BLUE RIDGE MOUNTAIN RESCUE GROUP

BASIC COURSE
Handout #1

TABLE 1-1:

SUBACUTE ("MOUNTAIN") HYPOTHERMIA

STAGE I (MILD) HYPOTHERMIA 37-35°C (99-95°F)	• In Stage I, body heat conservation mechanisms are compensating to keep the core temperature within a few degrees of normal; it is possible to stay in Stage I for long periods of time, provided that energy reserves are sufficient to provide the necessary heat. • Shivering occurs but may be stopped by voluntary action. • Outer body blood vessels narrow (peripheral vasoconstriction), reducing the blood supply to superficial areas. This results in a cooling of the periphery, providing an insulating layer to reduce heat losses from the core. Blood flow to the extremities may reach as little as 1% of normal, but occurs as periodic "flushes" to different areas so as to prevent permanent damage. • Blood pressure and pulse go up, reflecting the increased metabolic rate.
STAGE II (MODERATE) HYPOTHERMIA 35-32°C (95-90°F)	• In Stage II, compensatory mechanisms have begun to be strained to the point of failure. • Shivering is violent and uncontrollable, and may raise the the metabolic rate to five or six times normal for short periods, although this uses up energy reserves at a prodigous rate. • Much physical and mental coordination is lost; slurred speech and amnesia are common. • The periodic variation in circulation to the periphery decreases and stops. • Most healthy people cannot regain a normal core temperature from Stage II without external warming. • Blood pressure and pulse may be high initially, but drop as energy reserves are exhausted.
STAGE III (MARKED) HYPOTHERMIA 32-28°C (90-83°F)	• In Stage III, compensatory mechanisms have been overwhelmed, and the core temperature drops quickly. • Shivering stops and is replaced by muscular rigidity. • Consciousness and physical coordination are greatly impaired. • Blood pressure and pulse are weak to the point of being barely detectable.
STAGE IV (SEVERE) HYPOTHERMIA -25°C 3-77°F)	In Stage IV, a hypothermia victim appears dead: cold, rigid, with dilated pupils, and with no detectable vital signs. Due to low metabolic needs at this temperature, it is possible for victims to survive long periods without oxygen, and for recovery without brain damage to occur.

TYPE	VOLTAGE	COST/ CELL	LIFE	WEIGHT/ D CELL	COMMENTS
Carbon/Zinc	1.5V	X	Y	3 oz.	Common "battery". Low shelf life, especially at warm temperatures.
Zinc Chloride (Heavy Duty/ Industrial)	1.5V	1.5X	1.5Y	3.5 oz.	
Alkaline	1.5V	2.5X	2Y+	4.3 oz.	Works much better than the above cells in cold environments.
Nickel/Cadmium ("NICADs")	1.25V	6X+	2Y+*	3.2 oz.	*May be recharged many times; Works better than alkalines in cold environments.
Lithium	2.8V	8X+	5Y	2.9 oz.	Note that (1) one lithium cell replaces two alkaline or similar cells, due to the difference in voltage; and (2) two lithium cells replace 8 alkalines in terms of total energy. This is 5.8 oz. instead of 34.4 oz.=2.1 lbs. of battery.

FIGURE 1-2:
COMMON DRY CELL CHARACTERISTICS

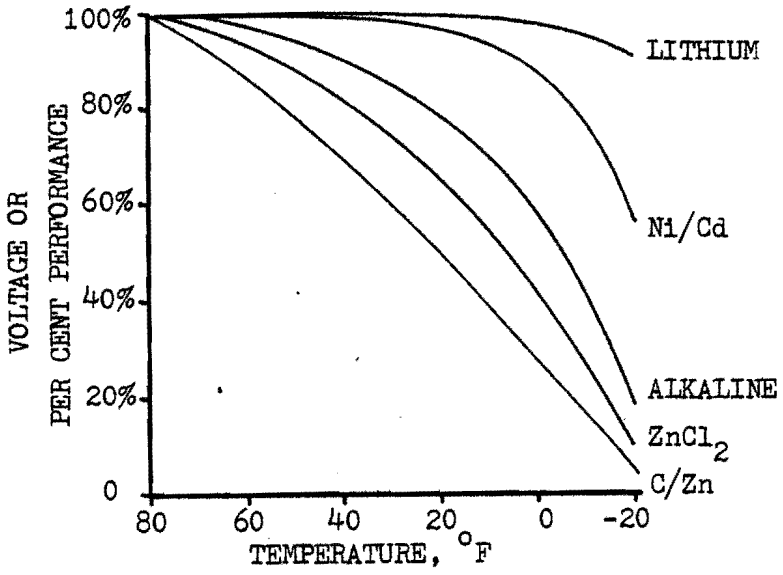
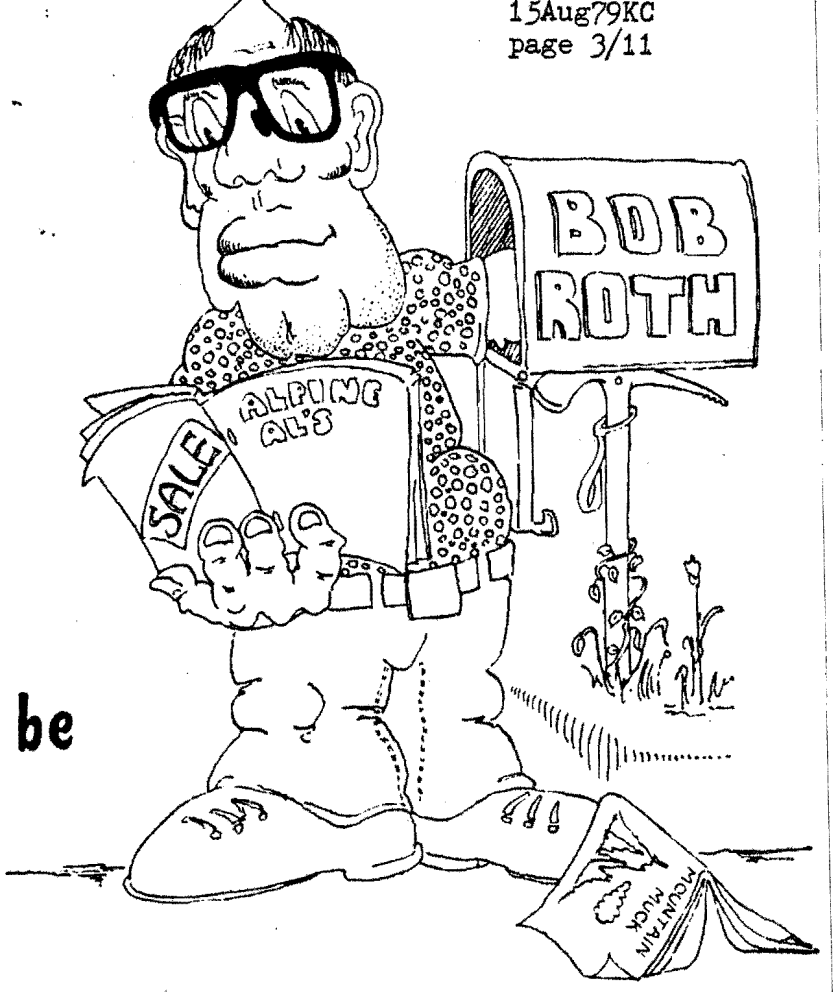


