

## CHAPTER 29

### THE CAIRNS FAMILY BEGINS THREE DECADES AT FIELD STATIONS

Although much of my professional life has been spent in field studies, I had never been to a biological field station<sup>1</sup> when my advisor at Swarthmore College, Professor Robert Enders, who was also Director of the Rocky Mountain Biological Laboratory (RMBL), offered me a summer position there in 1961. The entire family was thrilled that it was to have this new experience. We had a Volkswagen microbus – a stripped-down utility vehicle that was spartan, but commodious—that had a 35-horsepower, air-cooled engine. I readied the vehicle for the trip by having the middle of the three seats removed and a wooden platform built that went from the rear seat to the back of the front seat. We packed all my teaching equipment under the platform, plus a tent, camping gear, field clothes, waders, boat oars, and my fishing rods. Ground mats and the sleeping bags were placed on top of the platform. Over the engine in the rear was a large shelf on which we kept food, a camp stove, camping plates, etc.

During the trip, Jeannie and I, and sometimes one of the children, generally would sit on the bench-like front seat. The children usually spent time on the sleeping bags since it was possible to sit upright and even lean against the rear seat. The 12-foot aluminum boat was carried on the roof. The front doors each had a large pocket for maps and camping guides. We must have looked like “Okies” fleeing the Dust Bowl to the Easterners we were leaving, but, as we got farther west, I was complimented on my “rig.”

On flat roads, our top speed was 50 miles per hour, but, when we ascended Monarch Pass on Route 50 in Colorado, it was between 8 and 10 miles per hour. Everybody, even huge trucks, passed us. Even with six people and a very heavy load, we got nearly 20 miles per gallon of gas. The gas tank held about 10 gallons but had no fuel gauge. However, a switch had to be engaged to use the last gallon, so we could always make it to the next gas station. In addition, I always stopped for gas every 120 to 140 miles as a precautionary measure. The odometer served as a gas gauge. I always noted how many miles had passed since the last “fill ‘er up” and how much gas was pumped.

Jeannie had a high school class reunion the night before we departed our home in Gladwyne, Pennsylvania, for a trip to Gothic, Colorado – about 1,800 miles, including sizable detours to campgrounds. I don’t remember what time Jeannie and I got home from her reunion, but it must have been at least midnight. During later trips, Jeannie was able to drive the microbus, but, at first, I was the sole, available driver. The superb vehicle in which we traveled was purchased in the late 1950s for about US \$2,000.00; it had no insulation, no radio, and no air conditioner, but it did have a heater and a horn.

With great luck, we arrived at a campground just over the Ohio/Pennsylvania border while the sun was still high in the sky since it was mid- to late June. We pitched our huge family sized tent in a nearly empty campground. We camped every night until, on Route 36 in Kansas, we noticed a big storm approaching. We found a small, old hotel in a tiny town just off the highway where we booked a huge, family-sized, clean room for \$16.00. It had one bathroom with a huge tub with clawed legs. Although Route 36 is a primary east/west road, traffic was not heavy in those days. We could usually find a small, clean, grassy, tree-shaded rest stop with picnic benches under a roof, plus a hand-pumped water supply, and two or more outhouses (privies) in the rear of the rest stop. Somehow the trip to RMBL was a relaxed, homey journey in 1961, ‘62, and ‘63. We returned to RMBL in 1971 and from 1984 through 1994 when Interstates 64 and 70 were available, but it wasn’t the same – faster but not traveler friendly.

The day before we were due to arrive at RMBL that first year, Jeannie found the US Army Corps of Engineers John Martin Reservoir campground in the campground guide. The campground had just been completed, and the reservoir was surrounded, unknown to us, with ragweed and other asthma-inducing plants. Our daughter Karen suffered from severe asthma in her childhood and teens, and the attack she had at the campground was a bad one. We left there immediately and, after dark, found a motel in Pueblo, Colorado, with one unoccupied room that had an air conditioner with a filter. The boys slept in the microbus.

