

STAFF REPORTS | SCIENCE

Early Scandinavians were not wine barbarians

By Tom Avril
INQUIRER STAFF WRITER

Greeks and Roman historians were fond of depicting northern Europeans as beer-swilling barbarians, incapable of appreciating the fruits of sun-splashed Mediterranean vineyards.

Writing in the late first century B.C., Dionysius of Halicarnassus sniffed that northerners were known to drink a "foul-smelling liquor made from barley rotted in water."

Time to give the barbarians some credit, says University of Pennsylvania archaeologist Patrick E. McGovern.

Chemical analysis of residues from ancient drinking vessels and strainers, found in what are now Denmark and Sweden, reveal traces of elaborate hybrid beverages made from berries, birch resin, honey and herbs, McGovern said. Some even contained imported grapes.

"They were just as innovative in the north as they were down in Italy or Greece," McGovern said. "They were taking the ingredients they had in their area and making the most

out of them."

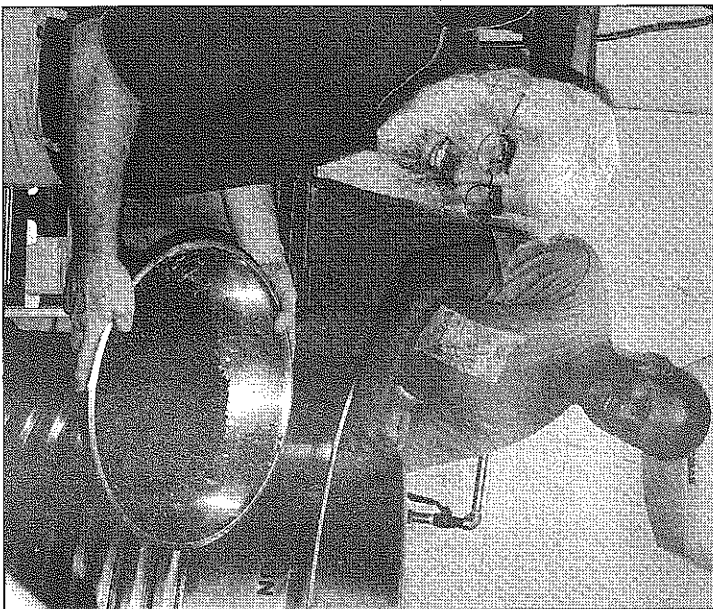
The findings, published in the Danish Journal of Archaeology, mark the latest chapter in McGovern's global survey of ancient alcohol, a quest he began more than two decades ago. Using the tandem tools of gas chromatography and mass spectrometry, among other techniques, he has identified the contents of vessels from China, Honduras, Turkey, Egypt, and, now, Scandinavia.

Scholars at the National Museum of Denmark, home to three of the four containers that McGovern sampled for the new study, were impressed.

Curator Poul Otto Nielsen said he was particularly struck by the analysis of a Bronze Age strainer from the town of Kosterade, dated 1,100 to 500 B.C., that revealed tartaric acid — a telltale sign of grapes.

"Nobody dared to imagine this until now," Nielsen wrote in an e-mail. "The Danes had an early taste of wine."

The Kosterade strainer also revealed traces of honey and birch resin, as well



Sam Calagione of Dogfish Head brewery and Penn's Patrick E. McGovern brew ale. DOGFISH HEAD CRAFT BREWERY

as probable evidence of juniper and bog myrtle. McGovern and colleagues reported, characterizing the mixture as a "Nordic grog."

McGovern is the scientific director of the Biomolecular Archaeology Project

partment.

In a case of art before science, the fruits of the research were bottled and sold in advance of its publication in the academic journal.

In October, the Dogfish Head brewery in Delaware worked with McGovern to produce a modern-day version of grog, as it has done with other ancient beverages he has studied.

Called Kvasir, the Dogfish Head brew was made with wheat, lingonberries, cranberries, honey, birch syrup, and the flowering plants yarrow and myrica gale.

The addition of cranberries and lingonberries was a nod to one of the other Danish samples in the study, a bronze container from the town of Juelinge. Analysis of residues from that vessel, dated to about 200 B.C., early in the Roman Iron Age, revealed the presence of both red fruits as well as grapes.

An earlier vessel, from a tomb in the Danish site of Nandrup, appeared to have held honey mead. The one artifact from Swe-

den, a first-century bucket from the island of Gotland, was found to have contained grape wine and tree resin.

Scholars had previously determined some of the likely ingredients in the Scandinavian vessels by looking at them under a microscope. The new chemical analysis was consistent with these earlier findings, but it added information, McGovern said.

No doubt some of the Scandinavian beverages also contained wheat, rye, or barley, McGovern said, but they were far from the simple swill imagined by the Greeks and Romans.

The addition of berries, with their higher sugar content, would have yielded more complex flavors — as well as more alcohol. McGovern has seen evidence of that thirst across the ancient world, so why should Scandinavia be any different?

"Obviously a lot of people are aiming for higher alcohol," McGovern said. "That seems to be the way humans operate."

✉ tavril@phillynews.com
© 215-854-2430