

A Brief and Biased Memoir of the Southern Institute of Forest Genetics

Ron Schmidting

Ron Schmidting (retired) Research Geneticist, and Emeritus Scientist, U.S. Department of Agriculture, Forest Service, Southern Research Station, Saucier, MS.

Looking back, I recall many fond memories of my association with the Southern Institute of Forest Genetics (SIFG) and the U.S. Department of Agriculture Forest Service. The SIFG was “activated” by the Forest Service’s Southern Forest Experiment Station (SOFES) on August 29, 1954, to meet the following three purposes (Briegleb 1955):

- Focus a staff with specialized training using adequate laboratory and field facilities on some of the fundamental research questions and management problems related to forest genetics
- Conduct an “aggressive” program of tree improvement
- Serve as a repository of information on forest genetics work and its application, with an emphasis on the southern pines

After nearly 70 years of such work, the SIFG continues to serve in this capacity—and so much more! But let me start at the beginning, many years before my time. In the early days of southern forestry, vast areas were clearcut with little or no regard for regeneration. Natural regeneration was satisfactory in some areas but totally lacking in others. Very little planting occurred before the Civilian Conservation Corps (CCC) began wide scale planting during the Great Depression. In 1944, SOFES scientist Philip Wakeley estimated that fewer than 500 acres of southern pines (*Pinus* spp.) had been artificially regenerated successfully before 1920.

Seed source effects on forest plantation productivity received little attention in the United States before 1920. In contrast, since well before the turn of the 20th century, the importance of geographic seed source was known for European species.¹ In the United States, native seed collections for an extensive study of Douglas-fir (*Pseudotsuga menziesii*) seed sources were initiated in 1912 by Thornton T. Munger and colleagues (St. Clair and others 2020), and testing of ponderosa pine (*Pinus ponderosa*) seed sources in northern Idaho and Colorado began in 1916. Inspired by some of Luther Burbank’s work with walnut (*Juglans* spp.) hybrids, lumberman James G. Eddy started the Eddy Tree Breeding Station at Placerville, CA, in 1925. In 1932, the facility became the Institute of Forest Genetics (IFG); in 1935, the IFG was donated to the Forest Service (PSWRS, no date).

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¹Personal communication (1995). Heinrich Melchior, Director, Institute of Forest Genetics, Grosshansdorf, Germany.



THE PRE-HISTORY OF THE SIFG

The pre-history of southern tree improvement—including the SIFG—began with Philip Wakeley (Wakeley and Barnett 2016). Wakeley was hired in 1924 by the Forest Service to do basic research on the regeneration of the cutover southern forests. His undaunted drive led him to complete a monumental amount of research in basic silviculture, and his seminal manual, *Planting the Southern Pines* (Wakeley 1954), is still in use today. I met a then-retired Wakeley in 1968 when he came from his home in Syracuse, NY, to the SIFG to talk to Osborn “Ozzie” Wells about a pending publication. It was very interesting talking to Wakeley, as he had some fascinating stories to tell about the old days in the SOFES.

Although he had little formal training in genetics, Wakeley was aware of seed source effects. In 1926, he installed an important loblolly pine (*P. taeda*) provenance test near Bogalusa, LA, at Coburn Creek. The four loblolly seed sources used were from widely separated locations (southeast Louisiana, east Texas, central Georgia, and southeast Arkansas), and this was the first test of geographic differences in a southern pine. The magnitude of the seed source effect in loblolly pine was unknown before Wakeley published 15-year results indicating that growth and disease resistance varied widely among geographic sources (Wakeley 1944). Interestingly, there was no real replication, as Wakeley knew little about plot design and analysis of variance, but since the differences were so impressive, such analysis was not needed. The local (Louisiana) seed source from nearby Livingston Parish, LA, was clearly the best, not only for growth, but also for disease resistance. The Coburn Creek planting remained when I arrived at the SIFG in 1967, and the differences were still remarkable.

Wakeley also tried his hand at controlled pollinations and is credited with creating the first artificial southern pine hybrid in 1929, a cross between longleaf (*P. palustris*) and slash (*P. elliottii*) pines. He knew that the first natural southern pine hybrid (*Pinus x sondereggeri*) had been identified by Yale Professor H.H. Chapman a few years earlier (Chapman 1922)—a longleaf and loblolly cross named after the man Chapman credited with discovering the first example, V.H. Sonderegger (who eventually became the state forester of Louisiana).

Other early work included a large open-pollinated progeny test of loblolly pine installed in 1934 by A.L. McKinney and L.E. Chaiken of the Appalachian Forest Experiment Station (AFES). Substantial inherent differences were noted before the planting was flooded by the Santee Cooper Power and Navigation Project. Following earlier genetics-related projects by V.L. Harper and T.A. Liefeld, in the early 1940s, H.L. Mitchell, Albert Snow, Keith W. Dorman, and C.S. Schopmeyer, working at the USDA Naval Stores Research Laboratory in Olustee, FL, started selecting slash and longleaf pine for high naval stores yield (Mergen and Pomeroy 1954). Open- and controlled-pollinated seedlings from these selections were used to establish the first progeny tests in southern pines demonstrating the existence of individual tree genetic variation.

According to Clemens Kaufman, two events provided the impetus for the rapid expansion of genetics and tree improvement in the 1950s (Kaufman 1961). The first was the influence of several prominent foresters who attended the World Forestry Congress in Helsinki in 1949, where they became aware of the tremendous progress being made by tree breeders in Europe. The second event



Top: Philip C. Wakeley.

Bottom: Example of how different sources of loblolly pine seed produced different yield performances.

was an exchange of correspondence beginning in the fall of 1949 between the Forestry Relations Division of the Tennessee Valley Authority (TVA) and the SOFES on the possibility of establishing a regional seed source research program. The result was the first Southern Forest Tree Improvement Conference (SFTIC) held in Atlanta, GA, in January of 1951. The organizers were surprised when more than 80 people attended. Since then, the conferences have been held every other year, and the proceedings are major sources of information in genetics and tree improvement (see www.sftic.org for full access to all SFTIC proceedings). The Southern Forest Tree Improvement Committee formed later in 1951 to foster research and development in forest genetics and tree improvement. It has continued to be a guiding force in forest genetics and tree improvement research and technology transfer to the present day.

One product of the first SFTIC was the establishment of a subcommittee, headed by Wakeley, to install the Southwide Pine Seed Source Study (SPSSS), one of the most comprehensive provenance tests ever established. The results from Wakeley's first seed source test were dramatic, but the study only included loblolly pine and was planted only at one location: Bogalusa, LA. The SPSSS, on the other hand, was much more comprehensive. It was a very large undertaking, involving many cooperators across the Southeastern United States who collected seed and provided planting sites. All four major southern pine species were included: loblolly, slash, longleaf, and shortleaf (*P. echinata*). A total of 128 plantations were established, including seed from, and plantations in, 16 States, ranging from New Jersey and Pennsylvania south to Florida and west to Texas, Oklahoma, and Missouri.

