

Chemical Film May Aid Water Fight

DENVER (UPI) — A chemical film only one molecule thick may turn out to be the greatest aid to reclamation in the history of the water-starved West.

The target of this amazing film is evaporation, the natural phenomenon that robs huge amounts of precious stored water every year. Experts estimate that one-third of all water in storage projects is lost through evaporation.

Large-scale experiments underway since 1957 indicate the potential value of the chemical film, which has cut evaporation to nearly nothing at reservoirs used in surface tests. Costs have been considerably less than the value of the water thus saved.

To the layman, it is difficult to believe that a surface-film less than one-millionth of an inch thick—invisible unless the light catches it at a certain angle—could do so much effect to prevent evaporation.

The favored material used so far has been hexadecanol, a fatty substance found in foods and cosmetics. A mixture of the chemical and water is spread by motor-boats. When the long, thin "polar" molecules of hexadecanol touch the water, they crowd tightly against each other until there is no room left for water vapor to escape.

Otherwise, the water is unaffected. There is no change in its drinking quality, and no danger to the health of water life or animals. The only difference is that the water temperature is raised slightly due to the confinement of heat energy that makes for evaporation.

Assistant U.S. Reclamation Commissioner Grant Bloodgood, chief engineer of the Bureau's engineering laboratories in Denver, is chairman of a committee coordinating the anti-evaporation experiments. Collaborating agencies include the U.S. Geological Survey and the U.S. Public Health Service. Several cities have participated in the tests voluntarily.

In 1957 and early 1958, the experiments were centered at Carter, Rattlesnake and Ralston Reservoirs in Colorado. Another study was made last summer at Lake Hefner, the water-supply and recreation reservoir for Oklahoma City.

Congress will be asked this year to appropriate \$200,000 so the studies can be continued. Sens. James Murray (D-Mont.) and Carl Hayden (D-Ariz.) will back the request with a staff report from the Senate Insular and Interior Affairs Committee estimating that at least 11.5-million acre feet of water is lost yearly to evaporation in the 11 Western States.

A tiny film of "fat" may stop it.

Whales Like South Too

SAN DIEGO, Calif. (UPI)—Each year, for about two or three months in mid-winter, several hundred giant whales migrate from the Bering Sea in Alaska to warmer waters off the coast of Baja California, Mexico.

The huge mammals travel the more than 6,000 miles to reach their calving grounds, remote lagoons sheltered from the winds and the waves of the Pacific Ocean.

It's during this mass migration that scientists have their best opportunity to study the habits of the earth's largest form of animal life. The whales obligingly pass close to San Diego's jutting Point Loma, where experts make a daily count and take notes on their activities.

RICH-YEAR-OLD

NEW YORK (UPI)—First Landing, winner in 10 of 11 starts, earned \$396,460 in 1958, highest to be recorded by a two-year-old.

Many Owe Lives To Russell Cone And His Trail Dogs

LOS GATOS, Calif. (UPI) — "Thank you for our little Randy's life," the letter began.

It was written by a couple in Fresno, Calif., to Russell Cone, a 37-year-old ex-farmboy who since 1950 has tracked down scores of lost children, hikers, hunters and, once, even a Boy Scout leader.

Aided by his pack of bloodhounds, Cone has found missing persons ranging in age from 22 months to 92 years during the more than 115 occasions on which he has been called from his home in the Santa Cruz mountains 40 miles southeast of San Francisco.

The 22-month-old baby was tracked across a busy six-lane highway to the candy department of a supermarket. The 92-year-old was a man who couldn't get out of a ditch into which he had fallen. Cone's veteran hound "Daniel Boone" tracked him down with a rush, causing the oldest to cry out, "Get that blankety blank dog off my chest."

Cone bought Daniel Boone as a pet for \$100 in early 1950 and at the suggestion of a deputy sheriff in neighboring Santa Cruz County trained him for "man-tracking." Dan'l got his baptism on Dec.

28, 1950, when he located an elderly woman in thick woods near here.

Since then Cone has acquired five more bloodhounds and has averaged two searches a month. The dogs have accompanied him on sweltering treks across the desert as well as searches 10,000 feet up on snow-clad mountains.

A typical case was that of Randy Scott Libby, 3, whose parents sent Cone that letter of thanks. At 4:30 p.m. on June 27, 1957, Randy wandered off from his family's cabin on Dinky Creek in the High Sierra. He was barefooted and wore only a bathing suit.

"At midnight the sheriff called me at home," Cone recalled. "A chartered plane flew me with Daniel Boone and Calamity Jane to the mountains."

