CBW policy in over a decade. President Nixon's November 1969 policy statement indicated concern for the implications of the CBW program.

Another factor prompting disclosure of Alaskan testing was Hersh's January 1970 report of tularemia tests conducted at Fort Greely in 1967. Confronted with detailed accounts of the tests in Alaska, it did not make sense to continue to deny the obvious.

VX LAKE

Apparently the Army had no intention of owning up to the lake fiasco when it acknowledged CBW testing at Fort Greely. In Colonel Reid's letter to Senator Gravel, he said that the CBW tests "were conducted safely and without incident or residual hazard." Though the hazards of the gas loss and recovery might be disputed, the accidental nerve gas sinking was indisputably an "incident."

The lake the Army drained measures about a thousand feet in diameter and is located near the Gerstle River, a little over 6 miles from the Alaska Highway and about 130

miles southeast of Fairbanks. Men stationed at the remote outpost dubbed the lake "VX Lake" after the nerve gas episode came to light. VX is the military code name for the British-developed nerve gas produced by the United States in large quantities for a wide range of munitions. Many times stronger than the mustard gas used during World War I, a few inhaled milligrams of nerve gas can kill a human being in seconds. A drop on the skin will be fatal within minutes.*

"I don't know much about VX Lake," said one GI who was stationed at Gerstle River while the weapons lay at the bottom, "but it wasn't exactly the kind of place you would want to go swimming. We were told to keep away from it." After the mishap was discovered the servicemen were instructed to refer to the lake as "Blueberry Lake." Though this pleasantly bucolic name is now the official one, it has never caught on among the GIs who knew it as VX Lake.

As in the disclosure of the fact of CBW testing in Alaska, information about the lake draining episode has been released belatedly. In some instances the Army's reluctant and partial revelations seem to raise more questions than they answer.

News of the nerve gas loss slid not surface until nine months after the chemicals had been recovered from the lake, more than four years after they had sunk and three months after the Army had gratuitously denied any un-

*The tactical weapons submerged in the lake were actually loaded with the nerve agent GB, rather than VX. Both are lethal nerve gases classified by the Army as standard casualty agents. They are comparable in their effects and characteristics, though VX is less volatile. The leaking rockets the Army dumped in the Atlantic in 1970 were filled with GB; the sheep that died at Dugway in 1988 were killed by VX.

toward incidents in its Alaska CBW program. The first admission that anything had gone awry at Gerstle came on June 5, 1970, when a little-noticed mimeographed Army statement marked "Information for Members of Congress" was slipped under doors on Capitol Hill in Washington. That evening in Anchorage the Alaskan Command issued the same statement to the press.

The Army apparently released the story to beat the *Anchorage Daily News* to the punch. Several days earlier, the paper's executive editor Stan Abbott had contacted military authorities in Anchorage requesting confirmation of a story I had researched and written for the newspaper revealing the strange episode.

"We asked the Army to get back to us by Friday (June 5) so we could break the story in our Sunday paper," Abbott recalls. "Instead, the Army put out a release to try to take the sting out of our disclosure.... We had given them an exclusive story in the interest of accuracy. The Army doublecrossed us by issuing its own release . . . "

The Army has issued four communiqués concerning VX Lake. There are some significant discrepancies in these four accounts. Careful analysis reveals something of the manner in which the Army's cumbersome bureaucracy manages to cloud critical questions. (Because information about this incident is not readily available to the public, all four statements are included in Appendix C, pp. 148-163).

In the June 5, 1970 "news scoop" release, the Army's legislative liaison hastened to assure Congress that "during the entire operation no lethal chemical agent was released into the atmosphere, and no personnel were exposed to the agents." This information contradicted firsthand accounts of possible nerve gas exposure I had come across

while investigating rumors about the lake. In response to my specific questions about a possible nerve gas exposure treated at the Fort Greely dispensary, the Army's Test and Evaluation Command (TECOM) which is responsible for the Arctic Test Center at Fort Greely, gave me a report on one leaking nerve gas weapon and two possible exposures to nerve gas that occurred during the operation. The letter to which the TECOM report was attached was dated July 10, 1970.

