

Teaching Children: The Naturalist Paul B. Sears at Home

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ABSTRACT. Paul B. Sears' three children experienced the downside of growing up with a famous father, but they valued the enjoyment of being with him outdoors on numerous trips. He took them to prairies, peat bogs, woodlands and mountains, where he taught them to observe the landscape and the ecosystems. They learned to respect natural hazards but to meet natural challenges. Their collections sometimes were taken to Sears' laboratory for close examination. Later in their lives, Sears often was invited to give lectures or speeches at the schools where they were students or faculty members. He always was revitalized by an audience, and even in his last year of life, he took the time to talk to a student about ecology. Sears instilled in his children a love of the natural world and a respect for the processes of nature.

OHIO J SCI 109 (4-5): 116-118, 2010

INTRODUCTION

Paul B. Sears and Marjorie Lea McCutcheon were married on 22 June 1917. They met at The Ohio State University where he was an instructor in Botany and she a graduate student in English. Marjorie taught at Denison University while a student and then at The Ohio State University. Sears' manuscripts, for lectures, articles or books, received Marjorie's careful editorial attention. Without doubt, her talents contributed substantially to her husband's professional success. Marjorie died on 31 October 1982.

Their children were Paul McCutcheon Sears, born on 8 December 1921, Catherine Louise Sears, born on 22 April 1925, and Sallie Harris Sears, born on 14 January 1933. Another daughter was born and died on 4 June 1918. Paul McCutcheon Sears died on 31 October 1984. He was a senior editor at RAND Corporation and the National Center for Atmospheric Research prior to his years as a freelance author and reporter. The surviving daughters wrote their reminiscences and present them in this volume as memorials not only to their eminent father but also to their mother and brother, whose roles in the family, though less well known, are also of enduring importance to us (see Sears, this volume).

CHILDHOOD ADVENTURES

The age differences among the three of us accentuate the variations in perspective that are inevitable in any family. We were all quite aware of the fact that our father was a person who many people admired and respected. The strongest recognitions that we held in common all through our lives have been our love of the natural world and our respect for the processes of nature. Surely, this is our heritage from Paul Sears. The abilities to see what is around us, the intricate interrelated systems and to take note (seldom in admiration) of human interference with our precious environment must have been learned long before we could remember learning them.

Field trips in the Rocky Mountains, in the Dust Bowl region of the Southwest and in the peat bogs and woodlands of Ohio provide a kaleidoscope of memories made possible for us by our father's lifelong professional pursuits. None of us recall any other activity when we were not in school; it was years before I discovered that most families took vacations quite unrelated to their father's work.

Nebraska sand hills, Oklahoma red prairie, the Ozark and Arbuckle Mountains, the Sangre de Cristo's of New Mexico, the Colorado Front Range and the Snowy Range of Wyoming were

our most memorable summer haunts. We dammed icy streams, scrambled over boulder fields, investigated mineshafts and abandoned mills, whittled walking sticks of green aspen, learned to recognize timberline, beaver huts and a few poisonous plants and generally learned to handle ourselves in the wild.

One small Wyoming stream came to be named Sallie Creek, after my sister. And we knew it was untamed. A family reported a toddler missing at a location above 10,000 feet in elevation in the Medicine Bow Mountains, also in Wyoming. We children reminded each other that if such an event happened to us, we would walk downstream as instructed by my father. Natural hazards were respected, but all natural challenges were met head-on as a matter of course. Sallie still carries the scar of a small rock embedded in her shin when she was triumphantly learning to walk on a mountain slope rather than on the level floor of a protected nursery.

In such surroundings, our brother learned western birds, flowers and trees before he was in his teens and he passed the lore along to his sisters. He shared with us his skill at geological mapping and acute powers of observation. One time, father took us to an alpine meadow to see how many minute plants we could discover in an area of one square foot. Intent upon that, we took turns with his hand lens. A hand lens was a piece of equipment that my father carried throughout his life. My sister now has the last of the many hand lenses my father had carried. Although the species names are long forgotten, the importance and satisfaction of paying attention remains. When I read the report of one of Louis Agassiz's students having to stare at the same fish all day long to tell the professor what he had seen, I recalled our sustained inspection of that one square foot of earth.

