

Personnel



WFIWC Portland, OR 1951. [Photo Caption](#). I was one year into my employment at the Berkeley Forest Insect Lab when the 3rd WFIWC was held in Portland, Nov. 26-28, 1951. The fall meeting was scheduled to coincide with the meeting of the larger Western Forestry Conservation Association, in which the WFIWC founders like Paul Keen participated (the first WFIWC was held to coincide with a WFCA meeting in Portland in 1949). That association soon faded in favor of locations that were more representative of conference membership. Also, timing was changed to spring-time, beginning with the 1957 meeting in Calgary, to accommodate university personnel.

I remember going by train from Berkeley to Portland with Keen, Jack Bongberg, Ralph Hall, and George Struble. That was a great way to travel. We were together in the club car where we could converse and view the passing scenery. North of Mount Shasta, the train would its way upward through a vast brush-field containing Ceanothus. Paul remarked that there had been an outbreak of the California tortoise shell butterfly there. I did not imagine that a few years later, I would be in Idaho studying insects of wildland-shrubs, along with bark beetles.

The accompanying photo is the first one taken at a WFIWC meeting. It was distributed separately and not published in the proceedings. It includes 40 of those attending; a few others such as Keen were at the concurrent WFCA meeting. Those attending, and their affiliations, are shown in the caption. Notably, Avery Hoyt, Chief of the Bureau of Entomology (equivalent to Chief Forester) came from Washington, DC. James A. Beal, Chief of the Division of Forest Insect Investigations, also attended. He was the last Chief before the Bureau was disbanded in 1953 and transferred to the Forest Service.

The meeting took place as a group with a discussion leader for several pre-chosen topics. Work shops were yet to be. Also, this meeting had the first semblance of a banquet... members decided to go to a local restaurant together for dinner. I had cracked Dungeness crab in a bowl of delicious warm marinade. And a beer. -- *Malcolm Furniss* --



Frederick Paul Keen (1890 - 1980): Some Recollections by M. Furniss. After I graduated from high school in Waverly, NY, in 1944, I moved to Berkeley, CA, with my mother while I waited to be called into the Army Air Corps. I remained in the Berkeley environs after my discharge in Nov. 1945. My oldest brother, Robert L., had graduated in entomology with a minor in forest management from Syracuse in 1931. He was employed by the Bureau of Entomology and had replaced Keen at the Portland Forest Insect Lab in 1942 when Keen transferred to head the Berkeley FIL. Thus, our family knew of Keen and that he was a bachelor. My father had left the scene in Waverly at the edge of my childhood memory, hence some of us, mainly my sister, rather jokingly hinted that maybe a match could be made. It never happened.

Paul waited until retirement when he married Lillian, an architect. She preceded him in death in 1972.

My introduction to Paul was in June 1950. I had graduated in Forestry at U. California and the job market was bleak. I had not planned a career in forest entomology but in desperation, I knocked on Paul's door in the basement of Mulford Hall on campus seeking a summer job. To my surprise, Paul was wanting to hire me on the spot to survey bark beetle mortality in the Sierra Nevada. I then got cold feet, and confessed that I knew little about entomology. He countered that they would teach me all that I needed to know and what they were looking for was a forester who could survey, identify, and measure killed trees. Somebody who could get around in the mountains. Well, I was married and had two children to feed so that is how I got a start in this business on June 19 as a Field Aide GS-4 at \$2,875 per annum. On March 30, 1952, I got a raise to Forester GS-7 (\$4,205). It was announced by a handwritten note on a 3X5 slip of paper. It read: "Mal, My congratulations on your grade promotion. It was well deserved and I hope will keep the wolf from the door awhile longer. FPK"

My main job was to survey insect infestations, mainly bark beetles, for planning control operations, which were still done mainly by fell-peel-burn but also by salvage logging where feasible. Thus, I did a lot of pacing and sampling after which I wrote reports.

Each fall, I also wrote the annual California Forest Insect Conditions report and took the type-written master copy to Sacramento for publishing by the Calif. Div. Forestry. Paul liked my writing. Along with my big ears, I seem to have inherited this quality, there being others of note in my lineage.

Paul retired in 1951 and was replaced by Charlie Eaton. The friendly pats ceased and I was offered a job at Intermountain Station, Ogden, UT in Oct 1954 after which I might just as well have been re-born. But, I will stop there and refer you to my Founders Award address for the thereafter of my career including some mention of Paul. Now, on with my recollections ... after Paul retired, he wrote-up the work (Tech. Bull. 1169) on cone and seed insects (1912-1917) that was done mostly at Ashland, Oregon, where Keen was hired as an Entomological Ranger in 1914 (He was number one on the Civil Service test). One of my regrets is that in 1953 he dropped-in and said that he was going to collect some Monterey pine cones for rearing insects and asked if I wanted to accompany him. I was still low on the ladder and didn't think that I could take the liberty to go. Read: I didn't think. That still brings me sadness to near tears.