This early work demonstrated that genetics played a significant role in the survival, growth, and timber yield of the Nation's forest trees and led to the establishment of several government research programs, including the SIFG. The recognition that forestry research, especially genetics work, is long term led to an understanding that continuity was important and the necessary long-term funding to support it was not likely assured through anything but a Federal program.

THE EARLY YEARS OF THE SIFG

The Harrison Experimental Forest (HEF), near Saucier in southern Mississippi, became the original home to the SIFG. Largely built by the CCC, the HEF was established in 1934 as a location for research on the regeneration and growth of southern pines.

By the time the SIFG was established, a great deal of research on the pathology of tree root diseases, brown spot needle blight (*Mycosphaerella dearnessii*), and fusiform rust (*Cronartium quercuum* f. sp. *fusiforme*) had also been done on the HEF under the direction of Paul Siggers and a technician named Norm Scarborough. This research facility was well suited for the new institute. What the SIFG also needed was a good leader. When it was founded, many people assumed that Philip Wakeley was the logical choice for the SIFG's project leader position. He was a hard-working scientist, a brilliant observer of nature, and certainly one of the most important pioneers in forest genetics. However, according to Bill Mann, one the SOFES project leaders at Pineville, LA, SOFES leadership wanted



The original home of the Southern Institute of Forest Genetics when it was founded in 1954 at the Harrison Experimental Forest.



Top: Southern and Southeastern Forest Experiment Station geneticists in 1958. Standing (left to right): Pieter Hoekstra, François Mergen, John Barber, Bob Allen, Phil Wakeley, Carl Ostrom, and Roland Schoenike; kneeling (left to right): Berch Henry, Davis McGregor, Keith Dorman, George Gruschow, and Ken Pomeroy.

Bottom: The original Harrison Experimental Forest headquarters building with greenhouse attached to the back.

to keep Wakeley in his office in New Orleans writing up all the research he had accomplished before he retired.

So, rather than choosing Wakeley, the SOFES turned to Berch Henry, a forest pathologist who had been with the USDA Bureau of Plant Industry, Soils, and Agricultural Engineering until early 1954. Henry was appointed project leader because of his considerable management skills—and this turned out to be a fortuitous choice.

Henry originally came south from Wisconsin to study root diseases of southern pines at the Forest Service's Ashe Nursery (located about 40 miles north of the HEF). He was also living at the HEF Lodge along with several other scientists over the years utilizing the provided residences.²

A gregarious person, Henry got to know all the important people of the State, including U.S. Senators James "Big Jim" Eastland and John Stennis. These senators from Mississippi, because of seniority, party affiliation, and sheer force of personality, were very powerful people in the U.S. Government. In particular, Senator Stennis was a friend to science in general and of forestry in particular. Henry became good friends with Senator Stennis, and even though Mississippi was still "dry," they were able to discuss business while having a drink or two at a local establishment. (Such relationships between Forest Service scientists and politicians are now frowned upon.)

Genetics research progressed at the HEF as the SIFG initiated projects. When Siggers retired, Scarborough worked for plant physiologist Bob Allen.³ Facilities for seed extraction, pollen handling, and wood quality determination were developed, and a physiology laboratory was constructed for Allen (this eventually became the headquarters building for the HEF and SIFG). The headquarters is now the scientist office building, which also has an attached greenhouse.

Bob Echols arrived at the HEF in the 1950s and had a small lab in Allen's building for studies of wood traits. He was interested in the genetics of wood fiber length, and he built a microscope projection device dubbed the "ampliscope" that allowed measurement of the fibers from a slide using an ordinary ruler (Echols had a talent for building such devices). Echols transferred to the IFG in Placerville in the 1960s.

Bayne Snyder joined the unit after working on rubber tree (*Hevea* spp.) genetics in Sumatra in the early 1950s. He was very interested in longleaf pine and had established a large number of studies with Harold Derr of the SOFES silviculture unit in Pineville, LA. I am sure that Snyder was interested in longleaf because of its ecosystem desirability while knowing it was being replaced by slash and loblolly over much of its range. Another factor is that longleaf was almost completely ignored by the geneticists in the tree improvement programs because of the problems with regeneration. Snyder started an ambitious program of

²It was customary for the scientists and some staff to live at the experimental forests in those days. For instance, Siggers had lived in the HEF Lodge from 1942 to 1952, as did plant physiologist Bob Allen (in the Bidwell House), and technician Scarborough also lived on the HEF in the "L.H. Lott technician office" residences. The Lodge was demolished in the early 1960s because it needed extensive repairs, and it was no longer needed as a residence. The site is now occupied by a guest house built in the 1980s for visiting researchers.

³I know that Allen had fond memories of beginning his career at the HEF. I was present some years ago when his family came to spread his ashes around the area of the old lodge.

making controlled pollinations for several longleaf pine studies, including a 13-parent full diallel (we are currently collecting the 60-year data from that work). Establishing this study required climbing many large trees. Snyder was a thin, wiry guy who could climb a tree using Swedish tree-climbing ladders faster than anyone in the project, and he eventually wrote the Forest Service's manual for safe tree climbing.

Snyder stirred up some controversy in the 1960s and 1970s. The tree improvement cooperatives at North Carolina State University, Texas A&M University, and University of Florida all adopted single tree selection and using comparison trees for all southern pine species. Snyder pointed out that this method worked well for slash, loblolly, and shortleaf, but using comparison trees for longleaf pine was not warranted because one could not know how long each tree had been in the "grass" stage. (I recall a study where Wakeley followed a brown spot-infected longleaf pine in the grass stage for 35 years!) Snyder was not very good at oral presentations, and he offended Bruce Zobel, head of the North Carolina State University Forest Tree Improvement Cooperative, who was a superb salesman and advocate for tree improvement.

Snyder and Derr did a great deal of research on the inheritance of brown spot needle blight and early height growth. They discovered an interesting variant in an old longleaf pine nursery bed in Louisiana that was devastated by the disease: an individual seedling that popped up and started height growth, while every other seedling died. That individual—dubbed "Father Abraham"—proved to be truly resistant to brown spot and hence was used in hundreds of crosses.

Snyder and Derr also initiated a "mass selection" study where they collected seed from 500 mother trees and planted the seedlings in a progeny test. As I recall, selection from these were crossed and planted in next generation progeny tests (I do not remember if the results of this study were ever written up).

Snyder's work was heeded by many but had only a marginal effect on tree improvement in longleaf pine. His contributions may have been less obvious; when he retired in 1979, he had mentored numerous young scientists. For instance, after Gene Namkoong joined the SIFG in 1958, Snyder recognized his exceptional talent and encouraged him to further his education. Namkoong stayed with the project but moved to Raleigh, NC, to get his doctorate at North Carolina State University. Namkoong remained in Raleigh after graduation, still part of the SIFG, and formed his own "Pioneering Project" around 1972. Namkoong would later win the internationally renowned Marcus Wallenberg Prize in 1994, becoming the SIFG's most distinguished alumnus.

