



# Western Forester

October/November/December 2021

## The Evolution of Consulting Forestry: The Mason, Bruce & Girard Experience

By Roger G. Lord, ACF

In America, the business of consulting forestry has been around as long as the forestry profession. In fact, Gifford Pinchot, the nation's first trained forester, opened an office in New York City and placed upon the door the unique title "Consulting Forester" way back in December 1893. The first forestry schools in the US emerged around the turn of the century. Most early foresters, however, were employed by the newly created U.S. Forest Service or lumber companies. Consulting foresters were rare. One source opines that in 1910 there were probably fewer than a dozen consulting foresters nationwide. During the 1920s their numbers increased slowly, but they were set back during the Depression years of the 1930s. It was not until the 1940s that numbers began to increase significantly. In 1949, the SAF estimated 150 firms were selling professional advice or services, and em-



ploying more than 200 foresters in total.

Mason, Bruce & Girard (MB&G) is celebrating its 100th year of business in 2021. We have spent some effort researching and compiling a history and are struck by how the development of the company parallels the evolution of professional forestry and forestry consulting in America. We believe we are the oldest forestry consulting firm in the western United States and, so far as we know, second only to James W. Sewall Company of Old Town, Maine, which traces its roots back to 1880. If I am wrong about this assertion, please contact me with proof and I'll send you a bottle of Old Forester!

### MB&G's beginning

MB&G's founders were first-generation foresters. David Mason and Donald Bruce graduated from the Yale School of Forestry's 6th and 9th graduating classes in 1907 and 1910, respectively. Jim Girard, the eldest of the three, was a self-taught forester, roughhewn from the Tennessee Hills.

As is often the case today, our founders gained forestry work experience before entering the consulting world. Mason and Bruce had more than a decade of experience under their belts before becoming consultants. Girard pivoted to consulting after retiring from a long career in forestry. This career experience influenced how MB&G evolved over the years.

Like many foresters in those days, Mason's early career was in Pinchot's Forest Service, where he quickly moved through positions of forest ranger, silviculturist, and supervisor on the Deerlodge National Forest in Montana. It was there he met Donald Bruce, whose early years with the agency included surveying and mapping

damages after the 1910 Fire in Idaho and serving as forest assistant on the Helena National Forest and supervisor on the Flathead National Forest. Meanwhile, Jim Girard was the chief log scaler on the giant Blackfoot timber sale near Seeley Lake. The three were assigned to write the *Manual for Timber Reconnaissance* to standardize the agency's timber sale survey work in 1914, planting the seeds of a future consulting firm.

Both Mason and Bruce later joined the faculty at the newly formed forestry school at the University of California at Berkeley. Mason taught forest management, protection, finance, and administration while Bruce became well known for his rigorous mathematical approach to forest engineering and mensurational problems.

After returning to Berkeley from service in France during World War I, Mason was appointed to head the newly created Timber Valuation Section of the U.S. Bureau of Internal Revenue where his task was to develop the regulations and procedures to apply income tax laws to the forest industry. Mason would later call this appointment "a stroke of terrific luck" because he gained knowledge and relationships with forest industry leaders that would later lead to a successful consulting business. Through this assignment, he said, he learned that knowledge of accountancy was key to understanding the problems involved in forest management. As he gained an understanding of the economic conditions throughout the lumber industry, he also began to outline the factors involved in establishing operating plans for "sustained yield management" as a solution to the industry's plight and the conservation of a diminishing resource.

Shortly after returning to Berkeley in January 1921, Mason resigned to open an office as a "consulting forest engineer."

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## Western Forester

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In doing so, his objective was to promote the adoption of scientific forestry in the private sector. After studying the location of timber in western North America, he concluded that Portland, Oregon, was the epicenter of western timber and rented a one-room office in the city's downtown.

APRIL, 1921

### MASON COMES TO PORTLAND

David T. Mason, professor of forestry at the University of California and recently chief of the timber section of the Bureau of Internal Revenue, will open an office as a forest engineer in Portland, Ore., in May.