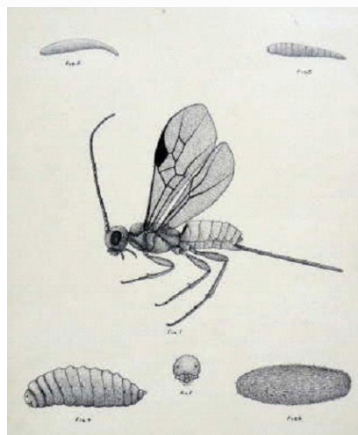
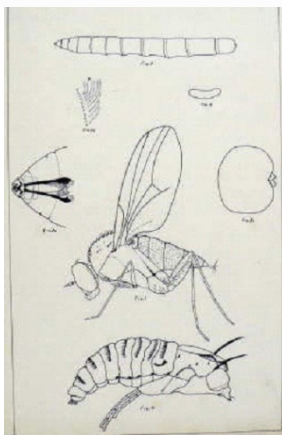
My transfer parted us except for a couple visits to his adobe home in Lafayette, CA. We did communicate by an occasional letter and exchanged Christmas cards from 1962-1979. His last Christmas card was written on Dec. 18, 1979, a month after his 89th birthday and 2 months before he died on Feb. 20, 1980. The last time that I saw Paul was in 1978 at Portland during the signing of the just-published book, *Insect Enemies of Western Forests* by R.L. Furniss and V.M. Carolin, which up-dated Paul's 1950 book. -- *Malcolm Furniss* --



Ernie Kolbe, left and **F. Paul Keen** (1890-1980) at Western Forestry Center, Portland, OR, May 19, 1978. The occasion was the signing of the just-published book, *Western Forest Insects*, by Robert L. Furniss and Val Carolin. Kolbe and Keen had been roommates after the Portland FIL opened in 1929 with Keen in charge and Kolbe was a forester with the Forest Service PNW experiment station. Keen subsequently headed the Berkeley FIL, 1942 -1951. Keen helped to develop the forestry curriculum at U.C. Berkeley from where he graduated in 1915. Among his contributions were a bark beetle susceptibility classification and publishing of the first manual on *Insect Enemies of*

Western Forests (1938, revised 1950), which was updated and expanded by R. L. Furniss & Carolin. Kolbe went on to be an executive with the Western Pine Assoc. and Director of the World Forestry Center in Portland where Keen and R.L. Furniss are included in the Memorial Gallery of people who have contributed to the advancement of forestry worldwide. Kolbe died a few weeks after this photo was taken. Mrs. Kolbe wrote: "I can't begin to tell you how much your pictures of Ernie, which arrived on his birthday, delighted me. ... you caught him just the way he was ... no other pictures show him like this. ... I will treasure them." Photo by M. Furniss.

Donald DeLeon (1902-1966) graduated from Syracuse University (B.S 1926, MS 1927). After graduation, he was employed at the Coeur d'Alene, Idaho, Forest Insect Laboratory (1928-31) studying the parasites, predators, and other insects associated with the mountain pine beetle (MPB) in western white pine and lodgepole pine (DeLeon 1929, 1930, 1931a, 1931b). He evidently took leave to study at Cornell University where he received his PhD in 1933. His thesis was entitled: "A study of the parasites & predators of the mountain pine beetle and an annotated list of its associated insects." The external & internal anatomy, biology, & habits of *Coeloides dendroctoni* & *Medetera aldrichii* were studied in detail. Included was an annotated list of 129 species of insects associated with the beetle with notes on their biology, occurrence & habits. Life stages of many of these insects were illustrated with drawings by DeLeon.



After receiving his PhD, he worked at the Berkeley Forest Insect Laboratory from where he wrote to Henry Rust at Coeur d'Alene in April 1934 that: "Am leaving for the Sequoia (National Forest) for 4 weeks on a topographic survey (of bark beetle-killed pines). *D.b.* (*Dendroctonus brevicomis*) and *D.m.* (*Dendroctonus monticolae*) are pretty thick but the country is so rough it's a heller to cruise."

He had spent a year in post-doctoral studies in France & Germany. During my employment at the Berkeley FIL (1950-54), I remember seeing a description by him of a procedure for inflating Lepidoptera larvae that he had learned in Germany. I took him to be a brainy, different kind of guy. For one thing, PhD's were scarce in Forest Insect Investigations at the time and no others had studied in Europe. I have always wondered about the lack of information about him. His obituary was written by Martin Muma, a mite/spider authority rather than by a forest entomologist. The only story that I heard was by R.L. Furniss, a student at Syracuse with DeLeon. It was something to the effect that DeLeon was bunking in an attic room and maintained that he could, by willing his mind, walk the length of the room in the dark. Dared, he immediately bumped his head on a rafter.



