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IN AND OUT OF THE IVORY TOWER

Carl Bajema

I chose the life of a college professor rather than the more financially rewarding life of a physician because I thought that I could make a larger intellectual contribution. I joined the faculty of GVSC in the Fall of 1964 and have a number of fond as well as frustrating memories of the my first ten or so years at GVSC. Some day I plan to write about the mistakes the college made in its experiments in those early years with different academic styles, so that others don't have to learn the hard way, but, for now, I want to take this occasion to record some of the fondest memories I have of life with colleagues and students during the first ten years.

The Day They Evacuated Lake Michigan Hall

In the summer of 1965, a secretary came into the lab where Fred Bevis and I were teaching biology and announced that someone on the telephone wanted to donate a couple of snakes to GVSC. Fred immediately said yes, but I quickly added that we could not take poisonous snakes. Fred reminded me of one of the earliest GVSC policies—to accept any donation a citizen makes—and pointed out that the only poisonous snake in Michigan is the pigmy Missasuga rattlesnake, which he was confident we could handle with care.

A guy showed up holding a burlap bag at arm's length. He had "collected" one huge and very much alive timber rattlesnake and one smaller but still very alive and active copperhead on his way home from New England to show his relatives in Grand Rapids. The garbage can was the only secure "cage" we had in the lab, so the amateur herpetologist dumped the two poisonous snakes into the garbage can and walked out.

The word quickly spread that there were live poisonous snakes in the Biology lab. Secretaries from Dean George Potter's office on the first floor came up to see the snakes. Fred and I securely taped the lid on the garbage can, attached a sign that stated WARNING—POISONOUS SNAKES—DO NOT OPEN and went home for the night.

We thought that Dean Potter would like to see the snakes the next morning, but he wasn't interested. He told us that we had a problem. The janitor refused to empty any trash containers in the science labs as long as the crazy scientists kept poisonous snakes in one of the containers. So we transferred the snakes into the metal terrarium that was equipped with sliding glass doors. We thought this was a big improvement, because anyone who came into the lab now could see the snakes through the glass doors, which we had taped shut for security reasons. Boy, were we wrong!

When I drove into the parking lot the next morning, secretaries were running out of Lake Michigan Hall. The snakes were missing. Dean Potter made some
threatening statement to Fred and me about being fired (terminated, for those of you using modern language) unless we found the snakes within the next few minutes. I was not about to go on a "search and destroy" mission, because I had had only minimal experience handling snakes, and those were nonpoisonous garter snakes, water snakes and blue racers.

The thought of coming face to face with a poisonous snake under a desk or ventilation duct opening made me decide that the best solution for me was to submit my resignation effective immediately. In frustration, I hit the side of the terrarium with my fist and heard the rattle of the timber rattlesnake. The snakes had not escaped. They had crawled into the false ceiling of the terrarium and wrapped themselves around the heat sources—the lights. The Dean was only half pleased: "I am glad you found them, but you biologists have to get rid of those poisonous snakes now."

The terrarium was too heavy to move, and the janitors were not the least bit interested in helping us. So Fred and I began unscrewing the top of the terrarium, where the rattlesnake and copperhead were "resting." I fashioned a noose out of a broom handle and some wire, while Fred filled a large beaker with 95% ethyl alcohol. Fred decided that he would pull the lid of the terrarium from a distance with a broom handle and I was to get in position to lasso each snake as it came out of the terrarium. I wanted to switch roles, but I did not want Fred or the couple of onlookers present to know how scared I was. Someone armed himself with a broom and climbed up on a laboratory table behind me so that he would be in position to attempt to hit one of the snakes with the broom handle if both snakes decided to come out at the same time.

I lassoed the head of the first snake that stuck its head out and pulled the writhing creature over to a laboratory table. I plunged its head into the beaker of alcohol, and the snake stopped writhing. The next cooperated similarly. Fred and I kept our jobs, but we no longer automatically accepted living animals from citizens.

The bodies of these two serpents remain with us, pickled in large specimen jars, labeled *Crotalus horridus horridus* and *Agkistodon contortrix mokeson*. Grand Valley students have been studying the bodies of these two snakes in introductory biology courses for the past thirty years.

**It's Time to Go on Another Field Trip**

My fondest memories of academic life during the first ten years at GVSC are of the many field trips that Fred and I organized and led for our students and such colleagues as Johnny Lucke and Dick Lefebvre in Geology. I had fallen in love with the Upper Peninsula as a youngster. Fred had conducted research in forestry and had taught forestry courses at Michigan Technological University. Fred was (and remains) the most knowledgeable person in the natural history of Michigan and the rest of temperate North America that I had (and have) ever met. I suggested to Fred that it would be fun to take biology students on a field trip to study the natural history of Michigan's Superior peninsula during the summer of 1965. Thus began a tradition that was to enrich the academic and social lives of the hundreds of Grand Valley students who went on field trips with Fred and/or me to such places as South Manitou Island in Lake Superior, Petoskey and the Smoky Mountains.

