

John C. Goodlett (1922-1967), Botanist, Plant Geographer, and Teacher

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Some native Kentucky scientists, e.g., Thomas Hunt Morgan and Nathaniel Shaler, are better known for their research and other accomplishments outside rather than inside the state. Botanist and plant geographer John Campbell Goodlett (Fig. 1) was another of those individuals. Goodlett was born 1 May 1922 in Lawrenceburg, Anderson County, in the Bluegrass Region of Kentucky. Lawrenceburg, then, as now, was a small rural community ca. 12 miles south of Frankfort, the state capitol. John was the youngest child, by seven years, to two brothers and one sister. His father, Robert, was the county clerk and his mother, Martha, was a homemaker.

At an early age, John acquired the nickname "Pud," that he affectionately would be called for the rest of his life. His early education was in the Lawrenceburg public schools. He was recognized as an outdoorsman even as a young boy because of the time he spent roaming the forests and fields throughout the county, especially those in the vicinity of Salt and Kentucky rivers. While still a teenager, he and a schoolmate built a rustic cabin near Salt River; the chimney and scattered remains of that building were still evident in 2005. Pud kept a detailed journal of the flora and fauna of Anderson County, especially those that he observed at the Salt River camp.

Pud graduated from Lawrenceburg High

School in 1940 near the top of an exceptionally talented class. He enrolled at the University of Kentucky in fall and began life as a college student. By the middle of his sophomore year, the United States entered World War II. Goodlett was enrolled in the ROTC program and at the end of his junior year was drafted into the U.S. Army. Following 6 weeks of basic training, he was commissioned a second lieutenant. He was an infantryman, and along with his unit, he moved across Europe with Patton's army. His unit was one of the first to see the opening and horrors of the concentration camps. Following the German surrender in 1945, Goodlett, now a first lieutenant, was in command of a bakery company in Pilsen, Czechoslovakia that provided 700,000 pounds of bread weekly to occupation troops. Although he regarded war as a "gruesome experience," he had some fond memories of his time with this Company, especially his early morning visits to the bakery where he would eat the fresh baked bread with butter. Although he did not talk much about his wartime experiences, these apparently left an indelible mark on him; later he became a student of war and wars. He had always been an avid reader, but now especially of books by Hemingway, and about the Civil War and wars in general.

After his discharge from the army, Goodlett returned home to Lawrenceburg and in fall 1946 began his senior year of college at the University of Kentucky. Dr. Thomas D. Clark (1982); a history professor at the University of

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Kentucky at that time, noted the great avalanche of returning veterans after the end of WWII. "Never before were universities so overrun by so many mature students demanding better instruction. State universities, and many of the better private schools as well, began offering work leading to the doctorate. There was begun a search far afield for promising candidates to fill the newly organized graduate lecture courses and seminars."

Brokaw (1998); referring to these returning GIs as members of America's Greatest Generation, wrote "men and women who immediately began the task of rebuilding their lives, and the world they wanted. They were mature beyond their years, tempered by what they had been through, disciplined by their military training and sacrifices. They married in record numbers and gave birth to another distinctive generation, the Baby Boomers. They stayed true to their values of personal responsibility, duty, honor, and faith.

They became part of the greatest investment in higher education that any society ever made, a generous tribute from a grateful nation. The GI Bill, providing veteran tuition and spending money for education, was a brilliant and enduring commitment to their nation's future. Campus classrooms and housing were overflowing with young men in their mid-twenties. They left those campuses with degrees and a determination to make up for lost time. They were a new kind of army now, moving onto landscapes of industry, science, art, public policy, and all fields of American life, bringing to them the same passions and discipline that had served them so well during the war.