DeLeon is said (by Muma 1966) to have had 5 positions (not identified) with USDA, Bureau of Entomology from 1928 - 1950 and 2 positions with U.S. Foreign Aid Program in the Philippines from 1950-1953 when he retired. He was at the Fort Collins Forest Insect Lab after its re-opening in 1935 (Furniss 2007), which would be his 3rd known Bur. Ent. assignment. There, he was involved again with the mountain pine beetle but details are lacking. There are only 5 photos taken by him that are in the Fort

Collins FIL file, all taken in 1938: MPB cages at Elk Mtn., WY, and St Vrain, CO; and spruce budworm damage at Big Thompson, CO. The Fort Collins lab was closed in 1940 and no further mention is made of DeLeon having worked at any western FIL.

He apparently continued to jump around if he had 2 other USDA jobs (according to Muma) in the following decade after closing of the Fort Collins FIL. Inexplicably, he studied mite taxonomy after retirement and published often on mites in the Florida Entomologist between 1956-1966. At the time of his death, he was completing manuscripts on plant mites of Trinidad and the Ascas of the Caribbean area. Two of his publications (not seen) have intriguing titles (DeLeon 1937, 1963). Muma (1966) remembered his "quick, gently caustic, humor and sedate, humanistic, philosophy." DeLeon did not marry and lived the last years with his sister, Miss Gertrude De Leon "in a cabin on the creek" in the mountains above Erwin, Tennessee (Muma 1966). -- *Malcolm Furniss* --



Selected reports (on file at USDA-Forest Service R-1, Missoula, MT) and publications by DeLeon:

1929. Introductory study of the parasites, predators, and some other associated insects of the

mountain pine beetle in lodgepole pine. Coeur d'Alene FIL. 20 pp., illus.

1930. *The parasites, predators, and associated insects of the mountain pine beetle (Dendroctonus monticolae Hopk.) in lodgepole pine. Cd'A FIL. 75 pp., illus.*

1931a. *An annotated list of the fauna associated with the mountain pine beetle in western white and lodgepole pine. Cd'A FIL. 23 pp.*

1931b. *The important parasites, predators, and associated insects of the mountain pine beetle in western white pine. Cd'A FIL. 65 pp., illus.*

DeLeon, D. 1934. *The morphology of Coeloides dendroctoni Cushman. J. NY. Ent. Soc. 42: 297-316.*

DeLeon, D. 1937. *An interesting hoax perpetuated in an early scientific bulletin. Science, 2243: 588-589.*

DeLeon, D. 1963. *A new Dermatophagoides: It prevents the rising of self-rising flour (Acarina: Epidermoptidae). The Florida Entomologist, 46: 247-250.*

Furniss, M. M. 2007. *A history of forest entomology in the Intermountain and Rocky Mountain areas, 1901 to 1982. USDA Forest Service, Gen. Tech. Rep. RMRS-GTR-195. Fort Collins, CO. 40 pp.*



Personnel of the Division of Forest Insect Investigations, Bureau of Entomology, USDA, at a survey methods workshop, Fort Collins, CO, Feb. 1951. Prior to this time, large (up to 640 ac), permanent, plots were in use in the pine region east of the Cascade Mountains in Pacific Coast states. They were installed initially by F. Paul Keen to measure trend of pine mortality and to develop his "Keen susceptibility classification." Now, in 1951, an infusion of post-war personnel, use of airplanes, and insect population studies, contributed to the testing and development of various new survey methods for different purposes. At the Berkeley lab, Ralph C. Hall enlisted others on the staff, including me (M. Furniss), to sample bark beetle infestations with temporary circular plots at intervals along paced compass lines. This method was used to estimate the number and volume of beetle infested trees for direct control purposes and also for stratifying old growth stands by degree of "hazard" (susceptibility to bark beetles). After Keen's retirement in 1951, the long-term permanent plots were no longer surveyed, ending that era.

(From left) Front row: Ralph C. Hall, Jack W. Bongberg, Phillip C. Johnson, Ed Merkel, (Row 2): Leslie W. Orr, Jack M. Whiteside, Wm. E. Waters, Harvey J. MacAloney; (Row 3): John F. Wear, Noel D. Wygant, Robert C. Heller, Bill H. Wilford, Richard I. Washburn; (Row 4): Wm. F. McCambridge, Tom T. Terrell, Fred B. Knight, S. Davidson. (WFIWC archives, Coeur d'Alene FIL #1436).



John M. Miller (1882-1952) is my candidate for #2 after A.D. Hopkins on the list of those most influential in the formative years of American forest entomology. John's interesting life is told by [Wickman \(2005\)](#), enhanced by material provided by John's surviving family ... highly recommended. Download at http://www.fs.fed.us/pnw/publications/pnw_gtr638/. My purpose here is to provide some personal recollections. From 1950-1952, I knew him as an office mate at the Berkeley Forest Insect Lab in the basement of Mulford Hall on the U.C. campus, and in other ways. A few anecdotes come to mind.

