

Vignettes from the Past: H. E. Burke

The Greatest Need in Western Forest Entomology (1925)¹



Background. During 1923 - 1930, personnel of the Division of Forest Insect Investigations (USDA Bureau of Entomology) assigned to the "Pacific Slope" were stationed at Stanford University, California. Prominent among the staff were Harry E. Burke (1878-1963), John M. Miller (1882-1952) and F. Paul Keen (1890-1990). They were among the very first graduates hired by Andrew D. Hopkins (1857 -1948), who began the discipline of forest entomology with his discovery of a vast outbreak of southern pine beetle in 1890 in West Virginia (Furniss 2010). Burke was remembered by Keen as a personable fellow always interested in the work and welfare of others in the Division. My own impression from photos of him (attire, stance, expression) is one of a relaxed, very informal guy. Burke's Recollections (Burke 1946) and his being editor of the Western Forest Insect News reflect that he was also a person of broad entomological interests and who did much to preserve history of that formative time. Both attributes are captured in the following from the May 1925 Newsletter:

"In the opinion of the writer the greatest need in western forest entomology is the development of an attractant which will draw the destructive pine bark beetles into traps of poor trees where they can be destroyed without loss of valuable timber, or a repellent which will keep them out of the largest, older trees which produce the finest, most valuable timber. Either would solve the pressing problem of saving our last stands of most valuable fully mature timber. Both could be used profitably.

The Western Pine Beetle probably destroys more valuable timber than any other insect on the Pacific Coast. In our principal pine belts it attacks only the yellow (ponderosa) pine. It does not attack sugar pine, Jeffrey pine, mountain pine (lodgepole?), white bark

pine, knob cone pine or pinyon. If we knew the exact chemical substance which causes this beetle to select only the yellow pine instead of the sugar pine or Jeffrey pine we might spray the trunks of Jeffrey pine and sugar pine with this substance and trap the beetles into trees in which its broods could not develop. At the very least, we should be able to get the beetles to attack the stunted and worthless yellow pine trees and pass by the most valuable ones. The attacked trees could then be treated and the control conducted without serious loss to the stand. On the other hand, if we knew a real repellent substance that would absolutely prevent attack, or even prevent attack in the majority of cases, we could spray trees of special value and save them from the insects. Such trees are those found around summer resorts and recreational grounds, in scenic localities and the better trees in the timber forests.

Which are the most valuable trees in the timber forests? Are they not those old monarchs with their thousands of feet of clear lumber? They are slow growing or possibly not growing at all, but they are reservoirs of the most valuable timber which we have today and which we probably will never be able to replace. Possibly because of their slow growth, or for some other unknown reason, they appear to be particularly attractive to the beetles. The largest yellow pine the writer ever saw had been attacked and killed the year before by the Western Pine Beetle and the largest sugar pine was being attacked by the Mountain Pine Beetle and probably died within the next three years. If an efficient repellent was developed, the timber owners would be glad to use it on their trees of special value. It is from these trees that they get their profits. The way the price of timber is apt to raise in the future it will not be very long before many of our Pacific Coast yellow pine and sugar pine will be valuable enough to treat providing an efficient repellent is developed.

There certainly is some real reason why bark beetles will attack one tree and will not attack another tree which so far as we can determine at the present time is identical. The determination of this reason is fundamental. Isn't it about time that we started working out the solution of this problem?"

-- *H.E. Burke*

Footnotes:

¹ *Western Division Newsletter, Forest Insect Investigations, Bureau of Entomology, USDA. Palo Alto, California. May 1, 1925. p7.*

References:

Furniss, M. M. 2010. *Beginnings of American forest entomology: The role of Andrew Delmar Hopkins (1857-1948).* *American Entomologist* 56: 78-87.

Burke, H. E. 1946. *My recollections of the first years of forest entomology.* *Division of Forest Insect Investigations, Bur. Entomol. Plant Quar., Berkeley, CA*