In his new work he plans to give attention particularly to assisting timber land owners in the formulation of a policy concerning and working out plans for the protection and utilization of their timber and the final disposition of their cut-over land, whether by sale, trade, or permanent management for the production of crops of timber. He also plans to deal with various economic problems of the timber owner and the lumberman, such as those relating to taxes, industrial organization, etc.

Mr. Mason graduated from Rutgers College in 1915 in the civil engineering course, and in 1917 from the graduate school of forestry of Yale University.

While in the United States Forest Service from 1907 to 1915, he was engaged in timber work in various parts of the United States, was supervisor of the Deer Lodge National Forest in Mon-



DAVID T. MASON

tana, and later assistant district forester of the Montana-Idaho district in charge of the forest management work involving timber surveys and estimates, timber sales, forest investigations, forest planting, forest management plans, etc. During 1915 he conducted an economic survey of the forest resources and the lumber industry in the Inland Empire. The results of this work recently appeared in an exhaustive report published by the Western Pine Manufacturers Association.

He was lecturer on forest administration in the University of Montana in the winters of 1910 and 1911, and in Yale University in the winter of 1914. From 1915 until the present spring, as professor of forestry in the University of California, he has been engaged in lecture and research work in the field of forest economics.

From May, 1917, to January, 1919, while on leave from the University of California, he was in the U. S. army, holding rank as first lieutenant of field artillery, captain of engineers and major of engineers. He served a year in France, most of the time with the Forest Engineers. From April, 1919, to January, 1921, he was again on leave from the University of California, organizing and acting as chief of the timber section of the Bureau of Internal Revenue.

In addition to technical articles published in lumber trade and forestry journals, Mr. Mason is the author of "The Utilization and Management of Lodgepole Pine" and "Timber Ownership and Lumber Production in the Inland Empire."

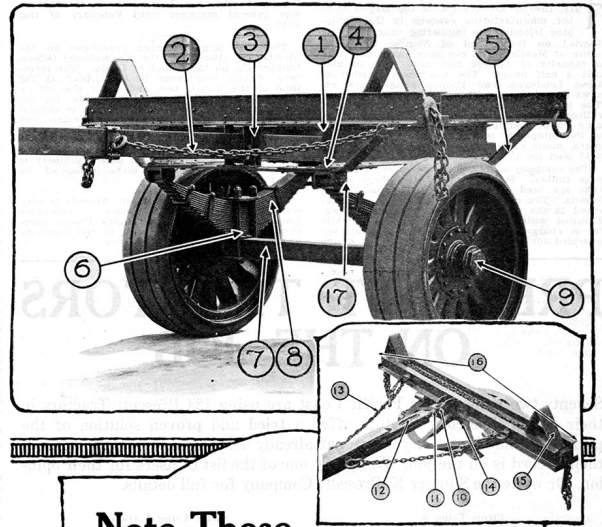
He is the chief author of the general forest industries questionnaire of the Bureau of Internal Revenue and also of the regulations with respect to timber and lumber manufacturing in accordance with which the federal income tax laws are applied to the lumber industry and other industries owning or operating standing timber.

### RUBBER MILLS BEING ENLARGED.

A new unit is being added to the Pioneer Rubber Mills at Pittsburg, Contra Costa County, Cal. Vice-president D. D. Tripp recently completed a survey of industrial conditions in the Northwest. The survey convinced him, he says, that an era of increased production is at hand for western mines, mills and industrial plants. He proposes that the Pioneer Mills shall be prepared for it. The new unit under construction will accommodate new belt presses and other machinery for utilizing California-grown long staple cotton and crude rubber received at west coast ports from the Far East.

THE TIMBERMAN

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David Mason's opening of his one-room office in Portland's downtown was noted in *The Timberman*, a journal started by George M. Cornwall in 1899.

Next Issue: What's New in Forest Operations



ests, Operations and Forestry Possibilities.