FIGURE 1-3:
DRY CELL PERFORMANCE VS. TEMPERATURE

The COLDER you are

The WARMER you'll be



A GUIDE TO STAYING WARM ON WINTER EXPEDITIONS

Bob Roth was a practical man. He knew good advice when he saw it. So when he received a collection of winter mountaineering textbooks and catalogs full of tips on keeping warm, he knew he had it made.

For Bob Roth was a winter mountaineer, and he never seemed to have enough tips on how to stay warm. In fact, he stayed miserably cold for the duration of every winter trip he had ever gone on. Understandably, then, he jumped at the possibilities these hot tips seemed to offer.

First, he bought all the equipment the textbooks recommended. He bought dacron underwear, dacron ensolite, dacron shirts, and dacron ice-axes. Then, he threw away the dacron rope, ice-axes, and ensolite because even though they were warm when they were wet, they were useless when they were dry. Next, he bought wool underwear, wool socks, wool pants, wool scarves, wool shirts, wool long-johns, wool hats and wool sweaters, and threw away his dacron underwear, pants and shirts, since one book said that only wool clothing should be used, and wool is wet when it's not dry, and warm when it's not wet.

Then, he bought a fifteen-gallon Stetson hat to annoy Ken Goddard, who only had a ten-gallon Stetson. With an eye towards utility, Bob had chosen the hat because someone had advised him that he could always carry water in it. Someone else had said that a woolen hat was just as good when it was wet, but Roth was a practical man. He knew that the argument just wouldn't hold water.

The day of the next expedition rolled around, and Bob Roth was ready. He donned his wool apparel and shouldered his dacron pack. Before beginning, he swallowed a chunk of rock salt and slugged a hearty slug of cold water, since *Yukon Pete's Medical Manual* said, "Salt stimulates blood circulation and retains body fluids, thus reducing the possibility of dehydration, frostbite or hypothermia." He immediately felt nauseous, but Bob was a practical man. He might feel nauseous now, but he had reduced the possibility of his getting frostbite later. Looking down, he noticed he had spilled some water on his fingers as he was drinking, and they had suddenly become frozen and numb.

When they had thawed Bob's hands, the climbing party began marching up the mountain. It was a clear, cold day, with a bright sun, so Bob slipped on his new snow goggles with the narrow slits, and stepped into a crevasse when he couldn't see where he was going. After he was rescued, he swallowed some more rock salt and a few ice cubes, since his water had frozen. He felt sicker than before.

As they trudged along, Bob suddenly began to itch all over, and realized that his wool clothing was asserting itself. But, practical as he was, he knew this was a small price to pay for being warm if he ever got wet. He thoughtfully munched

Continued

some more ice cubes and rock salt as he walked along, feeling sicker than ever, and longing to get wet.

The party put on crampons and readied ice-axes as they reached the base of a precipitous ice-wall. But Bob's left foot was getting cold. Remembering that one textbook said, "If your feet are cold, wear a hat," he stuffed his Stetson into a boot, strapped on his crampons, and began to climb. As he got about half-way up, he realized his fingers were becoming cold. He recalled some wise words of advice from Yukon Pete, who said, "If your fingers get cold, a simple way to warm them is to whirl the arms like propellers around your head. This pushes blood to the fingers and gets them warm immediately." Forgetting for a moment that he was fastened only by crampon-tips to a vertical wall of ice, he dutifully whirled his arms and plummetted gracefully earthwards, knocking three other climbers off the ice as he fell. He successfully made it to the summit of the wall on his second attempt, and stumbled along after the group, nursing his bruises, scratching madly at his red, itching skin, and sucking on some more rock salt.

Ken Goddard rigged a traverse across a roaring glacier-fed stream. As Bob swung across, Ken let a rope go slack, since he was still annoyed by Roth's Stetson that was five gallons bigger than his. Bob struck the water with a resounding "Splat!", but was quickly towed to safety. The leader announced that they would bivouac there for the night, so Bob quickly set up his dacron tent and crawled inside. Using an ice-axe to undress, he realized that wool was cold when it was dry and frozen when it was wet. He rubbed his sore, red itching body down with various organic salves, and noted that the dacron in his sleeping bag dissolved upon contact with the liquids. But Roth was a practical man, and he knew that worrying about dissolution would not help solve the problem. He crawled into his depleted sleeping bag.

Bob recalled another tip from the Medical Manual advising that "eating cheese before retiring into the sleeping bag will help one stay warm on cold winter nights." He reached inside his pack and pulled out a chunk of cheese and a handful of crackers, since he never ate cheese without crackers. He stuffed some chocolate bars into his sleeping bag too, since another textbook suggested he take some candy to bed with him, and eat a bite or two whenever awake. He ate the cheese and crackers, saving the chocolate

for later. He suddenly began to itch again, and realized that it was from cracker crumbs in his sleeping bag.

Bob felt cold and began to shiver. The cracker crumbs dug into his tender skin, and made him feel even worse. He chewed frantically on some rock salt to keep from getting frostbite, and cursed *Yukon Pete's Medical Manual*. His teeth chattered violently; Roth lost four fillings that night. But he was a practical man. A catalog had said that "Shivering in your sleeping bag is an excellent way to warm your bag," so he didn't feel so bad lying there shivering from the cold. He knew he was warming up his bag.

A short while later he felt the need to urinate. Recalling that one textbook said, "Be sure to urinate (even though it may seem inconvenient) when the feeling first arises," Roth shrugged philosophically, thinking about the cold outside. But then he recalled the extra admonition, "Don't wait." He unzipped his sleeping bag and sprayed the inside of his tent. Yes, Bob Roth was a practical man.

