

ASPB Pioneer Member

Thomas S. Moore

I am honored to be named an ASPB Pioneer, but I feel strongly that it has not been achieved by me alone. I was born in Kennett, Missouri, but my parents moved to Mena, Arkansas when I was four years old. I was fortunate to have good parents and a good education system in Mena (population about 4500 the time).

My scientific training began in the 7th grade when Mr. Norton taught my science class. I especially remember his teaching us about the Periodic Table, and how he made it interesting for us. When I became a sophomore at Mena High School, Ms. Aileen McWilliam was my biology teacher. She later taught me Chemistry and Physics. She was an excellent teacher and dealt very well with her students. She started a science club, which many of us joined, and she helped us do research projects. Some of us chose to do field projects and would go out at night to Rich Mountain, which was nearby, and study nocturnal animals. I worked with Rich Mountain salamander populations, and with her help I won the State Science Fair my Junior year and went to the National Science Fair (a female friend of mine beat me the next year and she went to the National Science Fair that year). Ms. McWilliam was excellent!

After I graduated, I went to the University of Arkansas, and there I was recognized by Dr. Lowell F. Bailey, Chair of the Botany Department, when I walked by



his office. He had been in charge of the State Science Fair, and he offered me a job in his laboratory; this got me started in Botany. After I received a BS degree, I decided to stay there so I could mature before starting a PhD. I later received an MS degree from Dr. Bailey.

For my PhD I went to Indiana University to work with Carlos O. Miller, which again was a fortunate choice. He worked well with all his students and encouraged independent thinking. As a result, I was able to work on new approaches to using cell cultures (soybean callus tissue) and test hormonal effects on respiration by converting soybean callus to suspended cells and monitoring oxygen flux for a period after adding cytokinin. Indiana University was also a good place to be.

After the PhD, I did postdoctoral research with Dr. Harry Beevers, who had just moved to the new branch campus of the University of California in Santa Cruz. In his labo-

ratory I learned many critical techniques while studying plant cell wall production in cultured suspension cells. However, even more significant to my future research was learning how to separate cellular components and measure organelle functions in the cell. I worked closely with other members of the lab who taught me a lot, including how to carry out this research. My research centered on the cultured cells from Dr. Miller's laboratory as well as the castor bean cells used in Dr. Beevers' laboratory. My primary interest was cellular membrane development, particularly phospholipid biosynthesis and in some cases the synthesis of unique phospholipids in other organisms.

Subsequently, I got a job on the faculty of the Botany Department at the University of Wyoming in Laramie, Wyoming, which gave me a real different look at this country and provided me with good exercise (e.g., hiking, backpacking, camping, cross-country skiing) and some very good students. When I was promoted to Associate Professor, I also became chair of the department. That experience helped broaden my view of the biological sciences and better appreciate taxonomy, ecology, physiology, cell biology, chemistry, etc. Once, I was sidetracked to work with another faculty member at the University of Wyoming, a mycologist named Martha Christensen. We and our student were able to establish that fungi in plant mycorrhizal associations produce cytokinins, which

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stimulate movement of nutrients to the roots and nourish the fungus.

After several years at the University of Wyoming, I interviewed to be Chair of the Botany Department at Louisiana State University, where I completed my career. LSU gave me excellent opportunities in research, teaching and administration. I was even able

to host a meeting of the American Society of Plant Physiologists, where we had a Mardi Gras party!

My research contributions ranged from examination of the effects of cytokinins on cell metabolism, especially respiration, to lipid biosynthesis. The lipid biosynthesis research expanded to looking at pathways for synthesis and location of cell membrane lipids. I was

fortunate to receive good financial support for this research from my universities and the National Science Foundation. I was also fortunate to have some outstanding and innovative undergraduate, graduate, and postdoctoral students. I thank them for all their contributions!