In 1951, I was assigned by Paul Keen to conduct a bark beetle hazard survey on 95,000 remaining acres of old growth pine on the Lassen N.F. Purpose was to direct sanitation-salvage logging into stands expected to suffer severe loss from bark beetles. I, and my Bureau of Entomology crew, worked out of Blacks Mtn. Experimental Forest headquarters (a Forest Service facility). It was customary for Bureau of Entomology employees to "cooperate 110%" as my boss, Jack Bongberg would say. One way we could repay our presence there was to help lay-in the winter wood supply. While stacking wood in the storage shed, one crewman stepped on a nail necessitating filing a CA-1 accident form. Paul Keen received the form and, after I got back to Berkeley, he came into my shared office, stood before me with a stern look, and asked: "Was this official business?" Before I could answer, John said: "Well, it may not have been official business, but it was damn good business." With that, Keen turned and left. I was one year into my employment and only in grade GS-5; you can't imagine my relief at John's response!

Photography. John was a master of large format black & white photography. I have prints of his photos of dead lodgepole pine in Tenaya basin, Yosemite N.P., early in the last century and had the extraordinary experience of re-photographing them in 1953 and 1984 (Furniss 2007). In 1951, I had some exposed 4X5 film that I wanted to print. He took me up to the third floor darkroom of the Forest Experiment Station, which occupied that floor and set-up trays containing developer, etc. Then, he turned on the enlarger and counted seconds(!) to expose the image. He left me to wash the prints which was said to take perhaps an hour. I decided to go downstairs and do some work in the meantime. When I went back, there was much commotion. The sink had overflowed and flooded through the floor to the ceiling of the forestry library below!

Urban wildlife. John was a financial supporter of the Berkeley YMCA and he rented a house owned by them. My family (Irene and 2 children) had been living in the WW II Kaiser shipyard housing in Richmond and my ears perked-up when I heard John mention that he would be moving out. He agreed to put in a good word for me and we were accepted as tenants. However, John thought it appropriate to tell us that the place

came with some "wildlife." They turned out to be a very large population of mice. In our first day there, we set traps and could barely sit down before a trap would snap.

Early in 1952, John took on an entomology assignment in Mexico with the United Nations Food & Agriculture Organization. The folks at the Lab gave him a big send-off at a local restaurant. I was surveying mountain pine beetle-infested sugar pine on the Sierra N.F. that spring when I received a phone call notifying me of his passing. I brought some pine boughs for his casket at the funeral. Even now, typing this brings tears to my eyes. John was a very special person. -- *Malcolm Furniss* --

References

Furniss, M. M. 2007. Forest entomology in Yosemite National Park: Creation of the Tenaya Ghost Forest and glimpses of forest renewal, 1903-1984. Amer. Entomol. 53: 202-207.

Furniss, M. M. 1953. Inventory of current bark-beetle hazard in yellow pine stands of the eastern Lassen area, Lassen National Forest - California. Forest Insect Laboratory, USDA, BE & PQ, Division of Forest Insect Investigations. Mimeo. 10 p + map.

Wickman, B. E. 2005. Harry E. Burke and John M. Miller, pioneers in Western forest entomology. Gen. Tech. Rep. PNW-GTR-638. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 163 p.



Stephen L. Wood, a scolytid taxonomist, has dominated this field since he received his PhD from University of Kansas in 1953 (Cryphalini). His first job was at Ottawa (1953-56) where Karl Schedl also worked. Thereafter, he accepted a position as professor of entomology at Brigham Young University in his home state of Utah and continues working on Scolytidae (he insists that they stay a family) since retiring. It is impossible to measure or to characterize the importance of his work in other than personal terms. I came along in forest entomology about the same time, first in the role of a forester, then entomologist, and now of a sort that defies classification. Oh, I guess naturalist comes to mind, others may have different names! But, what I wish

to say is that by the time I retired in 1982, I had traveled and collected (read observed, admired) scolytids widely in western North America. Hundreds of these collections were alive, in their host, and were reared subsequently. I kept Steve busy identifying them (!) and thereby built the scolytid collection at the University of Idaho Barr Museum into a major one.

Now (in 1982), I was in happy circumstances. The taxonomy and related literature that had been so fragmented, was now packaged in Steve's monograph of that year.

