Made in Canada

From shipyard-fashioned wood to modern fiberglass, an intriguing history of Canadian ski manufacturing over almost a century.

BY BOB SODEN

Canoes were the "seven-league boots" of Canadian exploration, and skis became the seven-league boots in the exploration of its winter landscapes. So it's fitting that the first Canadian skis were produced by a canoe manufacturer.

From Voyageur to Vorlage: When hand-sewn birchbark canoes would no longer float the boat, the Peterborough Canoe Company (PCC) glided to the rescue with superbly fashioned wooden canoes, beginning in 1892. The company had an industrial advantage: Located on the Otanabee River in central Onatrio, Peterborough was one of the first cities in Canada to generate hydroelectric power (in 1882). An offshoot of the PCC, the Peterborough Ski & Toboggan Company was officially designated in 1913 to carry on the snow-sports work that the parent company had been doing for years—that is, making skis and toboggans from hickory, ash, birch and maple. Peterborough skis were used in 1930 in the famous 500-mile marathon from Timmins to Toronto, relates W.L. Ball in *I Skied the Thirties*. Proudly touting "made in Canada," the skis were sold by the T. Eaton Co. department store (Canada's version of Macy's or Sears) and featured regularly in the company's winter catalogs.

The Peterborough Canoe Company made skis from hickory and other woods.

By the 1920s and '30s there was a flourishing ski-manufacturing scene across the eastern half of the country, with companies such as Propeller Wood Working of Montreal; Ketchum & Company of Ottawa; Allcock, Laight & Westwood of Toronto; and the Super Diagonals Company of Canada.

From Shipping to Schussing: With an abundance of natural resources in their forests and demand afloat off their coasts, the maritime provinces naturally became centers of shipping production. Their sleek schooners caught fish on the Grand Banks, captured unwary ships as privateers during revolutionary years, and in peacetime won international sailing races. These wood-shaping skills transferred easily to carriage production and, in the 1920s, to skis. At one point during the decade, there were five ski manufacturers in Nova Scotia. The most prominent was the Liverpool Woodworking Company, which manufactured the well-known "Bluenose" ski, crafted in "hickory, white ash, birch, maple and pine." By 1929, the rights to the Bluenose ski had been purchased by the Canada Ski Company, which moved production to Annapolis Royal, Nova Scotia.

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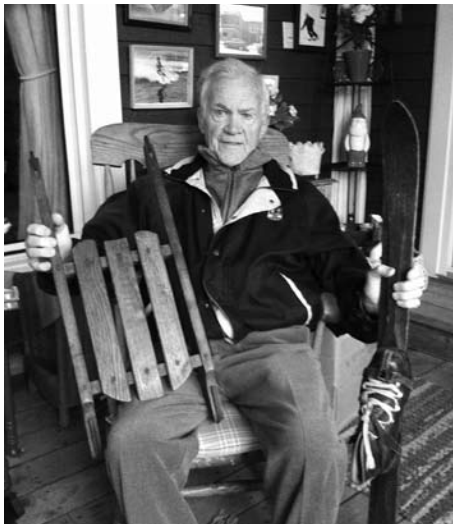
In the 1920s, the Liverpool company of Nova Scotia produced the Bluenose ski, named after the famous racing schooner.



From 1929 through 1935, J. Albert Cloutier, father of Canadian ski-racing champion Rémi Cloutier (above), made and sold 7,500 pairs of maple skis per year at his hardware store in Ste. Agathe, Quebec.

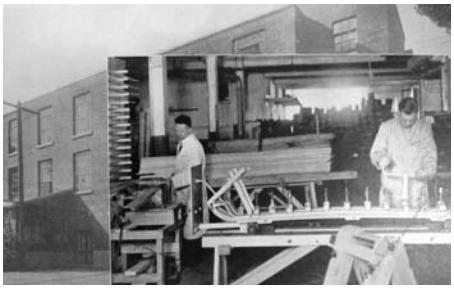
skis, which he sold at his Cloutier Hardware store in Ste. Agathe, Quebec. Rémi Cloutier recalled recently that his father produced 7,500 pairs of skis a year, meanwhile imparting to him, through his success, the economic lesson of value-added production.

In 1938, the Harvey E. Dodds Company acquired the manufacturing equipment of Canada Ski and moved the fabrication to Montreal. Also known as "The Ski People," Dodds promoted a line of skis named Chalet Skis during the 1930s and 1940s, and in 1934 introduced the Chalet Binding.

During World War II, the Peterborough Canoe Company produced numerous wood items for the war effort, including bridge pontoons and Royal Canadian Air Force crash and assault boats. In 1939, the company shipped its entire wood ski production through northern Quebec to help the Finns in their Winter War against Russian invaders.

From Langlauf to Laminates: The problem with a one-piece wooden ski was that "it could twist, split or lose its camber over time," wrote H. Bruce Carnall in the 1939-40 *Canadian Ski Year Book*. The solution to this problem was the laminated ski.