So he lay there, shivering, teeth chattering, cracker crumbs scratching, until he remembered some more of Yukon Pete's advice: "Tensing and relaxing muscles will also help to warm one's body by generating body heat." He quickly arched his back and flexed his neck and thigh muscles. There was a resounding crack as all the seams of his mummy bag split and filled the inside of his tent with a swirling cloud of dacron fluff. Roth noted with a start that there was something warm and sticky trickling down his body, but was relieved to find that it was only his chocolate bars that had melted. He was also aware that he was shivering more violently than ever, but he was glad of that, since he would be warming up his sleeping bag more rapidly. Bob began sneezing and coughing as the dacron began to irritate his nose and throat, but the itching became less as the cracker crumbs became coated with chocolate and lost their potency. Bob stuffed as much loose dacron as he could back into his sleeping bag, munched some more salt, urinated again, and shivering quietly to himself, went to sleep.

Well, Bob Roth was a practical man. He left the expedition the next day. When he got home he sold all of his equipment except for his evil-smelling tent, which he donated to the Brooklyn Hiking Club, and his chocolate-covered, dacron-filled (with sprinkles) sleeping bag, which he donated to the manufacturer's research laboratory. They are still feverishly working to determine the origin of the sprinkles.

Bob Roth now lives happily by himself in Death Valley, going once a month to Yukon Pete's Dialysis Center for treatment of a blood salt imbalance.

Yukon Pete, you see, was a very practical man.

--Ellis Lader
Bronx, New York

* * *

Any similarity to catalogs, products, and outdoor manuals past or present is purely intentional, but you can't prove it!

(E.G. PAUL PETZOLDT)

The Outing

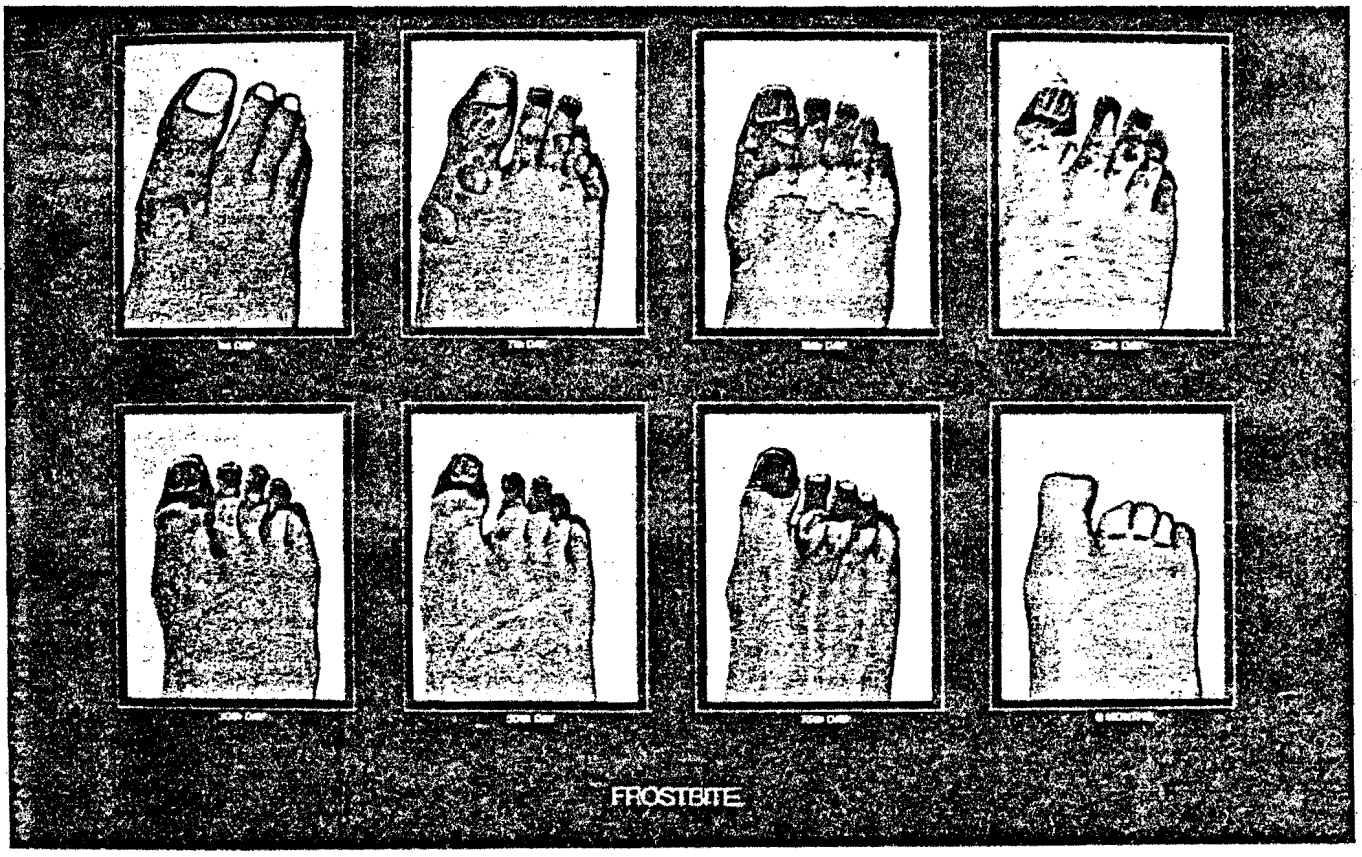
by Ted Morgan

A cautionary tale, both true and miserable

In his room at Willamette Falls Hospital, Scott McIntire finished five colored-pencil drawings of his toes. His feet posed compliantly under the sterile sheet held up by an aluminum tent. On the first day, his toes were pink. On the seventh, they were turning purple. On the twenty-eighth, they were blistered and blackening. On the thirty-fifth, they were almost totally black, and on the forty-fifth day, they looked as if they were covered with tiny black hoods. Soon after, parts of all ten toes were amputated.

The paintings were emblems of loss, not only the loss of his toes, or the loss of his wife, but a loss of innocence, an awareness gained at great cost that a man who has done nothing to deserve it can be struck down, that there is no such thing as safety, and that what we most cherish can turn against us. The paintings were also an example of Scott McIntire's quality of detachment. He calmly painted the toes he was about to lose, as if they belonged to someone else. When he was trapped in the snowstorm with his wife and infant daughter, and felt in his bones that they were doomed, the weather cleared momentarily and he found himself admiring the view, the fir forest, the glittering snow, the mountains in the distance, forgetting his predicament.

Until he reached the age of twenty-eight, Scott McIntire's life advanced on an easy, pleasant, downhill grade. He was born in Salem, a town fifty miles south of Portland, Oregon, the son of a printer, and went to school there. He learned as a boy that an Oregonian's birthright is knowing how to survive in the wilderness. He grew up hearing epic tales of the settlers who had come over the Oregon Trail in the 1840's and conquered nature once and for all—of men like Finan McDonald, who fought and killed a wounded buffalo with his bare hands, and many others who survived



Indian attacks and murderous winters and poison alkaline water pools on the long trek from Missouri.

