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Three botanists: Bessey, Pammel, and Hayden

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Charles E. Bessey (Iowa State College faculty, 1870-1884)

Bessey was a multidirectional innovator and evangelist of botanical education, conservation, and scientific agriculture. For example, he initiated the first undergraduate laboratory using microscopes for botany instruction and he had no peer as a botany teacher in the latter part of the 19th century. His enthusiasm about the natural history of Iowa and surrounding states broadened the horizons of innumerable students and he was one of the founders of the Iowa Academy of Science. An organization man, Bessey quickly became president of any group with which he became affiliated, and eventually was both nationally and internationally known through his text book writing and publications on the classification of flowering plants, the latter being the progenitors of the schemes proposed in the middle 20th century.

Bessey worked easily with institutional administration in contrast to his successor Pammel. However, in 1884 when he was Vice President of Iowa State College, he became involved in an imbroglio with the Iowa legislature. This resulted in his accepting an offer from the University of Nebraska, which had been wooing him for a couple of years and he moved to Lincoln, Nebraska where he spent the rest of his career.

Bessey's principal contribution to Iowa natural history was that of setting the botanical machinery at Iowa State College into vigorous motion and of leaving an inheritance of concern and action for his successors. In addition, he became president of the *Western Society of Naturalists*, he established the Iowa State Herbarium (the beginnings of plant specimen library for Iowa), and he was an early conservationist. Agonizing over the destruction of the forest reserves, he was appointed a member of an American Association for Advancement of Science committee concerned with preservation of the then Yellowstone Preserve. Bessey was also active in an early but unsuccessful movement to save the *Sequoiadendron* groves in California. While he talked conservation of remaining prairies areas in Iowa, his loss to the state left the action to his successors at Iowa State College and the University of Iowa.

Bessey as a botanist has been presented by Mertins and Isely (1981) and they cite papers about some of his other activities.

Louis H. Pammel (Iowa State College faculty, 1889-1929)

Pammel made the most of his inheritance from Bessey. He had the vigor and enthusiasm of the latter, in a hurry as if the next day was to be his last, he always had numerous bonfires going at one time. Although, by our standards, his teaching responsibilities were horrendous, he was esteemed as a teacher (probably because of force of personality), and speaker at any and all events. He was a one man Agriculture Extension Service before there was any Extension *per se*, as well an eloquent conservation spokesman. Simultaneously, Pammel was writing feverishly on any subject that might bear on the plants or natural history of Iowa — from short popular publications to his enormous book on poisonous plants. He built the Department of Botany from that of a single professor (himself) to a Department of Botany and Plant Pathology including specialists in most phases of botany and plant pathology. The paternity of the Iowa Park System and the (now) Department of Natural Resources (DNR) traces directly to him and University of Iowa botany professor T.H. MacBride. Pammel's unqualified strong-headedness made it harder for him to work with college administration than Bessey, and he received little institu-

tional support for most of his multiform efforts. Nevertheless, he was probably the best known Iowa State faculty member to the people of Iowa for many years, so that when his ancient dog died, the sad event received front page notice in the Des Moines paper.

Pammel was also an ardent conservationist. He felt that if the people of the state knew more about the plants, the fauna and geology of their homeland, Iowa, that some of our natural history resources could, through public pressure, be preserved rather than thoughtlessly extirpated.

Pammel's most visible contribution to the natural history of Iowa was that of the protagonist for an Iowa Park System. The thrust for this knight-on-a-white-horse undertaking was derivative of two factors: (1) his eloquent activism as a conservationist about what was left of the Iowa prairies and woodlands, and (2) the fact that by the early decades of the 20th century, most of rural Iowa was now fenced in with "No Trespass" signs. Automobiles and roads now allowed vacationing (weekends or longer) in Iowa. But there was no place to go. Initially the Iowa legislature seemed uninterested. Pammel was constantly in Des Moines as a one person lobby. Finally in 1917, the legislature established a "State Board of Conservation," but without fiscal allocations for the purchase of lands. Pammel was all over the state, working with diverse groups to generate public support and when Backbone State Park in Delaware Co. was the first approved, Pammel was prepared and ready. He also had data on other areas suitable for woodland, lake, or prairie parks. Some 37 state parks came into existence in his lifetime. One of the last of these became Pammel State Park in Madison County in 1930.