In 1939 the Splitkein Factory of Oslo, Norway, made an agreement with the Canada Cycle & Motor Company of St. Jean-Sur-Richelieu, Quebec, to produce their laminated skis. The technology of laminating together many thin strips of wood, sometimes up to fifteen or more, was ideal in strengthening the narrow *langlauf*, or cross-country, ski. The method's obvious superiority over the one-piece ski was incorporated in many types of skis, from slalom to downhill to jumping. Besides creating a strong and durable ski, laminations allowed the manufacturer to separately tune the stiffness and flexibility of different parts of the ski, a boon to professionals and racers. The Andreef ski was a quality multi-laminate wood ski designed and fabricated by Alexis Andrea during the late 1930s and early 1940s in Ste. Thérèse, Quebec, right next to the Laurentian ski zone.



In 1939, the Splitkein factory of Norway made an agreement with C.C.M Choquette to produce its laminated skis.

From Wood to Wong: In 1940, Clément Skis, a manufacturing firm in Trois-Rivieres, Quebec, registered the design for a wood ski that was quite revolutionary and which presaged many later ski designs. The ski was made in two distinct parts, an upper and lower layer, positioned and held together by a U-shaped channel footplate. The upper wood layer acted like a leaf spring, bearing down on the fore and aft midsections of the lower wood ski layer. As a result of the separate layers, the Clément ski enjoyed the advantages of being a flexible flat-top ski as well as a stiff dome or ridge-top ski.

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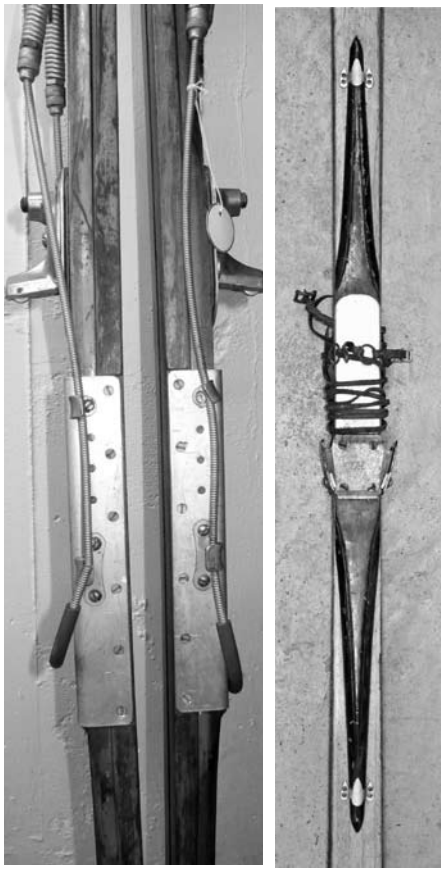

Canadian ski-racing champion Ernie McCulloch was partial to the Clément ski. The Concave model increased the bite and tracking of the steel edges.

very partial to the Clément ski. McCulloch favored a model that clung to the slopes, the Clément Concave. This iteration had a concave undersurface, particularly evident at the ski tip, to increase the bite and tracking of the steel edges (as some said, to a "railroad" extent). There have been a number of attempts over the years to achieve the same spreading-out of pressure and dampening, or attenuating, of vibrations

SKI MANUFACTURING TIMELINE

This succinct timeline will help you compare Canada's progress to equipment innovations in Europe and the United States.

c. 1850 Cambered ski invented in Telemark, Norway.

1879 First ski manufacturing undertaken by Norwegian immigrant Martin A. Strand in Minnesota.

1882 First hickory skis produced in Norway (from imported American hickory).

1893 First two-layer laminated ski built by H.M. Christiansen, in Norway.

1907 Abel Rossignol began mass production of skis in Voiron, France.

1911 C.A. Lund founds a ski factory in St. Paul, Minnesota, later called the Northland Ski Company. Its hickory skis dominated the market for another 30 years.

1928 Segmented steel edge invented by Rudolph Lettner of Salzburg, Austria; solid aluminum ski prototype in France.

1932 First successful three-layer laminated skis invented by Bjørn Ullevoldsaeter in Norway and independently by George Aaland in Seattle. The first of these skis were marketed under the Splitkein ("split-cane") label in Norway and as Anderson & Thompson skis in the U.S.

1934 Limited production of solid aluminum ski by M. Vicky in France.

1939 Hjalmar Hvam invents the world's first useful release binding.

1944 Cellulix, the first cellulose plastic bottom, made to go on Dynamic skis in France.

1945 Three Chance-Vought aeronautical engineers build an aluminum-laminate ski with a wood core.

1946 Gomme ski produced by Gomme Ltd in England. A laminated wood core was sandwiched between two top plastic layers and a bottom metal layer. First ski to use three different layered materials.

1947 TEY Manufacturing produces the Alu 60, a two-layer hollow aluminum ski. Howard Head creates aluminum sandwich ski with a lightweight honeycomb core.

1948 TEY Tape, a self-adhesive plastic running surface, is invented to adhere to either metal or wood skis. Chris Hoerle of Connecticut creates the Chris ski, the first ski with a continuous, integral steel edge.