Additionally, Donald E. Bright, Jr. had revised the large and troublesome genus *Pityophthorus* and published on the scolytids of Canada; and R.L. Furniss and V.M. Carolin had published their book on western forest insects. This led to much fruitful work in the intervening years and has, indeed, helped to make me competent to identify the native scolytid fauna of the areas extending from Mexico to Alaska that I have visited. Thus, largely through Steve's incomparable contributions to scolytid taxonomy and his welcoming all those specimens that I sent to him, much of what I have done flows from him. It is interesting to note that Steve's own attraction to scolytids came about through outings in Utah with his uncle, Ted Thatcher, who taught forest entomology at Colorado State University. Here is his account: "*The first insect I examined critically and collected for permanent preservation was Trypodendron retusum LeConte. At the age 14 years I was introduced to it by T. O. Thatcher on 21 June 1939 at Lehman Creek Canyon, White Pine County, Nevada, near the base of Wheeler Peak. The attraction was immediate and permanent.*" What date (calendar or any other) at age 14 do I remember? Nil, as they say in British soccer. -- *Malcolm M. Furniss*

Stephen Lane Wood, 84, of Provo, Utah, died July 1, 2009. His scolytid collection, which he estimated to number around 100,000 specimens, has been donated to the U.S. National Museum in Washington, DC.



"**The Palouse Trio**," written on back of print by Alan Berryman (1937-2018), at left, shown at a get-together with Ronald Stark (1922-2002) and Mal Furniss, Dec. 29, 1985. Alan was Ron's student at Berkeley before becoming a professor at Washington State University in the 1960s. At WSU, he studied host relationships of *Scolytus ventralis* and *Dendroctonus ponderosae*. He also cooperated with Erik Christiansen on similar studies of *Ips typographus* in Norway. Ron came to UC

Berkeley from Canada in 1958. In 1970, he accepted the position of graduate dean/coordinator of research at the University of Idaho where he was also a professor in the College of Forestry. His biography is in his WFIWC [Founder's Award address](#) and in the obituary by Mal and Alan and others (American Entomologist 49(1) 2003). Mal studied forestry at UC, was hired by Paul Keen in 1950, and came Moscow, Idaho, with the Forest Service when the Forestry Sciences Lab opened in 1963. His checkered career is detailed in his Founder's Award address on the WFIWC website. For those unfamiliar with the Palouse, it is a hilly area composed of loess soil and home of WSU and UI, which are 9 miles apart with the Washington/Idaho state line between. -- *Malcolm M. Furniss*"



Robert L. Furniss (1908-1980) with a bonsai Mugo pine at his Portland, OR, home ca 1974 ([Furniss 2006](#), Fig.8B). Through his assistance with insect problems in post-war Japan during 1949-1950, he gained the respect of Japanese involved with forest protection. As a gesture of their esteem, they wanted to present him with a special bonsai tree; however, regulations prohibited its import into the U.S.

In 1962, Lillian Keen, wife of the well-known California forest entomologist, F. P Keen, gave Bob his first bonsai (Norway spruce). That caused him to take-up the exacting art of propagating and training these miniature trees such as the one shown. Like all of his endeavors, he exhaustively researched the subject and created some lovely examples that were admired greatly. However, he dismissed his creations as "amateurish examples of the art. Some day I hope to shape them up into the real thing. After 17 years of effort, it remains only a hope.& (written 11 months before his death).

The quote is taken from a letter to Dennis Hamel, Forest Service Washington Office, who was wanting Bob's recommendation for a bonsai to be presented to the National Arboretum on the 75th anniversary of the Forest Service. Bob was making it clear that none of his was to be considered. Instead, he recommended contacting "Dan Robinson a trained forester, bonsai expert and landscaper who has numerous fine specimens for sale at his nursery in Bremerton, WA." Subsequently, Robinson provided a ponderosa pine from the Gifford Pinchot N.F., Washington, which became the first native American bonsai in the arboretum. The naturally dwarfed tree was 56 inches tall, 14 inches in basal diameter, and was estimated to be about 150 years old. It was presented by Chief

Forester Max Peterson and Hamel and Robinson on October 28, 1980. Bob Furniss died only weeks afterward, unaware that his suggestion had been followed.

In March 2009, I inquired to Jack Sustic, Curator, National Bonsai & Penjing Museum, and received the following reply: "I received your letter and am happy to tell you that the ponderosa pine is alive and well. The National Bonsai Foundation did a great piece on the repotting of the ponderosa pine. You can see it at the following address:

http://www.bonsai-nbf.org/site/whats_new_archive4.html



There are some great shots of the tree in that story. As you can see in the final shot it is in a very prominent spot in the museum. It has always been and remains today one of the visitors' favorite trees." -- *Malcolm M. Furniss*



F.C. Craighead (1890-1982) shooting his muzzleloader rifle at "the Lock House" near Washington, DC, 1939. Photo by R.L. Furniss who was on detail there from the Portland, OR, Forest Insect Lab. Craighead succeeded A.D. Hopkins in 1922 as Chief of Forest Insect Investigations, Bur. of Entomology. Craighead's twin sons, Frank and John were prominent wildlife biologists in the Yellowstone area.