"Early the next morning we started in. I asked for a sock belonging to the boy for a 'scent guide.' We found footprints belonging to the boy a half mile from the cabin. They were 18 hours old but we started from there."

"After tracking for several hours, the dogs decided to climb a dry, shaly bank where the scent usually is not very strong. In six hours the dogs reached Randy. He had walked eight miles and climbed 2,000 feet."

"The chief ranger told us he never would have thought the boy could have covered that much rough ground in his bare feet and wouldn't have extended the search that far so soon if it hadn't been for the dogs."

Cone said only one out of three bloodhounds he has worked with can track satisfactorily. They must ignore the scent of deer and other animals on the trail. They must not bark while tracking lest they frighten their quarry. And most important, they must be able to follow a trail as much as four or five days old, even across water.

Cone explained that a human's scent is as distinctive as his fingerprints. It is given off through the pores of the body in the form of some 20 elements and has a tendency to cling to moist places and to be blown about by the wind.

The dogs usually work in pairs, controlled by Cone and a fellow handler with a 10-foot leash which is fastened to a wide belt around the tracker's waist. The dogs do not follow with their nose to the lost person's footsteps, but sniff the air and "work out" the terrain in large circles to find a scent that may have been blown off course.

On one memorable search, two of Cone's dogs picked out the scent of a missing child from the middle of a yard where some 300 men had been milling about.

"These dogs have a terrific God-given ability," Cone said, "and I feel the good Lord wants us to do this work."

Cone is a compact five-foot, nine-inch 160 pounder with sandy hair and the ruddy complexion of an outdoorsman. From 1950 to 1956, he regarded his tracking work mainly as a hobby but it took so much of his time that his job as an appliance serviceman suffered. So he signed a contract with the Calo Dog Food Co., Oakland, Calif., to sponsor him on a full-time basis as a public service.

Cone isn't rich in material things but there are other rewards. Two years ago he was called in on the search for three-year-old Beverly Hudson after the child, a deaf mute, became lost in woods near Eureka, Calif.

She had been missing 16 hours but it took Daniel Boone and Calamity Jane just 25 minutes to find the youngster sitting in eight inches of water in a hole, unable to get out. Searchers earlier had passed within a few feet from where she was hidden by brush.

"She clung to me so tight I could hardly release her," Cone said. "You can imagine what it was like for a deaf mute youngster. She couldn't hear the searchers calling to her, nor could she call out herself."

Cone received a Christmas card from the Hudson family that year. It was a photograph of Bev, her mother, father, three brothers and

one sister, accompanied by this note:

"Dear Mr. Cone, Daniel Boone and Calamity Jane:

"We certainly want to wish you a very Merry Christmas and a Happy New Year; if it hadn't been for you and your wonderful dogs we might not have been able to take this picture."

"Yours very gratefully,
"The Hudsons."

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Germs Join Bug Battle

WOOSTER, Ohio (UPI) — Scientists at the Ohio Agriculture Experimental Station here are putting a variation of the "fight fire with fire" theory to work in their battle against bugs.

They are trying to fight insects with living bacteria. So far, though, the "living insecticide" has met with success only against moth-type pests.

Live spores of a bacterium are being produced in the form of a powder which can be mixed with water and sprayed on plants in the same manner as chemical insecticides.

The spores, when eaten by the larvae of many insects, cause a fatal disease. In initial experiments, the effectiveness of this method has been limited largely to the larvae of moths and butterflies.

The method has a number of advantages over chemical sprays:—It leaves no residues harmful to man, domestic or wild animals or fish.

—Persons applying the material face no hazards. Chemical insecticides often are dangerous.

—Insects apparently cannot develop resistance to the bacteria.

—The bacteria are so specific to moth-type insects that they do not upset the balance of nature by killing beneficial insects.

The bacteria were sprayed on corn here and at Toledo and Marietta last summer by Dr. C. A. Triplehorn, but they had no apparent effect on the corn earworm.

Although early tests have not been encouraging, entomologists are not abandoning this new idea for insect control. The bacteria are to be put on the firing line this summer to test their ability to kill the cabbage looper, European corn borer and other pests.

Moon Said Rust Free

CHICAGO (UPI) — Science has done it again.

For what comfort it may be to tidy space cadets and pioneer housewives, a metallurgist group here has announced that on the moon, metal won't rust, silver never tarnishes and bronze can't turn green.

A space-age "rust index" shows that on earth, up to 15 years of moisture, wind, corrosive gases, sunlight and salt water will corrode a steel panel the size of a license plate. And presumably anything else rustable.

Rust ratio, they say, is 0.0 for the moon, which lacks wind, moisture and free oxygen.