1949 Howard Head's plywood-core, pressure-bonded aluminum Head Standard with continuous integral steel edge began its journey toward becoming the most commercially successful early metal ski.

1952 The first fiberglass-reinforced plastic ski, the Bud Phillips Ski, was not satisfactory enough to endure. The same applies to the Holley Ski and the Dynaglass ski, both introduced in 1955.

1955 The first polyethylene base is introduced in Austria by Kofler. Kofix is slippery enough in most snow conditions to eliminate the need for wax. A similar material made by InterMontana in Switzerland is marketed under the brand name P-tex. Widely adopted, it supplants earlier plastic bases like Cellulix.

1968 By 1968, fiberglass had supplanted both wood and aluminum for use in slalom racing skis and in most recreational skis. Aluminum laminates remained important for all high-speed skis. Aluminum/fiberglass compound skis proved popular for recreational cruising and deep powder.

Sources: International Skiing History Association (www.skiinghistory.org), International Ski Federation (history.fis-ski.com), New England Ski Museum (Jeff Leich) , Laurentian Ski Museum (Sylvie Lebeau), Canadian Canoe Museum (Jeremy Ward), Peterborough Museum and Archives (Kim Reed), Canadian Ski Museum, "The History of the Peterborough Ski Club" by Cy Monkman (2008). Interviews: Doug Pfeiffer, Eric Kuch, Rémi Cloutier, Bob Gilmour, Morten Lund, Artie Irwin and Ivo Krupka.

at the ski tips and tails. Salomon in the late 1990s brought out a model called X-Scream. Fore and aft of the bindings were twin sets of "Pro-Link Bars" engineered and tuned to control stiffness and dampen jitters.

The Rossignol Bandit XX, the K2 Axis ST Smart Four, and the Head Kers Intel had similar design goals. One of the more recent (circa 2008) of these designs has been championed by freestyle skier Wayne Wong. The Anton Glider uses dual-leaf springs, one forward, one aft, along with its other refinements to achieve (and no doubt surpass) the wooden Cléments. Apparently there is nothing new under the sun...or on the slopes.

In 1940, Canadian ABC was founded by Heinz Kuch, with the amalgamation of Canadian Trading Co. and A.B.C. Fabriken, as an importer and distributor of skis. In the mid-1940s, ABC acquired the assets of the Andreef ski plant, and became a laminate ski manufacturer. The production line was later moved to St. Laurent Blvd. in Montreal. Heinz's son Eric Kuch took over the daily operations of the factory in 1968. ABC sold custom laminated skis across Canada to major department stores and smaller distributors such as Streeter & Quarles' "The Ski Shop,"

Canadian ABC sold custom laminated skis across Canada to major department stores. In the 1950s, ABC also made white-painted skis for the Canadian Army.

at Place Ville Marie in Montreal and at the St. Laurent Shopping Centre in Ottawa. During the 1950s, ABC also made skis to specification (and painted white) for the Canadian Army. After Heinz' death in 2000, Eric assumed the management of Canadian ABC, which today imports and distributes sports accessories.

Peterborough's production of solid wood skis continued until the 1950s, but the final straw came with the success of fiberglass and metal skis. The company filed for bankruptcy in 1962.

From Fiber Edges to Fiberglass: In the 1930s synthetic materials began to be used more and more on skis in such places as sole plates and ski edges (*see timeline*). Technologies developed in World War II added greatly to the arsenal of materials available to the designer.

The first all-fiberglass ski was the Toni Sailer, which debuted in 1959 (the ski was named after the Austrian ski racer sensation who won triple-gold at the Winter Olympics in Cortina, Italy, in 1956). It was invented by Art Molnar and Fred Langendorf and manufactured by G.M. Plastics in Granby, Quebec. (Interesting side note: Art later took his expertise in fiberglass construction to K2, and then to Lange in Boulder, Colorado. He then launched his own factory in the early 1970s in Boulder. The November 1975 cover of *SKI Magazine* featured Robert Redford skiing on a pair of Molnars. The ski was a bit wider than most recreational skis at the time, and was known for being excellent in powder and forgiving on hardpack. After the company failed—despite the ski's popularity, Molnar couldn't sell enough pairs to sustain production—he moved on to the automotive industry.)

Karhu Sports, launched in 1976 in Cowansville, Quebec, by Doug Barbor, manufactured cross-country skis under the Karhu label and OEM for Trak and other brands. Line built its ski there, and then Burton snowboards. The factory was sold in 1996 to Trak Sports and in 2006 to K2.

The Canadian ski manufacturing party might have continued to this day, except for the arrival of those pesky imports produced at a fraction of the cost of fabrication in Canada. But it was quite a run, over hill and dale, in those seven-league (Canadian) boots. From canoes to Sailer, from lofty crests to lowly troughs, it was all downhill from the 1960s onward. But it was a thrilling schuss while it lasted.

The first all-fiberglass ski, the Toni Sailer, debuted in 1959. It was manufactured by G.M. Plastics in Quebec.

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