I was thirteen when my brother, Bob, came east, visiting the family home in Waverly, NY, en-route to Washington. He was 18 years older and I idolized him. He took me for a hike in the woods. I remember that he carried an unsheathed double bit axe (2-1/2 lbs, 26 inch handle) and he would throw it at stumps as they do in loggers' contests. God, how I wanted to be like him! Well, somehow that has played out. And, in my early career, I did indeed always carry such an axe ... never sheathed (damn thing is a nuisance), even during many days of snowshoeing alone, spotting sugar pines infested with mountain pine beetle on the Sierra N.F. (1952). The trick is to grip the handle up close to the cutting head ... and throw it when falling!

To finish the story ... Bob and Frances were staying in Virginia and invited me and my sister, Jackie, down for a visit. I had always carried the memory of going out by a river where Bob and another man shot a rifle. After Bob's death, I inherited his photos and discovered that I had been there when this photo was taken! -- *Malcolm M. Furniss*



Phillip C. Johnson (1907-1981) (left), INT, Missoula, Montana, and Hector A. Richmond (1902-1989), Head of the Victoria, Canada, Forest Insect Lab, visiting the Cabinet N.F., Montana. June 15, 1950. Johnson was Secretary-Treasurer of WFIWC for many years beginning with its creation in 1949. Richman was also one of the Founders and was elected Chairman at that first meeting. The banquets at the annual conferences were rollicking affairs and, with sufficient encouragement from the crowd, Hec would recite his humorous non-stop, rapid-fire rendition, of the polysyllabic spelling by little "Archibald.Arsolin." Always my favorite part! Hec recorded his autobiography in the book, *Forever Green* (1983). In 1986, he published *Forest Entomology: From pack horse to helicopter* as Pest Management report No. 8, B.C. Ministry of Forests & Lands, 44 p. Both highly recommended reading. -- *Malcolm M. Furniss*



Meeting of **staff of western forest insect labs** at Berkeley, 1942. Row 1 from left: A.L. Gibson (Coeur d'Alene), D. DeLeon. Mrs. Weaver (Sec.), C.B. Eaton. Row 2: J.C. Evenden (Coeur d'Alene), F.P. Keen, G.R. Struble, N.D. Wygant (Fort Collins), J.S. Yuill. Row 3: J.M. Miller, P.C. Johnson, John Johnson, R.C. Hall, J.E. Patterson. Back row: Milt LaBallister (clerk), K.A. Salmon, R. Nagle (Fort Collins), J.W. Bongberg, Howard MacKenzie. All were located at Berkeley except as noted. Keen had just taken over the Berkeley Lab, being replaced at Portland by R.L. Furniss (missing from photo). Wygant had just left Berkeley to reopen the Fort Collins Lab. Salmon would soon prefer

charges against F.C. Craighead (Wash. DC) and leave the Bureau to become a dairy farmer near Madera where I saw him in 1952. MacKenzie studied scales and went to work for the Calif. Dept. Agriculture at Sacramento. DeLeon also left the Bureau. Yuill subsequently transferred to Beltsville, MD. In 1951, Eaton replaced Keen at Berkeley and Bongberg went to Albuquerque. Two very prominent sub-professional workers, Tom T. Terrell (Coeur d'Alene) and Walter J. Buckhorn (Portland) were not present. -- *Malcolm M. Furniss*



"Pacific Slope Station" staff, Palo Alto, CA. 1925. From left: F.C. Craighead (visiting from Washington, DC), John M. Miller, H. L. Person, F. Paul Keen, James C. Evenden, unknown, Harry E. Burke. The five named Palo Alto staff constituted the entire college-educated forest entomologists employed by the Bureau of Entomology in the western U.S. at the time. Craighead was Chief of Forest Insect Investigations having replaced A.D. Hopkins in 1922. He had specialized in taxonomy of Cerambycid larvae. Miller was in charge of the station. Person was involved with physiology of tree susceptibility. Keen succeeded Miller later after the Station moved to Berkeley and developed the first bark beetle susceptibility classification. Evenden was head of the Coeur d'Alene, Idaho, Lab. Burke was the second forest entomologist trained in the U. S. He specialized in Buprestidae. I knew three of these men well (Miller, Keen, Evenden). -- *Malcolm M. Furniss*



Western personnel of the Division of Forest Insect Investigations(FII) at Pingree Park, CO, ca 1937. Front row from left: F. C. Craighead, Chief, Washington, D.C.; D. De Leon; J. A. Beal; C. L. Massey; J. C. Evenden; unknown; W. Howe. Back row: G. R. Hopping; unknown; F. P. Keen; J. M. Miller; N. D. Wygant. Craighead was 2nd Chief of FII (1922-1950), succeeding A.D. Hopkins. Beal was head of the Fort Collins, CO, lab at the time; he succeeded Craighead as Chief of FII. Wygant succeeded Beal at Fort Collins. Miller was head of the Berkeley lab; Keen was head at Portland; and Evenden was head at Coeur d'Alene. Massey spent his career at Fort Collins and Albuquerque, specializing in the taxonomy of nematode parasites of bark beetles. Hopping went to Calgary, Canada, and revised the genus *Ips* in his later years. ([Furniss 2007A](#), Fig. 8).