We always enjoyed these trips. Once a student brought a large insect collection for a camping trip. A local bumble bee swarm had filled the terrarium with bees, and we found them, but you biologists have to get rid of those poisonous snakes now."
Manitou Island in Lake Michigan, the Pictured Rocks National Lakeshore adjacent Lake Superior, Point Pelee adjacent Lake Erie, and the Florida Keys, as well as the Smoky Mountains during the spring wildflower season.

We always encountered problems on these field trips. Some were with animals. Once a student brought a pineapple along and set it on a picnic table at Andrus Lake campground near Whitefish Point in the UP. It was gone the next morning. She was sure one of us had stolen it, until it was found in the woods. Scientific analyses of the pineapple revealed the imprint of a bear's paw. Raccons also got into food containers and mosquitoes into tents. Once, waking up inside a twelve-person tent at Point Pelee, Ontario (one of the best spring migrant bird watching sites in North America), I shined my flashlight on the ceiling to see hundreds, if not thousands, of mosquitoes resting and waiting for their turn to sample the warm blood of the dead-tired humans sacked out on the floor. The last person to enter had not bothered to zip up the tent flap. I abandoned the mosquitoes and students, crawled into my car, and slept the rest of the night (until 4:45 a.m.) with the car windows rolled up.

Automobile breakdowns created another set of problems. Twenty five of us started for the Keweenaw peninsula in six cars one summer, but, by the time we reached Munising, we and our camping gear were all squeezed into four cars. Another time Fred volunteered to take all our tents to Norway Lake in the UP and set them up so that all we would have to do when we arrived around midnight was to carry our sleeping bags from the cars to the tents. But Fred decided that he would first check out a couple of his research sites. His station wagon overheated from pulling the trailer loaded with camping gear on a wilderness road approximately ten miles from Norway Lake. I arrived at Norway Lake at midnight with five carloads of students and could not find any sign that Fred had been there. It was raining hard, and the students were exhausted from having attended classes during the day and driven nine hours. They slept in the cars and on top of picnic tables in a shelter that night. On at least two trips to the Smokey Mountains, I had to pick up students standing by their broken-down autos.

On one Florida field trip a student got stung by a Portuguese Man-of-War while sitting on a picnic table; another threw a rock up at a coconut in a tree, and it bounced off and hit him in the head. At John Pennekamp State Park in the Keys, some students pitched their tents on the flood plain and found their gear floating in and out of their tents on air mattresses.

You have not lived until you have eaten student- or faculty-prepared cuisine on a field trip. My children, who often accompanied me, still grimace when they remember Bevis-burgers and smile when they remember the huge frying pan that we used to whip up the scrambled eggs.

Despite everything, Fred and I got a lot of praise from students who participated in these field trips. Grand Valley administrators, on the other hand, considered these trips to be a nuisance at best, maybe because they heard some tall tales that kept getting taller. Another reason may have been that too many students were going. One spring, approximately ninety students came to the Smoky Mountains: one out of every fifteen Grand Valley students were with Fred and me rather than enjoying

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classes on campus. Still another reason may have been that they couldn’t figure out how to evaluate field-trip time for salaries. Finally, they may have thought that, since the students and faculty members were having so much fun on the field trips, there was obviously no meaningful learning taking place. My desire to take students on field trips died in 1973 when it became all too obvious that field trips created too many problems for the administrators, not one of whom ever thanked Fred or me for providing students with meaningful learning experiences outside the classroom.

Fred Bevis is now retired, but he and I still go on field trips together. I will be spending part of my sabbatical, hiking in Beartooth/Yellowstone Park, Wyoming, with Fred this September. We will also be going to study the forests of the Upper Peninsula in October. We have both slowed down: Fred can no longer sprint down the trail to the next plant, bird or rock formation that provides him with another teachable moment; and I can saunter only a little faster than he can. Fred’s driving hasn’t changed much though: he “rolled” his van in May after driving through the night. He was saved by an air bag.

Fred Bevis has my vote for the most outstanding teacher ever to walk the halls of Grand Valley and the fields on and off campus for all the time he was willing to spend outside the scheduled class hours to help students learn about the natural world.

The Evolution of the GVSC Curriculum By Jerks

One of the more fascinating yet frustrating theories concerning evolution is called punctuated equilibrium or “punct eq.” It proposes that much of the morphological change in the fossil record is best described as long periods of little or no evolutionary change (stasis) punctuated by short (geological time, not human time) episodes of rapid evolution. A critic of this theory has affectionately labeled it “evolution by jerks.” The evolution of the foundation/core and undergraduate curricula at GVSC might well be described using the same affectionate language, because it was also very jerky, with short episodes of stasis (usually two to three years, but often as short as three academic quarters), punctuated by a very rapid burst of change designed to make the catalog copy deadline for the next academic year.