One summer we children had a burro that was unresponsive to our requests to move. Father illustrated the principle that the carrot can be more effective than the stick by tying a greasy brown paper bag onto a stick that a small rider could hold in front of the burro's nose to get him to move. If we wondered what time it was when we could not see the sun, my father would remind us to recall when it rained briefly every day for the past 2 weeks, and we could manage from that. We chewed pine gum resin, ate wintergreen leaves and wild raspberries and learned to trust when he gathered "inky caps" and "puffballs" for lunch. We understood the importance of caution when collecting and eating mushrooms. Our caution was reinforced when anyone else would present a mushroom to my father to determine its edibility, he would say, "I really can't be sure, so don't eat it."

We became familiar with typhoid fever shots and their side effects when my father was so busy making sure his students were

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inoculated that he forgot his own shots, ate some watercress from the stream in Wichita Falls and was hospitalized for 11 weeks with a nearly fatal bout of typhoid fever.

In the Dust Bowl years, when everyone else was trying in vain to hide indoors, we tied wet bandannas robber-style across our faces (a very satisfying garb) and set out in an unreliable blue Pontiac to inspect Oklahoma barns drifted rafter-high with dust. I recall an average of two tire blowouts per trip and one radiator boilover. We rode precariously on the automobile running boards and lived to tell the tale. Perhaps those experiences made excursions to peat bogs a comparative treat. Mosquitoes at least were not any worse than chiggers and sunburn. We learned to roll mud bog samples from the sediment core-boring gadget in wet newspaper to carry home, to be deposited next to Mother's best tomato aspic in the icebox until laboratory time. She could not have been thrilled by that, but I never heard her complain. On laboratory day, if we were lucky, it would be spent washing samples, making slides, carefully handing a fragile slide cover, and finally (after many tries when I pretended to see what I still could not see at all) actually recognizing a tiny fossil pollen grain of oak or corn or whatever and realizing that past mysteries could actually be dated and outlined. The people who made the Ohio Indian mounds seemed real to us, as did the makers of flint arrowheads and admirers of mineral sand roses we collected in Oklahoma. When my brother found a dinosaur bone in Wyoming, we were all thrilled by this encounter with past eras.

I think a cosmic pull brought the three of us together for the last time in a climb up above the streambed in Taos canyon in New Mexico. With our childhood half a century behind us, we recreated the experience of our tall brother still able to glide Indian-style over a narrow log across the stream, with the spirited younger sister following him confidently, and the cautious older sister scooting across on her bottom. We all made it to the other side. Less than a decade later, the survivors of our generation and two succeeding ones scattered my father's ashes near that part of Taos canyon. Our mother's and our brother's ashes already had been returned to the upper and lower reaches of the Rio Grande canyon. These ceremonies seemed the most appropriate change from the generations of formal interment into a family plot with granite markers.

COLLECTING

Collecting was a constant activity for us—stamps, arrowheads, bones and feathers, to name a few. While exploring my grandmother's attic, I came across a number of glass plates with carefully mounted butterflies and moths, really elegant specimens. These had been collected by my father in high school, and I often wished I had kept them. I imagined that collecting as a hobby and playing the violin set him apart from his schoolmates. However, there are also photos of him on the school basketball team and helping out as cook for a barn raising crew. I also knew that some of his "collecting" had ulterior motives. Early one summer, we were assigned to catch as many grasshoppers and horned toads as possible. These were delivered to the department laboratory, where some appropriate chemical agent was applied to remove everything except the carapace and other hard body parts. After a quick wash, the specimens were dropped into carboys of alcohol where they stayed for months. I overheard a comment that the revenue inspectors were welcome any time to determine whether these substantial amounts of alcohol were for scientific purposes. Since a great deal of beer- and wine-making went on at home, with varying results and an occasional exploding container, I knew that the comment was related to Prohibition.