In 1923, the firm was renamed Mason & Stevens when Carl Stevens, a former Timber Valuation Section colleague, joined the firm. Mason & Stevens soon published an article in *Lumber World Review* promoting reforestation of private lands in the West. It was a revolutionary idea. To quote the article, “before 1920, there was some discussion of private reforestation, but this idea was usually considered fantastic in the extreme. Those who thought much on the subject concluded that prospective returns did not warrant private enterprise in engaging in reforestation.” This article was followed by the publication of “Sustained Yield and American Forest Problems” by Mason in the *Journal of Forestry* in 1927.

Donald Bruce, who by this time was working at the Forest Service’s mensuration office in D.C., joined the firm on a part-time basis in 1925. One of his first assignments was reporting on the forestry possibilities on timberland owned by Goodman Lumber in Wisconsin. His recommendations included selective harvesting and sustained yield instead of the common practice of clean cutting. Coached by his partners, Bruce talked in terms of economics and finance. “The thing that seemed to impress Bob Goodman and his staff the most was the fact that, coached by my partners, I went in and started asking economic questions

instead of poking on the ground for little seedlings,” Bruce said. “They said that’s the first time they have ever seen a forester go at it that way.”

Similar projects followed. In 1927, Bruce and Stevens worked out a selective logging plan for the Clearwater, Potlatch, and Rutledge companies in the white pine forests of Idaho. These companies merged to form Potlatch Forests, Inc. in 1931, the predecessor to what we now know as PotlatchDeltic.

Sometime in the mid-1920s, the firm established a good-sized cruising department, although the details have been lost to time. From 1928 to 1930, the firm mapped over a million acres of young forests from Grays Harbor to Coos Bay, cruised 150,000 acres of the most desirable parcels, and helped Crown Willamette Paper Co. acquire 70,000 acres. It was during this era that Mason & Stevens cruisers introduced the practice of marking plot centers using knitting needles and witness trees, thus allowing audits of cruising data. Until that time, cruisers had left no trace of their work in the woods.

In another first, Mason & Stevens undertook the first known use of aerial photos in forestry in the United States. In 1928, the firm teamed with Fairchild Aerial Surveys, a pioneer in aerial photography, to do timber type mapping in California and Oregon.

Projects in the 1920s dealt largely with timber valuation, cruising, land acquisitions and exchanges, and developing forest management plans for lumber companies. But throughout, Mason, supported by his partners, continued his promotion of reforestation of private lands and carefully planted seeds of the idea of sustained yield forestry.

### Adapting to the times

The Great Depression in 1929 changed the course for the country, the timber industry, and the firm. In 1931, President Hoover appointed Mason to the Timber Conservation Board, and Mason left the

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## Editor’s Note

By Andrea Watts

Within the forestry profession, consulting foresters straddle several job titles. Of course, they are foresters, but they may also be business owners and educators, marketing executives and bookkeepers. And throughout a day, they must deftly switch between the dual hats they wear.

In this issue, our authors explore navigating these dual roles and the business of consulting. Roger Lord takes us on a 100-year history tour on how Mason, Bruce & Girard adapted to meet the needs of their clients and the forestry industry, while Shavonne Sargent shares how she’s building her consulting forestry business. Mike Wolcott and Paula Hopkins share the importance of interpersonal skills. And we take to the skies with David Edwards as he shares his experience using a drone. Thank you to Mike Wolcott, the western region director of the Association of Consulting Foresters, for partnering with the NWO to produce this issue.

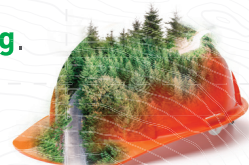
This issue closes out volume 66 of the *Western Forester*. Producing this publication is a team effort of authors, SAF members whose dues support the work of the NWO, and advertisers. Than you everyone who continues to support this publication. *WF*

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## The Evolution of Consulting Forestry: The Mason, Bruce & Girard Experience

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firm to his partners, who renamed it, Stevens & Bruce. Business surely must have been slow. As the lumber industry struggled to survive, few would have money for consultants. However, things took a turn for the worse in 1935 when Carl Stevens died suddenly. Bruce soon reached out to Mason, telling him that he would continue the work of Stevens & Bruce “for now.” The firm’s future hung in the balance.