Pammel built the ISC herbarium from the small Bessey establishment to holdings of about 150,000 specimens while he popularized interest in the natural history of Iowa. He kept records of his talks and the approximate number of people in attendance. His estimate for 1928, three years before his death, was (for that year alone!) 294 talks for 22,715 persons (Pohl, 1985, p. 21), but this seems slightly impossible. In any case, never again has Iowa had such an eloquent and successful natural history protagonist.

Amid Pammel's incredible clutter of publications, about 700, were several books including his three and one half inches thick *Poisonous Plants*. Among more than a hundred papers cited by Pohl (1985) under the heading Conservation and Parks, published over a period of 27 years, Pammel (1919, 1923) may be taken as reasonable summaries. Peripherally to conservation *per se*, Pammel also wrote *Flower Ecology* (a revised edition just as *Ecology*), the *Grasses of Iowa*, and *Major John R. Lacey* (a collection of Lacey's talks and papers on natural resources). Lacey is also remembered in the name of Lacey-Keosauqua State Park. Pammel's *Reminiscences of La Crosse County* [Wisconsin, immediately contiguous to northeast Iowa] and vicinity was said by its editors to be "an account of the early explorations and natural history of the region".

The definitive biography of Pammel by M.C. Pohl (1985) contains complete citations.

Ada Hayden (Iowa State College faculty, 1920-1950)

Ada Hayden was a student of Pammel, who, despite the fact that she had little of his personal magnetism and was commonly aporhistorically undiplomatic, perhaps equalled him in her contributions to the natural history of Iowa. The first part of her career, besides her teaching, was especially that of providing behind the scenes help for the over committed Pammel. A gifted artist, she provided illustrations

for many of his publications. She and Charlotte King facilitated much of Pammel publication by taking his hasty rough drafts and adapting them for publication (verbal history).

After Pammel's death, Hayden both followed The Master's footsteps and went out on her own. Her contributions to the natural history of Iowa can perhaps be categorized under three headings.

First is the era of major development of the Iowa State Herbarium (recently named the Ada Hayden Herbarium). Hayden was Curator of the herbarium or acting as such for most of her career following Pammel, and its continued growth as the number one Iowa plant reference source was a result of her direct hands-on building. As Pammel, she personally did extensive collecting but with the difference that her collections were supreme. In comparison to his, the specimens were carefully prepared and immaculate, and were supported by carefully prepared labels providing information not easily discernible from the dried preparations, as well as habitat and ecological notes. She aggressively collected in multiplicate, and used her numerous duplicates in exchange for specimens from elsewhere in the United States. Pammel's gatherings, in contrast, were often too hastily garnered snips with minimal label data.

Secondly: Dr. Hayden's research the last 15 years of life was primarily concerned with the floristics and ecology of the northern Iowa Lake region. She prepared *A botanical survey in the Iowa Lake region of Clay and Palo Alto counties* (Hayden, 1943). It has the distinction of being the best published study for any part of the state.

And lastly, but most importantly, Hayden was and remains the matriarch of the Iowa preserve system, and more exclusively so than Pammel as father of the parks. The undertaking was considerably more arduous than that of Pammel. This is because the parks were for the people: to picnic, camp, go boating and fishing, etc. On the other hand, the wayfarer coming to a potential preserve would find none of this, not even a place to sit down. Perhaps there were some pretty flowers, but often there was a persisting thought that the area should be rendered productive by plowing and planting to corn or soybeans.

Early in her career, Hayden had published about the beauty of the disappearing prairies, and the specializations of the plants occupying

them. Her prairie interests cannot be traced for the next 20 years, but she did obtain colored lantern slide vistas from some prairies. One presumes during this seeming hiatus that she was exploring for prairie remnants and talking about them. Her information abruptly comes to light in the middle 1940's. As a member of an Iowa Academy of Science conservation committee, she undertook the task of surveying all known prairie remnants in the state and making recommendations concerning preservation of some of them. "*A progress report on the preservation of prairie*" (Hayden, 1947) is not only a classic, but yet remains a basic reference for current conservation efforts. The ultimate heritage from Hayden has been the establishment of State Preserves Advisory Board in 1965, and the acquisition of many of the recommended prairie sites by the state or the Nature Conservancy. Hayden is slightly remembered by the naming of Hayden Prairie in Howard Co.

The overtones of these little recognized, almost anonymous, bequests of Hayden live with us yet, indeed contributing in a major way to our understanding of the natural history of Iowa. Long overdue flowers have been recently thrown to Hayden by Lovell (1987) and by Isely (1988).

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