CONNECTIONS WITH PEOPLE

Father also collected friends and acquaintances in vast numbers. He seemed to remember everyone he ever met, and most people who met him remembered him vividly. When my own children were small, my father drove up Mt. Evans one afternoon with me and my children. Halfway up the mountain, my father stopped at a crossroads store to renew his pipe tobacco supply. When he had not returned in one-half hour, we looked at each other and said, "He has met a friend." When my father and another man emerged from the store, they were comparing notes on their earlier encounter approximately 30 years ago. In my youth, I sometimes guessed right and sometimes guessed wrong about this incredible network of my father's friends. On my first day at college, I met some upper-class women, one of whom I knew. Her friend was telling a story about her own father's college days, when a major flood occurred in the vicinity and all the college boys were called upon to perform heroic deeds. I began to hear a very familiar story, told often but in my view, with little credibility despite my father's frequent renditions. Where had the upperclasswoman's father gone to college? Oh, a little school in the Midwest, called Ohio Wesleyan University, class of 1913, I believe. I admitted a belated recognition of fatherly derring-do in my family by describing a flood on the Olentangy River. A happy by-product of a shared history was that the other student and I became lifelong friends.

Another encounter with my father's network was not as fruitful. I received a telephone call from a courteous young man whose name was not familiar to me. "You don't know me, but your father was best man at my father's wedding and would you like to have a date Saturday night?" I complimented him on having a great line, especially for a Harvard man, and casually declined. Of course, I found that his tale was true, and who knows what each of us missed because of my skepticism? Having a well-known father does lead to such skepticism.

A common experience in my schooldays was having local biologists pursue me to ask my father to give a departmental lecture. He always generously complied with such requests, spoke with his customary grace to an appreciative audience and disappeared before we could talk personally. So, it was a mixed blessing to have such events on my campus. However, they did help prepare me for my own assorted commencements, when he was committed to give a speech somewhere else and could not attend. Mother did the honors and we had a fine time.

Even after my father retired and my sister and I were the working academics of the family, this pattern persisted. Grinnell College had received a grant from the Ding Darling Foundation to provide scholarships for biology students. One of my father's favorite possessions was the original art of the Darling cartoon showing the scalping of Planet Earth. Thus, it seemed pleasant and appropriate to ask him to speak at the scholarship awards ceremony. He spoke with great effect, despite his age of 90-some years. One of the Grinnell College students receiving the award was the daughter of another noted ecologist, mentored by my father, who helped arrange a special recognition for him in his 97th year. All teachers enjoy this sense of continuity. It was a kind of bond between us. Indeed, the only advice my father ever gave me about teaching was on the occasion of my first academic appointment. "Always remember that in every class you teach, there will be at least one student who is much smarter than you are," he said. It was always so.

Of course, time provides the ability to smile at matters that, earlier, had no humor for us. When I joined the Grinnell College faculty, my parents visited the campus and were guests at a reception that

the President gave to introduce me as I began my appointment as Dean. About halfway through that very pleasant evening, my mother took me aside and asked me if she should remind my father that this party was not for him. We shared our laughter, comfortable in the mutual understanding and acceptance of his lifelong starring role.

Indeed, any audience always revitalized my father. In the last year of his life, when he was frail and often in a wheelchair, a youthful admirer knocked on the door and asked if he could talk to Dr. Sears for a minute about ecology. I watched in awe as my father awoke from his "nap", lifted his head, and gave his most dazzling smile of welcome as he launched into a one-half hour talk with the

young man, who quite literally sat at the master's feet. It certainly made my father's day, and I can only hope it did the same for the youngster. This ability to respond was part of my father's style to the end. One friend who had managed our family farm in Iowa for decades visited my father the day before he died and wrote to me of his unfailing interest and alertness to various farm reports.

It occurred to me that if Socrates is right that death may be either a dreamless sleep or else the opportunity to continue conversing with friends whose souls have gone before, then there is a 50 percent chance that Paul Bigelow Sears is holding a vast audience spellbound.