

ROBERT HEINLEIN COMMENTS ON HIGH FRONTIER'S SPACEBORNE DEFENSE

SURVIVE

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USING MEDICINAL PLANTS
BACKPACK FACTS

**INSIDE THE USAF
SURVIVAL SCHOOL**



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SURVIVE

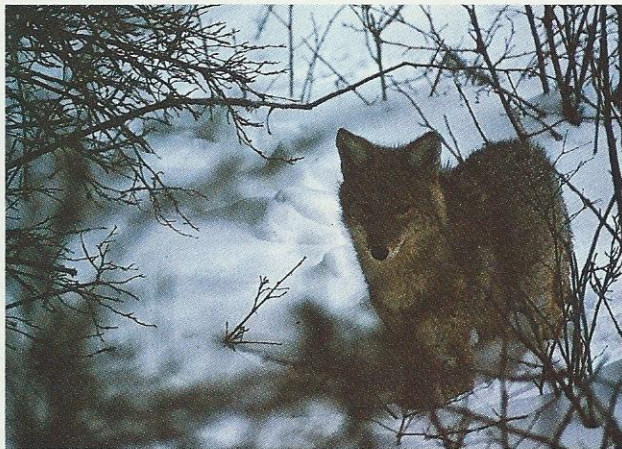
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Cover: Fairfield Air Force Base Survival School Instructor prepares jerky as part of survival training. Note parachute canopy. Photo courtesy of USAF.



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"THAT THEY SHALL SURVIVE . . ." is the official motto of the United States Air Force Survival School but it is more than just a motto, it is a way of life — sharing with students and community the knowledge and skills needed to survive in any environment.

I was met at the Spokane, Washington, airport by Fairchild Air Force Base Survival School Commander Colonel Albert A. Gagliardi, Jr., a highly trained pilot with combat experience. No stranger to survival training, he had graduated from basic-, water- and jungle-survival courses. By the time I reached my quarters at the school, I was briefed thoroughly on the school's mission. He was quick to point out that, much to my surprise, the Air Force Survival School (AFSS) devotes much volunteer time to work with civilians and lend professional assistance to various survival programs.

AFSS instructors must undergo in-depth training, after completing a rigid selection process. An instructor-trainee must graduate from a rugged 5½-month course that prepares him to teach survival worldwide, after being trained in captivity-resistance; arctic-, desert-, coastal-

tropical- and basic-survival skills. Once this comprehensive training is completed, the trainee begins on-the-job teaching under the watchful eye of senior instructors. In fact, two things that most impressed me about the school were the ability and professionalism of the instructors, and their continuing training even after they had been instructors for years.

I joined my class of 80 aircrew members and school began. It is the basic survival course required of all Air Force personnel on flying status. Failure of the course results in grounding: The Air Force knows about incentive.

During the first few days, we were in the classroom studying rescue procedures and capabilities, visual and electronic communication, survivor's responsibility, medicine and improvised gear. Students quickly began to appreciate the seriousness of survival.

We went to a nearby field to learn the use of signal devices. I knew that a signal mirror enabled the user to be spotted by rescue aircraft. However, I was surprised when instructors told us that a signal mirror can be easily spotted by a plane crew member 20 miles away and, in Nevada, an air rescue plane spotted a signal mirror more than 100 miles away.

Classes were broken into smaller working units called elements; mine consisted of nine students and two instructors. Our instructors, Airman First Class Wayne Sibley and Airman First Class Kim Kurz, accompanied us when we moved later into the Colville National Forest for field training after classroom instruction. One of the best learning centers I have seen is the Air Force Survival Exhibit Laboratory. Instruction "using real examples of all aspects of survival" can be given in rooms that are exact replicas of desert, arctic or woodlands camps. Traps, snares, edible

wild plants and animals are shown in native settings.

We learned everything a survivor should know — and can learn in a classroom — about edible wild plants found in northeastern Washington, but the most valuable information was the Air Force edibility test. I have studied edible wild plants around the world, but I have not been able to remember many when I needed to; I'm sure most survival students share this problem. However, if you know the edibility test, you can survive without memorizing specific plants. It's fairly simple.

- 1) Chew a small mouthful of plant. Wait five minutes for any effects such as burning, stinging or numbing.
- 2) If none, swallow and wait eight hours for effects such as diarrhea, cramps, pains, numbing, vomiting, etc.
- 3) If none, repeat the process using a handful of the plant and wait another eight hours for ill effects.
- 4) If none, it is probably safe to eat.
- 5) If a plant is poisonous, all parts (including flowers) can be poisonous. Use caution when plants have these characteristics:
 - a) discolored or milky sap.
 - b) spines or fine hairs, may be an irritant.
 - c) bitter or soapy taste.
 - d) beans, bulbs, mushrooms, fungi.
 - e) white or red berries, unless positively identified as non-poisonous.