The teen-age life-style in western Oregon percolates from California, losing some of its strength but not its flavor. Scott had an *American Graffiti* adolescence, with drag races on the outskirts of town, a drive-in that served as a motorized paseo, and sock hops in the gym so jitterbugging feet would not mark the basketball court. His first commissions as a painter were pinstriping his friends' jalopies. He dreamed of California, where the action was.

He went to Los Angeles in 1963, the one and only time he ever left his home state, and studied advertising design at the Art Center College of Design. He didn't like the hustle of advertising, and his parents might have had to mortgage their home to keep up his tuition, so he stayed only one of the four years. Coming home did not seem like a defeat. It was, rather, part of an ordained chain of events. Scott could now lead the predictable life for which he was intended, working in the art department of the local newspaper, and marrying Sue, a girl to whom all the cheerleader adjectives like cute and pert applied.

In 1967, however, Scott moved to Portland and enrolled in Portland State University. A reminder of his stay there still stands, an abstract mural on one wall of a small power-plant building, its colors fading. In the National Guard, where he served for six months, Scott learned such basic survival techniques as this: if two people are caught in a snowstorm, they can keep their feet warm by placing them in each other's armpits.

At Portland State, Scott formed a friendship with a co-ed, a former airline stewardess named Diane. She was permanently cheerful, like a climate with no seasons, and she looked good in angora sweaters. Like Scott, Diane was married and was working toward a degree in painting. It wasn't that Scott and Diane were unhappily married. They were indifferently married. When they were together, they plunged into the realm of romantic clichés that sound embarrassingly maudlin to everyone but the participants. "There was a greater clarity and meaning to our lives," Scott said.

In 1970, Scott and Diane graduated. Scott's wife Sue had taken an office job to help pay his tuition. Diane left for Minneapolis, where her husband would be getting his doctorate. Scott threw himself into his work. Overcoming his distaste of advertising, he became art director of a Portland agency, Branch & Bauer. At home, he worked on photo-realist paintings. Choosing a banal subject, like a diner or a milk shake in a paper cup, he photographed it in color and projected the slide on a canvas, painting over it with a spray gun and brush to get the precise shading and delineation. He was apologetic about the $600 he charged for a painting, explaining: "It takes me a hundred and fifty hours to do one. That's only four dollars an hour."

From Minneapolis, Diane wrote long melancholy letters—she missed Oregon, its lush green meadows, its snowcapped mountains, its wild coast. She came back for a visit in 1971, and she and Scott decided to get divorces. It was a cruel surprise for Scott's wife and Diane's husband, who at first opposed the divorces. At least there were no children involved.

Scott and Diane lived together for a year, and were married in May, 1972, outdoors, in the McClay Bird Sanctuary, a thirty-five-acre park on a forested hill above downtown Portland. They often went there with binoculars and a camera. "Neither of us was religious," Scott said. "Nature was the closest thing we had." Frank Case, a bear of a man whose wife was a childhood friend of Diane's, was at the wedding. H took photographs, but the camera was badly loade and none of them came out. Mr. and Mrs. Gord Strom, Diane's parents, also attended the ceremon Scott, twenty-seven, with his wavy reddish-brown ha and gentle blue eyes, looked like a defrocked Franci can friar. Diane, twenty-nine, with her long blond hai resolute expression, and beauty-queen shape, was lik a prow figure.

They had the kind of marriage that would mak Erich Segal blush. The barometer was always set a fair. They shared their love of art and outdoor life Most weekends found them in one of the many sceni areas near Portland, such as Mount Hood, or th Columbia River gorges. They shared housework an cooking. Mike Carmel, a close friend, said: "I have never seen another couple like them. They had broken through the male-female role-playing. They radiated happiness. It made me almost envious."

When Diane became pregnant, Scott attended natural-childbirth classes at Kaiser Hospital, which were designed for couples so that the father could be present at the birth. He was shown films to help him understand the difficulty of labor. In class, Scott was told that after twenty hours of labor, birth would be induced. But Diane was in labor for twenty-eight hours, with Scott at her side. He took snapshots of his daughter, still covered with the reddish film of the placenta, when she was born at 8:41 a.m. on June 15, 1973. She was named Emily Strom McIntire. Scott sold Mike Carmel a painting of a Hollywood Hamburger stand to help cover the maternity expenses.

The first weekend in November, when Emily was four and a half months old, Scott had a layout to prepare for the agency by Monday. He was planning to work that Saturday, November 3, but when he heard on the morning news that Sunday would be stormy, and when he looked out the window and saw that it was a fine, clear day, he and Diane decided to go out. In Portland, where it rains two days out of three, it's hard to resist a sunny day.

They thought of a place where neither had been, Bagby Hot Springs, about fifty miles southeast of Portland. The water bubbles out of the rock at 137 degrees Fahrenheit, and a wooden trough feeds it into cedar bath stalls with tubs hollowed from big logs. They planned to be back by nightfall.

Scott thought it might get cold and wore a new wool Pendleton shirt and a hooded windbreaker. He made Diane put on a raincoat over her wool pants and sweater and leather jacket. They both had wool caps, gloves, and waffle-stompers. Blond, blue-eyed Emily was bundled into the fur-lined pink snowsuit Diane had just bought at Sears. They took a camera, a blanket, a diaper bag, two pastrami sandwiches, an apple, and a thermos of hot chocolate. Emily's diet was no problem, Diane was nursing her.

"This was a common thing for us to do," Scott recalled. "To drive up and have a picnic and look around at what nature has to offer. Oregon is a nature lover's paradise, there's so much plant life and birdlife. There are so many places within a few hours' drive that offer splendid scenery."

Scott, Diane, and Emily left Portland at 12:30 p.m. in their blue 1966 Chevrolet station wagon. Scott was sliding behind the wheel when he realized he did not have a map of the Bagby area, which lies in the foothills of the Cascade mountain range. He went back into the house but could not find the right Forest Service map. In the car again, Diane *(Continued on page 185)*

THE OUTING

(Continued from page 165) pointed out that they did not know the way to Bagby. Scott got out and called a friend who did know, Martha Forster. He scrawled the directions in pencil in their address book, which he left next to the telephone—Estacada turnoff—ranger station—Timothy Lake—Bagby.