John C. Goodlett exemplified the men of that Greatest Generation. Not only did he use the GI Bill to complete the B.S. in Biology that he had started in 1940, he graduated Phi Beta Kappa in spring of 1947. He received a teaching fellowship at Harvard University for fall 1947 and later that year married his hometown sweetheart, Mary Marrs Board. While at Harvard, he came under the influence of Dr. Hugh M. Raup, Director of the Harvard Forest. Also, the student John Goodlett was exposed to challenging teachers and coursework. One course, in particular, an interdisciplinary seminar team taught by Professors Raup (botanist), Bryan (geologist), Movius (anthropolo-

gist), and Brooks (climatologist) had a profound impact on his career and future research endeavors. This seminar attracted graduate students from a number of disciplines and viewpoints. Goodlett began to realize that there were different ways of looking at a situation and that there may be more than one answer to a question. Thereafter, he would often collaborate with scientists from other fields, especially geologists and soil scientists, in an effort to gain a more thorough understanding of a research problem.

Goodlett received his A.M. in 1949 and immediately, starting in summer 1949, began the pursuit of his doctorate with Dr. Hugh M. Raup through the Harvard Forest. He began a research study of vegetation adjacent to the glacial border in Potter County, Pennsylvania. He worked closely with Dr. Charles Denny, a geomorphologist with the U.S. Geological Survey (U.S.G.S.), and K.V. Goodman, a soil scientist with the Soil Conservation Service (S.C.S.).

After receiving his Ph.D. in 1951, Dr. Goodlett joined the staff of the Harvard Forest as a research associate. This was a fortunate career move because it gave him time to carry out a number of research projects, expand his reading, work with graduate students on their projects, and hone his writing skills. His dissertation, *Vegetation Adjacent to the Border of the Wisconsin Drift of Potter County, Pennsylvania*, was published as *Harvard Forest Bulletin 25* (Goodlett 1954). In 1955 Dr. Goodlett was given the title of forest geographer and lecturer in forest biology in recognition of the high quality of his work thus far. During that summer and again in 1956 he worked in the Central Appalachians of Virginia with the geologist John T. Hack for the U.S.G.S. Their time in the field involved encounters with rattlesnakes and unfriendly black bears. Goodlett pioneered a field technique for recognizing vegetation based on the presence or absence of key indicator species (Hack and Goodlett 1960). While in the Virginia area, much of his nonresearch time was spent visiting and walking Civil War battlefields.

In the summers of 1958 and 1959, Dr. Goodlett worked at Death Valley, California for the U.S. G.S. For 12 years, Goodlett had been guided and mentored by Dr. Raup at the

Harvard Forest; however, in 1959, he was recruited by Dr. M.G. Wolman for a plant geography position at Johns Hopkins University (JHU). Wolman had known Goodlett since their graduate school days. Raup hated to lose Pud, but he recognized that Dr. Goodlett was probably just entering his most productive years and that publications, some based on research already completed, were forthcoming. Raup considered Dr. Goodlett's most outstanding qualities were, first, the clarity and sharpness of his intellectual processes, and, second, his ability to express the results in writing. Regarding the latter, Raup wrote that, "There is often a paradoxical contrast between his spoken and his written English, for he commonly speaks the curious dialect of central Kentucky."

Raup regarded John Goodlett as both a "floristic" plant geographer and an "ecological" one. Raup noted that there was a rather sharp division among American plant geographers between those who hold to the "species" of plants as the basic units of study and those who renounced the species in favor of units variously called "plant communities," "plant associations," and the like. Most plant geographers who have been trained in American schools have been brought up under the second of these systems, which has dominated. Through the years, however, serious failings have emerged in it. Raup was describing the Individualistic Concept (Gleason 1926, 1927, 1939) and the Organismic Concept (Clements 1916, 1936). Dr. Raup considered Goodlett to be one of the few, and perhaps the best, of the young plant geographers with the perquisite training, or patience and interest, to go back and pick up the essential threads of knowledge and skill in floristic geography to make themselves proficient in it. Dr. Goodlett is skilled in floristic and ecological geography, but sees and evaluates them in historical perspective as well as terms of his immediate research interests.