Space was always an issue with the growing SIFG. When roads were improved in the 1950s, several of the scientists moved into Gulfport, MS, and office space was obtained at the USDA complex on 25th Avenue (Highway 49) and 34th Street.⁴ Following the Korean War armistice, forestry research and genetics enjoyed a rise in popularity, and Federal funding was obtained for a new building in Gulfport (on 34th Street a few blocks east of Highway 49) to house the SIFG and three other research projects. No doubt, Henry's personal relationship with Senator Stennis was a factor.



Top: The "Father Abraham" longleaf pine in January 1961. This tree was discovered in a Louisiana nursery that had been abandoned. Practically all other longleaf seedlings there had been destroyed by the brown spot needle blight. (USDA Forest Service photo [negative #504102] taken by R.W. Neelands)

Bottom: Left to right: Bayne Snyder, Gene Namkoong, and Ron Schmidtling at the Harrison Experimental Forest, 2001.

⁴This location later became part of the USDA Agricultural Research Service, and then the USDA Animal and Plant Health Inspection Service.

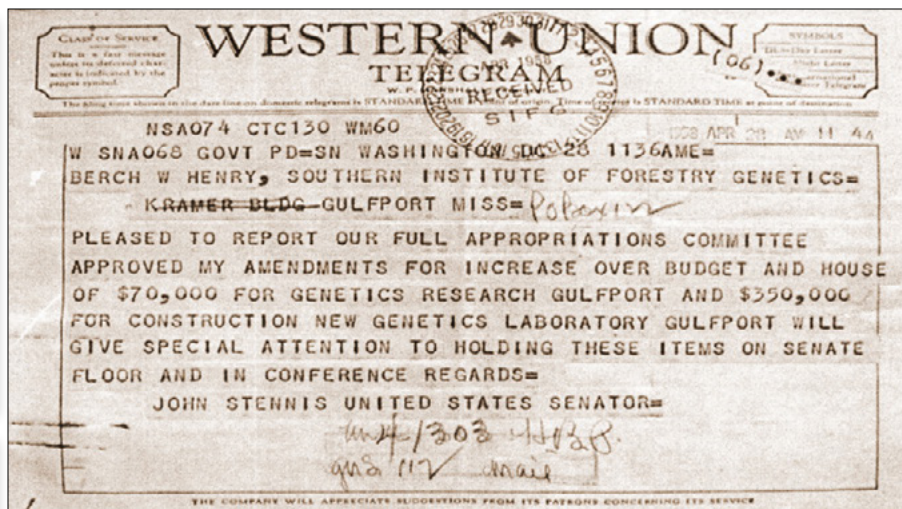


Top: Opening the new Southern Institute of Forest Genetics Laboratory on 34th Street in Gulfport, MS, October 1960. Left to right: Art Verral, Forest Pathologist; John Stennis, the Senior U.S. Senator from Mississippi; Berch Henry, Forest Pathologist and Southern Institute of Forest Genetics Project Leader; R.E. McArdle, U.S. Forest Service Chief; and H.R. "Mr. Johnny" Johnston, Entomologist.

Top right: An April 1958 telegram from U.S. Senator John Stennis to Berch Henry.

Middle: Gulfport Laboratory facility, likely taken in the 1960s.

Bottom: Greenhouses and other outbuildings at the Gulfport Laboratory facility.



The facility in Gulfport initiated a new era for the SIFG, beginning with its dedication in October 1960. Along with the SIFG, three other projects were housed in the new building: Forest Pathology (Glenn Snow, Project Leader), Decay of Wood Products (Rod DeGroot, Project Leader), and Wood Destroying Insects (H.R. Johnston, Project Leader). These other projects had also been housed at the USDA Bureau of Plant Industries facility on Highway 49 in Gulfport.

Not long after the Gulfport Laboratory facility opened, Henry was promoted to assistant director of the SOFES and stationed at the New Orleans headquarters about 75 miles from Gulfport. He did not move his family to New Orleans but left them living in Bayou View and commuted home on weekends. His family was quite active in the social affairs of the local Mississippi Gulf Coast community. I knew his wife Lori because of her involvement with the Gulf Coast Symphony Orchestra. She was also a good source of information about living at the HEF.

THE SIFG'S ERA OF EXPANSION

John Barber moved from the Macon, GA, research unit to replace Berch Henry as the SIFG's project leader. Barber ran a "tight ship." I was present during only the last month of his administration, but I certainly heard stories! One example of Barber's supervisory style involved Fred Jewell. Jewell was a talented plant pathologist who developed an effective way to test slash and loblolly pine seedlings for fusiform rust resistance in an inoculation chamber. Barber insisted that he follow up this work by doing massive screening to identify resistant families, but Jewell felt that this was plant breeding, not pathology research. Jewell left soon after for a faculty position at Louisiana Tech University.

Barber also clashed at times with supporting staff. At that time, there were probably 11 or 12 technicians at the HEF attached to various projects, and they told me tales about Barber as the boss. For example, Barber was a stickler for starting work when you arrived at the HEF, taking only a 15-minute break at the appointed time, a 45-minute lunch, and working until quitting time. Since all the supervisors were at the Gulfport Lab, adherence to the work schedules could be lax at times. On a cold day in winter, some staff would linger in the morning around the stove in the shop for some time before moving out into the field. They would, however, station someone to look out for any government vehicle



Lloyd Smith's 60-acre study of the effects of intensive culture on growth of slash, longleaf, and loblolly pines in Section 36 of the Harrison Experimental Forest at age 6 years. These trees are all the same age.

coming in the driveway. If such a vehicle would arrive, there would be a mad dash of everyone out the back door of the shop, quickly looking for a place to look busy. Nobody wanted to get caught in there around the stove by Barber, as the resulting conversation would be very unpleasant!

During this period (1950s and 1960s), Forest Service research was expanding, and the project was hiring scientists—so much so, that the project leaders for the four research projects housed at the Gulfport Lab were fighting for space. When I arrived at the end of June 1967 to start work at the SIFG, I occupied an office on the second floor. It had been vacated by Bob Allen, who had recently left for a faculty position at Clemson University. My office was next to Lloyd Smith's office. Smith was an old-time Ph.D. forester from Yale, 70 years of age but not ready to retire (I recall he had a daughter in medical school, which may have been a factor). Smith had done some great silviculture work at the McNeil Experimental Forest, an installation isolated from the rest of the De Soto National Forest, about 40 miles northwest of Gulfport. After that work was finished, the McNeil Experimental Forest was closed, and Lloyd and his technician, Horace Smith, were transferred to Gulfport. Immediately upon his arrival in 1960, Lloyd Smith set about planting a huge study (60 acres located in Section 36 of the HEF) involving intensive culture on longleaf, loblolly, and slash pines using parent trees of average and high specific gravity wood.