A good night’s sleep put Karen in good shape, and we began the final leg of our journey. We had drive through Monarch Pass on Route 50 to reach the western slopes of the Rocky Mountains. The trusty microbus lumbered up to Monarch Pass in first gear at a thrilling 8 to 10 miles per hour. Passengers in passing vehicles (and they all passed us) had expressions of sympathy, amusement, derision, and amazement, but we eventually reached the summit. The rest stop was a blessing – I had been tensing every muscle as if my stress would help the straining engine. Surely the trip

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<sup>1</sup> The professional aspects of field stations were mentioned briefly in Chapter 8 of this autobiography. This chapter focuses on the family aspects.

down from the summit would be better. Not so! The microbus was heavily loaded, and I drove in second gear with frequent use of the brakes. Soon we were turning toward Crested Butte and, in that tiny town, found a sign that pointed to Gothic – the location of RMBL. The paved road ended here and became more rugged by the mile. Finally, we reached the part of the road that overlooked the East River meanders. Naturally, no guard rail secured the narrow, rutted, rocky road and a steep drop off existed on the meanders side. On seeing the drop off, Jeannie stated firmly, “No matter what is at the end of this road, I am staying the whole summer.” However, within a week we were driving all through the mountains with few qualms.

Back in 1961, the sight of a car driving through Gothic to Emerald Lake and Schofield Pass was uncommon. However, this trend changed, and, when we last spent a summer in the area, hundreds of cars could be seen on a weekend day. Now I am told that the traffic is even more intense. In 1961, Professor Enders saw us arrive and came down to greet us with his granddaughter Abigail.

RMBL was not a typical research and teaching facility in 1961. In 1879, prospectors John and David Jennings discovered silver high above nearby Copper Creek, and the town of Gothic grew to more than 1,000 residents and became a major supply point for mining camps to the north (Connolly 2005). By 1893, the year of the silver crash, the town was nearly deserted (a hardy soul named Judd still lived there). In 1928, the town of Gothic was purchased by Dr. John C. Johnson, a biology professor at Western State College, Gunnison, Colorado. The picturesque cabin (named ‘O Be Joyful’ after a mountain) we occupied was a relic of the mining era. It had an all-purpose room downstairs with an old full sized bed, a large dining table, and a pot-bellied stove. The children slept in a loft, and Jeannie and I occupied the downstairs bed. A privy was conveniently located on the ridge behind the house. The cabin had electricity but no water inside; water came from a pipe in the middle of the field in front of the cabin. I could walk freely in the area near the bed, but, if I approached the stove unwarily, I cracked my forehead on a rafter. Showers were in a communal facility about ¼-mile away, and wood had to be split to heat the water.

My compensation for the six-week session was meals for two in the dining room (we rotated which four family members ate in the cabin, which had no refrigerator), a rent-free cabin, and \$100.00 for expenses on the 3,600-mile trip from Gladwyne, Pennsylvania, and back. I jumped at the chance to work at the field station because it gave me an opportunity to develop an aquatic ecology course. [In 1962-63, I was invited to teach a one-year National Science Foundation course in physiology for high-school teachers, which met all day on Saturdays at Temple University. I had taken Professor L. V. Heilbrunn’s physiology courses at the University of Pennsylvania, so I was well prepared for the course. However, the summer course at RMBL gave me more confidence in my teaching skills, but I never taught physiology again.]

About 20 students enrolled in the aquatic ecology course at RMBL the first summer. The number caused quite a transportation problem since RMBL had no vehicles. Fortunately, I could transport six or eight students in the microbus after the platform was removed, and some of the students had cars. Dr. Ruth “Scottie” Willey kindly showed me some good sites for field trips. I had each student do a research project (some worked in groups of two or three), which was ambitious for a six-week, summer course. This requirement startled some of the students, but the design worked out beautifully. Each project was presented to the rest of the class, which gave both undergraduate and graduate students a useful experience in presenting their research. I had to spend a substantial amount of time helping the students formulate a testable hypothesis, select a field site, and develop a simple sampling program. The results pleased the students and helped me get to know them better. From 1961 on, I made research projects part of every course I taught for over three decades at field stations.