At the town of Estacada, thirty miles from Portland, they took the road to the Ripplebrook Ranger Station, where Scott stopped to take some free pamphlets from a box. From the ranger station to Bagby it was another thirteen miles. About five miles from the hot springs the road was closed off, probably because of a mud slide, and a cardboard sign indicated a detour on a graveled service road.

Reaching Bagby, Scott parked the station wagon, and they hiked a mile and a half uphill to the springs. Scott saw mushrooms by the side of the road and tried to pick them, but they were frozen hard. The five bathing cabins were occupied. Scott and Diane ate their sandwiches and drank their hot chocolate while they waited. A couple came out of a cabin and they exchanged greetings with them and went in. Scott pulled a mossy wood plug and the water poured into the log tub, too hot to bathe in. Scott took a bucket and filled it in a stream twenty yards away, adding cold water to the tub. Diane took off her clothes and got in. The light filtering through the cabin's green fiber-glass roof gave her skin a greenish glow. Scott thought how nice it was to see her getting her figure back and what a lovely sight she was in the water.

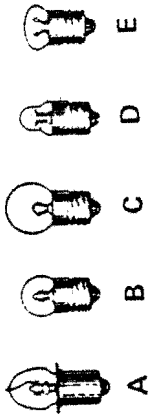
Scott rubbed Diane with a towel and took his bath while Diane held Emily. Looking out a window from the tub onto the slope of the hill, with the forest in the background, Scott noticed that it had started snowing. There was no wind, and the large, soft flakes fell in unhurried silence. It seemed to him a comforting sight, like a Currier and Ives print of winter.

On that same Saturday, Charles Mock, a twenty-three-year-old part-time U.S. Forest Service employee, seeing that it was a nice day and that the weather forecast made no mention of snow, decided to go hunting elk and deer in an area he knew well, around Wahtum Lake on the northern slope of Mount Hood, about forty miles east of Portland and forty-five miles north of Bagby in the Cascade Range. He planned to be gone from Portland several days and took some dried food, a sleeping bag, an aluminized space blanket, a tarp, an ax, a water bottle, a knife, matches, and his thirty-aught-six rifle. He parked his new Toyota pickup truck at the edge of the lake and set out onto the forested slope, looking for elk and bear tracks. He was surprised when it started snowing in the afternoon, and he made camp.

By the time the McIntires were back at the parking lot, there was a foot of snow on the ground. Scott wondered at how quickly it had built up. "Let's get going," he told Diane. "I want to get past that detour before it gets dark." Scott followed the tracks of two teenage boys in a Volkswagen, who had left a few minutes ahead of him. The sign marking the detour was by this time covered with snow. Instead of the detour road that would have taken them to the Ripplebrook Ranger Station eight miles away, the VW, followed by Scott's station wagon, took a logging road that twisted through the forest for twenty miles until it reached a main road.

The station wagon started skidding in the snow. Diane drove, and Scott spread the blanket under the rear wheels to give the car enough traction to gather momentum. It moved uphill by fits and starts over the narrow snow-covered road with a sheer drop on the right. Scott placed the blanket, ran to catch up, watched the station wagon skid dangerously close to the edge, then placed the blanket again.

One of the rear tires was nearly smooth, and Scott remembered that he had a new radial spare. He jacked up the car in the failing light, and changed the tire. When he eased the car down, he saw that the spare tire was flat. He had to put the old tire back on. It was Scott's first moment of discouragement. He was already tired from running behind the car and now he



STANDARD G.E. BULBS

BULB GE NO.	BULB TYPE	CANDLE POWER	AMPERE DRAIN	NUMBER OF CELLS
PR13	A	2.20	.50	4
27	C	1.40	.30	
PR17	A	1.20	.30	
502	C	.60	.15	
365	B	1.60	.50	3
PR3	A	1.50	.50	
403	B	1.00	.30	
13	B	.98	.30	
PR7	A	.90	.30	
246	D	——	.22	
245	B	.90	.50	2
PR2	A	.80	.50	
14	B	.50	.30	
PR5	A	.45	.35	
PR6	A	.45	.30	
233	B	.42	.27	
PR4	A	.40	.27	
243	D	——	.27	
223	E	.38	.25	
222	D	——	.25	
PR9	A	.25	.15	
123	B	.10	.30	1
112	D	——	.22	
131	B	.03	.10	
359	B	.02	.06	

FIGURE 1-4

thought: all that effort for nothing.

They resumed the laborious process with the blanket. By this time it was dark. Scott, watching from behind, saw the station wagon's taillights veer to the left. The car had skidded into a ditch. They realized they would have to spend the night there. The gas gauge read a quarter full. Scott turned the heater on, and they spent most of the night drying their clothes. They would keep the heater on for twenty minutes, sleep until the cold woke them, and turn the heater on again. They finished the hot chocolate and divided the apple. Every three hours, Diane nursed Emily for twenty minutes. The blanket Scott had used under the wheels was encrusted with frozen snow, and he made no effort to dry it.

Awakening on Sunday morning, they saw that the car was buried under snow. Sunday was Diane's birthday. She was thirty-one years old. They remarked, half laughing and half worried, that it was a hell of a way to spend a birthday. They discussed whether they should wait in the car to be rescued or hike out into the by now knee-high snow. Scott was convinced they could not be more than five miles from the ranger station. "We can make it with very little trouble," he told Diane. She agreed, and it was eight a.m. by the car clock when they started out. Diane nursed Emily before leaving the car. Scott had found an umbrella and a plastic garbage-can liner in the back of the station wagon. He pushed through the snow, with Emily on his back, and the upright umbrella handle wedged between them. Diane followed in single file, carrying the diaper bag and the camera. They never considered separating, Scott hiking to the ranger station while Diane and Emily stayed in the car. They always did everything together.

We have dreams of self-sufficiency. The myth has been drummed into us for centuries that there is nothing American ingenuity can't lick. Here is a settler arriving in virgin territory in 1832, fifty miles from Portland: "I caught from the prairie a span of horses with a lasso, made a harness, and set them to work. The harness I made from deerskins, sewed in proper form, and crooked oak limbs tied top and bottom with elkskin strings. Then to these, strips of hide were fastened for tugs, which I tied to the drag made from the crotch of a tree. On this I drew out logs for my cabin, which, when I had laid up, I put up rafters. To make the roof I covered it with bark peeled off from the cedar trees. This bark covering was secured by poles crossed and tied at the ends with wood strings to the timbers below. Then out of some split planks I made a bedstead and a table, and so I dwelt in a house of fir and cedar."

Scott, like his nineteenth-century forebear, could have made good use of the materials at hand. He could have cut blocks of snow for a shelter with his license plate. He could have punctured the gas tank and drained the oil for fuel. His matches were wet, but he could have soaked a rag in gasoline, and touched an insulated wire to a battery terminal to light it from the spark. He could have set fire to a tire, which burns for hours with billows of oily black smoke, and melted snow in a hubcap.

