

Memories of Fort Valley From 1938 to 1942



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Abstract—This delightful essay records Frank Wadsworth’s early forestry career at FVEF in the late 1930s. Frank married Margaret Pearson, G.A. and May Pearson’s daughter, in 1941. Pearson believed Frank could not continue to work for him because of nepotism rules, so Frank and Margaret moved to San Juan, Puerto Rico in 1942 where Frank continued his forestry career. His retirement now includes writing up research that he didn’t get to while employed and tending his multi-acre orchards in Puerto Rico.

A visit to Fort Valley in 1935 as a forestry student led me to apply for a position. I returned in 1938 as an Assistant Field Assistant at \$1,620 per year. Mr. Pearson met me at the Santa Fe depot. Fort Valley proper was an open park with dairy farms separated by zigzag rail fences. The Station was on a slight rise adjacent to the west of the park, surrounded by tall relics of a ponderosa pine forest with a beautiful view of the San Francisco Peaks. There was a two-story office/apartment building, a circle of residences and an enclosed water tower. The central area was landscaped with spruces brought down from the mountain. Their new growth was frostbitten, unadapted to the warmer temperatures of the lower elevation followed by late frosts. Aluminum wind shields surrounded a snow gauge.

The research season at the Station was from April to December, with snow at both ends. Residents at the time were: Gus and May Pearson, Gus having recently relinquished the Directorship of the Southwestern Forest and Range Experiment Station to return to research; George and Florence Meagher and their cocker “Crusty”, with George studying woodland regeneration, juniper post durability, and aspen at Hart Prairie; Ed and Sally Crafts, Ed on range ecology and economics; Elbert (Doc) Little using current-year piñon pine flowering in the Navajo Reservation to locate next year’s crops of nuts for Indian collection and sale in New York; and Bert and Lydia Lexen, with Bert on biometry. Also living there were: Ed Martin, property manager, and Florence Cary, accountant, who later married; and Georgia Savage served as secretary and recorded the tree growth data on atlas sized sheets stored in a closet. A retired cowpuncher, Mr. Oldham, kept things

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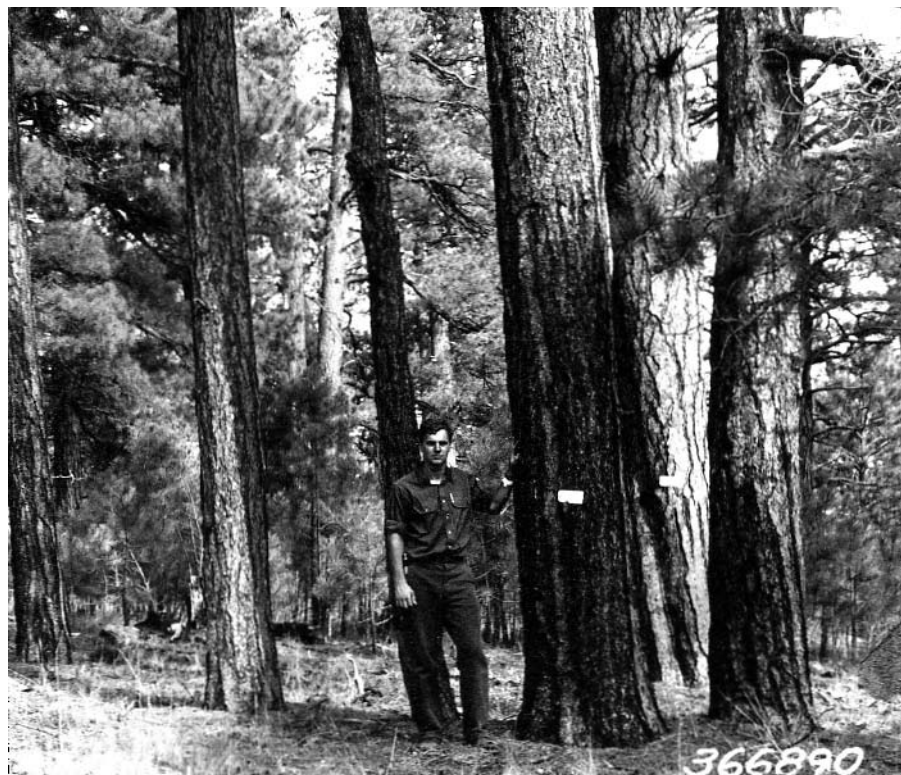