Mason by this time was executive officer of the National Recovery Administration’s (NRA) Lumber Code Authority (LCA) and busily incorporating tenets of sustained yield forestry into Article X Lumber Code to control the overproduction of lumber and support prices. But the Supreme Court brought the NRA and Mason’s LCA to a swift end, declaring it unconstitutional in May 1935.

Mason closed down the LCA and returned to Portland to rejoin his old partner as Mason & Bruce. With little work coming in from the private sector, Mason accepted an appointment to head a new forest advisory committee of the Pacific Northwest Regional Planning Commission. Together, they worked on a report of the forestry situation in Washington, Oregon, Idaho, and Montana. Not surprisingly, they used this forum to recommend a plan of action based on the application of sustained yield management to stabilize industry and timber communities. Mason also used his Washington contacts to draft the 1937 Oregon & California Revested Lands Sustained Yield Management Act that set forth the principle of sustained yield in the management of 2.6 million acres of O&C Lands in Oregon.

Following the attack on Pearl Harbor in December 1941, the skills of consulting foresters like Mason & Bruce came into high demand. An immense amount of wood was needed to feed the war machine and consulting foresters were needed to act as valuation agents and intermediaries between procurement officers and timberland owners. Mason & Bruce contributed to the war effort by facilitating the purchase of large quantities of timber for the government while

protecting the interests of its clients.

In 1946, Jim Girard, the long-time friend of both Mason and Bruce from their early Forest Service years, joined the firm after retiring from the Forest Service. Girard had risen from self-taught log scaler to assistant director of the Nationwide Forest Survey program (now FIA). During that time, he became legendary for his timber cruising and volume estimation skills and developed many of the mensurational techniques, such as the Girard Form Class system, used in the Forest Survey. Together again, Girard and Bruce soon collaborated to produce Girard Form Class Volume Tables for Douglas-fir. The pocket-sized booklets, widely used by cruisers for years, were an important contribution to forest mensuration in the Pacific Northwest. The firm was renamed Mason, Bruce & Girard in 1948.

Consulting forestry was still a small world. The author of a 1948 article notes that the SAF at the time listed 88 qualified consulting foresters or consulting

When Jim Girard joined the firm in 1947, he brought a wealth of timber cruising and volume estimation experience. Together with Bruce, they produced the Girard Form Class Volume Tables booklet. This became a fundamental resource for cruisers for many years.

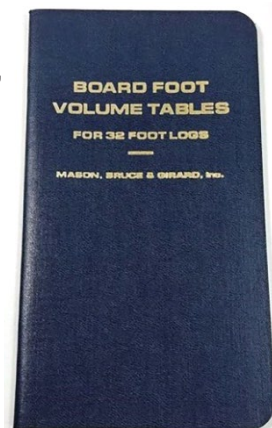


PHOTO COURTESY OF ROGER LORD

ing foresters in total. Of those, 150 were in the South, although most of them were “little more than cruisers.” Most consultants at this time worked chiefly with large landowners of 5,000 acres or more. Few were able to provide services to the small landowner at a fee the owners were willing and able to pay.

However, that began to change in the



PHOTO COURTESY OF ROGER LORD

During the 1950s, MB&G grew as the next generation of partners came on board. Gil Bowe was one of those partners, and here he is viewing 1962 Columbus Day Storm damage on a client property.

firms in the country. There were just 13 consulting foresters in the Northwest and two in the Rocky Mountains, compared to 33 in the South. Only two of the Northwestern firms employed four or more foresters. But the author didn’t consider this a comprehensive count and estimated there were a total of around 200 practic-

post-war era when the attention of the forestry profession began to turn to the small woodlot owner. This was especially true of the South with the emergence of the southern pulp and paper industry but was true in other regions too. During the 1950s, a new generation of company principals emerged to lead MB&G



forward and adapt it to the evolution of forestry. Gil Bowe, who joined the company in 1944 and became a partner in 1951, was the first of this generation. However, it was David Mason who first had a vision for a small landowner assistance business when no one else in the West had it.

