

Kansas Students Enjoy Summertime “Mountain Ventures”

KENNETH M. HIGHFILL

IN RECENT SUMMERS (1972 and 1973) the biology program at Lawrence (Kan.) High School has had maximum enrollment in an elective, coeducational program, for credit, called Mountain Ventures. The program has two parts—I and II—with somewhat different aims, but both parts emphasize basic field biology, ecology, conservation, camping, first aid, mountaineering, and map-reading. The maximum participation in Mountain Ventures I was 22 persons, in the period 3–17 August 1973; and 16 persons participated in Mountain Ventures II, held 7–21 July 1973.

Mountain Ventures I

Mountain Ventures I was primarily taught in Rocky Mountain National Park, west of Denver. En route across Kansas the students were also exposed to the fundamentals of Kansas geology and biology. Before arriving in the town of Estes Park, which is park headquarters, the students toured the Denver Museum of Natural History. The visit to the museum provided an excellent opportunity for the students to obtain an overview of the natural history of the Rocky Mountains. In addition to a biology teacher from Lawrence High, the group was assisted by three college students from Kansas.



The author has taught biology and human anatomy-physiology at Lawrence High School, Lawrence, Kan. 66044, for the past six years; before that he taught at Circle High School, Towanda, Kan. A 1965 graduate of Southwestern College, he has his M.S. from Kansas State Teachers College. Highfill is also a graduate of the National Outdoor Leadership School, Lander, Wyo.

He presented a workshop on the Mountain Ventures theme at the 1973 NABT convention.



Fig. 1. Special equipment was essential for instruction in mountaineering and rock-climbing.

After arriving in Estes Park (a drive of 1,045 km from Lawrence) and establishing a base camp at a commercial campground there, the students were driven daily via school bus to a particular trail in Rocky Mountain National Park. All day, the students and instructors would hike the trails and observe various biologic and geologic phenomena within the park. Notebook journals and periodic practical examinations were required. The use of biologic keys and guides was emphasized.

In addition to the daily field trips on the mountain trails, the students did all their own cooking, learned the use of maps, and were taught wilderness-conservation practices. Weather permitting, the students visited the ranger's camp fire in the evenings.

As expected, the only specimens collected were photographs.

The weather was excellent during Mountain Ventures I, both years. As a precaution against an interruption of fieldwork by foul weather, a slide projector and slides of mountain wildlife and geology were carried on the bus.

The last three days of Mountain Ventures I were climaxed by climbing demonstrations and student practice in basic techniques of safe rock-climbing. Rock-climbing is a dynamic first experience for most of the students. Climbing ability on the part of biology students not only promotes an avocation but

also enables wildlife photographers to climb into places that otherwise would not be accessible.

On the third day of training (weather permitting) the students who had qualified for the climb were awakened at midnight for breakfast in Estes Park, and by 3 A.M. the class was on the trail to the summit of Longs Peak, the highest peak (altitude 4,345 m) in Rocky Mountain National Park. Last summer 17 Ventures students climbed the "Key-hole" route. The clear sunrise over the plains and a flock of white-tailed ptarmigan near the boulder field on Longs created a splendid summit experience. The group returned to the bus by 4 P.M.

Some of the Ventures I students discovered that the two weeks of crude camping and physical requirements did not fit their idea of carefree living; however, from the class evaluation we learned that the students gained more appreciation of the preservation of state and national parks, forests, and wilderness. Also from the evaluation we discovered



Fig. 2. Packing dehydrated food in plastic bags was an important chore at a pretrip session.

that our students were frustrated by the indifference to conservation and the irresponsibility of many of the people they saw in the park. Perhaps another consideration was that our students discovered that they could achieve a magnificent experience of nature without the constant companionship of a motorized vehicle or a camping trailer.

As a matter of principle we camped outside Rocky Mountain National Park, in a commercial site in Estes Park. The ecologic stress of large-group camping in Rocky Mountain National Park was a major consideration in selecting a commercial camp.

Places that have provided the most interest for our students are Bear Lake Nature Trail, Moraine Nature Trail, Flattop Mountain, Hallett Peak, Andrews Glacier, Bierstadt Lake, Loch Vale, Longs Peak, and park headquarters. Without the cooperation and assistance of the officials of Rocky Mountain National Park, the results of our course would have been severely limited.

Mountain Ventures II

As stated previously, the other summer course was Mountain Ventures II. This was a wilderness-biology program. The course was held in Mt. Zirkel Wilderness, in north-central Colorado.

The Ventures II course was designed to expose the students to 10 days of wilderness study with as few tourist contacts as possible. Back-packing with mountain-climbing gear, camping equipment, cameras, biologic keys, notebooks, first-aid kits, extra clothing, bed rolls, and food resulted in women's packs that weighed 20.5 kg and men's packs that averaged 29.5 kg.