The class visited oligotrophic (very low nutrients) alpine lakes, high altitude streams, and the Gunnison River near Gunnison, Colorado. I had no teaching assistant, but two graduate students, Rick Richards and his colleague Jerry, had been at RMBL before and were very helpful. The other students, who carried the boat, sampling gear, and chemistry material, also helped. Each week for six weeks, the class met for one full day and the following morning only. I lectured for one hour after breakfast each day that the class met, took the class on a field trip on the full day, and gave the class free time to work on their research projects after the morning’s lecture on the half day. Students spent three full days on classes if they were taking two courses and had four full days for study or research projects and hiking. The front of one new log cabin was for classes, and the smaller rear part for faculty research and for research investigators. That first year, I even managed some research on synergistic interactions among fresh-water protozoans (Cairns 1967).

I tried to leave two days each week for family activities. Our food shopping was in the Gunnison supermarket, and gas was also about 25% less there, an important consideration since I received no monetary compensation for teaching. Nevertheless, the round-trip to Gunnison took nearly four hours. Karen was taking two courses (no tuition for children of faculty), so we usually shopped when she was in class. Our most memorable family trip was over Schofield Pass and down Crystal Creek Canyon. The riskiest part was crossing a ford (which wet the brakes), followed by a very steep, rocky road on the left and a steep drop-off (no guard rail) into the creek on the right. At the bottom was the Devil’s Punch Bowl, which had claimed one vehicle before our trip. I asked the family to hike down and braked frequently to dry the brakes. I drove across the small bridge below the Devil’s Punch Bowl, and the family got back into the microbus. The trip to the small, picturesque village of Crystal was challenging, but I even got to glance at the

spectacular scenery from time to time. From Crystal, we drove to the hamlet of Marble; from there, we took a paved road to Route 50, which went east to Gunnison, and then returned to Gothic after filling the gas tank.

The RMBL area was a treasure trove of aquatic ecology systems. One of my favorites was the Mexican Cut area, which contained Galena Lake, a high altitude oligotrophic lake and, at a lower altitude (about 100 feet lower), were two strings of "pater noster" ponds. I remember Professor G. Evelyn Hutchinson, the famous limnologist, using the term *pater noster* to describe ponds or lakes that were in a chain or in a series when he gave a week of lectures on the founding of the Limnology Department at the Academy of Natural Sciences. These strings of ponds contained the rare, neotenic salamander *Ambystoma tigrinum*. Neotenic refers to the way these salamanders retain their gills and never become land dwelling. Moreover, the water quality in the two *pater noster* systems differed. A hike through this area yielded spectacular scenery. Of course, the descent from the lake to the two chains was challenging, but most of the students acted like mountain goats. False pride and helping the timid students enabled me to make the journey with the dignity of a 39-year-old, fledgling faculty member.

I had been an unsuccessful devotee of trout fishing since I was 16. The RMBL area was paradise! Trout (brook, rainbow, and German Brown) were abundant in the East River that ran through the laboratory property. Copper Creek, that joined the East River at RMBL, had cutthroat trout. No travel was involved; so a few hours two or three times a week were a lifetime dream come true for me. My trout fishing era began at RMBL in 1961, and it was somehow fitting that it should end there in summer 1994. In 1961, snow melt kept the streams high and turbulent until mid- to late July. Fly fishing improved gradually by mid-July, especially in the headwaters and meanders. In 1971, I returned to RMBL and the fishing was great, just as it was in 1984 when I again returned to the laboratory. However, snow packs were diminished in the 1980s, and fly fishing began in late June. The trout were far less numerous as well. I have heard from Alan Heath, who currently has a cabin near RMBL, that trout fishing has deteriorated in the area. A former graduate student from over three decades ago has a cabin in another part of Colorado and reports the trout fishing remains good there. Still, I was fortunate to be at RMBL when the area was sparsely populated and many of the ecosystems were pristine. Travel over narrow primitive roads was less dangerous because one was unlikely to meet a vehicle coming in the opposite direction.