According to this report, Master Sgt. Richard V. Huband was assisting two other soldiers in removing a 105-mm shell containing nerve agent from the lake in July, 1969. The round was observed to be leaking and Sergeant Huband immediately put it back into the mud. Soon he developed a runny nose and a headache. As these are symptoms of nerve gas exposure, the report explained, Huband immediately injected himself with atropine, an antidote for nerve gas carried by all men working with the lethal agent. No formal report of the incident was made, but a blood sample check for cholinesterase was taken and processed at the Arctic Test Center laboratory. Results of the test showed a low cholinesterase level, indicating possible exposure. The day after the incident, the TECOM report stated, Huband showed no ill effects.*

***The second possible exposure mentioned in the report was a civilian chemist from Dugway who was assisting in the project and who was treated as a possible exposure case in September 1969. He was held for twenty-four hour observation, but blood samples indicated no exposure. Physicians later decided that he had probably suffered simple heat prostration while wearing a heavy protective suit and gas mask. The report did not identify the circumstances in which the Dugway chemist was stricken.**

The account of the leaking weapon handled by Sergeant Huband contradicted the Army's June 5 assurances to

Congress that the draining was carried out without leakage of gas or exposure of personnel. Which Army account was accurate? After a lengthy delay, on December 21, 1970 Col. Philo A. Hutcheson, Army legislative liaison, sent Senator Gravel what he termed a "final reply" to Gravel's repeated inquiries about VX Lake. This account, based on TECOM's investigation, substantiated the Army's initial representation of the mishap. There was no reference to a leaking rocket or to possible exposure victims.

But three months later the Army flip-flopped again and confirmed for Congress the information TECOM had provided me the preceding summer. This was done in a confidential letter sent in March 1971 to Democratic Senator Thomas J. McIntyre of New Hampshire, chairman of the Senate Armed Services Research and Development subcommittee, who had followed up Gravel's lead and addressed further questions to the Army about VX Lake. The information was subsequently declassified and a post-final report sent to Senator Gravel July 2, 1971.

In correcting its erroneous first statement and the misleading "final reply," the Army informed Senator Gravel that "certain conflicting evidence in the case became available" after the "final reply." Much of that information, however, had been available from TECOM for nearly six months before the "final reply" was written.

The post-final report contained an interesting new piece of information. One of the rounds had been leaking nerve gas when it was placed on the lake in 1966. The leaking agent constituted a "minimal hazard," the Army maintained, because "any agent leaking from the projectile would probably have been hydrolyzed [neutralized] and/ or diluted to physiological ineffectiveness within several

days after the agent came in contact with water." The report neglected to point out that the leaking liquid nerve gas would have remained frozen in a solid state at temperatures below minus thirty-six degrees Fahrenheit, and that in liquid form the agent would not have come in contact with water on the solid-frozen lake. Once the rocket sank, of course, the chemical agent would have been neutralized. But the leaking rocket remained atop the lake for several months during the winter before the lake thawed.

The vague and occasionally conflicting accounts of VX Lake the Army has given leave several key questions unanswered. Why were nerve gas weapons left on the lake? Why did it take the Army so long to discover its potentially deadly mistake? Why were Congressmen misinformed about the events surrounding the incident? Would Army spokesmen have admitted the incident at all if disclosure had not been forced upon them? How many more secrets like VX Lake does the Alaskan wilderness hold?

In May 1971, almost a year after the disclosure of the nerve gas bungle, I visited Fort Greely to see the Gerstle River facility and the site of VX Lake. My escort, Lt. Col. Kenneth Brown, told me that he was busy banging out replies to Congressional inquiries about the lake. Apparently the task of soothing public nerves about the peculiar activities at Gerstle River had fallen to Brown, who was not stationed at Fort Greely when the lake was drained and who is not a CBR specialist.

The lake, about six miles south of the Alaska Highway and two miles from the Gerstle River compound gate barring public access by road, is refilling from accumulated snowmelt; Alaska had a record snowfall the preceding winter, and the lake had returned to more than half its original

level when I saw it. The lake bed and adjacent tundra is scarred with vehicle tracks easily visible from the air. But from the nearby hill, there is no indication to the casual observer that the lake bottom once held more than a ton of lethal nerve gas in loaded tactical rockets. The pumps that siphoned the lake's water through a low saddle, and into the Gerstle River drainage system have been dismantled and removed. The shacks constructed on the site to house the decontamination equipment have been torn down and burned.