Lloyd Smith was a wonderful source of information for me. He had great knowledge of forestry, especially silviculture. Unfortunately, he died suddenly of a stroke about a year after I arrived. I inherited his gigantic study, which was a good part of my education in forestry because I was trained as a botanist, not a forester (prior to moving my wife and three small children to the Mississippi Gulf Coast, I had been teaching botany at Inter American University in San Juan, PR). The study provided a source of material for over a dozen publications.

Shortly after I started with the SIFG, Barber left for a staff position in Washington, DC. Dan Schmitt was appointed project leader. Schmitt's style of supervision was opposite of Barber's. Schmitt readily admitted that he "did not run a tight ship," but he was always there to advise. This leadership style suited me just fine. In my first month, Schmitt organized two trips for me to the other SOFES projects doing research in genetics, including those in Pineville, LA, Olustee, FL, and Macon, GA.



Nellie Rich, a technician in the entomology project, demonstrating how to determine if a shortleaf pine is shedding pollen by bumping it with a mallet (1971).

This was an orientation to get a feeling for what was being done in forest genetics and proved very useful for me, as I heard some highly divergent opinions about what I should be doing.

My office was not the only thing that I inherited from Allen. I also inherited his technician, Norm Scarborough, who had started working for the CCC with the Forest Service in 1937 (the same year I was born). One of the best forestry technicians in the South, Scarborough had learned all there was to know about forestry field research from Paul Siggers, which was of great benefit to me when I arrived. I remember talking to Allen some years later about how great Scarborough was, and he said, “He was indeed good, I worked for *him* for my first several years!” Years later I asked Schmitt why he assigned Scarborough to me, because there were plenty of scientists, senior to me, who would have liked to have him. Schmitt replied, “Ron, you came to us in woeful ignorance, I needed to give you someone good.” He was right! It was a great loss to me when Scarborough retired around 1972.

MORE SIFG SCIENTISTS

Bill Beland arrived about 6 months before I did and was working on reproductive physiology and genetics of sycamore (*Platanus occidentalis*). Beland was about my age, perhaps a little younger, and had been plagued by a hearing problem in one ear. By the time the presence of a tumor behind this ear was diagnosed, it was too late to do surgery. He retired around 1976 on disability and died a year later, leaving a widow and two small children. Ron Dinus arrived about 6 months after I did. He started working on the genetics of fusiform rust resistance in slash and loblolly pines. He was successful in research and developed a good reputation as a scientist. Warren Nance joined the project sometime after my arrival. Nance had a lot of interest in statistical analysis and computers. In the early days of my tenure, we had no methods for analyzing data beyond the Monroe Calculator. Nance, along with computer technician Tony Rayford, developed a system where we could use surplus time on the National Aeronautics and Space Administration (NASA) computers in Slidell, LA. We assembled our decks of punch cards and one of the technicians would run them over to Slidell in a weekly shuttle. We were lacking statistical software, so I did a lot of programing in Fortran and Basic to analyze the data for my various studies.

One of the Forest Service scientists who became part of the SIFG during this expansion period was entomologist Jack Coyne. An old-time forester and entomologist from Syracuse, NY, Coyne worked on southern pine beetle (*Dendroctonus frontalis*) infestations and the underlying host genetics, especially the role of terpenes in resistance. He located a number of “escapes” from southern pine beetle infestations where nearly every tree was killed but these survivors; these were propagated by grafting for our experimental clone bank and have been utilized in many experiments. He suffered from a serious heart disorder and had surgery to replace his heart valve with one from a pig. Coyne said he didn’t notice any difference except whenever a garbage truck went by, he had an urge to follow it. (He had a great sense of humor.) Another scientist was Bob Hare, who started his Forest Service career working on the physiology of fire resistance but was working in our project on rooting cuttings of pines. Hare would later be in charge of propagating the “Moon Trees” (described below). A third was

Ozzie Wells, who had been at the Gulfport Lab since the early 1960s.⁵ He started his Forest Service career at the original IFG in Placerville before going back to school at Michigan State University for his doctorate. Wells wanted to return to Placerville, but the agency had a different plan: the Forest Service wanted him in Gulfport to carry on Philip Wakeley's work on the SPSSS.

Wells had a very productive career, much of it from carrying on the SPSSS. That, of course, is the way long-term forest genetics research is done. Few of us will be around long enough to follow a study through a 30-, 40-, or 50-year rotation, or through several generations of breeding. However, Wells somewhat resented having a ready-made career, which was one of the things that prompted him to organize a new provenance study of monumental size. Interest was building in the South for growing hardwoods. Tree improvement had become very successful for southern pines and it was assumed that this same success could be obtained with hardwoods. However, some basic genetics information was needed. In the 1970s, Wells started making seed collections (which included sweetgum [*Liquidambar styraciflua*], sycamore, green ash [*Fraxinus pennsylvanica*], and cherrybark oak [*Quercus pagoda*]) and finding planting sites for a new series of provenance tests for hardwoods. Just as was needed for the SPSSS, this involved lining up a lot of cooperators under the auspices of the SFTIC. Up until 1976, a large nursery at the HEF was available for growing seedlings for these extensive experimental plantings.

Around this time, the SOFES made an administrative decision to establish a hardwood genetics research unit cooperation with Mississippi State University, so most of the hardwood genetics work (including the data and plantings) were transferred to Starkville, MS. Wells was offered the position of project leader, but he was not interested in relocating. D.T. "Tom" Cooper was an exception—he was already stationed at the Southern Hardwoods Lab in Stoneville, MS, since he was working on *Populus* genetics. Cooper came to the SIFG about the same time that I did but only worked there for several years before he resigned (he told me he was getting into the truck farming business). After a few years, another administrative decision was made. The hardwood genetics project was closed, and the research and young plantings were turned over to the forestry program at Mississippi State University. Suddenly, the SOFES was out of the hardwood genetics business—the research unit was born but died in infancy.

After 5 years as project leader, Dan Schmitt wearied of balancing administrative work with research and announced one day "if I am going to be a [expletive] administrator, then I am going to be an administrator." He took an assistant director position in the Forest Service's Northeastern Forest Experiment Station at Upper Darby, PA, in 1972. Dinus replaced Schmitt as project leader. The contrast in their management styles was sharp—while Schmitt had a laissez faire approach, Dinus tended towards a more autocratic style and clashed with some of his staff. During Dinus' tenure, the size of the project shrunk considerably as a number of scientists chose to retire (some early) rather than being given direct reassignments to move them elsewhere. For instance, Snyder was wrapping up some important work on the longleaf diallel but elected to depart instead. Dinus



Left: Floyd Bridgwater and right: Osborn (Ozzie) Wells circa 1970.

⁵I became close friends with Wells—he and his wife Judy had two girls about the same age as our children, and we moved into a house in Long Beach across the street from them.