After several evening seminars the Ventures II class left Lawrence and traveled two days to Denver via school bus. From Denver the class traveled by commercial bus to Steamboat Springs, Colo. The trip from Steamboat Springs to and from the wilderness was accomplished with the assistance of a tour-guide service.

Even considering the cool, wet weather that was encountered, our students retained positive attitudes and expressed enduring appreciation for their experience of 72 km of mountain trails.

Without the efforts and concern of the U.S. Forest Service, Ventures II could not have become a reality.

Requirements and Costs

The requirements for students in Mountain Ventures include at least an average grade in a general-biology course, a mature attitude toward outdoor living, and the necessary physical ability. Possession of a recent first-aid card is encouraged.

A word concerning physical fitness may be of interest to the reader. The participants in Ventures I are expected to have the capacity to jog 2 miles (3.2 km). Ventures II requirements include a jog of 2½ miles (4 km) for the women and 4 miles (6.4 km) for the men. Without the fitness program, acclimatization to high altitude would seriously restrict our hiking enjoyment and travel.



Fig. 3. Stream crossings were a challenging part of the wilderness-biology course.



Fig. 4. On a snowfield at the base of Andrews Glacier.

Cost is another factor. Each student of Ventures I paid \$135, and the student cost of Ventures II was \$178. (Estimated costs for 1974 are slightly higher: see table.) Most of the students earned the funds with summer jobs. Each student's fee paid for transportation, insurance, food, equipment-rental fees, equipment-cleaning fees, student instructors' expenses, camping fees, textbooks and maps, and tuition. In addition, each student was responsible for an outfit consisting of army-surplus wool trousers and shirt, two pairs of wool socks, a pair of Vibram-sole boots, a plastic water-bottle, and personal-hygiene articles. Materials and supplies that were not biodegradable were "packed out."

As with any sophisticated biology field trip, the students and instructors were insured against injury. If a student or instructor were seriously injured, emergency first-aid or evacuation, or both, would be necessary. Mountain emergency evacuation means that the injured person would have to be helped to safety on foot, on horseback, or by helicopter. Thus far, no insurance has had to be paid. In addition to an accident-and-sickness insurance policy, the students are required to submit a notarized medical release.

Without an administration sensitive to the students' future avocational or vocational interest in biology, the Mountain Ventures program would not have evolved in the Lawrence school district. Without additional assistance from parents, civil groups, merchants, and the Lawrence High class of 1973, which gave \$1,000, the equipment necessary for Mountain Ventures could not have been obtained. The cost of equipment for a five-year projected program was nearly \$3,000.

Mini-Ventures Planned

The Ventures program is expanding. Several of the Ventures II graduates are presently attending colleges and universities and have requested positions as student instructors in future Ventures

courses. Within the regular nine-month term local three-day "mini-Ventures" involving bicycling, hiking, canoeing, and rock-climbing are being planned. As with any Ventures course, the emphasis will be on field biology, conservation, safety, outdoor cooking, and camping. The mini-Ventures will provide a method of exposing more of the students to the Ventures program. Another advantage that has been encountered in organizing the mini-Ventures is the

Estimated cost per student for 1974 Mountain Ventures I and II

Item	I	II
Transportation	\$10.50	\$50.00
Camping fees	20.50	5.50
Insurance	8.00	8.00
Books and maps	5.00	5.00
Food, ice, fuel	45.00	45.00
Rental and cleaning of equipment	10.00	15.00
Tuition	50.00	50.00
First-aid supplies	1.00	1.50
Totals	\$150.00	\$180.00

willingness of professors at Kansas University (in Lawrence) to assist with the program.

A word of concern: an individual or a group in any backpacking situation must be expected to protect the environment's aesthetic and ecologic character. Any outdoor leader who does not understand and insist on wilderness conservation needs further training or should seek another area of interest.

A word of warning: a spectacular filming day in the mountains can turn into a blinding fury of freezing death. Severe injury or death can be the result of one misjudgment, lost map, loose rock, or sleet storm, in the Rockies. The instructor who attempts to conduct a mountain-biology class without notifying authorities, requiring proper equipment, and knowing specific outdoor techniques is inviting mountain disaster.

Acknowledgment.—Fig. 1, 2, and 3 photos are by Jim Pendleton. Fig. 4 photo is by Steve Gibbs.

Antityphoonery

In Ifaluk, a particular Micronesian atoll, whenever it looked as though a typhoon were blowing up, Maroligar, the number two chief, always went down to the shore and spent all day honking on a conch shell. I'm not quite sure of the theory, but I think it was to advise the spirits that we were prepared, or worried about it, or something. Whatever the theory, it always worked. No typhoons developed during the summer, and nobody but a fool would stop honking on a conch shell as long as it worked like that. I often thought it was a fine example of the scientific method.

Marston Bates, "The Meaning of Environment,"
in *Smithsonian Contributions to Zoology* 26