Figure 1. Frank Wadsworth on FVEF permanent sample plot S6A, amongst a mature stand of ponderosa pine. USFS photo 366890 by G.A. Pearson in August 1938.

running. Hermann Krauch, a silviculturist, came periodically but worked more at Coulter Ranch south of Flagstaff, and was concerned also with Douglas fir at higher elevations near Cloudcroft, New Mexico. Charles Cooperrider, Hugh Cassidy, George Glendening, and Ken Parker of the range research staff made occasional visits. Lake Gill and Stuart Andrews of the Agricultural Research Administration came from Albuquerque periodically to study forest pathology. Waldo Glock of the University of Minnesota and students visited and worked on dendrochronology.

I was sent to the quarters for bachelors and vehicles with Doc Little. We came to an agreement about cooking and dish washing. Kitchen efficiencies I picked up there were liabilities in later married life. We had to refrigerate immediately the milk from down in the valley placed daily on the step before lightning soured it. On Sundays Doc tried recipes from food boxes, like cake from Bisquick. An experiment without replication was a turnip pie. Doc, an avid field botanist, was collecting the flora above timberline. One weekend we drove up to the Spruce Cabin weather station at 10,500 feet and climbed above timberline to Agassiz Peak. When we came down our pickup had disappeared. We spent a cool night alternating between sleeping curled up around a fire and preventing the sleeper from burning. At that elevation the first light arrived at about 3 AM, and we soon found our quarry.

Gus Pearson's research was on what was said to be the world's most extensive pure pine forest (with apologies to *Juniperus deppeana*, *Quercus gambeli*, and *Robinia neomexicana*), extending from the Kaibab and Prescott National Forests

in central Arizona to the Gila in central New Mexico. Gus's intense dedication, constantly visible, appeared to be that of an exemplary employee. With pride and hat, Gus wore a well pressed Forest Service uniform for official business in town. He recounted to me his studies of climate up the Peaks including the winter, why the parks are treeless, and his failures with pine planting. Apparently because of past Forest Ranger training at Fort Valley in which he was involved, Gus was known throughout the Southwest Region of the Forest Service. His scientific writing, according to Henry Clepper of the Journal of Forestry, required no editing, a rare tribute from an editor. Gus said to me that Uncle Sam was the world's best employer and cautioned me not to mistreat him. He expected full use of official time and care of vehicles, allowing one trip to town per week but not after dark. I still sense repeatedly the virtue of the high ethical standard he symbolized at the beginning of my official life.

Shortly after I arrived, the Station sold for \$55 to a Flagstaff dealer "Forest Service #128", a venerable 1931 Ford coupe with a trunk. I bought it for \$75, had the engine rebored, the brakes fixed, and found that it responded well to pliers and wire. On free time it took me to the Grand Canyon for a moonlight descent on foot, through floods that stalled other cars after Hopi snake dances, to the "dusty" Grand Falls of the Little Colorado River, to Schnebley Hill to watch the production of the film "Virginia City", through a desert flood along the Camino del Diablo between Ajo and Tinajas Altas, and to Culiacan, deep in Mexico, and back.

My appointment at Fort Valley was fortunate but only temporary. The government offered so few "permanent" Civil Service jobs during the depression that I had to take the Junior Forester examination three successive years to remain on the register. After about six months at Fort Valley I received a Civil Service appointment with the Prairie States Forestry Project (the shelterbelt) in Nebraska. To refuse it would drop me off the register and require a fourth examination to remain eligible to return to Fort Valley. The downward slope of my progressive exam grades was such that I couldn't chance this. The Ford took me through a February blizzard in Kansas to Ewing, Nebraska.

Six months later I received a Civil Service appointment to Fort Valley as a Junior Forester. I left the Ford with my field worker and set off after supper in a new car. Beyond North Platte I fell asleep and went off the road onto a benevolent wide shoulder. At the next opportunity I drank coffee for the first time. The next night in the Wasatch Mountains entering Utah I came upon a barred owl perched on a dead rabbit. The owl had been injured so I stopped and threw a topcoat over it. As I wrapped it up a claw sunk into my hand, and I got to wondering about rabbit fever. Although it was after midnight when I reached Salt Lake I found a doctor and a taxidermist. The following afternoon I reached Fort Valley.