Raup also observed that Dr. Goodlett "seems to have a well-nigh instinctive knowledge of the way students think, and of what they must go through in order to reach understanding of their problems. He does not drive them, rather, he leads them, gently, but rigorously."

In fall 1959, the 37-year-old Goodlett was

brought to JHU as visiting lecturer in the Department of Geography. True to Raup's prediction a number of publications began to appear. Also, perhaps because of his excellent writing skills, Dr. Goodlett was appointed associate editor of *Ecological Monographs*, a position he would hold from 1959 to 1962.

In 1960, Dr. Goodlett was appointed associate professor in the Department of Geography and he settled into the life of a college professor, husband, and father. His two daughters, Virginia and Sallie, had been born in 1957 and 1959. In addition to plant geography, Goodlett taught economic botany. His teaching style was informal and he often used the seminar approach. Although he appeared to have a low-key attitude, he was observant, analytical, and a good judge of people. His insight may have helped the department maintain its interdisciplinary approach and high level of productivity. The Department of Geography was small and the students and faculty worked closely together. There was an open atmosphere for new ideas. Faculty get-togethers often involved open discussions of current events, e.g., the Cuban missile crisis. True to his Kentucky heritage, Pud enjoyed these get-togethers, especially with a glass of bourbon.

Like so many other professors, Goodlett always hoped to get more writing and research completed than he did, but he noted that "my open door policy with students is ruining me. I get almost no work done." However, he stated that, "unfinished reports, though they haunt me, do not stop me from rash new beginnings."

Goodlett, the teacher and mentor, always seemed to keep the interests of his students first and that is why he often sent his students to the Harvard Forest to take basic science courses or seminars. This was something that he resented having to do, especially when he felt that these could have been offered at JHU. On several occasions, he and a few other faculty members had hopes of improving the department by adding a zoogeographer, a pedologist, a geologist, or a non-urban economist, however, he recognized that the department probably would end up with another city planner instead. He preferred that his students gain a strong interdisciplinary view of geography, grounded in geology and biology,

but feared that "geochemistry and geophysics were doing to geology what DNA has done to biology."

He was concerned that too often the students in his classes had not been exposed to enough field trips, or experiences, and he tried to arrange as many trips as possible, especially in an effort to improve student observational skills. In fact, Dr. Goodlett, his colleagues, and students developed what they termed, "Four Rules of Field Work":

1. Water, generally, runs downhill. There might be some rare exceptions, but this was an essential landscape process.

2. Plants occur where you find them. This requires that a person must get into the field to see the plants. The questions of why they occur where they do can then be asked and investigated.

3. Never get separated from your lunch. Time in the field is too valuable for a person to waste for any reason.

4. Never go back the same way you came. It helps to get another view or perspective.

Common sense, and a sense of humor, were essentials for John Goodlett. He found it a good practice always to visit the local general store, or other gathering place, in the area where he planned to conduct field work. That allowed him to become familiar with the local people and for them to get to know him and what he was doing. He always learned a great deal from those encounters.

Goodlett was appointed full professor at JHU in January 1967. He had applied for and had been granted a sabbatical to return to the Harvard Forest for fall 1967. However, on 1 April 1967, one month shy of his 45th birthday, Dr. Goodlett died of a massive heart attack. His body was returned to Kentucky for burial in the Lawrenceburg Cemetery. His pall bearers were all friends, mostly from his childhood, and his home town.

At the time of his death, Goodlett's research mostly had been in New England but had been expanding as far south as Georgia and as far west as Death Valley, California and Mt. Rainier, Washington. Early in his career, he may have entertained notions of research in western Kentucky, but, those never materialized. After Christmas 1951, Pud wrote his mother, "Don't write us off as permanent residents of the north. We belong in the South,

and that's where I need to do a lot of work. We need a lot of botanizing in Kentucky. Maybe someday the South will be willing to pay for pure research like the northeast." That someday never came for Dr. Goodlett, and his yearly visits to Kentucky were essentially family visits. He had supervised two dissertations, one on vegetation in Michigan and the other on vegetation in Arizona and was currently mentoring a third. He had several manuscripts in various stages of completion.