Josef Brunner (standing left), **Frank F. Liebig** (next to Brunner) and **S. A. Silcox** (standing, far right) at meeting of Blackfeet National Forest personnel, Point of Rocks, MT, 1910. Brunner, a Bavarian, was hired in 1909 by A.D. Hopkins, Chief of Forest Insect Investigations, Washington, DC, to investigate forest insects in the

northern Rocky Mountains. Silcox was equivalent of Regional Forester at the time and later became Chief Forester. The position of Brunner and Silcox at opposite sides in the photo is not coincidental. Brunner was a temperamental person continuously at odds with the Forest Service over the relative importance of fire and insects. Besides, Silcox didn't like tobacco smoke! Liebig worked for Brunner briefly; Brunner said of him: "Liebig cannot be learned anything." ([Furniss 2003](#), Fig. 6).



Personnel of **Intermountain Station, Division of Forest Insect Research**, at staff meeting, Missoula, MT, May 3-5, 1965. Front row from left: David G. Fellin, Charles A. Wellner, Donald E. Parker, Walter E. Cole. Back row: Richard F. Schmitz, Robert E. Denton, Malcolm M. Furniss, Richard I. Washburn, Phillip C. Johnson. In 1961, the designation, "Forest Insect Laboratory" was replaced by the "Division of Forest Insect Research" headed by a Division Chief (Parker at Ogden) and Research Work Units headed by a Project Leader (Johnson at Missoula). At the time of this photo, still more reorganization had occurred. Forest Insect research was now grouped with other disciplines under an Assistant Station Director (Wellner at Ogden). Parker retired soon after. Furniss retired in 1982, ending the continuous residence of a USDA research forest entomologist in Idaho since the Coeur d'Alene Lab was established in 1919. Fellin retired 1986, ending the residence of such personnel in Montana since Josef Brunner was hired in 1909. ([Furniss 2007A](#), Fig. 25) The order of people in the caption of the published figure was reversed and the wrong year shown.



Staff of the Coeur d'Alene FIL and Washington Office visitors on a field trip in the Coeur d'Alene N.F, Idaho, ca 1952. Front from left: Archie Gibson, James A. Beal (WO), James C. Evenden, Phillip C. Johnson. Standing: Harvey J. MacAloney (WO), Robert E, Denton, Galen C. Trostle, Tom T. Terrell. Beal was the 3rd and last Chief of Forest Insect Investigations, which was disbanded in 1953 and transferred to the Forest Service. Evenden established the Coeur d'Alene lab in 1919 and was its leader until he retired and it was moved to Missoula, MT in Jan. 1955. ([Furniss 2007A](#), Fig. 24).



A.D. Hopkins, far right, in the Black Hills, SD, in July 1902. Others from left: Hopkins' employee, **Jack Webb**, and Pathologist **Hermann Von Schrank** and his assistant. Hopkins had just become Head of the newly created Division of Forest Insect Investigations, USDA, after 12 years at WV University. Webb, who studied under

Hopkins, was the first college-trained forest entomologist in America. At the request of Gifford Pinchot, Hopkins was investigating a bark beetle outbreak in ponderosa pine. He referred to it as "the pine-destroying beetle of the Black Hills," shortening it later to "the Black Hills beetle." He described it as *Dendroctonus ponderosae*; it is now known as the mountain pine beetle and infests several pine species in the western United States and western Canada (photo from Burke 1946). ([Furniss 1997](#), Fig. 2).



Andrew D. Hopkins (right), Assistant Forest Experts **Harry E. Burke** (left, seated) and **Jesse L. Webb** (middle). **F.C. Pratt**, Assistant in Truck Crop Investigations, is standing. This office was occupied by forest entomologists after creation of the Division of Forest Insect Investigations, USDA, in 1902. Webb and Burke were the first forest entomologist to receive college training in America. Hopkins is credited with the idea that entomologists of the Division should choose a taxon of insects in which to specialize. Hopkins specialized in Scolytidae; Webb in Cerambycidae and Burke in Buprestidae (Burke 1946). ([Furniss 2003](#), Fig. 8).



Andrew Delmar Hopkins (1857 -1948), whose education was restricted to county schools, came off a West Virginia farm at age 37 to have a most unlikely career at West Virginia University and as first Chief of Forest Insect Investigations in the USDA. This photo is dated 1909, the year of his classic publication on the bark beetle genus *Dendroctonus* and the year that he hired Josef Brunner to investigate forest insects in the northern Rocky Mountains. Bureau of Entomology photo 17310, WFIWC archives. ([Furniss 2003](#), Fig. 1).