The original freshman curriculum that our founding fathers established was very rigid. Each freshman took nine courses from the same set of seven courses and was given a choice only in the remaining two courses—they could choose the foreign language they wished to study from among French, German, or Russian.

Economic considerations played a major role in the rapid abandonment of this first core curriculum. Prospective students wanted a cafeteria style curriculum so that they could avoid broccoli and other things they didn’t like or thought were too demanding of their time and thinking. They went to other colleges and universities, and GVSC experienced the first of many enrollment crises. The state legislature had allocated money expecting rapid growth, which did not occur. Fearing a drop in state funding, the administration became very supportive of proposals to modernize the curriculum.

I proposed a course in human ecology for non-biology majors. I had taken a graduate level course on environmental problems, and had read about the concepts of ecological change, evolution, and how they have been applied to pollution problems. I proposed to do a study under the guise of an ecological and physiological investigation. I cast this course as an organic whole, thought it an attractive course, and strengthened by the thought that I could teach it. The course was accepted by the state university system, and it has been some four years later that more students are taking this science course. I taught it for the first time in the spring quarter of 1971.

Statistics was the only course in the GVSC curriculum where evolutionary processes are not purely applied. The design and data analysis in the sciences is thought to have simply a relationship to biology and social sciences. It obviously needed to be opened up in the curricula. What part of the mathematics faculty would consider it as a naturally occurring subject? Is it really a part of the national and state curriculum? Is it a part of the education of scientists and students?

The small class sizes that accommodate the student’s needs also help. Pedagogically produced by the small class size, it is more real learning in the natural world. The science courses are more meaningful as they are taught in small groups. The students and faculty members have more opportunities to interact and learn.

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graduate level course that dealt with human lifestyle, population growth, and environment problems. Our students deserved the opportunity to learn the basic concepts of ecology (including the ecological process of Darwinian selection) and how they have been applied to the scientific understanding of our population and pollution problems. Such a course seemed more worthwhile than what is often taught under the guise of biological science but is all too often simply trivial morphological and physiological information about life science. The administration supported adding this course as an option in the science core curriculum for non-majors. Maybe they thought it an attractive and meaningful one, but maybe their opinions were strengthened by the fact that it would cost less than the traditional life science lab course. The course was first offered during the fall, 1966 quarter. Most of the rest of the state universities began offering introductory environmental science courses some four years later, when the first annual Earth Day was celebrated. My guess is that more students took this course during the first ten years at GVSC than any other science course. I remember lecturing to approximately 450 students in the fall quarter of 1971.

Statistics was the second course that I was able to contaminate the original pure GVSC curriculum with. I thought it was important because the real world in which we live is not purely deterministic; it is stochastic: deterministic and probabilistic processes interact, and these interactions need to be taken into account when one is doing real science—constructing and testing scientific theories. However, purists dominated the mathematics faculty at GVSC then and did not want to teach such an obviously applied course as statistics. So I proposed a biology course on research design and data analyses (i.e., biostatistics). This led to an all-out war over academic turf. The mathematicians realized that if they didn't teach a statistics course, other faculty would invade what they viewed as their private terrain. The administration in its traditional "what costs less?" decision-making mode was concerned about the proliferation of such courses in the social sciences as well as in biology and the other sciences. It obviously is more cost effective to pack all the students into multiple sections of the same course. Introduction to Statistics was first taught in 1966, under the auspices of the Mathematics Department, with discussion sections taught by biology and social science faculty.

What part of the original curriculum was of most value in producing real learning? The small class sizes and tutorial sessions forced students and faculty to interact in educationally productive ways. However, financial problems eliminated most tutorials and small class sizes. In the good old days, I taught a total of 180 to 200 students in three or four different courses a year. Now I usually teach five, six, or even seven different courses containing 300 to 400 or more students a year. Occasionally, I teach a course which is limited to only twelve or fifteen students. I know that much more real learning occurs in classes limited to realistic numbers. Large classes and too many different course preparations today sometimes make me long for the good old days.

A college curriculum ought to be designed to provide students with numerous opportunities to improve their skills in critical thinking and communication. Liberally
educated students ought to know how to apply the major theories of the physical and biological sciences to solve problems and how to think critically about ethical questions. Students need to understand how philosophers (both secular scientists and theologians) have grappled with and continue to cope with the problem of what human beings ought to do on this planet. They need to know why what persons do, either individually or collectively, can differ from the belief systems which they champion and what can be harmful to other persons and the human life support systems of this planet.

The history of curriculum reform and teaching at Grand Valley needs to be carefully evaluated so that others can learn from both our mistakes and successes. We who survived the "jerky" period are probably in the best position to do so.

Dreams! For centuries, dreams have been as mundane and they will come. For early faculty, the institution in a corner, and other physical institutions had made, "The Dream" is certainly not the current programs—there was a sense of unity among faculty members who served as colorful debaters, and dreams elsewhere.

In those early years, members of many and professional faculty members were to be rather short-lived, and...