What was the impact of Dr. John C. Goodlett's life and career? In my opinion there are several areas that stand out. First, was the collaborative research for which he was extraordinarily successful. This began as a graduate student (Goodlett 1954, 1956; Denny and Goodlett 1956) and was an approach that he encouraged for his own students. Goodlett collaborated with the palynologist Margaret Davis on the comparison of pollen spectra with existing vegetation in northern Vermont (Davis and Goodlett 1960); with the geomorphologist John Hack in western Virginia (Hack and Goodlett 1960); with Charles Denny and W. H. Lyford of the S. C. S. in the upper Susquehanna region of Pennsylvania (Goodlett and Lyford 1963); with Lyford and W. Coates in the mapping of forest soils in the Harvard Forest (Lyford, Goodlett, and Coates 1963). Raup observed that the high levels of productivity in each of these cases rested not merely upon the fusion of technical proficiencies, but rather upon the ability and willingness of the people concerned to find conceptual levels in their respective fields at which there was a common ground. They could then state problems in mutually significant terms, and genuine collaboration could be achieved.

Second, was the development of site concepts at the Harvard Forest and their impact on management policy (Goodlett 1960). This publication gives a critical review of a great mass of research that had been done there on forest site evaluation and then places it in perspective with relations to the whole field of site studies in northeastern United States in the same period. Nothing so searching as this paper had ever been written about American forest site problems.

Third, 20 and 25 years after the publication of Goodlett's (1954) paper, Wright (1974) and Bormann and Likens (1979a, 1979b) respec-

tively, cited that paper as one that clearly documented the effects of wind and microrelief on forest development. Wright (1974) recognized windstorms as a major disruption renewing succession. He pointed out that Goodlett's study of mound microrelief in a forest in Pennsylvania showed that the presence of white pine is related to the incidence of wind throw of old hemlock trees. Bormann and Likens (1979a, b) used that study to show the importance of windstorms in maintaining shade intolerant species in the pre-settlement northern hardwood forest.

Fourth, Wright (1974) specifically singled out the Hack and Goodlett (1960) paper as an outstanding example of the dynamic equilibrium. Wright wrote that the pattern of the vegetation that Hack and Goodlett studied in the Shenandoah Valley of Virginia was a definite polyclimax. This interpretation is supported by detailed geomorphic work, which shows the sensitive response of certain tree species to moisture, slope, and soil conditions. Ridge crests and noses are characterized by pitch and table mountain pine, ravines by yellow birch, basswood, and sugar maple, and intermediate slopes by the absence of these species and the presence of certain oaks. Their study shows the dynamic equilibrium between geomorphic processes and vegetation (Wright 1974).

Hack and Goodlett (1960) wrote, "The writers believe that the present distribution of vegetation can be accounted for largely in terms of present relations of component species to environments, and that environments can be accounted for largely in terms of geomorphic processes acting at the present time. The physiological basis for coincidences observed between species and environments are unknown. The origin of the present relations of species to environments constitutes a knotty problem in the evolution of physiological responses, which can hardly be solved by the methods of physiological ecology."

This led Goodlett and some of his contemporaries to organize an informal group that they called the "Here and Now Society." His background in glacial processes and their recent impact on landscapes and vegetation forced him to disagree with the interpretations of Braun (1950) regarding forest development in the Eastern United States. However, rather

than be critical of Dr. Braun's interpretations, Dr. Goodlett praised her field work, her mapping of forest communities, and her attention to detail.

Fifth, Goodlett's role as a mentor and teacher had long-term effects on many of his students. As an example, Olson (1971) in the acknowledgments for her book wrote, "The greatest credit is due John C. Goodlett, much of whose research and writing lie unfinished because of the time he shared with his students and colleagues, the standard of craftsmanship he demanded of them and of himself, and a life so generous, so intense and brimming over, that it called for more years than were given."

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