



Wooden Skis Return to the Front Range

By Gary Neptune and John Wallack



▲ JOHN WALLACK, GARY NEPTUNE, AND BOB OLSON SHOW OFF THEIR WOODEN SKIS AT THE BRAINARD CABIN, JANUARY 2012. JEAN FOSTER

How many restaurants in Colorado are decorated with old skis and poles? Walk through Ragnar's Restaurant on the Rendezvous Saddle at Steamboat Springs or The Bistro at The Iron Horse Resort at Winter Park or even The Big Shooter coffee shop in Kremmling. They all are decorated with old wooden skis. The best collection along the Front Range is undoubtedly at Neptune Mountaineering in Boulder. Look closely at the designs. Are the skis for touring, jumping, or Alpine slopes? What vintage are they and what terrain were they used for?

Skiers have seen several pair of wooden skis around the Brainard ski trails in the past couple of years. Last January, when Bob Olson and John Wallack hosted at the Brainard Cabin, in the Brainard Lake Recreation Area of Roosevelt National Forest, four pair

of the old-style planks were in use. These are handmade skis in the traditional styles used 130 years ago. They are shaped from birch planks with hand tools and the graphics are carved or burned designs highlighted with concoctions of pine tar and linseed oil.

These handcrafted planks were not the only wooden skis on the trails. There were laminated wooden Bonnas and Gresshoppas. After all of the P-tex and plastics of the past 40 years, what is the appeal of wooden skis? The short answer: wooden designs are satisfying

to create and are great fun to ski.

Over the years, skiing has evolved from an efficient means of transportation in snowy parts of the world to an entire range of recreational sports. The ski sport has branched out to Nordic (mixed terrain) and Alpine (downhill, typically assisted with lifts). Nordic styles range from set-track racing to XC trail touring to light backcountry touring, ski-mountaineering, and off-piste free-heel downhill. Alpine styles range from downhill racing to ski-area piste, moguls or trees, and telemarking. Specialized equipment has been developed to target every style. Synthetic materials and complicated manufacturing processes have been employed to achieve specific goals. Wooden skis, particularly the handcrafted traditional designs, provide an insight to the evolution of the gear.

HISTORIC INSIGHT

The wooden skis pictured at the Brainard Cabin are based on the Telemark design. It was a design developed in the Telemark District of Norway, where downhill turning was a key factor in the design. *Two Planks and a Passion: The Dramatic History of Skiing* by Roland Huntford gives a fairly detailed history of the sport and the evolution of the equipment and technology. Oslo, called Christiania until 1877 (and Kristiania until 1925), is located in the southeast corner of Norway. Telemark is located in the hills halfway between Oslo and Norway's west coast. Norway was the heart of recreational skiing, and annual races were held in Christiania starting in the 1860s. The



WOODEN SKIS: 1) HUITFELDT "TELEMARK SKI", NORWAY, c1900. THIS SKI BECAME THE STANDARD FOR BOTH NORDIC AND ALPINE USE AT THE TURN OF THE LAST CENTURY. 2) SIMOND FRANCE, c1893. THE FIRST SKIS MADE IN THE FRENCH ALPS WERE MADE BY SIMOND. A CHAMONARD FRIEND OF NANSEN VISITED NORWAY AND BROUGHT BACK SKIS TO USE AS MODELS. 3) VIKING SKIS MADE IN CADILLAC, MICHIGAN, IN THE EARLY 1900S. 4) NORTHLAND SKIS OF ST PAUL, MINNESOTA, 1912-1928. FORMER FOREMAN OF THE STRAND SKI COMPANY FOUNDED NORTHLAND, WHICH WAS AT ONE POINT THE LARGEST SKI MANUFACTURER IN THE WORLD. 5) STRAND SKIS, NEW RICHMOND, WISCONSIN, c1920. ONE OF THE MOST SUCCESSFUL EARLY U.S. MANUFACTURERS DUE TO SIMPLICITY AND COST. 6) SKIS MADE ON THE FARM IN IRON BELT, WISCONSIN, c1930S, BY EMIL NELSON. JOHN WALLACK/GARY NEPTUNE ▶

skis at this time were all hand crafted. No two pair from any area were identical, but some generalizations could be made about the designs. Most of the regions of present-day Norway and Sweden represented in the Christiania races practiced "straight run" skiing on mostly level ground. The skis from areas such as Stockholm were very long and straight-sided and deeply grooved for stability. By contrast, the terrain in Telemark was hilly and full of obstacles. Consequently, the need for maneuverability and turning drove the ski designs in Telemark. The Telemark design was shorter (around 240 centimeters) and had a greater width at the shovel than the waist and it widened out again at the tail (sidecut). There was often no groove to allow easier turns.