Scott and Diane could not walk more than fifty feet through the snow without stopping to rest. At each turn of the winding road, they thought they would reach the top of the ridge and come within sight of the ranger station, but instead they saw another turn. At about ten a.m., after two hours of walking, they stopped beside a small waterfall and Diane nursed Emily. She opened her coat, lifted her sweater, unsnapped her bra, and Emily's head disappeared under the tan wool sweater. Diane ate snow. She felt it was the only way to keep up her production of milk.

Body heat, produced from food intake and muscular activity, has a narrow temperature range. Between 97 and 98.6 degrees Fahrenheit is normal. Above that you are feverish, below that you are losing body heat. When the balance between heat production and heat loss is broken, and body temperature drops below 95 degrees, a condition called hypothermia sets in. The body's inner core cools to a level at which normal metabolism breaks down, which leads to a numbing of the body and brain, and can eventually cause heartbeat and respiration to fail. One sure way to lose body heat is to eat snow. It takes as much heat to turn one ounce of snow to water as it does to heat an ounce of soup at room temperature to boiling.

Scott and Diane walked two hours more, then stopped beside a tree, where Diane nursed Emily. Diane ate more snow, melting it in her mouth. She wanted to turn back. Scott was bent on reaching the ranger station. They had already gone three miles, they only had two more to go. Turning back was counterproductive, he told Diane. They were moving closer to rescue.

The snow was so deep that they could only advance ten feet at a time before stopping to rest. "You would look ahead and know that normally it would take five minutes to reach the turn, and you would reach it forty-five minutes later," Scott recalled. He kept looking for an area he had spotted driving in on the detour, which had been cleared and set aside for people to collect firewood.

At about three that afternoon, they came to a fork in the road. Snow was falling heavily and visibility was poor. Scott chose the downhill branch, but after 500 feet they were blocked by a snowbank. There was no way around it. "We must have taken the wrong road," Scott told Diane. Like the flat spare tire, it was useless effort. They went back to the fork, Diane following Scott. Scott turned around and saw Diane walking listlessly, her bare hands dragging and making light furrows in the snow. "Where are your gloves?" Scott asked. "I don't know," Diane replied. She had also dropped the camera and the diaper bag.

Diane waited at the fork as Scott explored the second road. It stopped suddenly at the slope of a hill. A strong wind had risen, dark with falling snow, which whirled through the fir branches and whipped his face. His legs ached from pushing against the drifts. There was nothing to do but turn back. They had planned to hike into the night, but they were too tired. It was getting dark, and they had to find some sort of shelter. Off the road, Scott spotted a cut log lying across a dip in the slope. "Let's spend the night here," he told Diane. He shoveled the snow out from under the log and they both lay down under it with Emily between them, on a diagonal. They were covered above the knees, and put their legs in the garbage-can liner. Scott told Diane that if the log had covered them completely, they could have kept their feet warm in each other's armpits.

They took turns holding Emily. Diane nursed her. Scott collected snow from his side of the log and fed it to Diane. For the first time, they discussed the

possibility that they might not survive. Scott was still optimistic. Martha Forster knew where they were. There was probably a search party out for them already. The VW in front of them must have told the rangers there was another car coming. But the VW in front of them, being on the wrong road, did not pass the ranger station; although it was a lighter car with better tires, it also bogged down farther along. The boys made their way to a log truck, where they waited for rescue.

Back in Portland, Diane's sister Susan, twenty-seven, a tall, flaxen-haired, restless young woman who wants to be a doctor, was driving home from a party on Saturday night over icy streets. Crossing a bridge over the Willamette River she skidded and crashed into a column, breaking her nose. A friend, following in another car, took her to the emergency room of a nearby hospital, where she remained until four on Sunday morning. "Normally I would have come around on Sunday for Diane's birthday," Susan said, "but my car had been totaled, and I was on Demerol. I called and there was no one there, but I didn't think anything of it. They were often off on weekends, and I figured they were staying in a lodge." Susan knew Scott and Diane had gone to Bagby. She was staying with Martha Forster, the friend who had given Scott directions.

In Lincoln City, on the Oregon coast, ninety miles away from Portland, Diane's mother, Mrs. Gordon Strom, mailed her daughter a swirl skirt for her birthday on Friday. Mrs. Strom, a practical woman who runs her own fabric shop, was promised by the post office that Diane would have the gift on Saturday. She wanted to call on Saturday and ask whether the post office kept its promises, but she didn't, because "I don't like to seem nosy about what the children are doing." She did, however, call on Sunday morning. There was no answer.

A little later, Susan called her mother and said: "I hate to tell you this, but I broke my nose and wrecked my car last night."

"Do you know where Scott and Diane are?" Mrs. Strom asked. "I can't reach them."

"They're on an outing," Susan said. "They must be in a lodge."

Mrs. Strom kept trying to reach them until eleven Sunday night.

When Charles Mock, the Forest Service employee who had gone hunting on Mount Hood, woke up on Sunday morning, his tarp was sagging under the weight of snow. He broke camp, and it took him six hours to hike the four miles back to his Toyota pickup in the waist-deep snow. He turned on the truck heater and dried his clothes—he was dressed entirely in wool, from long wool underwear to wool Army pants and a wool shirt and wool mittens and wool socks and a wool-lined denim jacket. He spent the rest of the day building a shelter, packing the snow down, setting up his tarp, and gathering firewood. "I got myself squared away," he said.

Monday morning found Scott and Diane huddled together under the log, trying to keep warm. Scott had gotten up to urinate during the night, leaving his gloves where he was lying. When he returned, he couldn't find them. It wasn't much of a loss, he thought, they were leather and soaked through. He and Diane kept their hands in their armpits. They were by now so weakened mentally and physically that they could not move at all. They sat under the log and looked out at the white November sky and the snow that continued to drop, more lightly now. They wanted very badly to believe that the ranger station was within earshot, and they yelled for help. Diane, although she was not religious, prayed. Scott tried E.S.P. He concentrated very hard on making contact with the rangers. Emily, like an alarm clock, regulated their sleeping. She would start crying, and they would wake and Diane would nurse her. "I can't feed her as much," Diane said, and ate more snow. The snow gave her pains like labor pains. They were shivering constantly now. Scott told Diane it was good to shiver. He remembered from his National Guard training that it kept your muscles moving and helped retain body heat. Trying to keep Diane's spirits up, Scott said: "It's Monday. People know we're lost. They're getting together and looking for us."