“As the newest thing in forestry, there was a lot of interest in genetics and tree breeding at this time. University forestry student groups were common in the summer, and we also had tour groups associated with national and international meetings, mainly affiliated with the International Union of Forestry Research Organizations (IUFRO).

was not the only factor—decreasing budget allocations also played an important role in the contraction of the SIFG.

Dinus and I got along fine, and he supported my application for GETA⁶ training to finish my Ph.D., and I was determined to remain productive. For example, while working temporary duty on my coursework at the University of Florida, I directed my technicians Herschel Loper and Horace Smith in their usual research work back at the HEF, published six papers, and presented work at two meetings. Dinus moved on around 1979 and took a lab director position with International Paper Company's brand-new forest genetics research unit near Corvallis, OR, to build a lab starting from scratch.

Dinus was replaced as project leader by Calvin Bey, a genetics researcher working on black walnut (*J. nigra*) who came from a hardwood genetics project of the North Central Forest Experiment Station in Carbondale, IL. Bey brought a calm and temperate demeanor to the position. Bey's express purpose in taking the SIFG's project leader position was to move upward into Forest Service management. After a few years, he took a position in Alaska as an “über” project leader (more than a project leader but not an assistant director). After a few years there, Bey took a staff position at the Washington Office. After Bey left, Wells was appointed project leader around 1984. Wells' management style was similar to Schmitt's. The bureaucratic work was a bother to Wells, and he had plenty of work to do managing his own research.

Margene Griggs was hired as a technician in 1973, with an M.S. degree, and worked on epidemiology of brown spot needle blight. She took a GETA transfer to the University of Florida around 1976 as I had earlier, finished the coursework and exams for the Ph.D., and then returned to Gulfport in 1978. She was promoted to a scientist grade. She and I cohosted the SFTIC in 1985 at Long Beach, MS. She resigned around 1990 and took a teaching position at Bob Jones University.

REMOTE SIFG SCIENTISTS, CHINESE VISITORS, AND “MOON TREES”

Over the years, we had scientists in the SIFG project who were remotely located. I have already mentioned Gene Namkoong and Tom Cooper. The SIFG also had Hoy Grigsby at the Crossett Experimental Forest (CEF) in Arkansas and a whole genetics subproject located at Normal, AL. Grigsby was an interesting character. He made a lot of plus-tree selections on the CEF and controlled crosses and planted several progeny tests. Just like Bayne Snyder, Grigsby was a great tree climber. He was also a clever innovator. I remember on one of my trips over there that he was having trouble with cone and seed insects but was having difficulty getting insecticides up into these tall pines. He solved his problem by installing a galvanized pipeline up the trees with spray nozzles at the top. He could connect his pump at the bottom and then spray the required dose in a few minutes. Grigsby eventually found out that the pipes needed to be grounded, because they acted like lightning rods. However, they did protect his breed trees from lightning. Grigsby was the last scientist at the CEF before it was closed in 1974;

⁶ Editor's note: The “Government Employees Training Act” (GETA) was originally passed in 1958 to allow the Federal Government to pay for the furtherance of the education of their researchers. Thaddeus Harrington would describe this as a “wonderful law” that allowed the Forest Service to “develop our own experts from people we knew were producers” (Harrington 1999: 407).

he was allowed to spend some of his time there until he retired to continue some valuable experimental plantings that were in the area.⁷

In the 1990s, the SOFES began an outreach effort by opening a subproject at Alabama A&M University, an HBCU (Historically Black Colleges and Universities) institution. The team's goal was to get students there interested in doing forestry research, while doing some research themselves. That whole group seemed to be in a constant state of flux. At first around 1990, Sam Foster and Jane Ford-Logan made up the unit; they were later joined by Alex Diner and Jimmy Reaves. It finally became a separate project with Foster as project leader; later, Jimmy Reaves became project leader. By 2000, the whole subproject team had been scattered. Foster became an assistant director. Although he remained with the SIFG, Diner went to University of Florida, and Reaves went to the Forest Service's Washington Office. Later, Foster left the Forest Service to become dean of forestry at Mississippi State University, but he was there only a couple of years before he came back to the Forest Service (he eventually became the director of the Rocky Mountain Research Station).

The SIFG often had visitors, including international ones, that I recall. As the newest thing in forestry, there was a lot of interest in genetics and tree breeding at this time. University forestry student groups were common in the summer, and we also had tour groups associated with national and international meetings, mainly affiliated with the International Union of Forestry Research Organizations (IUFRO). Some of our most notable international visitors came from China. For example, after many years of contacts with Taiwanese foresters, we started getting visitors from the People's Republic of China. I remember one group of a dozen foresters from China and their interpreter (I expect he was also their "minder": someone with political connections who would make sure his charges did not misbehave). He spoke perfect English. He said he had trouble translating some of the terminology, because he did not know much about forestry. He also said that whenever he visited Hong Kong, he spoke English, because he did not know Cantonese (only Mandarin). In conversations with this interpreter, I found out that he had been in the Korean War. He was one of the millions of Chinese who came across the Yalu River when the Chinese entered the war on the side of North Korea. I was just a few years too young for service in the Korean War, but I knew a lot of veterans. I recall one comment that he made that "the Americans had excellent equipment but were not very determined soldiers." We discussed the background of World War II, General McArthur, politics, and more. It was very interesting hearing his perspective on the Korean conflict.

On a different occasion, one afternoon I was asked to play host to a very senior Chinese forester and a more junior forester who was his interpreter. Unfortunately, his interpreter only knew Mandarin and Spanish. The senior only knew Mandarin. They were on their way to a meeting in Mexico City, and decided to drop by Gulfport, not realizing that we did not speak Spanish in this area. I

⁷ Once long-time CEF Project Leader Russell R. Reynolds retired, the SOFES began shutting down the CEF and assigning staff elsewhere. After Grigsby's retirement, it was discovered that the deed that transferred the CEF to the Forest Service contained a reversion clause if the agency was not conducting research on the property to the end of a 50-year period (in other words, January 1, 1984). See Bragg (2023) for some more details of the events during this closure period. While Grigsby's genetics projects on the CEF that were closed were never formally reopened, some remain to this day on the forest and continue to provide some new knowledge (see Bragg 2021).



Hoy Grigsby using a Swedish tree-climbing ladder to scale a superior loblolly pine on the Crossett Experimental Forest to install a spray device to protect cones from insect pests, March 1963. (USDA Forest Service photo [negative #505655] taken by Dan Todd)

enlisted the help of my wife Elaine, who also has a good knowledge of Spanish. We drove down the beach, went by to look at the shops in the mall, and stopped at other points of interest. We were explaining everything in Spanish, which the interpreter translated into Chinese for the older man, who then made comments and asked questions in Chinese, which the younger man translated into Spanish, which we translated into English in our heads, then back to Spanish, then to Chinese and back again. It was comical but exhausting, because Elaine and I seldom got a chance to speak Spanish. Another interesting observation: the elder visitor noticed a sign in one of the shop windows that said “30% off”—a concept he did not understand. In China, the price is the price. The concept of profit made no sense to him, as this was years before capitalism started creeping into the Chinese economy.