On a small hill near the lake, a bare area surrounded by a barbed wire fence contains the pit in which the rockets were exploded, as well as the burned remains of the temporary buildings. Lieutenant Colonel Brown parted the tangle of barbed wire and walked into the disposal area with me. He spoke disparagingly of exaggerated accounts of the hazards of the operation. But when I noticed a small, weathered metal cartridge about the size of a flashlight battery and casually stooped to pick it up, he quickly cautioned me not to let curiosity get the better of my judgment.

As we traversed the rough roads that crisscross the Gerstle River test site, Brown pointed to the signs of wildlife which inhabit the area. Stripped willow branches about three feet off the ground where rabbits and moose had browsed to the snow line during the past winter were evident throughout the area. We saw numerous rabbits and moose, and occasionally bear and even wolf droppings could be seen. The lake, I was told, seasonally hosts large numbers of migrating ducks and geese.

Activities at Gerstle River have been slowed to a trickle, Brown told me. He cited budget cuts throughout the Army

and the President's decision "to get out of the CBW business" as the principal reasons. The meteorological crew which had been stationed permanently at Gerstle River and had frequently provided wind and weather data in support of CBW test operations is now based permanently at the main post, thirty miles northwest. Other than occasional training exercises with CS and minor surveillance programs which are continuing, there is no gas activity there, Brown said.

We walked through a fenced area known as "the gas yard," the storage area where nerve gas had been kept. Except for a few incendiary canisters in one corner and some drums containing CS in another, no munitions were visible in the storage area. Brown identified the incendiary as M4 thickener under long-term surveillance monitoring. Except for stacks of diamond willow branches one of the five servicemen stationed at Gerstle collects and cures as a hobby, the large equipment shed near the main compound is now virtually empty.

I asked Brown why Senator Stevens had been misinformed concerning Fort Greely's CBW activities in 1969. He told me that Colonel Andreeson, then the post commander, was "entirely on the level" when he responded to inquiries in the spring of 1969. But I found it difficult to reconcile the senator's assurance "that a CBW center does not and has not existed at Fort Greely" with the clear fact that a rather extensive amount of time, equipment, personnel, and land at Fort Greely has been devoted to the CBW program. If he had not been misinformed, why did Senator Stevens give his constituents a clearly erroneous impression?

Brown explained that the answer lay in Army security

regulations, coupled with a complex chain of command. He reminded me that the post commander is responsible to the Alaskan Command, headquartered in Anchorage, while Arctic Test Center operations at Fort Greely are conducted under an entirely different command, TECOM, headquartered at the Aberdeen (Maryland) Proving Grounds. In accordance with Army security regulations, he said, CBW testing might have been conducted by The Arctic Test Center at Fort Greely without the knowledge of the post commander. Because he had no "need to know," Colonel Andreeson had not been informed that CBW operations were being conducted at the post he commanded.

Anyone who has tried to work through the Army's Byzantine chain of command and unwieldy procedures can appreciate Brown's explanation. But the rationalization does not suffice. The misinformation cited by Senator Stevens had been given by the post commander in reply to an inquiry by the assistant state veterinarian, Dr. James Pazaruski, an official with a legitimate public health interest. Dr. Pazaruski had been called into the matter after a trapper complained to Senator Stevens of mysterious animal deaths in the vicinity of Fort Greely. After talks with the post commander and post veterinarian Dr. Pazaruski concluded that "a chemical and biological warfare center at Fort Greely does not exist nor has there ever been such a unit in the area." Apparently Colonel Andreeson either did not know or forgot to tell Dr. Pazaruski about the Nuclear, Biological and Chemical test division of the Arctic Test Center. The division is headquartered in a small cluster of buildings including a small laboratory several hundred yards from the post commander's office.

It is conceivable that Senator Stevens was not familiar

with reports of CBW activities at Fort Greely, but it seems unlikely that these accounts altogether escaped the attention of the commanding officer of the post. If the post commander cannot tell an inquiring state official whom to contact for accurate information about activities on his post, one wonders who on earth can find out anything about activities the Army wishes to conceal.

