SG ONBD

■■ Any crash landing is one which will require the best of gear, be it summer or winter.

Where survival in the elements is concerned, Alaska is a proving ground to end all. Countless downed airmen have eagerly confessed that the toughest part of their ordeal was combating insects in the absence of a bottle of repellent. Winter emergencies, however, continue to top the list, for the demands are infinitely more severe where roads are few, radio transmission fair, and navaids as scarce as hen's teeth. Those visiting pilots who are strange to these demands are, perhaps, most susceptible, yet each year dozens of members of the Alaskan flying fraternity, who should know better, find that they are pathetically underequipped during the 11th hour.

Ed Gauss, of the Fairbanks CAP and veteran of countless searches for downed pilots, says, "too many guys leave home with a candy bar and a pocket knife, but they only do it once providing they survive the first time." To understand why pilots do this, let's start with the basics.

The first consideration, where survival gear is concerned, should be usability and utility, but it seldom is. Weight takes precedence in almost all cases. I have seen pilots brag about kits that weighed scarcely more than ten pounds, and could be stowed in a seat pocket. They are truly masterpieces of intricate compactness, and their construction has required many hours of serious, but totally misdirected thought.

Don Sheldon, Alaska's most revered glacier and rescue pilot once told me that "good survival gear should lay somewhere between dying of exposure and having a picnic while waiting to be found." He housed his own gear in a big red nylon bag, which he fondly referred to as "the sausage." It weighed at least 35 or 40 pounds. Sheldon flew Super Cubs and Cessna 180s exclu-

Having survival gear on board is great — if you can use it

by J. D. GREINER / AOPA 500038

sively and, in the regime of aviation he courted—the 12,000-foot mountains of Alaska—extra weight was a factor not to be taken lightly. Yet, he always carried the sausage.

In it could be found frozen oranges (they taste just as good when they thaw as they do fresh), salami (it could be eaten without cooking and was highly nourishing), an assortment of candy, a jar or two of toasted soybeans, a 90-inch down sleeping bag which guaranteed warmth even in the coldest weather, an engine heater with a couple of quarts of fuel, a primus stove, warm footgear and heavy socks, along with many other items which most of us would consider ludicrous. They were not, as Sheldon proved on many occasions—one of the most memorable being a week's stay on a wind-scoured mountside with the temperature standing at an even 45° below zero.

Sheldon's message to the rest of us was a simple one—forget about staying up late and worrying about a few pounds of extra static weight in your airplane. In truth, it seldom really matters in today's high-performance birds. If one is willing to take his expert advice, the door to *practical* survival gear opens on well-oiled hinges. Now, let's get down to specifics.

Consider the common sleeping bag—and before I forget, space blankets and the like make almost worthless substitutes. A warm bag is often the first item that a crash victim seeks and requires.

Post-crash shock, even when uninjured, and the effort required to get clear of the aircraft, are prime inducers of a condition well known to mountaineers as hypothermia. Heavy physical effort, perspiration, and common fear are the ingredients which bring it on, and once afflicted you become a prime candidate for frostbite and other serious problems.

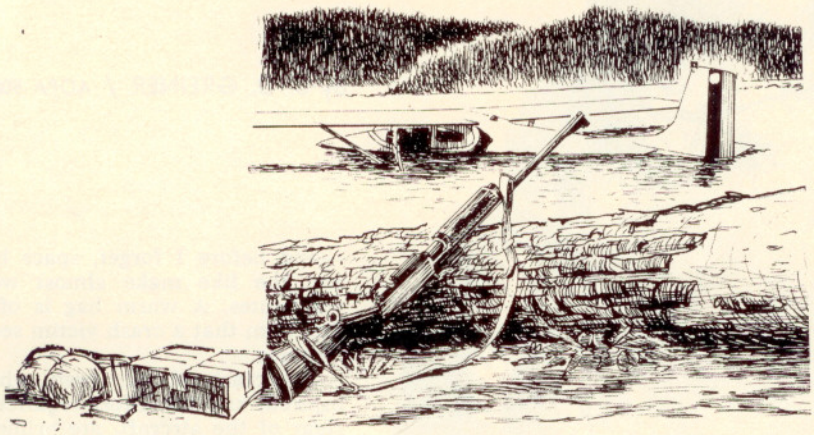
Even though a good sleeping bag can mean the difference between life and death, far too many pilots skimp or do not provide one for each passenger on board. They worry about weight, and in the process delude themselves, often opting for a two-pound down bag when the choice should have been a four pounder. Besides, they reason, more bags of lighter weight can all be stuffed into the single duffle bag that I'd like to end up with. It can be a fatal mistake.