On Monday morning, Scott had a nine a.m. appointment with a printer to choose the color for a client's letterhead. When he didn't show up, the printer called the Branch & Bauer agency. Scott didn't miss appointments, and his boss, Tiger Branch, started worrying. At 9:30 a.m. Mrs. Strom called Diane from Lincoln City, and when there was no answer, she called the agency. The secretary said: "Scott's not here, but he always calls when he's not coming in." Mrs. Strom then called Susan and said: "I'm concerned. I can't reach Scott or Diane. Something's wrong."

"I just remembered," Susan said, "they went to Bagby. I bet they got stuck up there. I'll call the forest rangers."

Susan called the Estacada Forest Service at 9:30 a.m. She was told a Sno-Cat was on its way to Bagby, as several persons were missing. "We'll call you back when we get a report," the Forest Service said. "I stopped worrying," Susan said. "I thought they must be in their car in the parking lot." At the same time, Tiger Branch tried to hire a private helicopter, but could not find one that would fly in the snow.

At three p.m., the Forest Service called Susan and told her that the Sno-Cat had reached the Bagby parking lot but that Scott's station wagon was not there. They advised her to call the Clackamas County Sheriff's Office, which is responsible for the Bagby Springs area, and report them missing. Susan talked to Sergeant Lloyd L. Ryan, a big affable man who puts his heart into search-and-rescue missions because he spends so much of his own spare time in the wilderness. Ryan took down the facts and said, "Okay, I'll call you when I've checked."

Ryan organized a search party, using the Ripplebrook Ranger Station as his base. He called Susan back at five p.m. and told her they were going out that night. "We had four big Sno-Cats and ten snowmobiles out looking for them that night," Ryan recalled. "They were finally called off, they couldn't do anything in that snow." Ryan also contacted the state aviation officer of the Army National Guard in Salem, Lt. Col. Gale Goyins, who agreed to keep a Huey helicopter on standby, ready to fly as soon as the ceiling lifted.

Charles Mock, warmed by the fire he kept going and nourished by powdered eggs, kept busy on Monday. He cleaned the snow from the hood of his Toyota pickup so it could be spotted from the air, and laid his space blanket out for the same reason. He cut big piles of firewood. He started the pickup only once, to listen to the news. He heard that quite a few persons had been caught in the unseasonal snowstorm and that search parties were out. He felt foolish—a Forest Service employee lost in his own district.

He thought of getting out. He knew he was about thirteen miles from the nearest town and decided he could make it on snowshoes. He knew how the webbing went, he had seen it in backpack magazines. He cut four noble-fir saplings, six feet long, tested the tough, springy wood, and squared them up with his ax. Tiring, he remembered a bush of blue elderberries he had noticed near the truck. He was surprised to see elderberries at 4000 feet, stepped off the road, up to his neck in powder snow, and picked as many berries as he could. That night he boiled them into a mush with half his sugar. He had never tasted anything better.

As the Monday hours slipped by without any sign of rescue, and with their strength ebbing, Scott and Diane took a hard look at their chances. They searched for an explanation. Was God punishing them? Were they part of some destiny they could not grasp? They refused to accept the idea that they were somehow at fault, or victims of a grand design. Scott said: "We were in the wrong place at the wrong time, that's all."

"This is a crazy way for it to end," Diane said. Everything had been going so well. They had finally had a baby, they had finally bought a house. They were remodeling it, they had been so lucky, they were so happy. "We got more out of the two years we spent together than most people do in a lifetime," Scott said. Diane's body heaved with dry sobs. She was physically unable to cry.

Diane said: "It's just not fair."

Diane said: "I wish we had made love one last time in the car when we had the chance, because we never will again."

Diane said: "You'll live longer than I will."

Diane said: "If we die Emily will die. What a terrible thing to bring her into the world and have her die four months later. What a terrible thing to do."

"That's why we have to hold out," Scott said. Scott kept going over the steps in the rescue. By now, they are at the ranger station with Sno-Cats, he said, and they will have started up the detour road and found the car. It can only be a matter of hours. It was time to nurse Emily, and Scott scooped up some snow and handed it to Diane.

As night fell, Scott was alarmed by Diane's behavior. She no longer seemed to care about keeping herself warm. Her hands contracted into claws, and she could no longer hold Emily. She became delirious, and snatched at Emily and Scott with her stiff, bent fingers. Scott felt he had to protect Emily from her mother. When he tried to talk to Diane, she replied incoherently. He could not get her to say her name, or recognize Emily.

Scott awoke during the night to see Diane lying with her eyes open. He felt her pulse. There was none. He put a finger under her nostrils. There was no breath. He tried to close her eyes. They stayed open. Scott felt no remorse, only an overpowering sense of helplessness. He tried to remove Diane's raincoat to use as a tarp over the log, but he was too weak. He thought: "I've got to hold on. I've got to feed Emily."

Emily no longer squirmed or fussed, she only whimpered from time to time, enough to awaken Scott. He melted snow in his mouth and fed her the water mouth-to-mouth. By now, every time he ate snow, he threw up. He still believed he would be rescued. His feet felt like clubs. He tried not to think about Diane. Instead, he fantasized about having his feet amputated. He could continue working as a painter, but he would have to get around in a wheelchair. He would have to build ramps and rails all over the house.

There was no one to blame in Diane's death. She was the victim of circumstance. She was also a casualty, perhaps, of the "return to nature" trend. We read the *Whole Earth Catalog*, we hear about communes living off the land, we watch the Apple family on the tube finding a meaningful life in a return to native Iowan soil, and we think we are regaining our lost innocence. We think we can escape doomsday by concerning ourselves with ecology and the preservation of natural beauty. We promote the sentimental view of a benevolent nature which can solve our problems and make us better men. We yearn for Walden Pond, and forget that one can drown in Walden Pond.

On Tuesday morning, Mr. and Mrs. Strom arrived at Scott's house in Portland. A reporter interviewed Mrs. Strom, who said: "I'm not worried, they have their sleeping bags and they're both good cooks."

Sergeant Ryan called Susan on Tuesday morning and said "no luck."

"Have you talked to any other people who were picked up at Bagby?" Susan asked.

"Don't worry," Sergeant Ryan said. "We're checking all the angles. By the way, did they have sleeping bags?"

"No, they didn't," Susan said. "Their sleeping bags are in the attic."

"Oh, shit," Sergeant Ryan said.

On Tuesday morning, the Sno-Cats were out again. Volunteers, including two Boy Scout troops, came to the Ripplebrook Ranger Station and joined in the search. There were about a hundred persons involved. It was Oregon's biggest rescue operation in years. But they could do nothing. The snow was impenetrable.