TESTING TULAREMIA IN ALASKA

Fort Greely holds the dubious distinction of being the only place in the United States besides Dugway where germ warfare agents are acknowledged to have been tested in the open atmosphere. The information concerning biological testing that Senator Gravel obtained from the Army in response to Keim's inquiry may be summarized as follows:

1. In 1966 and 1967 tularemia tests were conducted in the Delta Creek area, approximately thirty miles west of the main post at Fort Greely and about sixty miles from Gerstle River.
2. The tests were conducted in order to obtain data concerning the vulnerability of tularemia under arctic conditions.
3. Prior to testing the pathogenic agent, stimulants were used to check the procedures and safety precautions.
4. Extensive ecological, epidemiological, and meteorological studies were conducted before the tests.

5. The strain of tularemia selected for testing was intentionally different from the endemic strains, ensuring that it could be readily identified and traced.

6. Ecological and epidemiological monitoring of the area was continued through 1970, and followup studies indicate that the strain of tularemia used for testing not contaminate either the wildlife or the environment of Alaska.

Tularemia, commonly known as rabbit fever because it frequently occurs in rabbits, is a bacterial disease commonly found in North America as well as in many parts of Europe, Japan, and the U.S.S.R. Sporadic human cases have been reported. The bite of an infected tick or mosquito, as well as the handling of infected animals may result in tularemia. Chills and fever occurring one to ten days after infection mark the onset of tularemia. Fatality in untreated cases is about five percent.

It is not known exactly what kind of tests were conducted with tularemia pathogens at the Delta Creek site. Technical problems generally associated with biological weapons testing include stabilizing the organism (keeping it alive until it reaches the target it is to infect) and dispersing it. It is known that one tularemia test was conducted during the summer of 1967.

"We didn't know what we were working with, but we knew it was a biological agent," recalls one worker who was involved with the 1967 test. "That summer frightened me more than any other work I did for the military."

The job of tracing tularemia in the test area at Fort

Greely was handled by the University of Oklahoma Research Institute. The principal investigator for the project, Dr. Cluff E. Hopla, professor of zoology at Oklahoma, is a specialist in parasitic diseases. Dr. Hopla's interest in the arctic, as well as his research association with the military, dates back to 1955. Although the Defense Department funds his work, Dr. Hopla maintains that his research interests are scientific rather than military or strategic.

The Oklahoma group's military-financed research has focused on animal- and insect-borne diseases in Alaska. Dr. Hopla's field teams have gathered wildlife and insect samples from widely scattered areas of the state for laboratory analysis. The reports produced by the Oklahoma research institute cover a wide range of topics. A 346-page study Dr. Hopla compiled from data collected between 1960 and 1964, for example, catalogs the different varieties of fleas in Alaska, the animals on which they occur, and the parts of the state in which both are found.

In a January 1965 report prepared for Dugway, Dr. Hopla's research group surveyed the literature on the occurrence in Alaska of tularemia, Q fever, pasteurellosis, brucellosis, leptospirosis, infectious hepatitis, influenza, and tuberculosis. In the introduction, Hopla noted that he had included more data than the project had called for because he felt "this additional information would prove useful as background information for military purposes." He says in retrospect that he was trying to prevent what he termed "tunnel vision" on the part of the military.

The Oklahoma program under which the 1966-67 tularemia test was monitored began in 1964. The project reports are innocuously titled *Ecology and Epidemiology*

Research Studies in Alaska: A Report of Field Collections and Laboratory Diagnostic Assays; the contracting party — presumably Dugway — is not identified. According to the first project report of March 30, 1965, the purpose of this study was to gain information pertaining to the ecology and epidemiology of Q fever and tularemia. In order to learn where these agents occur naturally, birds, mammals, and insects were collected. During the summer of 1964, while security clearance checks were being run on the Oklahoma personnel, the Dugway Proving Grounds provided two advance field teams to gather insects for the project.

Though Dr. Hopla's annual project reports make no reference to CBW testing, the 1967 report notes obliquely that "this past year a greater amount of our effort was conducted in the Delta-Fort Greely area than previously." The same report identifies the Delta region as the "focal point of interest" for the project.

The 1969 report summarizes the findings from 1964 to 1968. According to that report, twenty-one tularemia infected animals were gathered during those years. Of these, eight were collected in 1968, the year after the Army's tularemia test.

