

Ancient trading raft sails anew

May 13 2009, David Chandler



Students from Professor of Archeology and Ancient Technology Dorothy Hosler's class work on making the full-size authentic replica of a pre-Columbian South American balsa oceangoing raft on the Charles river. Here Leslie Dewan and Feng Wu work. Photo / Donna Coveney

(PhysOrg.com) -- For the first time in nearly 500 years, a full-size balsa-wood raft just like those used in pre-Columbian Pacific trade took to the water on Sunday, May 10. Only this time, instead of the Pacific coast between Mexico and Chile where such rafts carried goods between the great civilizations of the Andes and Mesoamerica as long as a millennium ago, the replica raft was floated in the Charles River basin.

The faithful reproduction of the ancient sailing craft, built from eight balsa logs brought from Ecuador for the project, was created in less than six weeks by 30 students in the Ancient Materials class taught by Professor of Archeology and Ancient Technology Dorothy Hosler of the

department of Materials Science and Engineering. The replica was based on an analysis carried out by Hosler and her former student Leslie Dewan '06, which was published last year in the Journal of Anthropological Research.

Based on drawings and descriptions recorded by Spanish, Portuguese and Dutch explorers, Dewan and Hosler figured out the dimensions and construction methods that most likely were used for the ancient craft, and reproduced these as accurately as possible. While some other attempts have been made to reproduce the ancient craft, including a one-third scale version built by Dewan and other students five years ago, none had previously copied the ancient designs and materials so precisely. No modern materials were used in the construction.

The full-size replica was built to confirm the [computer analysis](#) of the craft's size, capacity and construction, and to prove that such a vessel really is seaworthy and could have made the voyages of thousands of miles indicated by Hosler's research on similarities in the metalwork design and manufacture between the Andean and Mesoamerican cultures. The reproduction was financed through a donation from Alcan-Beltec Corp.

The raft will undergo a series of tests over the summer, but so far performed very well, Hosler says. Although there were high winds that caused problems for many sailboats on the Charles on Sunday, the raft with nine students aboard remained very stable, she said.

Provided by Massachusetts Institute of Technology ([news](#) : [web](#))

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