I rejoined Doc Little. This time on a weekend we walked down to the Rainbow Bridge in Glen Canyon, a 14-miler. Doc was slight physically and yet more able than I was to deal with the 107 degrees recorded at Holbrook the day we climbed out. At the Goldwater Lodge, I drank 17 glasses of water.

Gus had established a network of permanent sample plots with tagged trees, some to 160 acres or more. The ones I knew included S-3 on the Kaibab, with S-3a requiring a 10-foot deer-proof fence; S-4 in the cinder country near Sunset Crater (slower growth); S-5 on the best site outside of the malpais in Long Valley (taller trees); S-6 and S-7 beside what became Highway 180; and others on the

Prescott Forest downstate and on the Carson and the Datil Forests in New Mexico. From these plots and his counterparts Gus had learned that his pines grew faster than those of Carlos Bates in the Black Hills, and that the ponderosas of Thornton Munger and Leo Isaac in the Pacific Northwest and those of Duncan Dunning in California were taller than in the Southwest.

A major task of mine was tape remeasurement of the breast-height trunk diameters of the trees in the plots, starting with 30-year-old S-3. For this I had a good technician by the name of Pendergrass. In addition, thickets of saplings and small poles had arisen beneath openings in the forest, products of 1914, 1919, and 1927, the only years with spring rains adequate to germinate pine seeds before they were all eaten. These needed thinning, pruning and mistletoe removal. I had a Civilian Conservation Corps crew, at first of young Mexican Americans, followed by others from some tough area in Philadelphia. For a period, the use of double-bitted axes by many of these young men was not forestry.

Gus thinned the densest sapling stands where logging was in progress by sending the log skidders directly through them. Pruning of mistletoe from branches on pole-sized trees just made it reappear on the central trunks, so the crews had to remove infected trees. We also were on the watch for *Ips* bark beetle attacks common in S-6 and S-7. They required removal of not only the yellowing trees but some of their still green neighbors with the newly emerged insects starting in them. Logging and thinning produced slash that was piled in openings and burned on calm days.

In S-3, apparently Gus's favorite, he had us pruning lower dead branches from large trees. Pole sawing of thick branches was onerous. We saw it only as of cosmetic value since the trees looked too near to maturity to outgrow the stubs. I white-painted many stubs and recorded tree numbers and stem diameters at the stubs to follow occlusion. During a visit forty years later the paint was still visible.

From a pine group beside the Station entrance road long before I arrived, Gus had harvested the dominant trees, exposing to full light formerly suppressed trees. He later noted that their crowns had filled out. Increment borings confirmed that increased growth had continued ever since release. A result was Improvement Selection, a silvicultural practice for Forest Service ponderosa pine timber sales adopted by the Southwest Region. These suppressed trees, left and released from former root competition, despite their ages, promised a second harvest of clear boles before the regeneration matured. I set up Plot S-8 on the east side of the Wing Mountain road where Gus made a demonstration of Improvement Selection.

Gus had differences with some members of the ecosystem. Included were deer that browsed new pine growth, porcupines that girdled upper pine trunks (the day I shot a gathering of 22 I was almost promoted), Abert squirrels that raid maturing pine cones, and *Ips* beetles.

Gus saved most of his vitriol for grazing on what he considered were pinelands. He argued with Frank C.W. Pooler, Regional Forester, that on the Coconino Plateau the Forest Service was getting only a pittance for grazing permits while pine growth on the same lands would produce seven times the value. Over time his pines won many a battle, reforesting clearings naturally, including, I'm told, much of the "Flag desert" of my time. More specifically Gus condemned cattle



Figure 2. Frank Wadsworth in a ponderosa pine forest near FVEF. USFS photo 421057 by G.A. Pearson in October 1941.

that ate pine tips; cattlemen who didn't care; Basque sheep herders whose flocks twice a year en route from the desert to the Peaks bedded down in S-3 and chewed on everything in sight, eating the fescue and uprooting the mountain muhly; and National Forest personnel and range researchers with insufficient backbone to recommend keeping the cattle off National Forest "pinelands" until the new pine terminals had hardened by July first.