Dr. Hopla does not think there is any connection between these findings and military testing. Most of the 1968 isolates, he explained, were found in the vicinity of Nome on the Seward Peninsula, more than six hundred miles from the Delta River area where the Army tested.

The strain of tularemia found in the Nome vicinity was identified by Dr. Hopla as "Type B." Although he has no definite information, he suspects that the Army would be more likely to test an "A" strain, with which it is known to

have conducted laboratory experiments. He emphasized, however, that this was merely his guess. "I have no real way of knowing," he said. "I have no positive proof."

Hopla is not certain whether the open air test of biological pathogens constitutes a threat to Alaska. "That's a hard question to answer," he said. "You never feel one hundred percent sure about these things." Part of the problem, he explained, is that "you never have enough information about what they do." He thinks that if the military was "extremely careful" the chances are good that a controlled strain might have been introduced without danger to the environment.

Dr. Hopla believes that the tularemia isolates his group gathered were all endemic to Alaska. On the basis of the Oklahoma group's preliminary and followup field reports, the Army assured Senator Gravel that the tularemia tests did not harm the Alaska environment.

The fact that the Oklahoma group is funded by the Army has led some observers to question whether its evaluations of the Army tests can be considered detached or objective. Because Dr. Hopla's interests overlap those of the military there has been some confusion between the two. The members of the Oklahoma project with whom I spoke agree that Dr. Hopla's interest in tularemia is a legitimate and longstanding scientific concern. They are quick to point out that the monitoring of the Delta test site was only one aspect of a statewide research project.

Alaska biologists whose field work on animal diseases parallels that of Dr. Hopla believe the Oklahoma researcher's interests are unquestionably professional. They cite his voluminous flea study as an example of Dr. Hopla's meticulous scholarship. Some state biologists, however, say they

should be informed about the military's biological activities in Alaska. "I'd like to know more about what they're doing," one professional game biologist says. "It is always possible that I may come across a strain of a disease we hadn't found before and report it as enzootic [naturally occurring], only to find out later that it had been artificially introduced by the Army."

Why is the Army interested in arctic biology? A reference in the January 1965 report on Alaskan parasitic diseases prepared for Dugway by Dr. Hopla's group demonstrates the high degree of transference between pure science and its perverted military stepchild. That report refers to the possibility that infectious diseases might be exchanged between Siberian and Alaskan caribou. It says indications are "that *Brucella* organisms isolated from the reindeer species ... in Siberia and other parts of Russia are of similar description to those isolated from the same species of reindeer and from human beings exposed to infected reindeer on the North American continent." The *brucella* organism, frequently found in reindeer, produces in man a disease known as brucellosis, sometimes called undulant fever because of its characteristic intermittent, irregular high temperature. Other symptoms of brucellosis include headache, weakness, sweating or chills, and generalized aching. Reports of more than sixty cases of brucellosis contracted by laboratory workers at Fort Detrick underscore past military interest in the disease.

"Putting two and two together," says a state game biologist, "what they're interested in is transmitting diseases, or preparing defenses against them." Consider the flea study. "Fleas make dandy disease carriers," he points out. Epidemiological studies are a basic tool for effective biological warfare offense or defense.

THE ALMOST TEST

The Pentagon maintains that no tests involving lethal CBW agents have been conducted in Alaska since 1967. Preparations for at least one such test were begun in 1968, but there is no evidence that the test was ever conducted at the contemplated site.

During the summer of 1968 the Army asked the Oklahoma research group to collect field data at a site about thirty miles from Clear, an Air Force radar installation southwest of Fairbanks. The remote site, accessible only by helicopter and more than one hundred miles from Fort Greely, lies within the vast domain of public lands maintained by the Interior Department's Bureau of Land Management. Apparently the area was to be used for CBW testing.

According to an Oklahoma field biologist who spent about ten days working in the area during the summer of 1968, a weather crew was gathering meteorological data for the military at the same location. The weather crew consisted of about a dozen civilians and a handful of Army and Air Force personnel. One of the military men was identified as an Air Force officer who apparently served as Alaska liaison for the Desert Test Center, the Utah CBW complex, during the 1967 biological tests at Fort Greely. He was assisted by members of the meteorological team at Fort Greely.

