

Facing your Danger: The Evolution of the Cataract Boat By Roy Webb, University of Utah

The cataract boat, designed by Norman D. Nevills in the late 1930s, was one evolutionary product of the wooden river boat (another was his successful San Juan punt, but that's a topic for another time). An original design, the standard cataract boat was made of marine plywood, about sixteen feet long by five feet wide by two feet deep, with a pronounced "rake" fore and aft, and a broad stern. Each boat weighed about 400 pounds empty. The boatman sat in the center on top of a covered storage compartment, while the front and rear were also covered over for storage of supplies and gear. The boatman "faced the danger," being seated facing the broad stern and downstream, Galloway-style. There was really no provision for passenger seating; in calm water the passengers sat on the front and rear decks, while in rapids they either squatted on the deck behind the boatman, lay face down on the stern deck, clinging to ropes along the sides, or walked around the rapid altogether. At most, they could carry four passengers plus a boatman, but the usual load was less.

The first three cataract boats were the WEN, named for Norm's father, William E. Nevills; BOTANY, and MEXICAN HAT. Of these three, two survive today: WEN, in the collections of Grand Canyon National Park, and the MEXICAN HAT, at the John Wesley Powell Museum of River Running History in Green River, Utah. After extensive use, Norm decided to replace his fleet with three more boats, with very little change in design. These were the JOAN and SANDRA, named for his daughters, and the MEXICAN HAT II. After Norm's death in 1949, his successors, Jim Rigg and Frank Wright, took over Nevills Expedition, renamed it Mexican Hat Expeditions, and continued using cataract boats. They added the NORM, DORIS, and MEXICAN HAT III to their fleet in the spring of 1950. Gaylord Staveley, who took over the company after marrying Joan Nevills, built the BRIGHT ANGEL in 1957, and tried a new approach with the CAMSCOTT, named for his two sons, which differed greatly from all other cataract boats in that it was made of aluminum and had seats for three passengers. The last use of the Mexican Hat Expeditions cataract boats was on a John Wesley Powell commemorative trip in 1969, after which they were retired and the company, renamed Canyoneers, began to use inflatable boats. Of these boats, only the DORIS is unaccounted for; the others are all in museums or in private hands.

Others saw Norm's design and liked it, and built their own cataract boats. One was THE LOPER, built using the MEXICAN HAT as a model by Jack Brennan and Don Harris, who owned the original MEXICAN HAT. It was used for a number of years by these two for Harris-Brennan River Expeditions. Fred Speyer, manager of the lifts at the Alta Ski Resort in Utah, got interested in river running and built his own boat, which he named the MAJOR POWELL. The MEXICAN HAT, as mentioned, is in the museum in Green River, Utah; THE LOPER is in the possession of Dinosaur National Monument, and the MAJOR POWELL was last seen at the Green River museum, but its current whereabouts and condition are unknown. Al Morton, a filmmaker from Bountiful, Utah, wanted to obtain movies of the river canyons so he built another cataract boat, the MOVIE MAKER, following the design of the MEXICAN HAT and THE LOPER. After Morton left the river, he might have sold it to Harris-Brennan, but this is currently unclear. A.K. Reynolds of Green River, Wyoming, saw Norm's boats in that town in 1947, when Norm came there to start a trip on the upper Green, and built three boats to Norm's design which he named the GALLOWAY, ASHLEY, and LODORE. He used

these for about a decade for trips on the upper Green for his company, Reynolds-Hallacy River Expeditions, later just Reynolds River Expeditions. After the gates on Flaming Gorge Dam were closed in 1963, Reynolds retired from the river and the boats remain in a barn on his ranch near Manila, Utah. Finally there is the BONNIE ANNE, built by Jack Treece of Grand Junction, Colorado; this boat was restored by Brad Dimock for an old-timers trip in the Grand Canyon in 1994, but its current location is unknown. All of the later boats listed here had some minor changes, but were still virtually the same as Norm's original design.

Cataract boats had some limitations, as noted above; you couldn't carry that many passengers and, like all wooden boats, if you hit a rock hard enough you would knock a hole in them. But overall, they were remarkably successful. Norm Nevills never flipped one throughout his career, and capsizes with them were very infrequent. They were very maneuverable and able to carry a good load of supplies and gear. In those days, big rapids such as Hells Half Mile, Hance, Hermit, and Lava Falls were often portaged, and the cataract boat's relatively light weight made this possible, if not easy. Even though eighteen cataract boats were built in the period 1938-1969, only one is still in use, the SANDRA, named for Norm's daughter. Owned by Greg Reiff, Norm's grandson, it was beautifully and lovingly restored and sometimes accompanies Canyoneers Grand Canyon trips. A replica of the BOTANY was built by Dee Holladay in the 1990s, and used for several years on Holiday River Expeditions, but it hasn't been on the river for some time and is now on static display in front of the HRE warehouse in Green River, Utah. Of that total, all but five have survived not only thousands of miles of rugged use on the river, but the ravages of time, and are preserved in museums or lovingly cared for by their owners. It's a remarkable record for any craft.

List of boats (those in bold are unaccounted for):

WEN (Grand Canyon National Park collection)
BOTANY (given to Harbor Plywood by agreement, lost in a flood in the Midwest)
MEXICAN HAT (John Wesley Powell Museum of River Running History, Green River, Utah)
JOAN (Joan Nevills-Staveley)
SANDRA (Greg Reiff)
MEXICAN HAT II (John Wesley Powell Museum, Page, Arizona)
NORM (Gaylord Staveley)
DORIS (given to Fred and Maggie Eiseman in 1966, current location unknown)
BRIGHT ANGEL (whereabouts unknown)
MEXICAN HAT III (Gaylord Staveley)
CAMSCOTT (Gaylord Staveley)
THE LOPER (Dinosaur National Monument)
MAJOR POWELL (John Wesley Powell Museum of River Running History, Green River, Utah)
GALLOWAY (private ownership)
ASHLEY (private ownership)
LODORE (private ownership)
MOVIE MAKER (whereabouts unknown)
BONNIE ANNE (whereabouts unknown)