Gus's passion did not spare his fellow scientists. After an argument Gus was reported to have left Hermann Krauch by a roadside. With a threat to "destroy professionally" Cooperrider and Cassidy in the *Journal of Forestry* if they published a manuscript using what he considered contrived photographs to allege that cattle eat pine leaders only because they are thirsty, Gus got Director Upson to withhold the publication.

Gus detested what he considered an idle imposition of statistical confirmation on decades of his already published and widely recognized astute observations. A mathematically robust revision of his Plot S-5 in Long Valley, fragmenting it for replication and contrast, ended his interest in this, his best forest site. He said to me,

“We are trying to learn about trees by looking at numbers.” Once I overheard him, obviously in exasperation, say to Bert Lexen, “I don’t care whether it is significant, is it important?” Bert admitted to me that he was trying to prove statistically “what Gus already knows.” More memorable, however, was the fact that the strong professional differences between these two were not personal. The Lexens and Pearsons alternated in hosting friendly Sunday dinners.

The Pearson house, the most expensive, had its bathroom separated by one inch to comply, I was told, with a federal ceiling of \$2,500 on residences. On Sunday mornings Gus was up early and made pancakes and I was invited. In the woods his lunch was a small can of tuna, a practice I still like. May, a native Arizonan, knew the state from Betatakin to Baboquivari. An adventurous good cook, she arranged Sunday picnics and got Gus to go by telling him only when the lunch was in the car. To travel with them was a treat. They recalled historic events in the Grand Canyon, friends in Navajo trading posts, acquaintances living in Oak Creek Canyon and in Sedona. May, a Baptist, reportedly got Gus to go the nine miles to church in town only to discover that there he turned off his hearing aid. Their offspring, both now deceased, included a son, Arthur, an engineer who became a pilot of the B-36’s of the Air Force, and Margaret (Peggy) who was a concert soprano.

In April 1941 when I was about to marry Peggy, Gus explained that under the anti-nepotism rules of the federal government I would have to take a transfer. During the ten months when none appeared we lived in the middle cottage, next to the Crafts. Crossing the compound toward the office one night I heard through dense snowflakes what sounded like a cat’s meow. It was a fawn with a back leg dangling. It followed me back to our house, went in and lay down on the floor. When it heard Peggy peeling an apple in the kitchen it stood on her feet and begged. “Cutie” lived at the Station for weeks while we tried in vain to bind up the broken hip. Miraculously it gradually set until we observed the four-footed leaping that characterizes the deer of the west. When it ate what then were precious pre-war nylons off a clothesline, it was time for release, far from hunters, in Grand Canyon National Park. A family had found the fawn. Since the deer was of the forest, the family assumed the Forest Service should know what to do. It looked like we did.

One Saturday afternoon Peggy and I decided to take a walk on a trail behind the Station toward A-1 Mountain. We returned at about five o’clock to find our cottage burned to the ground and still smoldering. The few people that had not gone to town saw it only too late. By then, with flames being blown from the woodshed filled with resinous pine knots toward the house, a simple hose was useless. They rushed in and got out our clothes but not our unacknowledged wedding gifts. Director Upson concluded that the fire must have started by the sun’s rays on a bottle, something that remains uncertain. We moved to the apartment above the office. Georgia Savage, whose older son I had rescued when his brother accidentally shot him in a remote location, asked her boys to look for Peggy’s engagement ring left on the bureau in the bedroom. Using a window screen they sifted the ashes and found the diamond, which we had remounted.

Our remaining in Fort Valley apparently was not nepotism by the rules strictly because I was not requesting a job or a promotion. Not knowing this until 67 years later, we drove to Mobile and boarded a ship for Puerto Rico early in 1942.

As a sequel, forest remeasurements as at Fort Valley proved even more necessary for forest research in the tropics where tree growth rings are mostly invisible. The result produced a second set of long-term numbered tree growth records. Even the silvicultural practice developed in tropical rain forests in Puerto Rico turned out to be similar to Improvement Selection, merely assuring crown illumination more than root space. The growing appreciation of diverse forest benefits intensifies the fundamental importance of the tree growth information of both locations to forest health, productivity, and sustainability.

The content of this paper reflects the views of the author(s), who are responsible for the facts and accuracy of the information presented herein.