Jim Evenden in a bark beetle control camp, Big Hole Basin, MT, ca 1930. Evenden headed the Coeur d'Alene Forest Insect Lab that gave technical supervision to control projects in the northern Rocky Mtn. region. He was a big guy (played football at Oregon State College) and most at home in this attire and environment. For a short while in 1954, he was my (M. Furniss) supervisor. The Division of Forest Insect Investigation had just been disbanded and we were transferred to the Forest Service. I was classified as a forester (B.S. degree with minor in entomology) and concerned about my career; at my request (helped by Irene's dinner and biscuits ... see [my Founders address](#)), he had me reclassified as an entomologist. Photo 352, WFIWC archives. ([Furniss 2003](#), Fig. 7)



Forest entomologists at a conference in Portland, OR in 1936: (from left, kneeling) J.C. Evenden, Coeur d'Alene, ID; J.A. Beal, recently transferred to Fort Collins, CO; R.L. Furniss, Portland; (from left, standing) W.J. Buckhorn, Portland; F.C. Craighead, Washington, D.C.; A.J. Jaenecke, Forest Service, Portland; J.M. Miller, Berkeley, CA; and F.P. Keen, Portland. Keen replaced Miller as leader at Berkeley in 1942 and R.L. Furniss took over at Portland. Photo 327 by R.L. Furniss, WFIWC archives. ([Wickman et al. 2002](#), Fig. 5).



In April 1915, **A.D. Hopkins** (left), Washington, D.C., visited the Ashland, Oregon, station on his last western trip. Others from left are: Walter E. Glendinning, John M. Miller, John E. Patterson, Jules D. Riggs, P.D. Sergent and F. Paul Keen who had just been hired as Entomological Ranger. The station existed from 1913-1923 during which time cone and seed insects and bark beetles were studied. Photo 15919 by J.E. Patterson. ([Wickman et al. 2002](#), Fig.1 B)



(l to r) **F.C. Craighead**, **W.D. Edmonston**, **G. Hofer** and **F.P. Keen** at Mile-and-a-Half Cabin, Kaibab N.F., Arizona. Sept. 3, 1924. Craighead was second Chief of Forest Insect Investigations, Wash. D.C.; Edmonston and Hofer were stationed in the Rocky Mtns. Keen was on a detail from the Palo Alto, CA, Station to the Kaibab N.F. to supervise control of a Black Hills beetle (= mountain pine beetle) outbreak. Photo no. 5548, WFIWC archives. ([Furniss and Wickman 1998](#), Fig. 3).



Palo Alto Station force, Stanford University (l. to r.): John M. Miller, F. Paul Keen, Hauge, Tatro, Morrow, H.L. Person, Harry E. Burke, John E. Patterson. Feb. 1925. This station existed from 1923 to 1930 when it was relocated to Giannini Hall, U. California, Berkeley. Miller, Keen, and Patterson were stationed at Berkeley until they retired; Burke retired at Los Gatos where he had been studying shade tree insects. Brothers Robert L. Furniss (1908-1980) and Malcolm M. Furniss, (1926-), were hired by Miller (1930) and Keen (1950), respectively. ([Furniss and Wickman 1998](#), Fig. 1). Photo no. 2354 by J.E. Patterson, WFIWC archives.



James A. Beal removing bark from a ponderosa pine infested with western pine beetle, Sisters, OR. June 1933. Beal and other entomologists of the 1930s era routinely climbed trees even in subzero weather to monitor mortality of broods of this beetle. Beal subsequently headed the Fort Collins FIL, then taught at Duke before becoming the third and last Chief of Forest Insect Investigations, BE&PQ, in Washington D.C. The Bureau was disbanded in 1953 and FII personnel, including M. Furniss and Boyd Wickman were transferred to the Forest Service. ([Wickman et al. 2002](#), Fig. 3) WFIWC archives photo 8798 by J.M. Whiteside.



Forest Insect Laboratory personnel, University of California, Berkeley (front, 1. to r.): F. Paul Keen, Edith E. Black, John M. Miller, (back row): George R. Struble, Ralph C. Hall, John E. Patterson, Phillip C. Johnson. January 25, 1946. Missing is Jack W. Bongberg, apparently still in U.S. Navy. Johnson transferred to Coeur d'Alene, ID that year. Photo no. 13,259-a, WFIWC archives. ([Furniss and Wickman 1998](#), Figure 2)



Paul Keen developed a widely acclaimed tree classification by which susceptible pine trees could be logged selectively to prevent loss by bark beetles. The classification was derived from pine stands east of the Sierra-Cascade mountains from California to Washington. Walter Buckhorn acquired much of the field data used by Keen. Weyerhaeuser Company paid tribute to Keen's achievement by commissioning this painting by Stan Galli that appeared in national magazines. Note details such as the western pine beetle galleries, dark areas on sapwood caused by blue stain fungus, and the woodpecker work on outer bark. ([Furniss 2000](#), Fig. 6).