Ask those unfortunates who have actually experienced a crash landing during the winter, and they'll quickly tell you that as the days pass slowly and the depression of not knowing when or even if you'll be rescued grows, the difference between injury and misery becomes increasingly harder to define.

In such a situation, a warm place to sleep can make the difference between logical decisions and highly irrational, panicky action. It is the kind of thing that has caused many pilots to leave the airplane, simply because even a cold walk in the wilderness seemed better than another cold night at the scene of the crash.

While on the subject of warmth, let's take a brief look at the business of packing matches. Remember, they will be stored in the kit for a long time, often many years. Even sealed in a waterproof plastic bottle they can assimilate atmospheric moisture, becoming porous. If the bottle ruptures on impact, your supply may be rendered useless in snow or other water.

I have found that the only foolproof



SG ONBD continued

way to pack matches is to pack the kind we used to call "farmers' matches" head down in empty shotgun shells, then fill the casings with melted paraffin. You can throw these babies into a rain barrel for two years and they'll work when you dig them out.

The FAA suggests that we northerners also pack a rifle, or at least some kind of firearm. Many of us shun this idea. Yet, a firearm of some kind can be useful, if only for signaling help.

If asked, most pilots would cite food for the inner man as being the most singularly critical item in any survival kit. Not so. A lack of water will do you in long before you starve to death, especially if shock is present, and it usually is. Couple this with the frequency with which pilots run out of airspeed and luck over waterless terrain, and the wisdom of packing at least a couple of quarts becomes more than obvious.

During the winter, dehydration is slower but, don't kid yourself, it's still a factor to reckon with. In addition, you'll have to have dry matches and lots of firewood to melt the amount of snow required for a good drink.

Let's take a brief look at the kind of food pilots pack and then stake their lives on. Most of it these days is the freeze-dry variety. The stuff seems ideal —it's nourishing, light and compact, and it stores well under most conditions. Like converting altitude to airspeed, however, some swaps had to be made to get it that way in the first place, and we're back to that old subject of water.

Moisture must be replaced in the freeze-dry food to prepare it. To do it properly, you'll need a measuring cup and utensils, along with a fire. If you alight where there is no water and your broken leg prevents you from hiking to get some, then, poor man, you're in a world of hurt.

If you're planning to eat it without all the soaking and cooking, forget it, because the stuff hydrates and swells in your stomach causing severe cramps and, of course, dehydrates you from within.

Freeze-dry food is truly nourishing, but with regard to its packaging, one tiny pinhole in the plastic bag can ruin the contents. Long-term storage in a soft bag stowed under other gear is a producer of such pinholes.

The rule seems to be, pack items which require no cooking, and it's easier to do than you might think.

"...the most valuable survival equipment is mental attitude."

Fruit, candy, hard sausage, nuts, soybeans, bacon bars, jerky, and cereal bars are but a few on an almost endless list, especially if you allow yourself more space and extra weight for your survival kit.

One of the most desirable things after a winter disaster is a fire. Nothing like a good crackling blaze to lift the spirits and warm the body. If your matches are in good shape, you're part way there. Now all you have to do is rustle up some dry wood and the battle is won. During winter, and during rainy periods, standing dead trees offer the only reliable source for this commodity.

Not to worry though, we've packed one of those clever little coilable, spring steel saws—now, let's see if it works. Two hours later, your index fingers

bleeding and bruised, you discover that it doesn't and you also discover that your craving for the ultralight and compact has done it to you again.

A small pack saw might be little better than the loop-ended wire type. However, a cruiser axe (long handle, single-edge) not only resists breakage and cuts wood easily, it can be used for pounding and even for exiting from a wrecked airplane. It can also be used as a fair substitute for a broken knife or one which has been forgotten. Get one with its own leather sheath, and it will lay flat on the rear deck of your airplane imposing no danger of cutting other baggage.