One of the things that generated a lot of publicity for the SIFG during its “heyday” was its affiliation with a publicity generated by the Forest Service’s “Moon Trees” project. Around 1970, during Project Leader Schmitt’s administration, then-Forest Service Chief Ed Cliff suggested to astronaut Stuart Roosa that he take some tree seeds to the moon and back on the Apollo 14 flight to see what effect it might have on growth. Roosa was interested in forestry and had been a smokejumper in his youth, so he agreed. Schmitt got a call from John Barber (then of the Washington Office’s silviculture staff, formerly Project Leader of the SIFG), and he went scrambling for some loblolly pine, sycamore, and sweetgum seed. They were easily obtained at the HEF and sent to Cliff. The IFG in Placerville provided redwood (*Sequoia sempervirens*) and Douglas-fir seed. When the mission was over, the well-traveled seed were returned to us at the SIFG and to the IFG, germinated, and grown into seedlings—and earned the nickname “Moon Trees.” I recall Bob Hare and Bill Beland took great care in handling the propagation. The seedlings germinated and grew normally. They were distributed around the world as part of the U.S. bicentennial celebration in 1975–1976.

Over time, people largely forgot about the Moon Trees project. Some 20 years later, a teacher in Arkansas found one of the loblolly pines with a plaque identifying it as a Moon Tree, which triggered a worldwide search for other surviving trees. Around 2010, I met Roosa’s daughter Rosemary in the Gulfport Yacht Club’s bar. I happened to be wearing an SIFG T-shirt, and she zeroed in on me. Rosemary had been out to the HEF, looking for loblolly pine Moon Trees that had been planted there. The HEF Forest Supervisor “Big Larry” Lott agreed to graft scions of the Moon Trees onto seedling rootstock and provide these to her. For this deed, Lott was featured in a February 28, 2011, article by a local paper (*The Sun Herald*). Another 15 minutes of fame for us from the Moon Trees project!

THE OTHER PROJECTS AFFILIATED WITH THE SIFG

I should include some history of the other research units colocated with the SIFG at Gulfport and elsewhere between 1960 and 1995, because we often worked closely with them and had plenty of social interactions as well. From playing bridge at lunch to playing volleyball on Sunday afternoon in Ozzie Wells’ yard, we all got to know each other.

Most prominent among these other units was the forest pathology group, a logical fit as traditionally the most important approach to plant disease problems

has been through genetics and resistance breeding. When I joined the SIFG, there were a number of scientists working in pathology. Glenn Snow came to Gulfport in 1957 and was their project leader when I arrived a decade later. Snow worked extensively on the search for genetic resistance to fusiform rust in southern pines. He and Fred Jewell had successfully developed a system for inoculating slash and loblolly pines with fusiform rust spores to look for resistant families. This was important work which led to the development of the resistance testing center on the Bent Creek Experimental Forest near Asheville, NC, and helped alleviate a major challenge to the widespread planting of loblolly and slash pine across much of the South.⁸

I always take great pleasure in recounting a story about Snow and some visiting plant pathologists from Holland and Germany. They had been attending a forest pathology meeting and stopped to tour our research establishment. At lunch time, Snow decided to take them to An-Jac's Barbecue Restaurant to give them some local flavor at a well-known restaurant located only a few blocks from the Gulfport Lab. When they arrived, they went straight in and through the buffet line. When it came time to leave, Snow looked for someone to pay. It was then that he realized he wasn't in An-Jac's Restaurant—rather, he had stumbled upon a charity soup kitchen called “Feed My Sheep”! So, he left a donation and went back to the lab somewhat embarrassed.

Until he retired around 1980, Al Kais was examining spread of brown spot needle disease of longleaf pine. Ron Froelich was very nearly finished with his work on the silvicultural control of the root disease *Fomes annosus*. Felix Czabator, who retired around 1984, was examining mycelial growth of *Cronartium*. Charlie Walkinshaw had gone on a temporary assignment around that time. NASA's Lunar Receiving Laboratory in Houston, TX, needed someone who had a good knowledge of sterile technique. They had no idea what they might be introducing when they brought dust and rocks back from the moon. Walkinshaw and his colleagues determined that there was no apparent danger inherent in the moon rocks. After years of high-profile work at NASA, when he came back from Houston around 1985, Walkinshaw was never able to adjust to the mundane environment of Gulfport. In 1989, Snow hired Rob Doudrick to carry on his work with fusiform rust; Doudrick worked on genetic mapping and molecular cytogenetics. In 1990, after their long-time Project Leader Snow retired, the SOFES merged this unit with the SIFG.

The Wood Products Decay project long had a wide influence by conducting a number of long-term decay tests. For example, when you see a pile of logs being continuously sprayed with water to preserve them, this was because of the research carried on by this project. My favorite has always been the fence post line study, which has been going on more than 50 years. Several miles of fence posts, treated with various preservatives, were installed at 4-foot spacing. At measured intervals, a researcher would walk the fence line, kicking each post and recording whether or not it fell over.

The Wood Products Decay project was led by Rod DeGroot. DeGroot had a rather rigid, inflexible style of management. I only recall one other scientist in the project, Terry Amburgey. He had a lot of good ideas on speeding up



Rob Doudrick around 1990, in an old-growth longleaf pine stand in Flomaton, AL. Doudrick later became project leader and eventually Southern Research Station director.

⁸ Editor's note: See an excellent history of this Asheville screening center in Cowling and Young (2013).

testing of preservatives on wood decay, and he and I cooperated on a couple of studies on the decay susceptibility of wood samples of differing genetic and silvicultural backgrounds which produced two peer-reviewed publications. Amburgey eventually left for a faculty position at Mississippi State University. The Wood Products Decay project was closed before the Gulfport Lab shut down, and DeGroot transferred to the Forest Products Laboratory in Madison, WI. For years after his transfer, he would come down to the HEF in the winter to score decay studies.

The entomology project (Wood Destroying Insects, also known as the termite project) had a rather unique role in Forest Service research and development. This project had a congressional mandate to conduct long-term efficacy tests of all termite treatments for buildings. There must have been some real chicanery in the past in selling such treatments to have brought this kind of directive for a Government research project—especially one with a fat line-item budget. This testing activity, though no longer exactly research, occupied a great deal of the termite project's energy.⁹ In 1967, H.R. “Mr. Johnny” Johnston was the termite project leader. Though short in stature, he was long in influence—he was the “Boss.” Mr. Johnny retired shortly after I arrived, probably around 1970. He was replaced by a young scientist, Mike Haverty. He was an outgoing, friendly guy, with a dry, sometimes snarky, sense of humor. Haverty was a good project leader with an acerbic wit not appreciated by all. After a few years, Haverty transferred to a research unit in Berkeley, CA. It was no coincidence that his wife's family owned a vineyard in Napa Valley, right up the road from Berkeley. Haverty was replaced by the low-key and amicable Joe Mauldin.

