Conservation crisis as historic carved trees die

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Canopy of carved trees under threat

(PhysOrg.com) -- The imminent loss of the internationally-acclaimed Moriori-carved trees on the Chatham Islands National Historic Reserve constitutes a "national conservation crisis" which needs urgent attention, says new University of Otago research.

In an article to be published in the next issue of *Archaeology in New Zealand*, University of Otago archaeologist Dr. Ian Barber, along with post-graduate student Justin Maxwell, write:

“These living carved trees are a novel Polynesian art form, and in their current number and condition, represent the most intact, extant world

example of this indigenous site type."

Consequently, the imminent loss of most if not all of the kopi trees on the main reserve informally known as Hapupu, which is managed by the Department of Conservation (DOC), represents "a national archaeological crisis". The trees and their carvings are thought to be hundreds of years old.

The researchers came to their conclusion during a month long visit to the islands in February, during which time they assessed the rate-of-loss of the trees and their human figure carvings since a collaborative DOC-led, University of Otago project to secure three-dimensional scanned images of the carvings a year before.

The research in both 2010 and 2011was planned and carried out in full collaboration with the Hokotehi Moriori Trust, which is also deeply concerned about the longevity of their taonga trees. Hapupu is one of only two national historic reserves so-designated in New Zealand.

"We were shocked, quite frankly, that in the year that we had been away, a further 10% of the carvings on trees in this National Reserve have been lost, and that the entire canopy is mostly dead. The remaining trees are in big trouble," says Dr. Barber.

The researchers constructed an "alarming" comparison over time of the health of carved trees, incorporating the 2011 fieldwork results.

When recordings of tree numbers first began in 1964, there was an estimated 200-plus carved trees at the Hapupu reserve in that year. When recordings were made in 1998, only 82 were left.

Of the 63 carved tree trunks located and recorded at the reserve in 2010, 26 were dead. Now, one year on, a further seven trees have died, and the

overall rate of loss is accelerating. Only two of the carved trees still have a full and healthy canopy.

One notable old kopi tree carved depicting a figure with a relatively rare down-turned mouth – most of the figures have smiling faces - has only 25% of its canopy left, and is likely to disappear completely in just a few years.

“Most of the Kopi trees on Hapupu are now in serious trouble, if not dead. And our comparative analysis confirms that,” he says.

While DOC has worked well with Hokotehi Moriori Trust to manage the Reserve in recent years, not enough public effort had been put in to install protective measures earlier to ensure the trees survived for longer. DOC has provided the technical and management expertise at the reserve since the late 1980s.

While significant wind damage was documented as having a devastating effect on the trees in 1975, “nothing has been done to provide appropriate buffering cover” around the Reserve apart from protection from stock with fencing as far back as 1980.

Dense buffering vegetation at the windward edge of the stands extending over the canopy needed to be retained, or replanted. Individual trees could also have been treated with fertiliser to encourage canopy growth.

“This has never been done, but we are recommending it now. This may give those few trees at Hapupu that have some canopy health a bit of a reprieve, and the agencies some more time to coordinate and finance an appropriate response with Hokotehi.

“The conservation priority is to preserve the trees in place as part of a unique cultural heritage landscape. However, an appropriate response

should also provide for the carefully documented removal and treatment of carved trunks once a tree has died," Dr. Barber says

The Otago researchers' latest work also involved the excavation of archaeological deposits near carved trees to obtain materials for radiocarbon dating.

"We've had considerable success in locating secure radiocarbon samples that are being processed currently at Otago, as well as finding new archaeological evidence of Moriori lifeways and economy," says Dr. Barber.

"We are excited by this success, but share Hokotehi's concern that one of the most substantial archaeological connections to the Moriori past is about to be severed. We are literally racing against time to understand these taonga before they are lost to the world forever."

Provided by University of Otago