

Dr. Gary Brooks, a retired dentist with a 30-year history of building intricate sawmill dioramas, rebuilt motors, switches and moving parts on a mini sawmill housed in an Ore. museum.



Brooks' first sawmill model was typical of backwoods mills in the Pacific Northwest. It was made from a miniatures kit and features a removable roof.

He Rebuilt A Working Miniature Sawmill

When a large 1/20th scale, 70-year-old miniature sawmill in the Yamhill County Historical Museum in McMinnville, Ore. needed repair, the Kiwanis Club in charge of the restoration knew that Gary Brooks was the person they wanted to do the work. Brooks is known throughout the northwestern U.S. as a prominent builder of miniature sawmills based on real mills.

"Museum members told me it would probably take 20 to 25 hrs. to get it back in order, so that seemed like something I could do," Brooks says. "However, nobody mentioned that it had a dozen motors and 18 switches that didn't work. Their original estimate of 20 to 25 hrs. turned into 20 to 25 hrs. a week for 16 mos."

Brooks says the saw was functional, but the diorama was missing the log pond and green chain parts, which were 11-ft. long and 30-in. wide, controlled by 18 toggle switches for each of the 18 electric motors. "Someone had rewired the entire mill and added some additional motors and the switch panel, and it was a disaster because nothing worked and

nothing was labeled," Brooks says.

Undeterred, he dove into the repair, tracing the wires and labeling the switches, wires and motors. He replaced three burned-out motors and added a second gear reduction set to slow the carriages while the working saw cut a log. "Eventually I got all 12 independent areas working together so I could actually cut a cant off a log for further processing," Brooks says.

To document his work, Brooks photographed every step of the reconstruction and put together a manual of 100 pictures to show museum members how the actual mill worked about 100 years ago and how to repair the model if problems occur in the future.

"I probably put in more than 1,000 hrs. on the whole project, but the diorama is now in perfect shape with working parts that show exactly how the mill worked more than 100 years ago," Brooks says.

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Miniature Sawmills Built To Scale

For the past 30 years, Gary Brooks has built more than 35 scale model sawmills with a level of detail that precisely matches the original structures. His designs are scaled from pictures of portable mills that were used years ago in the Northwest backwoods. Brooks says he selects something in the picture of a known size, like a person or a 7-ft. doorway, then scales up or down on a copy machine.

"I use a Micro-Mark table saw to cut Basswood lumber into tiny pieces that I fabricate into 1:87 scale designs," Brooks says. "The saw will cut 99 percent of what I need for building dioramas that I put on a 4 by 8-ft. sheet of plywood which I can haul in my Suburban." He makes bigger models in sections and assembles them on site. Most of his dioramas are at museums in the Pacific Northwest.

Brooks started building sawmill dioramas after he, his wife and daughter moved to the country, where they had a 10,000 sq. ft. barn. There, he set aside a large room to work with model trains, a hobby that he has enjoyed since childhood when he saw actual steam engines working. "I had so much space to fill to surround my trains that I decided making buildings for sawmills was more interesting than working with just the trains," Brooks says. He's been at it ever since.

"I want everything to look authentic, so all of my buildings have a weathered look that I get by treating the pieces with a mixture of alcohol and black or brown India ink,"

Brooks says. "This concoction produces 'instant' weathered boards that are very realistic. Rail cars have the same treatment, with an added wash of chalk powder for special effect."

His largest project, patterned after a WWI spruce resaw mill in Sheridan, Ore., resides at the Fort Vancouver National Historic site. The mill produced sawn lumber known as cants that were shipped to the eastern U.S. and eventually on to Europe. After further processing, the wood was used for building bi-wing airplanes.

The main building in this super model has 12 saw lines and a dry kiln building, each one 44 in. sq. Brooks says "the mill was run by a staff and camp of 5,000 Army men working 24/7 for 8 mos. until the war ended in 1918. They loaded 60 boxcars a day by hand, one stick of material at a time."

His full diorama is 8 1/2-ft. wide and 34-ft. long, with more than 300 ft. of non-operating railroad track. It was a two-year volunteer project that required more than 1,200 hrs. to complete.

"Building these has been very rewarding, especially since most of them are on display for museum visitors to see so they can imagine how the real sawmill might have worked," says Brooks.

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In order to qualify as a member of the Tamarack breed, it must be enrolled in LambPlan and have, as a minimum, recorded 60 and 150-day weights, as well as birth and pedigree information.

Tamarack Sheep Produce More Lambs, Require Less Labor

Janet McNally wanted sheep that required less labor on her part and were more productive on grass alone. Over the past 30 years, her farm-bred Tamarack sheep have gained a reputation throughout the country for easy lambing, good mothering and fast growth.

"The ewes birth several lambs at one time and produce lots of milk on grass. The sheep fatten quickly and flavorfully on pasture," says McNally.

She started by introducing the Booroola B gene into her flock of Dorsets.

The naturally mutated gene originated in

an Australian flock of fine-wooled Merinos. Ewes with the Booroola B gene had a high ovulation rate and litter size. McNally introduced the gene to her Dorsets in 1987. That was followed by decades of backcrossing with Polled Dorsets and Ile de France bloodlines for improved milk, growth, number of lambs weaned and carcass quality.

The sheep were selected for maternal weaning weight, post-weaning weight, loin eye, muscle depth and number of lambs born and weaned. Not all the sheep "fix" the Booroola B gene. Those that do are called Tamarack Prolific. Those that don't are

simply called Tamarack.

"I rigorously culled to produce a sheep requiring less labor with higher lamb survival," says McNally.

Starting in 1991, that meant lambing on pasture. More recently, it has included lambing on the fly, where a ewe must lamb, mother up, and be able to move to new paddocks without losing track of 3 or 4 lambs within 3 days. This is all without lambing pens or barns.

"I select for ewes that will produce a quality market lamb at weights from 30 to 140 lbs.," says McNally. "I expect early lamb growth, with top individuals gaining a pound a day on good grazing for the first 100 days."

McNally expects her Tamaracks to wean a 160 to 190 percent lamb crop on quality forage. They exhibit a long breeding season, making accelerated or out-of-season lambing possible.

Tamarack Prolific ewes have more lambs. They will wean from 237 to 320 percent lamb crops on a principally forage-based diet.

Tamarack Prolific rams are equally productive, settling the flock in less than 21 days, yet selected to be docile around handlers. Her rams are popular as terminal sires, as well as maternal sires.

"Tamarack Prolific rams with 1 or 2 copies of the Booroola B gene are well suited for

highly managed grazing programs, as well as more intensive lamb production systems," suggests McNally.

McNally utilizes LambPlan, an Australian genetic evaluation tool. It provides a way to calculate estimated breeding values as well as tracking pedigrees.

In order to qualify as a member of the Tamarack breed, it must be enrolled in LambPlan and have, as a minimum, recorded 60 and 150-day weights, as well as birth and pedigree information. It also must have valid genetic links to the original Tamarack flock.

To qualify as Tamarack Prolific, it also must have DNA on file with AgResearch NZ confirming at least one copy of the Booroola gene. It must be enrolled in LambPlan and be linked to the original Tamarack flock.

McNally sells breeding stock throughout the country, making deliveries as far as the East and West Coasts. Tamarack ewes sell for \$400. Tamarack Prolific ewes are priced at \$600 each.

Tamarack rams range from \$800 to \$1,400. Tamarack Prolific rams range from \$800 to \$2,500.

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