The entomology project was almost as large as the SIFG and also hired new scientists. U.S. Army veteran Lonnie Williams came about the same time that I did. He became very interested in using borate treatment in wood preservation, especially for use in log houses, which were popular at that time. He had a lot of support among users, but the administration was not impressed. He eventually resigned and pursued a career in consulting (wood products). Ray Beal was probably the most prominent scientist in the entomology project. He was *the* expert on termites, and hence did a lot of foreign travel consulting on termite control. I recall that his father was a Forest Service division chief in the Washington Office. I knew him fairly well, as his children went to school with mine, as well as those of Wells (one does get to know people through their children). Beal was sociable, playing bridge at lunchtime and volleyball on Sunday afternoon. Beal retired around 1990 and moved to a retirement village in Arkansas. He did a good bit of consulting after retiring. He was an avid tennis player and spent a great deal of time officiating at tennis tournaments.

C.E. “Skip” McDaniel transferred in from the nearby USDA Animal and Plant Health Inspection Service lab. He was an organic chemist who was doing some analysis of wood extractives as they are related to insect toxicity. He had a wonderful new mass spectrometer, so naturally I promoted a collaborative study of geographic variation of monoterpenes in shortleaf pine. McDaniel was a good cooperator. He took an early retirement when the project moved to Starkville, as he had family issues which did not allow him to leave the coast. He finished out

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⁹ Editor's note: This project, now part of the Durability and Wood Protection Research unit, was administratively transferred to the Forest Service's Forest Products Laboratory around 2014.

his retirement teaching chemistry at the community college. I still see McDaniel at the Gulfport Yacht Club occasionally. Susan Jones worked on the ecology of termite infestations. Some of her work was in Arizona, which was part of her dissertation research. She married a wildlife biologist and moved to Arizona.

I am somewhat hazy as to work that the other scientists in the unit were engaged in. I did not know chemist Fairy Lyn Carter and entomologist Virgil Smith very well. I recall that there was some research being done on the gut flora of termites, a logical thing to study since the termites were totally dependent on these microorganisms to digest the wood that they consumed. Brad Kard came to the project in the 1980s, and then left for a position at Oklahoma State University before 1995. Kard later rejoined the unit after it had moved to Starkville. Of all the scientists and technicians in the entomology project in Gulfport, the only one that I know of to take the transfer to Starkville was a senior technician, Ted Roland. Everyone else retired or resigned.

TRANSITIONS TO THE PRESENT DAY

Around 1987, Ozzie Wells retired to the ski slopes of Utah, and Warren Nance was appointed project leader. At the suggestion of the then-SOFES Station Director T.H. Ellis, the emphasis of the work of the SIFG shifted from quantitative genetics to molecular. Nance had been engrossed in the genetics of growth and yield, but soon realized the possibilities of using genetic markers in assisting breeding for disease resistance. There had been a program for restoring the disease-ravaged American chestnut (*Castanea dentata*) through hybridization with resistant Asiatic *Castanea* species; to support this nostalgia came research money.

C. Dana Nelson joined the project in 1987 and started working with Glenn Snow, Charlie Walkinshaw, and Rob Doudrick on fusiform rust genetics and with Nance and Doudrick on molecular genetics. Sometime later, Nelson was joined in this work by Tom Kubisiak and eventually Craig Echt. Kubisiak's Ph.D. work at Louisiana State University was partially supported by the unit where Nelson served as a committee member. The work initiated quantitative trait loci (QTL) mapping in hybridized pines using Random Amplified Polymorphic DNA (RAPD) markers. The use of RAPD markers was made possible by the recent invention of polymerase chain reaction (PCR), which Nance, Nelson, Kubisiak, and technician Glen Johnsen performed by manually moving microtubes repeatedly between water baths set at three different temperatures. Echt came to the SIFG through a circuitous route. First, he was employed at the Forest Service's Northern Institute of Forest Genetics in Rhinelander, WI. He left there to take a research position at the Forest Research Institute at Rotorua, New Zealand, returning years later when a change in that country's government caused the loss of funding and positions. When Echt returned to the United States, he took a term scientist position through support provided by an external grant to work on the molecular genetics of pondberry (*Lindera melissifolia*), an endangered shrub; he would later be permanently incorporated into our project.

Ron Froelich, after becoming a part of the SIFG in the merger with the forest pathology project, had finished his silvicultural project on *Fomes* and needed another project to help integrate his work. In February of 1991, we took a field trip to measure a loblolly planting in Maryland and a shortleaf planting in New Jersey



Most of the personnel in the Southern Institute of Forest Genetics in 1987. Left to right: Sonya Sonnier (Youth Conservation Corps), Jim Hamacher, Warren Nance (Project Leader), Francis Falvey (Senior Program), Tony Rayford, Louise Quinlan, Herschel Loper, Jim Grissom, Kaye Mansfield, Norris Bond, Jack Schoenewicz, Ron Schmittling, and Holly Lee.



Four of the new laboratories on the Harrison Experimental Forest. Number Four (foreground) had a special solid microscope mount for Rob Doudrick's new fluorescent genetic mapping (molecular cytogenetics). This work was taken over by Nurul Faridi (stationed at Texas A&M University) when Doudrick left.

(the Maryland planting was successfully measured, but a snowstorm prevented the measurement of the New Jersey planting). Shortly after we returned, I departed for a short sabbatical at Oxford University in England to research provenance tests and long-term forestry studies in Europe. When I returned in October 1991, I learned that Froelich was seriously ill with a very aggressive case of cancer. He had been one of the healthiest people I knew, and there was no hint of trouble during our field trip. Even after trips to Houston, University of California-Los Angeles, and Minnesota seeking treatment, Froelich continued to decline and he died within a year.

As the push to go molecular ramped up, Nance felt the need to do some intensive study. His background was forestry and statistics, and he had little or no expertise in biochemistry and plant physiology. Nance decided to take an in-place sabbatical to intensively study the latest techniques in molecular genetics, and he set up a lab in a garage that had been converted to a laboratory. I was appointed acting project leader for fiscal year 1990 while Nance sequestered himself. When he emerged from his isolation, Nance was ready to conquer the world of molecular biology. Personally, I resisted shifting over to molecular, although I did make good use of allozymes in studying population genetics and diversity. I had a lot of work in the mill, of a traditional nature, that I felt I needed to finish. I subscribed to the notion there was no point in doing the research if the results were not disseminated in some way.

