Autumn 2002 VOLUME 6, NUMBER 3

Gulf of Maine Times

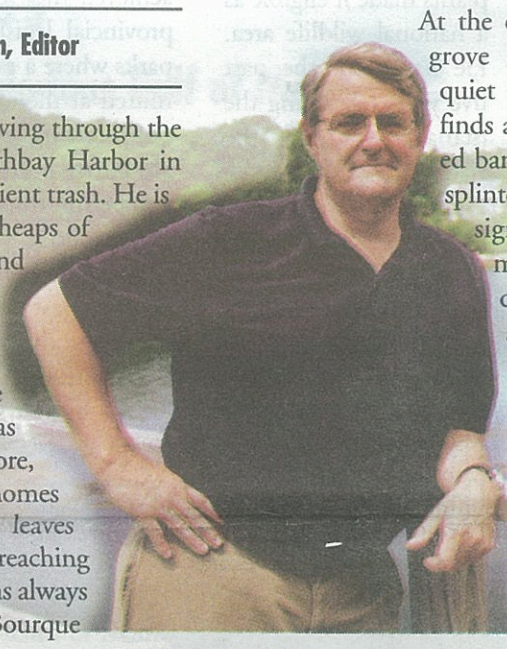
Promoting Cooperation to Maintain and Enhance Environmental Quality in the Gulf of Maine

More than arrowheads and old bones

Coastal archaeological remains can reveal much about our ecological past and future; but vandals and sea level changes loom large

By Andi Rierden, Editor

Bruce Bourque is driving through the lush backroads of Boothbay Harbor in Maine searching for ancient trash. He is stalking shell middens–heaps of kitchen scraps–left behind by inhabitants thousands of years ago. As the chief archaeologist at the Maine State Museum, Bourque has surveyed these sites before, but the burst of new homes and constructions sites leaves him disoriented and reaching for a map. "The middens always face south to east," Bourque says, surmising, "Most likely because of the sun."



Bruce Bourque standing in front of a Boothbay Harbor cove in Maine where ancient shell middens line a severely eroded coastline. Photo: Andi Rierden

At the edge of a pine grove overlooking a quiet cove, Bourque finds a severely eroded bank layered with splintered shells–the signature of a midden. The debris is packed about three meters deep [ten feet] with its exposed edges slowly crumbling into the sea. Nearby lies a dug pit. "The mark of vandals," Bourque says.

A midden, he goes on to explain, may contain the discards from several groups of inhabitants. Sometimes a succeeding culture added to the pile, or used it for a camp or home site. Way back then, a small cove like this one in Boothbay was boiling with shellfish and other marine life, making it an ideal habitation.

"Any archaeologist that works on this coast understands that there was an incredible abundance of resources," he says. "It was very, very different then."

Long before Europeans, populations waxed and waned along the Gulf of Maine's coastline reaping the ocean's bounty and migrating game. Along the coast of Maine alone, some 2,000 middens remain to tell their story. These shards of broken bones, tools and shells

Archaeology *continued on Page Six*

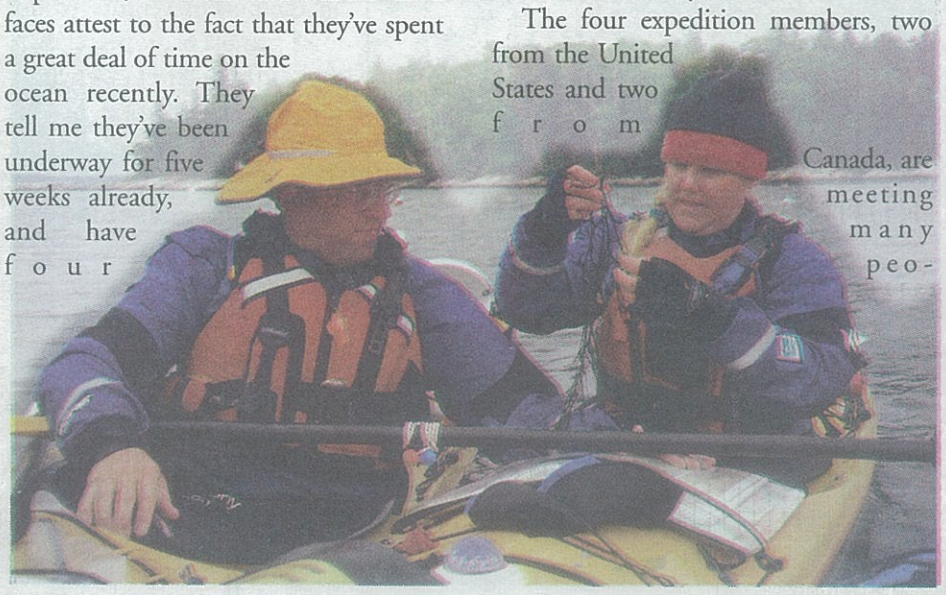
Inside

Gulf of Maine Expedition: The final stretch

By Lee Bumsted

On the day I go sea kayaking with the members of the Gulf of Maine Expedition, their sun and wind-burned faces attest to the fact that they've spent a great deal of time on the ocean recently. They tell me they've been underway for five weeks already, and have four months still to go. From their departure point on the northeastern tip of Cape Cod, Massachusetts, they are kayaking along the entire rim of the Gulf of Maine, all the way to Cape Sable Island, Nova Scotia. Their goal is to raise awareness of the Gulf as a distinct bioregion while learning more about its ecology and human history.

The four expedition members, two from the United States and two from Canada, are meeting many people along the way. Natalie Springuel, the team's leader, notes, "The traditional expedition goes to an extremely remote



Natalie Springuel and Rich MacDonald are taking water samples along their 1,000-mile journey from Cape Cod to Cape Sable, Nova Scotia.

Expedition *continued on Page Eight*

Aquaculture's new frontier:

Scientists at the University of New Hampshire are developing a novel approach to fish farming — offshore

By Maureen Kelly

Five miles off the coast of New Hampshire is an unlikely site for a fish farm, but it is here that faculty at the University of New Hampshire (UNH), in collaboration with other institutions including the Massachusetts Institute of Technology (MIT) and Woods Hole Oceanographic Institution, are working on an experimental project that aims to demonstrate how finfish and shellfish can be raised offshore in the open ocean.

Unlike the salmon farms already hugging New England's coasts, farms located offshore would free space in coastal areas for other purposes like recreation and shipping. Offshore farms in deep water may also avoid pollution problems associated with farms in bays whose waters are not well flushed by the tides.

To bring healthy fish to harvest in the Gulf of Maine's often turbulent seas UNH's Open Ocean Aquaculture project (OOA) is working to develop the technology to keep large cage systems moored in the sea.

I joined Project Manager Michael Chambers and several of his colleagues on a sunny July day as they made the trip from Rye, New Hampshire to their 30-acre (12-hectare) open ocean aqua-

Aquaculture *continued on Page Nine*

Gulf of Maine Council on the Marine Environment

P.O. Box 339
Annapolis Royal, NS
BOS IA0

PRINTED MATTER