In 1952, MB&G hired Richard Smith to lead a new Woodland Department focused on assisting private landowners owning less than 5,000 acres. Mason and Bowe mentored Smith. The firm also bought a 400-acre tract near Mount Hood for use as a demonstration forest and began applying the “Danish method” of uneven-aged management and natural regeneration. It’s unclear how much business was developed with small landowners, but the firm’s partners grew worried about its greater liability exposure when dealing with many small private landowners as opposed to a few large landowners. In 1961, they authorized Smith to spin the Woodland Department off as a separate company, Woodland Management, thus ending for a time the firm’s work with small private landowners.

The 1950s brought many innovations to the field of professional forestry. One of those was variable radius sampling, based on a 1947 paper by Austrian forest scientist, Walter Bitterlich. In 1952, two American foresters, Grosenbaugh and Spurr, published accounts of Bitterlich’s method, bringing the idea to America. Central to the technique was the use of an angle gauge to determine which trees to measure at each sample plot. In 1953, MB&G developed a prism mirror device for establishing reference angles, and in 1955, David Bruce, a son of Donald Bruce and then a research forester at the Southern Experiment Station, published an article proposing the use of a small wedge-shaped glass prism as an angle gauge. It was a modification of MB&G’s device.

The idea grew from there. In 1955, MB&G Principal Lu Alexander made a presentation at a SAF meeting in Eugene in which he described the technique. Alexander and Dr. John Bell at OSU published an article titled, “Application of the Variable Plot Method of Sampling Forest Stands” in 1957, providing detailed field procedures for using wedge prisms. In 1961, MB&G published *Prism Cruising in*

*the Western United States and Volume Tables for Use Therewith* by Donald Bruce. Although more sophisticated optical and electronic tools have been developed since then, wedge prisms are still in use today.

The Founder’s era of Mason, Bruce & Girard came to an end with the passing of Dave Mason in 1973 at the age of 90. Remarkably, he was still coming to the office until just a few weeks before he died. Donald Bruce had passed away in 1966 at age 82 and Jim Girard, the oldest of the three, passed away in 1952 at age 75. But together they had created a sustainable company that has been able to carry on, now for another 48 years.

### Notable achievements

There have been many changes as the company has continued to evolve and adapt to changes in forestry, society, and public policy. Here are some examples.

- With the advent of personal computers, MB&G released its first growth modeling and inventory management software in the mid-1980s and has continued to produce new generations of software, currently focusing on mobile and web-based applications.

- Forestry evolved during the 1980s and 1990s from a traditional timber focus to a multi-resource, multi-disciplinary field. Accordingly, MB&G added an Environmental Services Group in 1997 and diversified into wildlife, fisheries, water

quality, and allied sciences to complement its forestry services. We began to refer to ourselves as ‘natural resource consultants’ in recognition of our broader range of expertise and services.

- Shifts in the ownership of timberland gave birth to timberland investment management organizations during this same era. MB&G signed its first contracts to manage TIMO timberlands in 2006.

- In 2010, the Geospatial Services Group was created to enhance our geospatial products and service offerings as these technologies became more accessible, affordable, and essential to the forestry and natural resources professions.

- In 2016, Woodland Management was reacquired 55 years after it was spun-off, thus reestablishing services to the small forest landowner.

As we look back over our 100-year history, we at MB&G realize how fortunate we are to have been part of the journey that the profession of forestry has traveled since its beginning in the United States. *WF*

**Roger Lord** is president of MB&G and leads the company’s Appraisal Services Group. A member of both ACF and SAF, he has over 30 years of experience in the areas of timberland appraisal, acquisition and divestiture due diligence, forest economics, and planning. Lord can be reached at 503-224-3445 or [rlord@masonbruce.com](mailto:rlord@masonbruce.com).

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