One's life contains many defining moments, and summer of 1961 at RMBL was one for both my professional career and my family. I survived my first teaching position in unfamiliar surroundings, which included students from a wide variety of academic institutions and ranged from first-year undergraduates to graduate students. Only three other faculty members were there, none of whom I had met before personally, although I knew Professor Jean Langenheim by reputation. The only research investigator I knew was Professor Paul Ehrlich, of Stanford University, from a brief meeting at the Academy of Natural Sciences (ANSP) in Philadelphia.

I am indebted to my mentor, Ruth Patrick, who also chaired the Limnology Department, ANSP, for allowing me to take four weeks leave to add to my two weeks vacation time so that I could teach the RMBL course. Teaching aquatic ecology paid major dividends for such a small investment of time. I had been told by friends in colleges and universities that a person used to the intense focus of a research organization could not cope with the multiple demands of a teaching institution. At RMBL, I had gained confidence that I could cope.

Also, the experience demonstrated that my family could cope with the rugged conditions of a field station. 'O Be Joyful' cabin was very old, very musty, and very dark, but we made out, even with a 45-mile weekly trip to buy food. We were living in an area of spectacular scenery and fascinating wildlife (e.g., elk, mule deer, bear, mountain sheep, golden eagles, marmots, pikas, foxes, and many species of hummingbirds), as well as unforgettable alpine meadows, pure air, and pristine streams and lakes. So what if we didn't have indoor plumbing, a telephone, or television –one look at Gothic Mountain compensated for the lack of all of these amenities.

Suddenly, the time came for us to leave; we couldn't linger any longer as the college and university people could. I was on a 12-month appointment with a two-week vacation, already used, while most of the faculty from academe was on an academic-year appointment and had weeks before they were due back. The morning of the day before leaving was spent cleaning the cabin and my research area, as well as packing teaching equipment. Then we said goodbye to the RMBL family in a variety of ways. I took a number of pictures, since I had no reason to believe we would return – RMBL offered only four courses each summer, and some rotation was essential for variety. For me, the most gratifying event was the number of students who asked if I would be teaching at RMBL again the next summer. I could only tell them to wait until the courses for 1962 were announced. Even if I were asked to teach in 1962, I had no assurance that I would be given permission to be absent for six weeks again from my appointment. Summers were the Limnology Department's most important field season, so requesting a leave during that period was no small matter. However, we were lucky enough to return in 1962 and 1963.

In my experience, students at field stations are more strongly motivated than most of those at the academic institutions from which they come. They have made financial sacrifices because they could not take summer employment, and they are choosing hard field work over the easier physical requirements of typical academic institutions. In addition, handicapped students are not excluded from field stations. My biggest challenge was a legally blind student who wanted a field experience. The other students played an essential role in seeing that she got one. All

these factors contributed to the success of the individual research projects. Although they required a significant additional portion of my time, I was able to share my excitement about research with students and relive my joy when my first successful research project was completed by sharing their joy when their first research project was completed.

All of us were probably drained emotionally by leaving friends we might never see again and an environment we had grown to love. Had anyone told us we would spend summers of 1962, 1963, 1971, and 1984 through 1994 at RMBL, we would have been incredulous. The last ten of these summers were spent in a cabin on the hill below the Ehrlich cabin; it was small but incredibly luxurious – indoor plumbing, a hot water tank, a refrigerator, and a sink. The view of Gothic Mountain was grand. And, to top all this magnificence, our last summer was spent watching four young foxes grow up. They were in a den on the hillside with their mother, who often trotted past our cabin, usually carrying food for her family.

Some of Jeannie's ashes were sprinkled on a cairn not too far from Copper Lake by all the family members, except me. Over half of the remaining ashes are in a milk glass container in my den. Pictures of Jeannie's memorial service and the hike up to and down from Copper Lake were taken by my granddaughter Hannah Cairns and are on my website [www.johncairns.net](http://www.johncairns.net). All these memories are wonderful, and Hannah's photographs help me relive them.

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