The best known of the skiers participating in the Christiania Races from 1868 to 1875 was Sondre Norheim (also spelled Nordheim) from Morgedal, a village in the heart of Telemark. He won first place in the Christiania Races after skiing a steep 500-meter gully, the Flekstveidt chute, upright, including a 20-meter jump. As Anne-Gry Blikom and Eivind Molde describe in *Sondre Norheim—The Father of Modern Skiing*, there was a 17-year-old boy in the audience of the 1868 Christiania Races, named Fritz Huitfeldt, who was so impressed with Norheim's skiing that he would go on to champion the Telemark technique and ski design. Norheim crafted his own skis and created bindings with flexible toe and heel straps from twisted willow shoots. For years, the participants from Telemark dominated the Christiania Races.

In the 1880s, one of the Christiania ski racers who praised Norheim was the famous arctic explorer Fridtjof Nansen. Nansen

◀ WOODEN SKIS AT BRAINARD CABIN MADE BY JOHN WALLACK, BOB OLSON, AND GARY NEPTUNE. JOHN WALLACK



would go on to win the Norwegian national cross-country ski races 12 times. In Nansen's 1892 book, *The First Crossing of Greenland*, he admired the jumping and turning maneuvers of the skiers from Telemark: "In these arts the 'Telemarkinger' are complete masters, and the younger school of Christiania 'skilöbers' [ski-runners] have proved their worthy pupils." Nansen organized and led what was to be the first successful crossing of Greenland in 1888. His plan to cross the snow and ice on skis was criticized initially, but it proved to be a good choice. Two pair of oak and seven pair of birch skis were made for the expedition. The oak were 230 centimeters in length, with a shovel of 92 millimeters and a waist of 79 millimeters. The birch skis were made parallel throughout (by mistake) and were shod with thin

plates of steel with a rectangle of elk-fur for traction. In hindsight, the “skins” were not needed, and the simpler, grooved oak skis performed better for the actual conditions and were recommended for future expeditions.

MANUFACTURING OF SOLID WOODEN SKIS

As recreational skiing gained in popularity, the demand for the equipment grew. Mass production of skis has gone through several major phases in the 130 or so years since 1880. While the last 50 years has been the age of fiberglass, plastics, and metal, the first 80 years of mass production began with solid wood and ended with laminated construction. There are some 92 brands of wooden skis listed on the woodenskis.com Web site, most with some short story. For example, in Europe, one of the early ski manufacturers was L. H. Hagen and Company of Christiania (Oslo), Norway. This company provided skis to the Amundsen and Scott expeditions to the South Pole. Arne Åsnes worked for Hagen in Oslo in 1910 and would eventually start his own ski company with three of his brothers in 1922. Hagen worked with Fritz Huitfeldt in Oslo to develop bindings. Huitfeldt would go on to win a gold medal at a ski exhibition in Christiania in 1896 for his ski design. He started manufacturing the

ski and called it the Telemark. It had 19 millimeters of sidecut. It swept the market, and Huntford considers it the origin of modern ski designs, both Nordic and Alpine. The photo on page 25 shows a Huitfeldt Telemark ski as #1.

E.C. Richardson, an early English ski author, recommended the Telemark design “for the best all-round service.” His classic 1909 book, *The Ski-Runner*, has now been digitized and is available online. In those early days, many skiers were still crafting their own equipment. There is great detail provided in selecting the wood, optimizing the grain, and shaping the ski.