Before we leave the subject of bodily warmth, ask yourself how many of us opt for loafers or sneakers for winter flying. I do, for one big reason. Such footwear allows for comfort in a heated plane while providing good feel on the pedals. Yet, how many of us allow blind faith in the machine we fly to obscure the possibility of spending even a few hours in two feet of snow after an off-airport arrival?

Alaskans have in their wardrobes a kind of shoe that I have long felt represents the ideal where emergency footgear is concerned. They are called mukluks, and come in many varieties and shapes. The U.S. Army developed a style made of canvas with soft leather soles, and when worn with heavy socks or better yet, with felt inner liners, they will keep your pinkies warm in virtually any temperature extreme. Hunt up a pair and stash them in your bag.

Remember, frostbite can and does occur anytime the temperature drops below 32 degrees on the Fahrenheit scale. An added benefit comes in the fact that such shoes can be slipped on easily without lacing even over a badly sprained or broken ankle.

These suggestions are in no way meant to minimize or replace time-proven methods and equipment, only to supplement the list. Such items as signal flares, blankets, and other items should always be on hand.

For example, signaling for help is —quite simply—an activity that must follow an orderly post-crash organization of equipment, health of the survivors, and the situation in general.

"...good survival gear should lay somewhere between dying of exposure and having a picnic while waiting to be found..."

This, however, is not an implication that signaling is unimportant—far from it.

You may be able to use your airplane's comm radios, if they—and the battery—are intact, to summon help. The same goes for your ELT, although you may have to wait for a passing airplane to get any results if you are in an isolated area. In the end, it could be a flare gun or an ordinary railroad fusee that leads searchers to your location.

The fact that there are many climatic and terrain differences within the continental borders produces a broad and diverse spectrum of needs. As a result, the FAA has adopted a hands-off policy, where blanket regulations for survival gear are concerned. Canada, however, has hard and fast rules to cover the subject; they are enforced, and pilots flying north should be familiar with them.

Many states have regulations pertaining to survival gear, and Alaska is one of them. Unfortunately, the law is an old one (1959), and is not enforced. It requires "all airmen" to carry a list of items ranging from a seine net for emergency fishing to ammunition for a flare or Very pistol, but does not require the flare gun or pistol to be carried. It is a Public Works Ordinance, which is only occasionally used in conjunction with commercial operators. As a result, survival gear in general aviation falls into a category identical with that of the flight plan—recommended but not required by the FAA.

I have purposely left first-aid kits for last. This is the grayest of all aspects of survival, for the bitter truth of the matter is that few pilots know what to do with all those goodies found in even the simplest of kits. They would, in short, be better off with a box of animal crackers and a prayer shawl, as one salty old Alaskan pilot muttered.

Most of the kits that are carried today by general aviation types are made for automobile glove boxes, and consist of band aids, tape, and a few of the new premoistened antiseptic wiping towels. They are, it can safely be said, virtually useless in a real emergency.

With a bit of imagination, the stuff good survival kits are always built upon, most of us can come up with a list of things that we can actually use, such as a bottle of merthiolate or something similar, a supply of aspirin, a ready-to-use tourniquet or compression bandages. Even items of a nonprescription nature can be purchased on the advice of your friendly flight surgeon or family medic. Here again, think of things that you will have need for and, more important, that you will be able to use, rather than what the other guy carries in that neat little nine-ounce kit.

Few pilots have ever studied first aid methods and, like other of life's endeavors, a little knowledge can be dangerous. Sitting on the pile of junk that used to be your Cherokee is no time to bone up with the little guidebook most first-aid-kit makers supply. Time, in that instance, will probably be worth far more than mere money.

Finally, in the matter of post-crash survival, Big Brother has hit the nail squarely. The FAA contends that the singularly most valuable survival equipment is proper mental attitude. I carry their thinking one step farther, and contend that this outlook should be present when we are selecting our survival kits. The message? Forget about ultralight and super small. There's a lot more to "SG ONBD" than meets the eye. □