For years, a rumor circulated that the whole Gulfport establishment would be moved to Mississippi State University. As budgets tightened, this started to look like a real possibility, especially as the Gulfport Lab began needing serious repairs. One problem was the asbestos used in the construction. I could not believe that asbestos would be permitted in a government building built in 1960, but it was! There was already a movement afoot to transfer the entomology unit to Starkville and to move what was left of the wood decay unit to Madison, WI. Nance did not want to relocate to Starkville, so he set about figuring ways to move the genetics project back to the HEF, from whence it came. He knew that there was not enough space in the HEF buildings to establish molecular genetics laboratories. I think that he felt that he could preempt a move to Starkville by building labs at the HEF and moving before anyone knew we were missing. Nance took matters into his own hands and started five new lab buildings on the HEF, buying materials with project funds and using our technicians as carpenters, plumbers, and electricians. The money that was used for materials and subcontractors came to the project as a result of the salary savings after Froelich died.

Unfortunately, Nance did not go through the procedures required to construct buildings on Federal property. It would have taken a great deal of time, and he did not have the patience required. I think Nance operated under the old maxim that it was easier to ask forgiveness than get permission. While this effort may have been the salvation of the SIFG, it caused a lot of problems.

Nance retired in 1995, around the time the project vacated the Gulfport Lab completely. After Nance left, I became acting project leader again, and Jimmy Reaves was also acting for a short time. Other transitions also occurred during the mid-1990s. Nelson left the project in 1994 to take a research position at

International Paper's Southlands Experiment Forest and Research Lab in Georgia. That same year after receiving the Marcus Wallenberg Prize, Gene Namkoong retired from the Forest Service. Without the cachet of Namkoong's fame, support for his pioneering project at North Carolina State University was no longer available, so that effort was closed. This left Jim Roberds, his right-hand man, without a job. I arranged for him to be transferred to our unit while I was acting. I recall that Roberds and I wrote a letter to acting SOFES Station Director Pete Roussopoulos supporting Doudrick for the position of project leader of the SIFG, a position he was appointed to in 1996.

The Southern and the Southeastern Forest Experiment Stations began the process of merging in the early 1990s, and by 1996, they had merged into the Southern Research Station (SRS), headquartered in Asheville. Doudrick had a real talent for budgeting, so Roussopoulos had him frequently detailed to Asheville. In 1999, SRS permanently moved Doudrick to Asheville in an assistant director position. This was a gain for administration but a loss for science. "We barely got to know ye, Rob!" After a number of years, Doudrick moved to the Washington Office and served for a while as an assistant director with the North Central Forest Experiment Station before returning from the Washington Office to become the SRS's director in 2011. (As I began writing this tome in the summer 2021, Doudrick had announced his retirement.)

I once again became acting project leader, but only for a short time before the Station brought in Floyd Bridgwater who had transferred to College Station, TX, from Raleigh, NC, a short time earlier. Bridgwater's reign could be characterized as similar to Dan Schmitt's—laissez faire. I got along fine with Bridgwater, and I recall one incident that showed that Bridgwater was paying attention. I had a habit of attending two or three international or national meetings a year to give a paper on some aspect of my research. Bridgwater wondered how I could be doing that, and he decided that I must be giving the same paper over and over again. So, he checked up on me, only to find out that I always gave a paper with new results on a different subject. I always had enough work on the "back burner" to come up with a new paper to fit the theme of a meeting. We both had a chuckle when he recounted this story to me.

Around 2002, we hired a young Ph.D., Jennifer Myzewski, designated to replace me in some of my projects. She left the Forest Service for medical school.

After a good career, I retired in 2003. I began my career at the SIFG with the rank of GS-9 and after 36 years retired as a GS-15. My involvement with the SIFG continues to this day as an emeritus scientist, with no rank and not much clout but still doing some research. On occasion, I have continued to represent the work of the SIFG. For instance, I ran into Sam Foster in 2010 at the IUFRO Congress in Seoul, Republic of Korea (I gave a paper at the meeting, but I was there at my own expense). I remember his opening greeting: "Ron! I knew you were retired, but somehow, I expected to see you here!" He was the same, affable Sam.

I have also provided some institutional memory otherwise lost to time—such as when, around 2006, someone from SRS Headquarters called in a panic because they "lost" an experimental forest. The call was referred to me since I had been around the longest. "Do you know anything about the McNeil Experimental



A 2001 field trip to the Longleaf Pine Diallel during an advisory visit by Gene Namkoong. Left to right: Floyd Bridgwater, Mike Stine (Louisiana State University), Brian Strom (Southern Research Station, Pineville, LA), Jim Roberds, Jennifer Myzewski, Bayne Snyder, Gene Namkoong, and Bill Cibula (NASA).



Southern Institute of Forest Genetics personnel in 2008. Left to right: Ron Schmidtling, Dana Nelson, Yousry El-Kassaby (visiting scientist from the University of British Columbia), Tom Kubisiak, Milan Lstiburek (visiting from the Czech Republic), Craig Echt, and Jim Roberds.

Forest?” I explained to them that the McNeil had been closed around 1957, and the land was swapped for a tract contiguous to the De Soto National Forest around 1971. An old-timer’s knowledge was useful. Case closed!

In 2005, Bridgwater retired to his fish camp on the coast of North Carolina. Nelson replaced him as project leader and continues to lead the research work unit, which includes the SIFG, the Southern Institute of Forest Productivity (team located at Research Triangle Park, NC), and the Institute of Forest Health (located at Lexington, KY). Currently, Nelson splits his time between the HEF and an office on the University of Kentucky campus. Kubisiak resigned around 2008, and Echt retired in 2018. Roberds also retired in 2008 but remained active in research and engaged with the current HEF staff. Jim Roberds recently passed away, while still active in research.

IN CONCLUSION

Today, the SIFG is a mere shadow of its former self. It has been and remains very productive, however. Over the years, the SIFG played an important role in the use of genetically improved planting stock that has become the standard industrial silvicultural practice across the Southern United States. Furthermore, real progress is being made in rescuing species such as the American chestnut through a combination of breeding and molecular manipulation, and somewhat similar work is progressing by many on critical projects such as seeking genetic resistance in ash trees to an exotic invasive insect, the emerald ash borer (*Agrilus planipennis*).

Getting research information out to the users is certainly important. The customary measure of research productivity is publications. I do not have a number for the SIFG, but I would estimate that our output would be measured in thousands. I do know that my personal resume contains well over a hundred publications, and I am a small part of the organization.

Finally, I must repeat the old cliché: “More work needs to be done.” That is certainly true in genetics, as almost daily we learn of a new threatening climatic situation, or a disease or insect, whose virulence will be exacerbated by climate change.

ACKNOWLEDGMENTS

The first notion that I might write about the history of my work unit came when I read a dog-eared copy of Phil Wakeley’s *A Biased History of the Southern Station* many years ago. This provided the impetus plus a part of my own title. Most important was a stash of old photos and documents that technician Charles Burdine encountered while composing a PowerPoint presentation of the history of the HEF, in his role as Experimental Forest Coordinator. Certainly, edits and suggestions by Don Bragg, Dana Nelson, and Nancy Koerth were very helpful.

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