During the last half of the 19th century, many Scandinavians, including Sondre Norheim, would immigrate to Minnesota, Wisconsin, and North Dakota. They brought the sport of skiing with them. Hagen skis were used as models for ski designs around 1900 in Ashland, Wisconsin, by Aksel Holter, who shared the information with Martin Strand. John Allen describes the early days of the sport in his book *From Skisport to Skiing—One Hundred Years of an American Sport 1840–1940*. In the United States, some of the earlier production of skis in quantity occurred in the upper Midwest. In 1888, the Excelsior Ski Company of St. Croix Falls, Wisconsin, had



▲ ELAINE VARDEMIS IN SKI-MAKING CLASS USING A SPOKE SHAVE ON THE SURFACE. GARY NEPTUNE

its first successful season producing 50 pair of “A No 1 Skis”. The Strand Ski Company was started in 1896 and moved from Minneapolis to New Richmond, Wisconsin. In 1911, Strand had orders for 1,500 pair of skis. The skis were made of solid wood, mostly of Norway Pine shipped from Indiana. A foreman from Strand branched out to start Northland Ski in St. Paul, Minnesota, in 1912. According to woodenskis.com, Northland became the largest ski manufacturer in the world. Strand, Northland, and Viking skis are all shown in the photo on page 25. The manufacturing process for solid wood construction required both careful selection of good quality planks, as well as woodworking skills through the production process.

LAMINATED WOODEN SKIS

Lamination was the second major phase of wooden ski construction. Huntford describes how lamination was used initially in 1891 by Nansen’s sledge maker, H. M. Christiansen of Christiania. The laminated design was prompted by a shortage of good quality ash wood. The Christiansen skis had serious shortcomings, though: the adhesives of the time were not waterproof. Bjørn Ullevoldsæter patented lamination processes in 1932 and 1935 that were successful. His methods minimized the variations in materials and employed better adhesives. Huntford calls Ullevoldsæter the Henry Ford of the ski industry. Shortly thereafter, Peter Østbye licensed Ullevoldsæter design and laminated the vertical components. This was patented in 1937 as Splitkein (split cane) construction, and it became the mainstay of many ski products for the next 40 years. Rossignol patented a variation of the Splitkein construction in 1941. The Rossignol Olympic 41 laminated ski remained in production until 1965. The Åsnes Ski Company adopted the Splitkein construction in 1952, and patented a new construction.



▲ 1) BOB OLSON SAWING PLANK. 2) GARY NEPTUNE MARKING SHAPE FROM MODEL. 3) CARVED SKI TIPS. 4) WAYNE BRUCKNER AND GARY NEPTUNE SHAPING SIDES. 5) BOB OLSON AND JOHN WALLACK SHAPING SURFACES. 6) SKIS IN BENDING JIG. 7) CARVING DECORATIONS WITH A PARTING TOOL. JOHN WALLACK/GARY NEPTUNE



▲ ELITE SKIS MADE IN NORWAY FOR NORSK LTD. IN BOULDER. JOHN WALLACK

Along the Colorado Front Range, the Groswood Ski Company operated in Denver from 1932 to 1952. At the 2002 International Ski History Congress, Jerry Groswood described his father's company and involvement in the sport in the paper, "Thor C. Groswood—One of Skiing's First Great Salesmen". The patent for Splitkein construction was licensed in Denver by Thor Groswood in 1939. Thor developed gluing ovens and experimented with microwave to set the glue. In 1948, the Groswood Ski Company became the first official supplier to the U.S. Alpine Ski Team and the first U.S. Olympic Gold Medal was won by Gretchen Fraser on Groswood skis. The Groswood Ski Company was one of the producers of the 10th Mountain Division skis.

In an interview, Ingvar Sodal described his own experience moving from Trondheim, Norway, to Boulder to attend the University of Colorado in 1962. At that time there were very few Nordic skiers in the area. Surplus military skis were common. In 1965, Ingvar wanted to replace his skis and there were few choices available, so he decided to order some Elite skis from a wholesaler in the Trondheim area. He sent out half a dozen mimeographed sheets to the small cadre of Nordic skiers and quickly had an order for 70 pair of Elites with boots and poles! An additional order for 30 more followed on its heels—some new and some corrections for size and fit. The skis employed Splitkein construction, lignostone edges, and hard hickory surfaces.