On day four, we left the classroom for the field to learn by doing. Here we were expected to put into action all the knowledge we should have learned in the classroom. Since my group was primarily made up of young pilots fresh from flight school, I thought of the government's cost to train each pilot: \$500,000. The AFSS instructors — each in his early

ABOUT THE AUTHOR

J. Wayne Fears, wildlife biologist, outdoor writer and consultant on both long- and short-term survival, has written seven books and more than 1,000 magazine articles. He is currently working with the University of Alabama on an extensive survival-training program. He attended the USAF school as a student to collect information for a forthcoming book for Scribner's entitled *North America's Survival Book*.

STAYING ALIVE

Survival Schooling With USAF

Text & Photos by
J. Wayne Fears

USAF Survival School students practice using signal mirrors.





ABOVE: Students practicing firestarting skills at night during field operations. They are under canopy improvised from parachute. RIGHT: Securing food in wilds is important topic at school. Students are testing wild berries to see if edible, according to Air Force test.



twenties — are responsible for millions of dollars worth of training and the incalculable cost of human life.

The hike to our remote base camp took us cross country using ground-navigation techniques. We were required to make a different type of shelter each night we were in the field, including one from parachute pieces. Five panels from a parachute make an excellent one-man lean-to when the apex is tied about head high to a tree with heavy rocks or stakes securing the outer edge of the panels to the ground. When making parachute shelters, pitch and tightness must be considered so that it sheds rain or snow properly.

The parachute can be disassembled and made into numerous types of survival gear, also. Using a sailmaker's needle (not found on a parachute), we used three pieces of parachute-harness webbing and two pieces of shroud line to make an Alaskan backpack. By sewing up a section of parachute panel using thread pulled from the shroud line's inner core, we improvised socks insulated with down from the thistle plant. By using a forked stick, elastic cord and webbing from the parachute pack, improvised slingshots can be made.

After three days in the field, each element was becoming a cohesive working unit. The training had been demanding, based on the premise that pushing students makes them realize how great their abilities for survival actually are. One seasoned Air Force master sergeant

chuckled: "They think they're dying and they haven't even started bleeding yet."

After completing field training, each student felt that he had the necessary skills to stay alive in a wilderness environment. Vital survival skills that we had mastered included: water purification; improvised shelters; ground navigation; foraging for edible plants, berries and nuts; ground-to-air signalling of rescue aircraft; making jerky; survival medicine; snaring and trapping; firestarting; primitive fishing methods; improvised clothing; using compasses and maps; tracking; evasion and more.

Back at headquarters, after a hot shower and a thick steak, I learned more about what the school offers to Air Force personnel and civilians.

The school trains more than 10,000 students annually in eight different courses at four locations. In addition to

Basic Survival School, a life-support of-ficers' course and water-survival course are also conducted at Fairchild AFB. There is also a Water School at Homestead AFB, Florida; an Arctic School at Eielson AFB, Alaska; and at Nellis AFB, Nevada, members act as evaluators and safety observers during escape-and-evasion and search-and-rescue portions of Tactical Air Command's Red Flag Exercises.

Instructors also are involved with teaching survival skills to community organizations such as the Boy and Girl Scouts; Civil Air Patrol; elementary, high school and college students; civilian companies, and state and federal agencies. The Fairchild School volunteered almost 1,500 hours during the past year, instructing more than 50,000 local civilians on survival-related topics. Also, the wing supports Reserve Officer's Train-

ing Corps summer encampments, training more than 4,000 future officers annually.

Since 1969, the school has provided information for newspapers, as well as conducting tours of their facilities. In early 1978, the newspaper program was established as a weekly column, marking the beginning of a carefully planned public-service program, designed to instill in the civilian community the desire for survival knowledge.

Today, that program provides weekly newspaper columns for more than 2,100 newspapers, serving a potential 58 million people in 15 states and Canada. With this has come a weekly five-minute radio program and one-minute spots, reaching an estimated four million people throughout the Northwest. In addition, the school is developing a series of 30- and 60-second television spots featuring survival tips.

As the school established itself as a survival authority, requests for tours, appearances, displays and special-training programs have also increased. These programs are provided to civilian groups that are willing to pay the survival instructors' travel expenses.

These 140 instructors volunteered more than 1,500 hours during the past year conducting tours, doing personal appearances and setting up displays for special events. Through these programs more than 300,000 people throughout Washington, Idaho, Oregon and Montana have developed a better understanding of survival techniques.

An additional 450 hours were volunteered to plan and conduct special training programs for more than 1,100 people from organizations such as the Spokane and Northern Idaho Youth Search and Rescue Group, Washington Youth Conservation Corps, Montana Bureau of Land Management, United States Border Patrol and numerous private, civic and federal groups.

Anyone wanting the services offered by the U.S.A.F. Survival School, should contact Public Affairs, 3636th CCTW, Fairchild AFB, WA 99011. ■

TOP: Students are required to make different shelter each night they're in field. Here student makes lean-to from parachute, which can be disassembled and improvised into packs, socks, slingshots and other gear. **RIGHT:** One of most important survival skills taught is how to make fire if you don't have matches. Here student uses fire drill.

