Inventing the Pulaski

Gerald W. Williams

Most firefighters know that the pulaski firefighting tool was named for Ed Pulaski, the hero of the Big Blowup of 1910. Pulaski, a jack-of-all-trades, is often credited with inventing the tool in the years following the Big Blowup. However, stories abound about the tool's invention, and not every account is the same.

Early Tools

James B. Davis (1986), a research forester for the USDA Forest Service, noted that the Collins Tool Company developed a tool as early as 1876 that was designed to clear land. This farm tool, still on display at the Smithsonian Museum of Arts and Industry, looked and functioned essentially like today's pulaski. It is not clear why the Collins land grubbing tool was not used either to put out fires or as a model for a practical firefighting tool.

As Davis (1986) points out, early fire tools were whatever firefighters happened to have available. Early firefighting usually involved "knocking down" or beating out the flames, because water was generally not available. Beating out was usually done with a coat, a slicker, a wet sack, or even a saddle blanket. "A commonly used tool," notes Davis (1986), "was a pine bough cut on arrival at the fire edge." Farming and logging tools came into use, including the shovel, ax, hoe, and rake. "[L]ittle thought was given to size, weight, and balance," notes Davis (1986).

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For many years, "ranger inventors" toyed with the idea of building one tool that could do several jobs and be carried on a horse or pack mule and by a firefighter or tree planter. Many variations of such tools were tried and discarded. Several did rise to the top, including the Macleod tool, invented in 1905 by Ranger Malcolm Macleod on the Sierra National Forest in California. This sturdy combination rake-and-hoe or ax-and-mattock has withstood the test of time, although it never gained the popularity of the pulaski.

Pulaski Origins

Davis (1986) describes the pulaski's disputed origins. Earle P. Dudly claimed to have invented a pulaski-like tool by having a local blacksmith modify a lightweight mining pick. He said he used the tool for firefighting in the Forest Service's Northern Region in 1907.

William G. Weigle, supervisor of the Coeur d'Alene National Forest, also took credit for inventing a pulaski-like tool, though not for firefighting. Weigle wanted a new tool to replace the mattock for planting and other forestry work. In late 1910 or 1911, Weigle sent Rangers Joe Halm and Ed Holcomb to Ranger Ed Pulaski's home blacksmith shop to turn out a combination ax, mattock, and shovel.

Firefighters with pulaskis in Oregon in 1939. By the 1920s, pulaskis were a standard firefighting tool throughout much of the United States. Photo: Ray M. Filloon, USDA Forest Service, Umatilla National Forest, OR, 1939.

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The device proved to be too awkward for use as a planting tool. But Pulaski kept using and improving it. He abandoned the shovel part and reshaped the ax and mattock blades. By 1913, he had a well-balanced tool with a sharp ax on one side and a grubbing blade on the other.

By 1920, the Forest Service's Northern Region had "adopted the tool as its own," according to the fire historian Stephen J. Pyne (2001). The Forest Service asked for commercial production in quantity, and the pulaski and shovel soon became "the dominant, defining tools of fire control" (Pyne 2001).

Pulaski Legend

Ed Pulaski might not have invented the tool that bears his name, but he certainly helped to develop, improve, and popularize it (Davis 1986). Today, many thousands of pulaskis are ordered every year by the Federal Government, as well as by State and county firefighting organizations. Forestry supply catalogs always seem to have a category for pulaski fire tools.

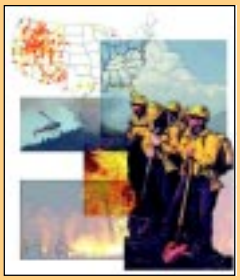
For more than 75 years, firefighting has been defined by the tool named for Ed Pulaski. Pyne (2001) calls it "the supreme fire tool," noting that it "embedded the legend of 1910 more firmly than any agency stunt, congressional memorial, or recovered memory." Every time a firefighter reaches for a pulaski, he or she figuratively retells "the story of Big Ed and the Big Blowup, the saga of the Great Fires and the year that tried to contain them" (Pyne 2001).*

References

Davis, J.B. 1986. The true story of the pulaski fire tool. Fire Management Notes. 47(3): 19–21.

Pyne, S.J. 2001. Year of the fires: The story of the Great Fires of 1910. New York: Viking. ■

* For the story of Ed Pulaski, see the article by Jerry Williams on page 19 of this issue.



Your National Fire Plan at Work*

Assessing Postfire Emergency Rehabilitation Conditions

Funded by the National Fire Plan (NFP), scientists at the USDA Forest Service's Southwest Forest Science Complex (SFSC) in Flagstaff, AZ, are providing land managers with postfire data from predictive models to help prevent erosion and catastrophic flooding. The models are also used to research the effects of erosion on wildland fire, vegetation treatments, hydrology, and geomorphology.

Similar SFSC research efforts using NFP monies include collaboration with the Joint Fire Sciences Program (JFSP) to link a study about the effectiveness of contour-felled logs in retaining soil in high-severity burned areas to research about postfire watershed responses.

Other efforts by SFSC scientists using NFP funds include:

- Signing agreements to collaborate with other research institutions in updating a model that identifies time trends in watershed response and monitors water yield responses to wildland fire and fuels reduction treatments in the Southwest;
- Researching soil chemical or physical properties after a fire or after fuel treatments, in partnership with a JFSP study on the microbiological effects of fire in ponderosa pine ecosystems;
- Restoring a gauging station in the Workman Creek watershed, Sierra Ancha Experimental Forest, to continue to monitor water and sediment yields from the Coon Creek Fire in Arizona;
- Remeasuring riparian geomorphic and vegetation transects on four streams in and adjacent to the 1991 Dude Fire in Arizona's Tonto National Forest; and
- Preparing a manuscript for publication in 2002 on the processing of archived hydrologic data used to assess the effects of wildland fire on postfire snowmelt hydrology. ■

Occasionally, Fire Management Today *tells a success story or describes an exemplary project under the National Fire Plan. Readers can find many more such accounts on the Website for the National Fire Plan at <http://www.fireplan.gov>.*