The interest in Nordic skiing along the Front Range grew by kicks and glides. By 1967, Sodal started Norsk Ltd. with outlets

on The Hill and Table Mesa, sharing retail space with the Spoke Cycle Shop. Ingvar started the CMC Boulder Group's XC Ski School in 1969, and the NCAR Auditorium, where the ski lectures were held, was regularly filled. To create a good ski tour to the Brainard Cabin, Sodal initiated the CMC efforts to clear the South (now CMC) ski trail in 1970 and the North (now Wal-drop) trail in 1971. By 1975, the time demands of the ski business were competing with his engineering career, so Sodal sold Norsk to Gary Neptune. Neptune Mountaineering, started in April 1973, was already selling Bonnas and Åsnes Nordic gear. In January 2006, a celebration was held at the Brainard Cabin to mark the 40th anniversary of Sodal's importing of Nordic skis. Nordic skiers drug out their traditional gear and skied to the cabin for a social lunch to celebrate the occasion.

HOW DOES ONE MAKE HAND-CRAFTED WOODEN SKIS?

A few years ago, two CMC skiers travelled to Minnesota to learn more about handcrafting wooden skis. Gary Neptune and John Lacher took the ski making course at North House Folk School, in Grand Marais, Minnesota. The course was taught by Mark Hansen. John Lacher describes the activity: "We bent 5/4 inch white birch planks, which had been in warm water for 48 hours. We then sawed to shape, planed, scraped, and carved into the product. We finished with one-third turpentine, one-third linseed oil, and one-third birch tar. White birch is pretty, light, and easy to work, but perhaps not the strongest." They brought back birch skis, new skills, and enthusiasm for creating handcrafted skis.

After making another few pair of skis, Gary Neptune set up a pilot course to develop a ski making class. Wayne Bruckner, Bob Olson, and I were gladly willing to participate. Gary provided birch planks and workbenches at Neptune Mountaineering. He created another pair of skis, as he walked us through each step in the process.

First, we selected an old pair of wooden skis to use as a

template. After selecting the orientation of skis based on grain of the wood, we traced the outline on the planks. We cut the planks to the basic outline (plus 1/4" margin) with a band saw. The margin allows for fine tuning the shape with hand tools. This removes about 20 percent of the material (based on a plank as wide as the shovel and as long as the ski). The rest of the shaping was done with the use of hand tools: block plane, spoke shave, carving knives, and metal scrapers. The shaping of the ski to its final thickness and outline leaves only 48 percent of the material (based on a plank as wide as the shovel and as long as the ski).

To bend the skis, Gary made a jig. We soaked our flat boards in (initially hot) water for a full day, then easily bent the tips in the jig. Voilà! With some fine-tuning using heat, we were able to form the skis. We carved graphic designs with parting tools or traced the design with a wood-burning tool. We waterproofed the skis with a 50/50 mix of pine tar and linseed oil. Bindings were not easy to find; however, we located some vintage cable bindings at an antique store and found some bindings on used telemark rentals.

Gary has since presented the course at Neptune Mountaineering to two classes of three students each. There will be more classes at Neptune Mountaineering, but the schedule has not yet been determined.

After the skis are made, there's more satisfaction to be experienced. The cold, dry snow typical of the Front Range is the perfect environment for these boards. The wooden skis have a springy feel, turn well on the hills, and glide smoothly on the trails. Gary has even used his wooden skis numerous times at Loveland Ski Area. Snow conditions there are generally good enough so that the birch edges are adequate. With the pine tar bases, only a thin coating of wax is needed to get great traction. It was really quite satisfying to create and then use the skis, and we've had several wooden ski tours in the Brainard Area.

Mark your calendars! This season, let's designate February 23rd and 24th as "Wooden Ski Days" at the CMC's Brainard Cabin. The Wallack-Masters-Olson crew will be hosting the cabin that weekend. Dust off those wooden skis and tour to the cabin to join in the fun. ▲



▲ GARY NEPTUNE, BOB OLSON, AND KRIS AND JOHN WALLACK AT LEFT HAND RESERVOIR ENJOYING WOODEN SKIS AFTER A FEBRUARY SNOW.