The Oklahoma researcher says that the weather crew was checking air currents, apparently for 'a CBW test. He recalls that a red dust stimulant was dispersed from a high tower constructed at the remote location, but he does not believe that testing with germ warfare agents was actually conducted. He was told that the military decided to call

off the test when the wind carried the stimulant much farther than had been anticipated.

When Oklahoma personnel returned to do a followup survey later in the year they were given no special precautions, indicating that no dangerous poisons had been introduced to the area. "We had no reason to believe they had tested anything," the Oklahoma biologist told me, but he does not know why he was sent back to the area for the followup survey. "Dr. Hopla said that the location was not scientifically interesting to him and that he dispatched his team to that location at the Army's request.

A disturbing aspect of the stimulant test is that the operation was conducted on public domain rather than within a military reservation. The Bureau of Land Management, which is responsible for the vast federal land holdings in Alaska, knew nothing about the Army's use of the site near Clear. Robert Krumm, then Bureau district manager, confirmed that a site northwest of Clear was occupied temporarily by an unknown party. "We have never received any indication of the military's proposed use or occupancy of any lands in this area. Specifically, never during the summer of 1968," he wrote me.

It is customary, Krumm noted, for government agencies and individual citizens to secure permission before making use of such land. Apparently when it comes to CBW the Army does not feel constrained to comply with rules and regulations others are obliged to follow.

The timing of the stimulant test raises an interesting question. A summer test in Alaska has no special value insofar as temperature is concerned. Test operations in Alaska normally seek to determine the effects of extreme cold temperatures; but summers in interior Alaska are quite mild.

During June, July, and August temperatures usually range between forty and seventy-five degrees. A summer test, then, would not be likely to tell the military much about an agent's ability to survive in extreme cold. Why, then, was a summer test contemplated near Clear, Alaska? One possibility: Faced with a strong public reaction to the sheep kill at Dugway, the Army intended to transfer its CBW test operations to the relative privacy of the Alaska wilderness. The Dugway accident brought open air test operations at the Utah test site to a halt in March 1968. Less than six months later a simulated test was conducted in the Alaska wilderness. Is this a coincidence, or was the stimulant test the first stage of a relocated test which had been scheduled originally for Dugway?

The Clear test was reportedly canceled because meteorological conditions at the site were not suitable. If the test was indeed necessary, was it rescheduled and conducted elsewhere in secrecy? If the test was not conducted at another time and place, was it really necessary in the first place?

In attempting to track down reports of the CBW operations near Clear, I ran into a blank wall when I inquired through official military channels. Inquiries addressed to the Arctic Test Center, the meteorological team and the post commander at Fort Greely, and TECOM headquarters in Maryland yielded nothing until I had finally gathered enough information, through the Oklahoma group, to pinpoint a specific location. (For written inquiries about the Clear site see Appendix D, pp.164-168.)

Once I had located the site — without the Army's cooperation — TECOM confirmed for me that an Army group had worked near Clear during the summer of 1968, that

Fort Greely meteorological team personnel did participate (the DIET team at Fort Greely says it has no record of the operation), and that the operation might have been mistaken for a CBW test. The TECOAI information, which took many months of investigation to secure, made no mention of C13W of the Oklahoma biological research groups presence in the area, or of the ubiquitous liaison from Dugway-Desert CBW headquarters.

Why did it take the Army so long to make this information available? How many other such sites might have been earmarked for clandestine CBW operations? This incident points out the case with which the Army might have conducted other CBW tests in Alaska. Prior to the enactment of PL 91-121 requiring disclosure of open air CBW tests, deadly gas and germ weapons could have been used almost anywhere in Alaska, at any time, at the discretion of the Army and without consulting other public officials. And even the limitations imposed by PL 91-121 can be overridden in secrecy by the President.

Despite the assertions of Fort Greely's military spokesmen that CBW is a thing of the past, projects at Fort Greely revolving secret teams from Dugway are continuing. In June 1971, Col. John Powers, post commander at Fort Greely, told an *Anchorage Daily News* reporter that people from Dugway "come and go all the time." What are they doing? "I don't know," he replied. "You'll have to ask ATC." One report is that Dugway decontamination teams are being sent to Fort Greely to clean up the mess left from past CBW operations.