On Tuesday morning, Charles Mock ate the rest of his berries and some biscuits. He noticed that it had almost stopped snowing. He worked all day on his snowshoes, cutting grooves in the tips of the squared saplings and lashing the ends together with the rope he had planned to use to lash his kill across his hood. He tied slats across the looped saplings, then cut strips from the rubber floor mat of his Toyota for the webbing. When it was dark, he worked by the light of a battery lantern.

Frank Case, who had been at Scott and Diane's wedding in the bird sanctuary, came home from work on Tuesday evening, turned on the news, and heard that his friends were missing. He called the sheriff's office and asked: "Is there anybody up at the ranger station representing the family?" "We don't want the family," he was told, "they're too emotional." "I'm coming up," he said. "I'll stay out of the way." At the ranger station, Frank acted as liaison with relatives and friends, discouraging them from joining the search. It was a frantic scene at Ripplebrook, with volunteers who had to be fed, campers asking for permits to burn firewood, and hunters coming in with deer.

By Tuesday night, the search party had made no headway at all. The rangers were pessimistic. There's not much chance they're still alive, they said, they've been out there since Saturday. We're going to have to make this a daylight operation. Sergeant Ryan insisted: "We've got to keep this thing going." The Sno-Cats were out again that night.

On Wednesday morning, November 7, a front-page headline in the *Oregon Journal* read:

TRIO BELIEVED SAFE IN SNOW
Baby Complicates Survival

The story was based on an interview with Diane's mother, who was quoted as saying: "I just feel they are holed up somewhere. They might try to get out, but because of the baby, I doubt it. . . . Scott is a very cool-headed person. I have faith in his judgment, especially in a situation like this."

Scott looked out that morning from under the log where he had been for three days and saw snow falling from the branches of trees. That meant it was getting warmer. The sky was clearer. His hopes lifted.

It was still foggy, however, and when Sergeant Ryan checked the National Guard early that morning, he was told: we just can't fly.

Around noon, two helicopter pilots stopped by the ranger station to borrow a Forest Service radio. They worked for a private company, Willamette Helicopter Service, and were on their way home for the winter; they had been up the valley dropping chokers (self-tightening cables for lifting logs) for other loggers to use in clearing timber by helicopter later.

Frank Case went up to the chopper pilots and said: "Will you fellows fly search and rescue?"

"Sure," they said. "Who's paying for it?"

Case called Tiger Branch, who said he would cover the cost. The chopper pilots gave him a special price of $125 an hour. They were off the ground at 1:10 p.m. Case called the Stroms and said: "Don't get turned on, but we've got a chopper out there."

In the meantime, Sergeant Ryan called the National Guard to tell them they finally had flying weather and the National Guard sent the Huey to Ripplebrook. The Huey took aboard Sergeant Ryan and two press photographers and flew off in the Timothy Lake area. Scott had mentioned Timothy Lake in the directions to Bagby penciled in his address book.

Soon the small helicopter radioed the Huey: "We've spotted a rectangular lump in the snow on Forest Service road S seven oh nine that looks like a car," and gave the map coordinates. The small helicopter was almost out of gas and went down to refuel. The Huey found the spot and hovered over the lump, close enough to recognize the shape and verify that it was a car.

"I saw the contours of what appeared to be a station wagon," Sergeant Ryan said. "Leading away from the car there was a faint indentation in the snow that could have been a trail. It was solid, not interrupted like an animal trail."

They followed the trail and came upon a log with an arm waving from under it. The log was on a slope, with a utility line in the way. Unable to find a place to land, the pilot, Major William Gottlieb, found a clear-cutting about sixty yards away, where he hovered close to the ground.

Scott heard the helicopter and came out. Several men were running toward him. One had a camera and took his picture. My God, reporters, Scott thought, there's always one around. Sergeant Ryan asked him what his name was.

"Scott McIntire," he said. "My wife has been dead for two days. The baby is alive."

"We've been looking for you," Sergeant Ryan said. "You're all right now."

"I picked up Emily," Sergeant Ryan recalled, "and she took one look at me in that flying helmet and started crying."

Scott said his feet were frozen and he couldn't walk. Sergeant Ryan and a photographer supported him to the helicopter. They wrapped him in a blanket and went back for Diane.

When the helicopter took off, Sergeant Ryan saw a set of Sno-Cat tracks that had gone to within half a mile of Scott's car. It took the helicopter twenty-seven minutes to reach Willamette Falls Community Hospital. "The red line on a Huey is at a hundred and twenty knots and that's where Gottlieb put it and that's where he kept it all the way to the hospital," Sergeant Ryan said.

A strange thing happened in the helicopter. Sergeant Ryan, whose working day is made up of violence and death, wept. "It got to me," he explained. "I'd been working on the rescue since Monday, and I wanted her to be alive so bad. It seemed like such a hell of a waste, to lose your life for an afternoon jaunt."

Scott was taken to the emergency room at 3:40 p.m. His rectal temperature was 94 degrees. His four extremities were thawed in pans of hot water, and he was treated for severe frostbite. Diane was buried several days later. Emily was in fine shape. All she had was a diaper rash. Had she been old enough to thaw out her own snow, doctors said, she probably would not have survived. Women, because they have a thicker padding of subcutaneous fat, normally withstand severe cold better than men. Diane had died, Scott was informed, because she had eaten snow to nurse her baby.

On Wednesday morning, Charles Mock took five more hours to finish his second snowshoe. He cooked the rest of his food, ham and navy beans with a cheese sauce, and made tea with the rest of his sugar. When he started out, he soon found that the floor mat rubber bindings weren't strong enough. He replaced them with the leather strap from his binoculars and canvas strips cut from his backpack. He was able to do about a mile an hour. The snow by now was heavy and wet. It rolled over the tops of the snowshoes and had to be shaken off every hundred yards. Walking was such hard work that he stripped down to his shirt in the freezing cold.

By dark, he had reached the first road junction. The storm had driven the deer from the high ground, and they had packed the snow in making their trail on the road he was on. He tried walking without snowshoes in the narrow deer track, and it was only ankle deep. He walked five more miles until he reached the west fork of Mount Hood, at the forest boundary. Another mile brought him to the first house in the village of Dee Flat at one a.m. on Thursday. It had taken him thirteen hours to go thirteen miles. He called the Hood River Sheriff's Office and was taken home.

Mock's main worry was that his new pickup truck would be damaged by the snow if it was left all winter on Mount Hood. Once the weather had changed and much of the snow had melted, he went back up the road and suddenly saw his truck coming toward him. Three teen-agers had broken into it, put chains on the tires, and driven it through the thin snowpack. ##